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Library Portal Designing & Web Resource Management

Sibsankar Jana

This study mainly covers the scope of digital library interface or library portal. Some similar or more or less similar terminologies are described here. The detail steps are not enumerated here for designing library portal. But some key points are pointed out here to keep in mind during portal designing.

Keywords: Library portals; Digital library interface; Digital library framework; Digital object; Handle system.

Introduction

Many of the big well known sites are considered portals. They are gateways into the internet for many users. A Portal attracts a broad (horizontal) range of users. The term "portal" describes a variety of web based interfaces, everything from a relatively static homepage with general product and contact information to a dynamic one-stop homepage where users can customize the content to meet their needs. For many portal is the epicenter of the web experience, a place to return to when you get lost, a place to keep your information, a place from which to communicate with others. The Joint Information Systems Committee defines a portal as "a network service that brings together content from diverse distributed resources using technologies such as cross searching, harvesting and altering, and collates this in to an amalgamated form for presentation via a web browser to the user". A library portal is a single access point combining the library catalogues, subscription databases, subject gateways, electronic journals etc. Library portal meets the individual needs of users, which either the system itself

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can tailor the delivery and presentation of information content or the users themselves can customize the type and format of information displayed. Library portal is now the standard interface to generate library resources and services through a single access and management point for users. In actual sense the Digital Library Interface is basically a library portal.

Some terminologies

Portal

Many of the big well known sites are considered as portals. They are gateways into the internet for many users. A Portal attracts a broad (horizontal) range of users. Sites like Altavista, Yahoo, CNN and MSN are considered portals and are gateways into the Internet. There are many portals that are known nationally and internationally. General portals are known as horizontal portal or hortal. This Portal development may include adding several features or components that are not normally found on a typical site. For example, you may need a discussion forum so that your visitors can share ideas or experiences. Creating this forum requires deciding which forum software to use and then installing it on the server. There are many other components or modules you may wish to add to your Portal. While creating portal sites we will have to decide the classification of information to be collected. Next is the

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collection of information of the divisions. The first step of this is to make a directory. Now, information like news, climate, e-mail, stock market and maps are all seen in portals. There is no specific rule to create a portal. When more people visit a portal, the portal becomes a success.

Vortal

Vortals focus on a group of people with a specific passion or interest. Portals meant for specific purpose are vertical portals or vortals. They are sometimes called 'online communities' or 'vertical portals.' If you are interested in horses, for example, go to horsenet.com. Here you can chat with others interested in horses. You can also buy horserelated products and books and find information about horses.

Portal and website

The term 'portal' is used to describe a website that acts as an entry point or gateway to an array of services or resources. Obviously all websites can do this to some degree, but typically a portal will have a wide range of resources, usually including a search facility, directory of other sites, news, e-mail etc. portals can be general (eg Yahoo) or be specific to a particular industry, occupation or field of interest.

Gateway

Gateway is a phrase used by webmasters and search engine optimizers to describe a webpage designed to attract visitors and search engines to a particular website. A typical gateway page is small, simple and highly optimized. Its primary goal is to attract visitors searching for relevant key words or phrases, and provide hyperlinks to pages within the website.

Library Portal/ Digital library Interface

Library portal or Digital Library Interface is now the mnstandard interface to generate library resources and services through a single access and management point for users.

Need for Library Portal or Digital Library Interface

Librarians have become increasingly aware that the multiplication of electronic resources is a problem for end-users. Users find it difficult to locate the most appropriate database or resource to search for information relevant to their need. Even if they locate the right resources, since each service tends to have its own unique interface, they may struggle to search it effectively. If information is difficult to find using library tools and services, users are looking for alternative sources. This new reality translates into the need for making library web environments effective and useful. This trend is especially challenging for librarians, who were and continue to see themselves as the traditional keepers of knowledge, which until very recently was housed in many millions of books and journals that are rapidly becoming digitized. Portals are transformational environments that address the problem of information glut by customizing information content to meet specific end-user needs.

Library portal is growing in its importance as the preferred way of organizing and using information. Web portals are seen as positive potential frameworks for achieving order out of chaos. As portals become a primary means for transacting information and commerce, libraries of all types are becoming involved in thinking, planning and building various frameworks and services. Library portal reduce the barrier of users having to remember multiple logons. The portal gives the library a tool to channel users towards preferred resources. It increases the ability of the library to ensure that costly electronic journals and databases are used, by offering a simple way to browse the available resources. It supports searching by carrying users through from bibliographic searches to full text options.

Digital library framework

Digital library system in true sense is actually the co-existence of many individual digital libraries or digital information system that may be:

- ftp archive
- World Wide Web server
- On-line database
- A repository / IDR

User interfaces/Library portal

The interface through which any user can have their required digital information from digital stores is called user interface. There are two user interfaces: one for the users of the library, the other for the librarians and system administrators who manage the digital collections. Each user interface is working in two parts:



Figure 1: Digital library framework

Components of digital library framework

The architectural components of library portal/digital libraries are of mainly four types namely user interface, repository, handle system and search system. The key components are shown in the figure 1. They run on a variety of computer systems connected by a computer network, such as the Internet.

Browser

A standard Internet browser like Netscape Navigator, Microsoft's Internet Explorer, Mozilla Firefox etc is used for the actual interactions with the user.

Client services

It provides intermediary functions between the browser and the other parts of the system. The client services allow the user to decide where to search and what to retrieve; they interpret information structured as digital objects; they negotiate terms and conditions, manage relationships between digital objects, remember the state of the interaction, and convert among the protocols used by the various parts of the system.

Digital object stores

Information in the digital library can be stored in many types of store, are enumerated below:

FTP archive

The archive where different digital files are stored and File Transfer Protocol is used for uploading and downloading the files over the internet. FTP works in the same way as HTTP for transferring Web pages from a server to a user's browser and SMTP for transferring electronic mail across the Internet in that, like these technologies, FTP uses the Internet's TCP/IP protocols to enable data transfer.

World Wide Web server

A WWW server is a program that runs 24hrs/day delivering files to requestors. Each WWW server on the Internet has its own name. The names often follow the www. organization.domain convention. Where organization is substituted by the organization's name or initials, and domain is determined by the type of organization (edu, com, org, net, etc...). Sub-units within the organization can add an extra item between the www. and the organization's name. Examples include www.sfsu.edu, www.journalism.sfsu.edu. The WWW Server program needs to be told where the documents to be served are located. Different web documents are stored in different WWW server. Each document has URL. User can access these documents using this URL trough web browser.

On-Line database

An online database is a database accessible via a network, now generally the internet. It differs from a local database, held in an individual computer or its attached storage, such as a CD. Using the desktop computer, one can travel along the Internet to the server, and access the information (articles, pictures, etc.) stored in the database server. The information travels back to you, and is displayed on your computer monitor. You can usually save the information, ("download it to disk", or print it out), but the information is actually owned by the database producer, or "vendor". Service provider of online database connects the database of the database produces to the users through search system. The popular service providers are DIALOG, COMPUSERVE etc.

Repository/IDR

The Repository addresses the need for uniformity by treating all forms of content as opaque, uniquely identified structures known as Digita lObjects. By opaque, we mean that neither the internal structure nor the semantics of Digital Objects are exposed. Essentially, from the Repository perspective, Digital Objects are atomic units, identifiable only by their unique names called handles. Repositories store and manage digital objects and other information associated with these objects. The interface to this repository is called the repository access protocol (RAP). The RAP is responsible for the regulation of rights and permissions that need to be satisfied before a client can access a digital object within the repository. Repository is used mainly for storing valuable digital objects.

Digital Object

A digital object is a fundamental unit of the digital library architecture. Digital object has five major components as per a network environment is concerned. These are key

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metadata and content (bits). The key metadata are of four types namely handle, properties, transaction log, and signature (Figure-2).

Handle system

Handles are general purpose identifiers that can be used to identify Internet resources, such as digital objects, over long periods of time and to manage materials stored in any repository or database. Handle system is comprising of three components:

Handle generator

Handle generator is responsible to create globally unique and unambiguous handles for digital objects before submitting these objects to the digital stores.

Handle server

It stores the handles of the digital objects and the information associated with the location of the repository or store. During client's request, it interprets the handles to its corresponding locations and returns this information to the users.

Handle server directory

It holds and manages the list of handle servers.

Search system

This is basically the database of indexes of digital objects having handles with different search options. The design of the digital library system assumes that there will be many indexes and catalogs that can be searched to discover digital information before retrieving it from a repository or store. These indexes must be compatible with Z 39.50 like standards to attain the interoperability with wide range of systems.

Characteristics of Library Portal or Digital Library Interface

The library portals are changing rapidly, but some of the major elements to be considered while designing the library portal are as follows:

Ease-of Use

The foremost feature to be considered is the ease-of-use, which can be determined by the effectively organized home page. The ease with which the users find information depends upon the multiple paths provided to find information, at the same time, keeping the number of clicks to a minimum in finding pertinent information. The user should perceive ease-of-use with the accessibility and usability of library portal, so as to interact with the system quite often. Text should be kept terse and lucid, so that user can scan and locate the needed information quickly and sometimes, obscured information they seek.

Search and Navigation

In addition to consistent and logical navigation framework, effective search functionality and site maps are mandatory in the homepage. Direct access to the commonly used services needs to be supported by the library portal, as the users expect to have the capability to complete tasks online. Search boxes are preferable to search buttons and need to be placed in a prominent location.

Resource Linking

Resource linking allows a library to seamlessly tie electronic resources together. For example, an index or abstract can be linked to a full-text database or a bibliographic record can be linked to a review or to an e-book. Users may like to have more than one path to find the same information, cross linking ensures that the users would find the information they are looking for.

Personalization

Each individual user or a community and/ or group of users can have settings for each of the portal functions that they use. A portal provides a framework for users to store the settings and tailor the content that they are interested in seeing. A portal can be personalized using user-profile to deliver personalized content. Each user can gain a view that is tailored to his or her access privileges. User has to sign on with a username and Personal Identification Number on entry to the library portal to access personal profile information and tailor the design based on customization feature. Or else, a portal may give users the ability to create their personalized pages by selecting what they want to see whenever they get access to the library portal. This personal page may keep track of resources for a user, his library account, queries kept until the session ends, request and reserves and also renewals.

User Authentication

User authentication also known as patrons' authentication determines whether patrons are eligible for service by checking patrons against a library database. This authentication is usually done with a proxy server to limit access to resources the patron is authorized to use. For example a library may allow anyone to access its catalog, its community information file and other locally created files on its web server, or it may limit access to subscription databases to only registered borrowers.

Interactive Services

Although most portals can support interactive services, only a few academic libraries have incorporated interactive services in to their portal. Typical of such services are e-mail, chat rooms and forums. Library portal should facilitate knowledge sharing online by providing collaborative space for interactive tools. However, in order to assist the users in the fair use of tools and services offered, library portal should facilitate web based information literacy programs.

Besides the above characteristics the following specific point need to be in mind during designig library portal

 Searching would be far easier for the user if the library could present resources in a consistent, organized gateway. This should be customized for different user groups.

- Users would learn to search more effectively if there is one fully functional library maintained search interface available for any database they wanted to use.
- It would often be convenient to search multiple databases from one search box. This implies the ability, in a single search, to interrogate databases that use different metadata standards, especially in different curatorial domains.
- Specifically the system should be able to search databases of images and a proliferating array of multimedia types, and ideally show thumbnails or previews in search results.
- The search results from spread searches need to be presented in an intelligible way to the user, ideally with de-duplication and sorting of results.
- The system must understand licenses, such that it only offers options to users that are available to them, based on their access rights and the license, although it can help create awareness and drive demand for protected resources through alerting, personalization and customization functions.
- Link resolution services should be supported. That is rather than pointing at specific static URLs for content, web requests should pass through an intermediary service where a final URL is calculated for any resource at the time of the user accessing it. This offers a scaleable way to manage constantly changing URLs and the opportunity to develop further middleware support services.
- The user should be able to save hits or a search, including for reuse on databases other than the one it was first created for.
- Another central requirement is that there should be a single point of authentication. The user must not be constantly challenged for a password, in fact cross searching of

multiple access controlled datasets is impractical without some sort of single sign on or caching of credentials or trust between servers.

 The system must provide central management tools for handling a variety of http based query syntaxes, since standards are developing rapidly to meet the needs of specific domains.

Role of Librarian

As educators who organize and evaluate information resources, academic librarians bring unique perspectives and skills to the development of portals in their colleges and universities to campus portal planning and implementation, they bring their expertise with content, their knowledge of copyright, their commitment to customer service, and their experience in creating customized webbased information delivery systems.

Content

Academic librarians provide credible content that has been selected for a specific learning community. Their library's homepages and collections have what every web site wants: brand and content. Libraries have the brand name of the academic institution they serve and content that has been customized to meet the needs of their users. To students who may have difficulty determining what is valuable and what is useless on the web, the library offers a safe harbor in a flood of information. Increasingly the content of libraries is in digital form and is composed of databases. Click on any library homepage and you will find an array of databases selected to support the academic programs offered by the institution. These databases are made available both on and off campus through licenses arranged through the library.

Copyright

Librarian's knowledge of current copyright policy is being called upon now more than

ever in setting up electronic reserves and online information for learning portals created using blackboard and other web-based course management systems. Faculty and students may assume that if educational material is on the web, no copyright restrictions apply. However, this is true only if the copyright for the work has expired, its author has allowed the work to go into the public domain, or the work was authored by the federal government. Since there is a mix of works in the public domain and under copyright on the internet and some works under copyright are posted without authorization, it is not always clear which are in the public domain. Librarians provide guidance in determining which web-based materials are under copyright and seek permission for use of these works with the Copyright Clearance Center and other agencies. Librarians inform faculty about the fair use guidelines.

Customer Service

As libraries make more digital resources available on the Web, research is increasingly conducted outside of the physical library. However, remote users want interactive assistance from a qualified human being and not just a help button to click on. Librarians have developed a number of ways to extend person-to-person reference service in a digital environment that are applicable in supporting portal use on campus. Digital Reference Services (DRS) offer quality service at any time to users outside the library. DRS refer to all internet-based, human-mediated information services, including those based in library settings and other types of organizations. Such services range from e-mail reference which libraries have offered for years, to online reference chat which many librarians are now implementing.

Conclusion

Most library patrons want information regardless of where they find it. They don't want to limit themselves to their library's collection. A portal offers them one-stop shopping that takes them from the initial need for information through its delivery without having to use several different tools. If well designed, a portal also provides effective navigation of complex, multiple collections. Over the past decade, academic librarians have been evaluators, selectors, and organizers of information on the web. Our experience and expertise make us valuable players in a team approach in planning and implementing library portals. An interactive service such as "Ask a Librarian" can make requesting assistance simple and convenient by connecting web users with librarians.

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Students' Attitude towards the Uses of Internet

Shivaraj O*, Suresha GP**, Arun Kumar D***

Abstract

Internet is a useful tool for all in a technologically advanced world. The impact of Internet widely visible in all most sector. The education sector is most benefited from the Internet. The students are pillars of building progress of the society and the nation. It is therefore students most have access to all technological tools & techniques. In recent days many schools and colleges offering Internet services to the students for their academic purpose. The present study analyzed the Students' attitude towards the uses of Internet in Arts and Science colleges of the Chitradurga city. A total of 170 well-structured questionnaires were distributed to the Students, and out of which 150 filled questionnaires were received, checked, and found fit for analysis. The results reveal that most students find that the Internet knowledge is essential for study and courses work. Almost all the respondents feel that they are comfortable using the Internet and the respondents are having fair knowledge in accessing Internet. The study found that there is a similarity use of Internet among male and female. Further the study recommends some useful suggestion for significant and positive use of the Internet.

Keywords: Technologically advance world; Education purposes; Effective tool; and Internet usage.

Introduction

Word Internet is derived from the words "global" and "network". The Internet can be defined as "network of networks and is the world's largest and most widely used network. The Internet can be used as an additional convenient method. The Internet is a useful tool for all in a technologically sophisticated world. The Internet is also widely used in education. The use of Internet for education is very important. It is now being used to teach in schools and colleges to get more out of it. The Internet offers more information than the largest libraries in the world [1]. The Internet has become an essential part in educational

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institutions since it plays a vital role in meeting information and communication needs of students, teachers and institutions. Teachers are being invited to give their teaching materials and other support resources available through the Internet [2]. Students use the Internet to communicate not only with colleagues, but also with their instructors. Students and teachers can communicate with each other with the help of Internet [3]. It has an easy access to all information on the latest research reports from anywhere in the world. It helps researchers, teachers, students and institutions to disseminate information to more viewers worldwide through websites [4, 5]. Teachers get useful information about their classes and also download useful and latest information on the subject. A teacher may ask students to find a topic and related research on the Internet. The Internet is also used to replace the traditional classroom lecture. The instructor can place course notes on web pages, create recordings video of a live conference for presentation to the Internet or can use combinations of these ideas [6].

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To make proper use of Internet in colleges there is a need to understand the attitudes of students toward the use of it. And it must be ensured that resources are being used in college legally and if there are problems, then problem areas must first strike and then put the necessary measures to overcome the problem. For the student's attitude toward Internet applications, college administration should know that the purposes for which students are using it as entertainment and purposes, academic sports, for correspondence and business and social purposes, etc. It is the duty of the administrator from one college to information and enabling factors that students are using the Internet for educational purposes. Now a day, all schools, colleges are using Internet technology. With the help of this, schools and colleges, teachers are valuable teaching tool. So to have more benefits from the resources you need to know about problem areas or barriers, but also take measures to address the best use of resources as the Internet. Increasingly, colleges are investing in Internet services. School is also making its teaching materials available online. While colleges and academics are trying to build the Internet, a valuable learning tool, it is necessary to understand what their students' attitudes toward Internet applications. Most of the chitradurga population exists in rural areas where Internet facility is not available and therefore are not aware of the Internet. And institutions are not giving any kind of Internet education to rural areas. As the Internet has become an essential tool for college students and professional life, all things that are occurring are normally made through the Internet. Although Internet students can take many advantages from Internet, but due to some factors, are not aware of the Internet or the information about the Internet is inadequate because the students' attitude toward the Internet is negative or slightly lower. These factors are due to sites that divert the attention of students of the educational purpose for which the student is using the Internet. This paper focuses college students frequently using the Internet for study and

related work. It explores to know about Internet usage by students of the college.

Objective

The objective of this study is to examine the 'student's attitude towards the uses of Internet in Arts and Science Colleges of the Chitradurga city.

Scope and limitations of the study

The scope of the present study is limited to the following:

- a) The study includes only two colleges, which are engaged in importing Degree level course in the field of Arts and Science.
- b) The study focused on student's attitude towards the uses of Internet in Arts and Science Colleges functioning within the territorial jurisdiction of the Chitradurga city.

Methodology

In order to collect the comprehensive and relevant data for the study, a well- designed questionnaire method is used for collecting the primary data. Present study only 17 items were used. These items were most appropriate in present situation. The questionnaire composed of two sections, the first section contained general information about respondents including gender, age, and education. Whereas, the second section related to student's attitude towards Internet applications and had 17 items .These items were measured on Liker type 5-point scale, where 5 was most degree of agreement and 1 was least degree of agreement. To find out facts, both survey methods, i.e., questionnaire and personnel interview method was used to collect the relevant data. The questionnaires, which were prepared, were distributed to selected students of Arts and Science Colleges. Total 170 questionnaires were distributed and out of which 150 questionnaires were received. The duly filled questionnaire used for data analysis and the analyzed data has been presented in form of table and graphs. The collected data were tabulated and analyzed systematically using the statistical package social science (SPSS).

Review of literature

A survey conducted by Sivaraj and Mohamed (2007) [7] on Use of internet by the students, faculty members, and research scholars at bannari Amman institute of technology. Responses of users showed that the Internet is being used by students, faculty members, and research scholars to gather a variety of information and gain more extensive knowledge as part of their learning, teaching, and research activities.

The Internet has become such an integral part everywhere and a potent communication tool, it is worth investigating exactly how the Internet fits into the daily lives of staff and students of educational institutions. There is a strong expression of the availability 24 / 7 on the Internet, i.e., every hour of every day, allows students and scholars for study and research, self-determination of the normal hours of work (Gorman, 2003)[8]. The main function of the Internet is used in most conference rooms is an instrument to gather information for teachers and students and has become one of the first places where teachers and students will collect data on almost any subject, whether at home or at school, college or University (Aydn, 2001)[9]. There is a lot of training available in the form of texts, primary sources, images, articles, online periodicals, multimedia presentations, books, maps, databases of almost anything you can think of almost any topic. Also, teachers and students are quite competent in the access to this information (McKenzie, 1998[10], Shiveley & VanFossen, 2000)[11]. The Internet can be a powerful source for such research, challenging students to investigate problems that are authentic, connected to the curriculum and interdisciplinary areas. The Internet can also help in the presentation and disclosure of the findings of such projects (DeWitt, 200312; Risinger, 1998 [13], Falvo, 1994 [14], Thompson et al., 2004) [15]. Finally, the evidence indicates that teachers use the Internet, as it is in their classrooms because the possibilities seem obvious, and they want to be involved with the trend of technology. However, instead of creating a class more interactive and collaborative Internet use every day often leads to an informal teaching style, and indeed can lead students away from reality instead of calling in (Benenson, 2001 [16], Chadwick, 2002) [17].

Technical support, Web experience, task equivocality, and perceived ease of use affect the usage of Internet, significantly (Lee & Kim, 2009)[18]. Technical support and web experience, in turn affect the perceived ease of use. Technical support, task equivocality, and task interdependence are positive related with subjective norm. Teacher Internet selfefficacy and believes about web-based learning are critical determinants of their attitude towards web-based professional development (Pin & Chung, 2009) [19]. The concept which reinforces the positive outcomes of web learning is highly suitable for the favorable attitude towards web-based professional development. The attitude of students and teachers towards using Internet in teaching, using Internet in research and likability of Internet usage in teaching is having a negative correlated with each other (Oral, 2008) [20]. Furthermore, the difference between devotion to democracy and qualities of democracy is significant. Likewise, the difference between attitudes towards devotion to democracy is significant with reference to the benefits provided by the Internet.

Analysis and findings of the study

This study reports the analysis of data gathered through the questionnaire designed for students of Arts and Science Colleges in Chitradurga City. The data analysis is based on questionnaire responses of students of Arts and Science Colleges. The information thus collected is tabulated and presented in the form of tables and graphs.

General information

Demographic characteristics of respondents

The data summarized in the table-1 demonstrates the demographic characteristics of respondents. It shows that out of 150 respondents' 50% are male respondents and 50% are female of respondents selected from different Arts and Science Colleges. The numbers of respondents are from, SJMCASC, GASC. 100% of respondents come under the age group of below 25 years. Equal numbers of (50% each) respondents are science & arts students.

Frequency Distribution with respect to Students' attitude towards the uses of internet

Table 2 illustrates frequency distribution with respect to Students' attitude towards the uses of internet. It evident from the table – 2 that 53.33% of respondents are agreed to feel comfortable in using Internet". 37.33% of respondents are strongly agreed that the statement of "knowledge of Internet is essential for students" Whereas 32.66% of respondents are disagreed regarding the statement of "feel overwhelmed using Internet in studies" and

Demograph (1	y of respondents n=150)	Counts	Percentage
Gender	Male	75	50
	Female	75	50
Age	<25	150	100
Colleges	SJMCASC	75	50
	GASC	75	50
Donartmont	Science (students)	75	50
Department	Arts (students)	75	50

Table 1: Demographic characteristics of respondents

Note: Number given in parenthesis represents the percentage SJMCASC- S.J.M. College of Arts and Science College GASC- Government Arts and Science College



Figure 1: Descriptive statistics in favor of usage of Internet

Table 2: Descriptive statistics in favor of usage of Internet (N=150)

Sources

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		1 08	2 07	3 02	4 02	5 30	1 12	2 10	3 03	4 24	5 26	1 20	2 17	3 05	4 52	5 56
	a	(10.66)	(9.33)	(2.66)	(37.33)	(40)	(16)	(13.33)	(4)	(32)	(34.66)	(13.33)	(11.33)	(3.33)	(34.66)	(37.33)
	q	08(10.66)	08(10.66)	01(1.33)	29(38.66)	30(40)	12(16)	15(20)	04(5.33)	25(33.33)	19(25.33)	20(13.33)	23(15.33)	05(3.33)	54(36)	49(32.66)
	J	05(6.66)	07(9.33)	0(0)	43(57.33)	24(32)	10(13.33)	15(20)	04(5.33)	33(44)	20(26.66)	15(10)	22(14.66)	4(2.66)	76(50.66)	44(29.33)
	q	07(9.33)	08(10.66)	02(2.66)	27(36)	27(36)	10(13.33)	13(17.33)	05(6.66)	29(38.66)	19(25.33)	17(11.33)	21(14)	07(4.66)	56(37.33)	46(30.66)
	е	03(4)	13(17.33	05(6.66)	31(41.33)	23(30.66)	5(6.66)	15(20)	10(13.33)	26(34.66)	28(37.33)	08(5.33)	28(18.66)	15(10)	57(38)	51(34)
	f	25(33.33)	26(34.66)	03(4)	12(16)	07(9.33)	22(29.33)	23(30.66)	05(6.66)	01(21.66)	10(13.33)	47(31.33)	49(32.66)	08(5.33)	28(18.66)	17(11.33)
	ав	03(4)	07(9.33)	02(2.66)	33(44)	30(40)	07(9.33)	15(20)	05(6.66)	28(37.33)	20(26.66)	13(8.66)	22(14.66)	08(5.33)	61(40.66)	50(33.33)
	Ч	05(6.66)	09(12)	03(4)	40(53.33)	18(24)	09(12)	15(20)	07(9.33)	30(40)	14(18.66)	14(9.33)	24(16)	10(6.66)	70(46.66)	32(21.33)
	·I	06(8)	10(13.33)	01(1.33)	33(44)	25(33.33)	10(13.33)	16(21.33)	03(4)	28(37.33)	18(24)	16(10.66)	26(17.33)	04(2.66)	61(40.66)	43(28.66)
	ĺ	02(2.66)	05(6.66)	02(2.66)	40(53.33)	21(28)	05(6.66)	08(10.66)	06(8)	40(53.33)	16(21.33)	07(4.66)	13(8.66)	08(5.33)	80(53.33)	37(24.66)

Note: Number given in parenthesis represents the percentage Total number is more than 100 percentage because multiple choice questions

"use Internet for learning fun" and also 31.33% of respondents are strongly disagreed the same. Only 10% of respondents are neutral with the statement of "enjoy Getting information more from written material than Internet". Study also shows the difference between Science and Arts students with respect to the uses of internet and it is evident from the table that 57.33% Science students are agreed that the statement of Internet is easier to use than library and 53.33% of respondents are agreed Table 3: Descriptive statistics in favor of usage of Internet (N=150)

S	ų	23(30.66) 07	24(32) 10(03(4) 0	13(17.33) 31(09(12) 26(24(32) 0	25(33.33) 12	05(6.66) 05	14(18.66) 30	8(10.66) 24
rrces	بر 	23(30.66)) 24(32)	03(4)) 13(17.33)) 09(12)	24(32)	25(33.33)) 05(6.66)) 14(18.66)) 8(10.66)
So	U	03(4)	13(17.3	07(9.33	29(38.6)	26(34.6)	05(6.66	15(20)	08(10.6	28(37.3	25(33.3:
	σ	08(10.66)	10(13.33)	03(4)	27(36)	24(32)	09(12)	11(14.66)	04(5.33)	29(38.66)	22(29.33)
	υ	13(17.33)	12(16)	1(1.33)	39(52)	24(32)	12(16)	11(14.66)	03(4)	37(49.33)	20(26.66)
	٩	11(14.66)	12(16)	02(2.66)	28(37.33)	24(32)	09(12)	11(14.66)	03(4)	26(34.66)	25(33.33)
	o	11(14.66)	08(10.66)	02(2.66)	29(38.66)	29(38.66)	09(12)	09(12)	03(4)	25(33.33)	27(36)
	ztnsbnoqzs99 (ZT=n) sl6M (ZT=n) sl6ms7							sm97	ъ		

Note: Number given in parenthesis represents the percentage

Total number is more than 100 percentage because multiple choice questions

1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree.

a-Knowledge of Internet is essential for students, b-Internet is Important like other research tools, c-Internet is easier to use than library, d-I find the Internet to be as informative as teachers, e-I enjoy Getting information more from written material than Internet, f-I feel overwhelmed using Internet in studies, g-I use Internet for learning fun, h-I find using the Internet as an integral part of the educational process, i-I access the Internet more at university than at home, j-I feel comfortable in using Internet.

with the statement of "feel comfortable in using Internet". Whereas 53.33% of Arts students are agreed with the statement of "feel comfortable in using Internet" and also 44% of Arts students are agreed with the statement of "Internet is easier to use than library".



Figure 2: Descriptive statistics against usage of Internet

Table 4:	Descriptive	statistics	against	usage	of	Internet	(N=150)
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					Sources			
Sints		а	b	С	d	е	f	g
lesponde								
Ľ	1	00/07 00)	00/10)	05(00.00)	10/1()	01/41.00)	10(17 00)	00/0((()
0		28(37.33)	09(12)	25(33.33)	12(16)	31(41.33)	13(17.33)	20(26.66)
5) inte	2	35(46.66)	27(36)	42(56)	20(26.66)	26(34.66)	17(22.66)	45(60)
ide 1de	3	04(5.33)	18(24)	04(5.33)	0(0)	0(0)	0(0)	0(0)
Str Str	4	06(8)	17(22.66)	03(4)	23(30.66)	12(16)	26(34.66)	07(9.33)
	5	02(2.66)	04(5.33)	0(0)	20(26.66)	03(4)	20(26.66)	03(4)
	1	23(30.66)	10(13.33)	20(26.66)	18(24)	18(24)	11(14.66)	20(26.66)
s 5)	2	30(40)	25(33.33)	34(45.33)	26(34.66)	27(36)	15(20)	32(42.66)
Art ide	3	05(6.66)	14(18.66)	08(10.66)	04(5.33)	04(5.33)	08(10.66)	04(5.33)
Stu /	4	12(16)	24(32)	10(13.33)	15(20)	16(21.33)	28(37.33)	13(17.33)
	5	05(8.88)	12(16)	03(4)	12(16)	09(12)	23(30.66)	06(8)
	1	51(34)	19(12.66)	45(30)	30(20)	49(32.66)	24(16)	40(26.66)
50)	2	65(43.33)	52(34.66)	76(50.66)	46(30.66)	53(35.33)	32(21.33)	77(51.33)
=15	3	09(6)	32(21.33)	12(8)	04(2.66)	04(2.66)	08(5.33)	04(2.66)
L n	4	18(12)	41(27.33)	13(8.66)	38(25.33)	28(18.66)	54(36)	20(13.33)
	5	07(4.66)	16(10.66)	03(2)	32(21.33)	12(8)	43(28.66)	09(6)

Note: Number given in parenthesis represents the percentage Total number is more than 100 percentage because multiple choice questions

Respondents		Sources							
		a	b	с	d	e	f	g	
	1	26 (34.66)	10 (13.33)	22 (29.33)	14 (18.66)	24 (32)	12 (16)	19 (25.33)	
Male	2	33 (44)	26 (34.66)	39(52)	24(32)	26 (34.66)	15 (20)	39 (52)	
(n=75)	3	04 (5.33)	13 (17.33)	05 (6.66)	01 (1.33)	1(1.33)	03 (4)	01 (1.33)	
	4	09 (12)	19 (25.33)	07 (9.33)	19 (25.33)	13 (17.33)	27 (36)	08 (10.66)	
	5	03 (4)	07 (9.33)	01 (1.33)	15 (20)	05 (6.66)	22 (29.33)	04 (5.33)	
	1	25 (33.33)	9 (12)	23 (30.66)	16 (21.33)	25 (33.33)	12 (16)	21 (28)	
Female (n=75)	2	32 (42.66)	23 (30.66)	37 (49.33)	22 (29.33)	27 (36)	17 (22.66)	38 (50.66)	
	3	05 (6.66)	15 (20)	07 (9.33)	03 (4)	03 (4)	05 (6.66)	03 (4)	
	4	09 (12)	20 (26.66)	006 (8)	20 (26.66)	11 (14.66)	26 (34.66)	12 (16)	
	5	04 (5.33)	08 (10.66)	02 (2.66)	16 (21.33)	07 (9.33)	21(28)	05 (6.66)	

Table 5: Descriptive statistics against usage of Internet (N=150)

Note: Number given in parenthesis represents the percentage

Total number is more than 100 percentage because multiple choice questions

1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree.

a-Internet contains useless information, b-Internet is difficult to use, c-I don't like using Internet for Important educational projects, d-I am different about using Internet for education, e-I have security concern about using Internet, f-I find Internet slow at home, g-Accessing, suffering and browsing the Internet confuses me.

Frequency Distribution with respect to 'Gender'

Table 3 shows the sex-wise frequency distribution with respect to students' attitude towards the uses of internet among the science & arts students. 56% of male respondents are agreed with the statement of "feel comfortable in using Internet", and 50.66% of female respondents are with the statement of "feel comfortable in using Internet". 32% of male

respondents disagreed and 33.33% of female respondents disagreed with the statement "feel overwhelmed using Internet in studies".

Only 9.33% of male respondents are neutral, where as 10.66% female respondents are neutral regarding the statement of "enjoy Getting information more from written material than Internet". Table 4 demonstrates that with respect to "Accessing, suffering and browsing the Internet confuses me", 51.33% of respondents are disagreed with the statement and also 50.66% of respondents are disagreed with the statement of "don't like using Internet for important educational projects". Whereas 36% of respondents are agreed and 28.66% of respondents are strongly agreed with statement of "find Internet slow at home". Only 21.33% of respondents are neutral regarding the statement of "different about using Internet for education".

In case of science students 56% of respondents are disagreed with the statement of "don't like using Internet for important educational projects". Whereas 45.33% of arts students with the statement of "don't like using Internet for important educational projects".

Frequency Distribution with respect to 'Gender'

Table 5 shows the sex-wise frequency distribution with respect to students' attitude towards the uses of internet among the science & arts students. Equal numbers of (52% each) of male respondents are disagreed with the statements of "don't like using Internet for important educational projects", and "Accessing, suffering and browsing the Internet confuses me". Whereas 50.66% of female respondents are disagreed regarding the statement of "Accessing, suffering and browsing the Internet confuses me". 36% of male respondents agreed and 34.66% of female respondents agreed with the statement of "find Internet slow at home."

Only 17.33% of male respondents are neutral, where as 20% female respondents are neutral regarding the statement of "Internet is difficult to use."

Recommendations

This research was conducted on the students' attitude toward Internet applications. The research objective is to identify factors influencing student Internet use. The study presents some significant recommendations for college or institutions regarding of planning, organizing and utilization of internet facilities and services for students in grand useful form. Some of the recommendations are as follows:

- This study is recommended that students should align their potential for significant and positive use of the Internet.
- Students must realize that the Internet is a medium.
- Students should not waste their time on useless activities.
- Basic Internet tools may be introduced to students in their early stages of education.
- The benefits of Internet should be disseminated to all students.
- Institutions should provide better infrastructure to facilitate students.
- Colleges or universities should organize courses that build up internal capacity of students require to use Internet in efficient and effective way.
- The courses organized by college or University should highlight the use of Internet research techniques and course materials should be situated on the Web to facilitate access by students.

Future Research

The present study directs future researcher to explore and address the safety concerns regarding using Internet. Some of the future research directions are as follows:

- The future researchers can find out safe and secure ways so that those who are not using internet can also use. Another important issue in this regard is privacy.
- The research has shown that privacy is a paramount concern for Internet users. The future researcher can further explore and deal with the privacy issue.
- The third and last direction for future research is to address misuse of Internet

by young students. It is very serious problem and affects both students and parents. Instead of stop using Internet it is the duty of the future researcher and scholars to find out safe and sound ways of using Internet.

Conclusion

The emergence of the internet, particularly the World Wide Web, as a new medium of information storage and delivery represents a revolution, which would have a lasting impact on the publishing and information delivery system in the 21st century. It is more near to user mind, and paves a bridge between the ocean of information and user needs. It is highly effective and efficient to provide instant and comprehensive access to users at their desktop irrespective of time and space. The Internet is relatively fast, it is accessible 24 hours a day, seven days a week and any one can use it from his own computer.

This research was conducted on the students' attitude toward Internet applications. The research objective is to identify factors influencing student Internet use. Information was gathered through the questionnaires on students using the Internet. The first section concludes that 50% of total respondents are male and 50% are female. It finds that the Internet is an essential knowledge for students and teachers. Students use the Internet primarily for educational and research purposes and benefits instead of playing a positive role and participation in society. However, it provides extensive information on the required assignments, and thus covers many dimensions' that meet educational needs. Students find the Internet more informative as compared to teachers. The majority of students feel comfortable using the Internet. Most respondents answered that the Internet provides useful information and half of those surveyed felt that Internet use is difficult in school. Above 50% of respondents responded that the Internet is easier to use than the library and is important for

educational projects and feel comfortable in using Internet. Respondents enjoy collecting more information than written material. Additionally, the results indicate that most respondents are satisfied that Internet access is more in college than at home and most of those participants said the Internet is slow at home. Respondents also expressed great confidence and satisfaction in using Internet for educational purposes.

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A Role of Libraries in 21st Century in India

Dinesh Kumar*, Arjun**, Purnima Chauhan***, Payare Lal****, Suresh Chand*****

Abstract

Library is a medium for the current exchange of ideas, not just for finished collected wisdom to be set down imperishably for posterity. It is way of talking to one another - important talking, but tentative talking nonetheless. Eventually, when the excitement is largely gone and the subject all wrapped up, then for the most part it will appear in books that are treatises.

Library is a service institution. Library services are one of the most widely used and accepted in the modern world. Academic community particularly in a university utilizes library services for research and teaching purposes. Academic work is supported by library. Therefore, library is rightly regarded as the heart of an academic institution.

Key Word: Higher Education; 21st Century in India; Libraries in India; Education in India.

Introduction

In human race and development of civilizations, Indian ancient cultural and educational tradition has a rich record in the history of civilization. From the very beginning, man has always been anguish to know about unknown objects (Sun, Moon, Sky, Stars, Planets, Air, Water, Atmosphere, Animal's Kingdom, Forestry Growth, Human Races, Basic Elements and All visible / invisible Atoms of the Universe etc.). In this regard to know the object's meanings, salient features and its usefulness for human race is called education.

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Education is one of the largest activities in the world. It is as important as any resource is for a nation's economic and industrial development because it is the key to human resource development. Through education we can achieve knowledge and information, which is power and this power, is very essential for the development of personality of individuals as well as the nations.

Historical perspective of education in India

Education in India has a long history and continuous tradition. In the past, education was restricted to Brahmins only. The young Brahmins were not only prepared for the education, he was trained for his practical duties in life as a priest and teacher but also was enabled to achieve self-realization and spiritual emancipation. Education is to guide man from falsehood to truth, from darkness to light and from death to immortality.

Between 1882 and 1902 there was rapid growth in educational efforts. By 1902 there were 145 colleges. Though the progress of Women's education was slow, at the initial stages it gained sufficient momentum to

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demand separate Schools and Colleges for Women and different curricula were developed for boys and girls. In 1937 Mahatma Gandhi proposed a new system of Education in order to create a new social order during the struggle for independence.

After independence the Government of India formed Indian Education Commission (1964-66) under the Chairmanship of Dr. D. S. Kothari, to examine the entire education system in India, in need for national system of education along with its other recommendation.

In the meaning of education, "It is a total development of the personality. Education consists of all these experiences that affect the individual from birth till death. Thus, education is that process by which an individual freely develops his self according to his nature in a free and uncontrolled environment. Education is a life long process of growth and development. Education is essentially a process of growth and development which a goes on throughout the whole life."

"The real concept of education is a synthesis of a process will develop the child to the full according to his inherent tendencies with emphasis on concurrent development of society, of which he is an integral part. Such an education will develop both child and the society to higher and higher position of glory and cultural eminence."

Distribution of knowledge is found in a three-tier system of Muktabs and Madrasas, mosques and monasteries and private houses denoting three forms of education viz.

- Primary education imparting elementary knowledge. Primary education aimed at teaching, reading and writing;
- Secondary education as in grammar schools, high schools and private academies;
- iii) University or higher education is undergraduate and post-graduate

courses. Higher education comprised teaching in religion, philosophy and medicine etc.

Purpose of Education

The purpose of education is essentially that of effecting desirable changes in individuals who in turn change different aspects of life of the society that is social, economic, political, technological or cultural in nature. Education directs and changes the people and enables them to change the society in the relevant ways so as to conquer its environment for the benefit of mankind. It is to bring out what is the best in a man, to develop his personality, to train him to be useful to the society so as to contribute to culture, social and economic its development, and to make him a better person to enable him to contribute in shaping the world.

The basic task of education is to promote the powers of mind, acquisition of special skills and the advancement of knowledge but above all to generate in young generation a sense of purposefulness and maximum dedication, confidence, in themselves and faith in the country's future. Human mind has wonderful resources of energy, but to bring out the best results from it, it has got to be tapped developed and canalized with the help of education.

Education without library is like a body without soul, a vehicle without an engine and a building merely a collection of bricks without cement. Education and library service cannot live apart from the other.

Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. The purpose of all education is to provide a coherent picture of universe and potentials in the most desirable form to young people in order to take up positions in the real life or an integrated way of life. Since education is both training of minds and training of souls, it should give both knowledge and wisdom.

Higher Education

The higher education is the basic need of the society for individual development. Education is to equalized opportunities enabling the backward and under privileged classes and individuals to use education as a lever for the improvement of their condition. Every society that values, social justice and is anxious to improve a layman and cultivate all available talent must ensure progressive equality of opportunity to all sections of the society.

"After independence the first action of a real significance to be taken by the Government of India in the field of education was the appointment of the University Commission in 1948 under the chairmanship of Dr. Sarvapali Radhakrishnan, a distinguished scholar and former Vice-Chancellor of Banaras University, who rose to become the Second President of India." It is on his name that the commission is known as *Radhakrishnan Commission*.

The report of the commission is a document of great importance as it has guided the development of the university education in India since independence. The commission made a thorough study of the problems of higher education in India. The higher education is basically the University Education. After independence, the main emphasis was on the consolidation and expansion of facilities in the existing institutions. The Revised National Policy on Education, 1992 in the field of higher education provided the following facilities:

- i) Redesigning the college education.
- ii) Planning and co-ordination.
- iii) Regulated admission.
- iv) Transformation of teaching methods.
- v) Open University and Distance Learning.

Management of Higher Education

The Indian higher education system is one of the largest such systems in the World. It is estimated that during the X Five Year Plan period (2002-07), there will be a tremendous pressure of numbers on this system and a large number of additional students will be knocking at the doors of higher education institutions in the country. There are also new challenges of management and regulation being faced by these institutions, which require serious attention, both at the institutions in the public sector and also those in the private sector now growing at a fast pace. As a result, the old structures of management established in pre-independent India and working during most of the twentieth century are now required to undergo drastic changes. Besides, the demands of the society for equity and accommodation cannot be neglected any more.

The following five sub-sections cover important aspects of the deliberations, recommendations and action plans of UGC Golden Jubilee Seminars organized at different Universities in the country:

- Public/Private Partnership in Higher Education, at University of Calicut, Kozhikode, Kerala;
- Governance of higher Education, at University of Jammu, Jammu, J&K;
- Access and Equity in Higher Education, at G.C.D .University, Bilaspur, Chattisgarh;
- Export of Higher Education, at J.N.V. University, Jodhpur, Rajasthan and
- Policy Planning for Higher Education under WTO and GATT regimes at North Bengal University, Darjeeling, West-Bengal.
- Economics of Higher Education, at N. E. Hill University, Shillong, Meghalaya.

Concept of university

In the modern era, the concept of higher education and university education clearly introduced in 16th century but in the Indian civilization we also read about *Textla* (Takshila), *Maghda*, and *Patliputra* universities. In India, the British established the first university in Calcutta in 1857, which is rich in its collection. After that Bombay, Madras, Aligarh universities were established. University is primarily a place of teaching universal knowledge.

University is, "an autonomous body giving instructions and degrees for various courses recognized by the other such bodies of the world and area."

According to the 'International Encyclopedia of Social Sciences, "Universities are organizations engaged in the advancement of knowledge, they teach, train, and examine students in a variety of scholarly, scientific and professional fields. Intellectual pursuits in universities define the highest prevailing levels of competence in these fields. The universities confer degrees and provide opportunities both for members of their teaching staff and for some of their students to do original research."

Aims, objectives & functions of university

The University is an important agency for imparting higher education. The traditional functions of a university are mainly acquisition, preservation, dissemination and extension of the frontiers of knowledge, the balanced education of individuals and the training of personnel for all walks of life. The Education Commission (1964-65) was of the opinion that universities are undergoing profound changes in their scope, functions and organizations are in a process of rapid evolution. In addition to the broad aims, they share in common with all the universities. Indian universities will have to shoulder special responsibilities in the present state of our social and educational development. They are:

 Conscience of the Nation: Universities must learn to serve as the conscience of the nation; and from this point of view, they should encourage individuality, variety and dissent, within a climate of tolerance.

- ii) Programme of Adult Education: They should develop programme of adult education in a big way and to that end, evolve a wide spread network of parttime and correspondence courses.
- iii) Qualitative Self-Improvement: They should assist the schools in their attempts at qualitative self-improvement.

After great deliberations, "the Commission formulated the following objectives for the universities to strive for:

- i) The aim of university should be to promote intellectual adventures.
- ii) Universities should be the organs of civilization. They should train the intellectual pioneers of civilization.
- iii) The content of education must accept the best of what modern advancement has to offer, but without neglecting our cultural heritage from the past.
- iv) One of the main functions of the universities is to bring about the spiritual development of the students.
- v) Literature deepens and enlarges the human feelings. Hence universities should give the most important place to the mother tongues in the general education.

Development of university education

There are so many commissions and committees consisted for the development of university education.

University Education Commission (1948-49) was appointed under the chairmanship of *Dr. Sarvapali Radhakrishnan.* "The report of the Commission is a document of great importance as it has guided the development of University Education in India since Independence."

Secondary Education Commission (1952-53), "Recommendations of the Commission occupy a place of paramount importance in the history of secondary education of free India, as they have great impact upon the change in nature of education. The Commission is indeed a big kind mark in the history of secondary education in free India."

"Indian Education Commission (1964-66) popularly known as Kothari Commission was appointed by the Government of India under the headship of Dr. D.S. Kothari dated July 14, 1964. The Commission was appointed to advise government on the national pattern of education and on the general principles and policies for the development of education at all stages and in all aspects."

National Policy on Education (1986) is popularly known as New Education Policy. "The new policy on education was introduced with the following features:

- Recognition of new technology in education, to the required extent.
- A culturing role of education was emphasized and highlighted through media.
- Policy also asserts the need for examination reforms. This reason alone is sufficient for exploring other areas of education and evaluation."

Library

Library is a service institution. Library services are one of the most widely used and accepted in the modern world. Academic community particularly in a university utilizes library services for research and teaching purposes. Academic work is supported by library. Therefore, library is rightly regarded as the heart of an academic institution.

Thus, we can say the concept of a library is an institution where a reader can consult and acquire desired information under single roof. Therefore the universities are places, which are wholly responsible for higher education and knowledge for the development of a human personality and development of nations. A university caters to the needs of higher learning and research.

Role of library in higher education

The role of the library can be defined within the framework of the university's mission and a library development programme can be undertaken accordingly.

In the words of Dr. S. R. Ranganathan, "Libraries are not more store houses, they are rich springs from which knowledge flows out to irrigate field of education and culture."

The fundamental role of the university library is educational. It should not be operated as a mere storehouse of books attached to a reading room, but as a dynamic instrument of education. It is emphasized in different reports brought out by various library and educational commissions in India and abroad. A university library is established with the intention of aiding in successful accomplishment of the objectives such as teaching, research, publication programmes, etc. In modern education system, the university library has important responsibilities.

Dr. S. R. Ranganathan headed the report of the Library Committee of University Grants Commission in 1957 that dealt with in detail the role of the university library in academic development especially in the field of higher education.

The above observations can be summarizing in the words as:

- i) The library is the heart of education;
- Methods & fashion in education change from generation to generation, but each generation uses the library as a means of realizing its items; hence the library remains the great conservator of learning;
- iii) A quality education is impossible without a quality library;
- iv) A library is vital organ for proper exploitation of our intellectual resources;

 v) A library is essential for maintenance of free access to ideas, and to the functioning of the untrammeled mind.

The Kothari Commission report (1964-66) on education to role of libraries in higher education is reflected in these words, no new university, college or department should be setup without taking into account its library needs in terms of staff, books, journals, space etc. "Nothing could be more damaging to a growing department than to neglect its library or to give it a low priority. On the contrary, the library should be an important centre of attraction on the college or university campus."

The importance of the library's role in imparting and disseminating knowledge has, of late, been enhanced by developments in continuing education, distance education and the Open University system. The university / college libraries have assumed even greater importance in a country like India where the majority of students cannot purchase the most essential books.

Aims, objectives of university library

A library is considered as the 'heart' of a university and it is the centre of learning for higher education. Each university has a central library attached to it and may have many constituent libraries attached to its different teaching departments or the constituent colleges. The aims and objectives of a library are as below:

- Education must facilitate the process of change that is essential for a developing and growing society.
- To provide the promote facilities for advanced study and research in education.
- To conduct research in several branches of education, publish the result of such research and act as an educational information dissemination centre.
- To prepare educational leaders in teaching, research and administration.

• To stimulate educational research of high quality, both fundamental and applied, required for the improvement of education.

The basic characteristic of a good library is its complete identification with its institution. The measure of its excellence is the extent to which its resources and services support the institution's academic pursuits. The university library provide reading material and other graphics records to help the university to engage itself earnestly and vigorously in its pursuits of intellectual attainments which is to assemble, preserve, transmit and illuminate knowledge of the wisdom and past.

Conclusion

Information environments are very much alive including libraries in higher education and other research environments. For the most part...we can't make one decision for the future but individual decisions need to be made and the common decisions need to be identified.

We need to:....

- focus on access and speed
- partner for access and speed
- proactively identify and design partnerships and cooperation
- increase our "market share" for higher education constituents
- seek ways to positions ourselves within our institutions to be "sitting at the decision-making table"
- link ourselves to higher education programs/services and outcomes
- focus on training (change, competencies particularly technology)

Wehave.....

 unique materials/Unique formats of materials

- unique expertise in creating structures for organizing and accessing materials
- unique curriculum to use in teaching our constituents on how to deal with 21st century opportunities and challenges
- processes to enable our constituents to create content
- a structure to support and possibly store content acquired and/or created
- information and research "about" information and research"

We don't have.....

- a place at the "decision making table"
- a leadership role to play in the academy
- all of the ongoing dollars needed for supporting our constituents
- a market presence or niche where others might/would "turn to us first".

For any library to succeed in implementing knowledge management will require a strong leadership and vision from the top administration, which can influence the organization's knowledge sharing efforts in a positive way. As libraries enter the knowledge age of the 21st century, we should not take a back seat in the development of knowledge management. Instead, armed with our professional knowledge and experiences, we should be in the driver's seat.

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Indian Universities on Postage Stamps: A Survey through Philatelic Websites

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Abstract

'Postage Stamps', basically as a token for payment of postal taxes are now being recognized as an information source and historical documents in recording national achievements that too visually with the four core elements viz. *denomination, country name, graphical design, and the textual element*. They are valuable means of communication; easily available anywhere to anybody. Realizing them as source of extra revenue, commemorative stamps are brought out over the time. Their role in information dissemination is prominent just like that of universities as information / knowledge disseminator and collaborator as well. Universities on stamps are relatively rare compared to other topics, issued irregularly, and in many years even decades entirely remain absent from the philatelic repertoire. As on today India has more than 430 university level institutions including Deemed Universities, Agricultural Universities; and includes 162 traditional universities with 41 Central Universities under the purview of the Ministry of Human Resource Development, Government of India. This study attempts to get acquainted with the Indian Universities on Postage Stamps-the 14 traditional universities that appeared on 15 Indian Postage Stamp. Here listing of such stamps in chronological order along with analysis and comments is presented.

Keywords: Stamps; Postage Stamps; Philately; Digital Philately; WADP Numbering System; WNS; Stamps on Indian Universities.

Introduction

Postage Stamps - the small pieces of colorful paper issued by the 'Government' of a Nation or Country, depicts national and international achievements; commemorate institutions and personalities of national and international importance; are used to announce national / international events. Though, are basically used as a token for payment of postal taxes, they carry mail and message both1 due to their illustrated nature. The little piece of paper is actually an ambassador representing its

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country through the people, places, and history depicted on it. They are valuable means of communication.

The first stamp was printed in Britain on May 06, 1840 and was used for mail; subsequently authorities could disseminate message (information) through stamps as a medium that further increasingly realized them as source of extra revenue thus first commemorative stamp was brought out in 18712. The introduction of postage stamps meant that the receipt of letters was now free of charge, whereas before stamps it was normal for postal charges to be paid by the recipient of a letter.

Definitional Analysis

A stamp is a distinctive mark or impression made upon an object, a device used to make it, or a distinctive sticker applied to an object. It may also include other vouchers or records with similar purposes [3].

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A postage stamp is a small piece of paper that is purchased and displayed on an item of mail as evidence of payment of postage [4].

Postage stamp is a printed paper label with a gummed back for attaching to mail as an official indication that the required postage has been paid [5].

Philately is the study of stamps and postal history and other related items. Philately involves more than just stamp collecting, which does not necessarily involve the study of stamps [6].

University is an institution of higher education and research, which grants academic degrees in a variety of subjects; that provides both undergraduate and postgraduate education [7].

University is an institution for higher learning with teaching and research facilities constituting a graduate school and professional schools that award master's degrees and doctorates and an undergraduate division that awards bachelor's degrees [8].

Philately

Collecting is a natural need of human beings. Originally it was required simply to survive but with development of civilization and with growing prosperity, it gradually changed to the acquisition and interest in beautiful and rare objects, both from natural world and manmade [2].

Stamp collecting become popular shortly after the issue of first stamp in 1840. The word "philately" is the English version of the French word "philatélie", coined by Georges Herpin in 1864. He took the Greek root word phil or philo, meaning an attraction or affinity for something, and ateleia, meaning "exempt from duties and taxes" to form "philatelie". The alternative terms "timbromania", "timbrophily" and "timbrology" gradually fell out of use as philately gained acceptance during the 1860s [6].

Philately - the study of stamps and its collection is considered as king of hobbies. It is equally right to say philately is a hobby of

king due to its costly nature and huge investment. Philately is perhaps the most popular pastime at least. Today such a large volume of stamps are issued by the world wide postal authorities that many prefer to concentrate on a particular theme. As library associates with collection; in philately also philatelists himself like a librarian is responsible for the collection development and collection management.

Philatelist categorizes stamps according to certain criteria and classify according to their visual motifs and themes e.g., technology, economy, education, science, culture etc. [9].

LIS Dimension:Biblio Philately

Even though Libraries and librarians are not a common theme on postage stamps and Library stamps continue to be relatively scarce[10]; in 1977, Leona Rostenberg, a wellknown antiquarian from New York published her series of articles entitled Bibliately in The American Philatelist magazine. The term Bibliately was derived from two words: bibliography and philately. The articles contain the history of a book depicted on postage stamps, beginning with the origins of writing, even along with mural drawings, through manuscripts, first printings and printers, and history of paper to literature and its authors, illustrations, press and book fairs. George Eberhart, in 1982 used for the first time the word Bibliophilately in his article published in American Libraries magazine. He defines it as derived from the Greek bibliothek (library) and philately. Bibliophilately, then in 2000, was intended to be understood as a collection including philatelic material, thematically connected with books and education[11]. Colleges and universities is one of the essential sub-themes of bibliophilately.

Review of literature

Stamps as an Information Source

Like any other non-book source of information such as banknotes, coins, and maps; stamps also illustrates the social, commercial, political, cultural, historical, and artistic aspects of a society in their own unique style. They use short and abstract text, color graphics and symbols on a limited surface area. Its content is the key attribute that differentiates stamp from other non-book material. For this unique attribute, the stamp can be deemed both as a communication tool and a work of art [12].

Although, stamps are largely regarded as collection materials, they are also being a source for information. Additionally, they can be regarded as an information-recording medium; and provide knowledge about the past and present efforts of a nation in variety of fields like social science, culture, politics, arts, education, tourism, sports, and economics etc.

Visual Elements of Stamp

Vignette- the central main image, Frameoutside image of a stamp, Denominationvalue of a stamp, Country of Origin, Marginunprinted area around a stamp, Border Line-Margin and frame separator and Perforationsholes on the edge of a stamp are the main features on stamp. Moreover, stamps may also contain some sort of unique and non-standard concealed insignia; though all of them may not be present on some stamps.

However, stamp necessarily bears certain visual elements. The four core elements include denomination, country name, graphical design, and the textual elements [12].

Denomination

is located at the corner of the stamp and shown in figures/ Arabic numbers. Still, most important elements, the denomination shows the commercial value of the stamp.

Country Name

The 'first stamp' carried no country name; this led to some complications, Univeral Postal Union-UPU acted to include the country name of the issuing country on all stamps to be printed. All UPU member countries/ nations are required to include their names on stamps they issue except United Kingdom.

Graphical Design

The graphical design along with drawings, shapes, symbols, insignia, and numbers makes up the design.

Textual element

is included to elucidate the stamp theme and enhance its communication as well as to display the name of the issuing country.

In addition to these required elements, invisible insignia or symbols, Watermarks or holograms may be present to prevent counterfeits.

Denomination on a stamp shown in numbers and/or letters may also give some information on the economy of the issuing nation. Stamp prices can change as the currency of the issuing nation changes, e.g. Old *Ana* system to new *Paisa* system in India. That marked the start of use of the new currency and stamps were reprinted according to their new value.

Country names are the most important source for information on stamps. They give details on the country, region, state, city, or time period the stamps relate to. E.g. Turkish stamps since 1863 carried different textual elements based on the specific period they were issued in. They were printed in Ottoman Turkish using Arabic script during 1863–1928 and from 1928 onward they were issued in Turkish using the New Turkish Alphabet based on the Latin script. On Indian stamps one can see, Indian Postage, Republic India, India and *Bharat in Devnagari* Script.

Graphical design on a stamp comes in four main styles. The first one is the portrait/bust illustration of the Statesmen, Scientists, and other leading individuals usually from the nation. For example, British stamps during 1840–1900 showed a portrait of Queen Victoria The second style is to use insignia comprised of flags, national symbols, the post horn, and other figures. The third is the ornament and arrangement framing the denomination. The fourth style is to illustrate anniversaries, important meetings, sports events, artworks, important days, social events, and institutions. Graphical design elements on a stamp helps to provide information on its purpose, the key points it highlights, the issue the stamps is dealing with and its meaning to the community, and the message it intends to communicate. Various materials coming in a wide variety of specifications can be used to this end.

Textual elements are included almost in every graphical design. Their main use is to elucidate the stamp theme and enhance its communication as well as to display the name of the issuing country. Textual elements include other components that are essential to be visible on a stamp. This includes the theme or purpose, booklet serial, and place of issue, names of the individuals, organizations or events, national mottos, and name of the stamp designer may to be found on a stamp.

Themes illustrated on stamps draws public attention that include Olympic Games, Drug, Alcohol Or Tobacco Abuse, National Days, and public awareness for certain Diseases, Bilateral Agreements, Traffic Regulations, Libraries and other Institutions, Birth Or Death Anniversaries, Institutional Services, and significant Technological Developments. Stamps are considered an important source for wartime propaganda, creation of public awareness for serious diseases, promotion of artwork, fund raising for organizations (AIDS stamps), and introduction of national culture. Thus they function both as an information source and a communication tool.

Postage Stamps as Information Disseminator

"All science is either physics or stamp collecting" Lord Rutherford quotes [13] at Manchester in 1962; stamp records historical facts like commemoration of events, honors individuals, achievements and institutes. They record sometime obscure historical facts [14]. The records on these postal issues can be useful in overcoming the national imbalance. The history of a country thus can be traced with the readily available stamps. Stamps are often over viewed and red rarely, rather exceptionally referred to organize knowledge; still are now recognized worldwide for their reference value. An article, in the Journal of Recreational Mathematics [15] predicts possible use of these stamps as a demonstration tool for carrying out science communication.

The illustration on stamps triggers joy of understanding and as it is strange to say a deep understanding can be shared by all humans without depending on revelation. The name Stamp itself has stamping impression on the society and is easily available anywhere to anybody, thus effective in disseminating the information on them.

Both, motifs and themes expressed on stamps, visually reveal an ideological and nationalistic intent; consequently, stamps are capable of relating struggles and negotiations involving public consensus or the dissemination of a particular political perspective.

Commemorative stamps printed in limited quantities are available for a short period of time, and play an important role in disseminating information about important people, places, events or subjects as depicted on it. Definitive stamps often reprinted to meet continual use by the public paying a standard rate or value to make up a specific need. Special purpose or service stamps issued for a particular need and oftentimes an exclusive use. These include: airmail stamps, postage due stamps (non-payment of fees), semi-postal stamps (surtaxed stamps for a charitable cause), special delivery stamps, and alike. Revenue stamps- non-postage receipts representing a tax paid for a variety of needs.

Authorities could disseminate message (information) through commemorative stamps as a medium that further realized them as source of extra revenue.

To generate public awareness on different issues/themes, we observe number of day/
year celebration. This 'Day/Year Syndrome' is mainly characterized by multi-media (stamp is one of them) publicity. Messages are communicated and variety of activities like conferences, seminars, symposia, exhibitions, popular lectures and meetings on the themes are organized. These events are more popular in the educational institutions like colleges and universities.

Universities: The Major Bodies in Information Dissemination

The word university is derived from the Latin universitas magistrorum et scholarium, roughly meaning "community of teachers and scholars." The university plays an important role in the dissemination of knowledge. Universities serve as both disseminators of information and as collaborators in the process of learning and teaching.

The regional universities play major roles in the development process. They produce research aligned with the needs of the region and relevant to the local economy. The university utilizes its heritage as a collaborator to transfer regional study results and innovative research from the university to the community. The transfer takes through one of the three forms: teaching students, sparking business ventures, and conducting policyrelevant research. The key issues involves disseminating the information to all of the parties at interest scientists, politicians, organizational leaders and potential entrepreneurs especially, along with getting that information acted upon in a coordinated way [16].

The production of new knowledge through the practices of research and scholarship lies at the heart of the university's mission. Yet without effective and ongoing dissemination of knowledge, the efforts of researchers and scholars will be wasted. Dissemination is thus a core responsibility of the university.

Universities in India

Indian universities are bought together under a common platform of The Association

of Indian Universities (AIU), with the view of promoting university activities, especially by way of sharing information and co-operation in the field of education, culture, sports and allied areas [17]. The AIU membership includes traditional universities, open universities, professional universities, Institutes of National Importance and deemed-to-be universities.

During 2008, India had 413 universities – 251 of which are state universities, 24 Central universities, 100 deemed universities, and five are institutions established under State Legislation and 33 institutes of national importance established by Act of Parliament. In addition, there are 20,677 colleges including 2,166 that are women-only colleges [18]. Today more than 430 universities of different categories, along with their colleges cater to the study and research needs in India [19]. Of these 162 are traditional universities. Currently 41 Central Universities works under the purview of the Ministry of

Human Resources Development, Government of India [20].

Objective of the study

The study focuses on detailed analysis of Indian stamps issued on traditional universities since its independence. With the main focus of checking Indian universities on Indian postage stamps, the specific objectives are:

- To check potential of Indian Stamps in recording National History.
- To review stamp as an information source.
- To review stamp's role in information dissemination.
- To find reasons in depicting universities on stamps by the postal authorities.
- To analyze Indian postage stamps depicting traditional Indian Universities.

The study will be helpful in creating the awareness about the aesthetic values especially the communicative value of stamp and useful in recognizing the importance of stamp as an information source/disseminator and communication tool.

Methodology and scope of the study

Though philately is associated with many other postal stationeries and items, the present work is confined to the *philately with postage stamps* and is limited to study of the Indian postage stamps depicting Indian universities on them. The study focuses on the current status based on the online information retrieved freely.

For the present study, 'descriptive' type of research methodology is used, with 'survey' as the research technique. A survey of selective, existing and accessible websites and databases related to philately is carried out followed by detailed analysis and interpretation of facts observed.

Joseph Luft's Philatelic Resources [21] provides more than 4000 links for various websites. *The WNS website* and its database [22], as a *reference tool and a control;* is one of the tools the Universal Postal Union - UPU

Table 1: Year wise registration of
stamps- World Status

Year	Number of Stamps Registered in WNS Database	Percentage %
2002	5548	11.5
2003	5116	10.6
2004	5504	11.4
2005	5413	11.2
2006	5903	12.3
2007	6282	13
2008	5811	12.1
2009	5635	11.7
2010	2967	6.2
Total	48179	100

has introduced, helping the Posts and the Philatelic venture as a whole. The other resources providing information with complete reference and an online catalog on Indian stamps issued from its independence, viz. 'India Stamps From 1947 To 2010:India Year wise Stamps' [23] and 'India Picks' [24], were used. The data for this paper have been collected through the search facility of the philatelic database accessed during January 2011.The paper is largely based on review of literature, both online and print.

Observations, analysis and discussions

The WADP Numbering System (WNS) - the stamp-identification system conceived, developed and established jointly by the Universal Postal Union (UPU) and the World Association for the Development of Philately (WADP), is aimed to create a database of authentic postage stamps issued on or after 1 January 2002 by the UPU member countries and territories. The WNS Database yields a treasure trove of information and images regarding stamps [25] issued by 191 UPU

Table 2. Year wise registration of
stamps- Indian Status

Year	Number of Stamps Registered in WNS Database	Percentage %
2002	54	9.8
2003	71	12.8
2004	55	9.9
2005	51	9.2
2006	64	11.5
2007	72	13
2008	79	14.3
2009	108	19.5
	Awaiting	
2010	stamps for	_
	registration	
Total	554	100

	Number of Stamps	Percentage	
Theme	Registered in WNS	0/0	
	Database		
Agriculture and Food	8	1.4	
Architecture	54	9.8	
Astronomy and Space	5	0.9	
Aviation	16	2.9	
Circus	0	0	
Economy and Industry	32	5.8	
Education	26	4.7	
Energy	9	1.6	
Engineering	6	1.1	
Environment & Conservation	14	2.5	
EUROPA	0	0	
Exhibitions, fairs and carnivals	8	1.4	
Explorers & Navigation	1	0.2	
Famous people	17	3.1	
Fauna	48	8.7	
Fine arts	18	3.3	
Flora	15	2.7	
Folklore & mythology	0	0	
Games & toys	1	0.2	
Geography & Metereology	14	2.5	
History	21	3.8	
Holy days & celebrations	12	2.2	
International Organizations	2	0.4	
Literature, Press & Comics	54	9.8	
Mankind	34	6.1	
Medicine	11	2	
Meteorology	0	0	
Military	30	5.4	
Mineralogy & Geology	7	1.3	
Music & Dance	19	3.4	
National symbols	3	0.5	
Nobel prize winners	0	0	
Olympic Games	4	0.7	
Politics & Government	79	14.3	
Post & Philately	15	2.7	
PUASP	0	0	
Religions & Beliefs	39	7	
Royalty & Monarchies	4	0.7	
Science & Technology	17	3.1	
Scouting	1	0.2	
Sport	12	2.2	
Telecommunications	1	0.2	
Theatre & Cinema	22	4	
Tourism	0	0	
Transportation (rail)	8	1.4	
Transportation (road)	0	0	
Transportation (ships & navigation)	9	1.6	
United Nations	1	0.2	
Total 48 Themes			

Table 3: Theme wise Registration of stamps for India

member countries or territories [26]. Since its beginning till date, the Database has more than 48 thousand entries.

Year wise Analysis - Worldwide Status in WNS Database

Table 1 represents the year wise registered stamps in the WNS database for period of nine years from 2002 to 2010. Initiating with 5548 stamps by 141 countries, the database has reached to handsome figure of 48159 at the end of 2010 with average registration of 5351 stamps per year. Year 2007 had maximum contribution of 13% (6282) while 2010 had minimum of 6.2% (2967) may be due to 'Awaiting stamps for registration' from many countries.

Table 2 details the year wise registration of 554 stamps for India, showing maximum registration of 108 (19.5%) stamps for 2009 and minimum 51 (9.2%) for 2005 with average registration of 69 per year up to 2009; while it is 'Awaiting stamps for registration' for 2010 even after a lapse of a month after end of the year.

Table 4: Top Ten Themes Contribution toIndian share in WNS Database

	Them e	Number of Stamps Registered in WNS	Percentage %
1.	Politics &	Dutuouse	
	Government	79	14.3
2.	Architecture	54	9.8
3.	Literature, Press &	54	9.8
	Comics	04	2.0
4.	Fauna	48	8.7
5.	Religions & Beliefs	39	7
6.	Mankind	34	6.1
7.	Economy and	32	5.8
	Industry	02	0.0
8.	Military	30	5.4
9.	Education	26	4.7
10.	Theatre & Cinema	22	4

Theme wise Analysis on Indian Status

Theme wise Indian status is presented in Table 3 for registration of stamps in the WNS database with all 48 available themes along with respective share in percentage; listed alphabetically. The theme wise numbers totals to 697 against 554 entries registered for India, clearly meaning some stamps are catalogued with multiple themes. Eight themes do not have non zero entries.

First Ten ranks of themes for Indian share are evident from the Table 4. 'Politics & Government' tops with 79 stamps sharing 14.3% followed by 'Architecture' and 'Literature, Press & Comics' both contributing 9.8% (54). Nineth is 'Education' 4.7 percent and 'Theatre & Cinema' with 22 entries stands tenth in the list.

Stamps issued by Government of a country are now being recognized as an information source and historical document in recording

Table 5: Indian Stamps on Indian universities

S.N.	University	Year of Establishment	Year of Issues
1.	Bombay University	1857	1957
2.	Calcutta University	1857	1957
3	Madras University	1857	1957, 2006
4.	Osmania University	1919	1969
5.	Jamia Milia Islamia*	1920	1970
6.	Kashi Vidyapith University	1921	1971
7.	Viswabharati University*	1921	1971
8.	Aligarh Muslim University*	1875	1973
9.	S.N.D.T. Women's University	1916	1976
10.	Allahabad University*	1887	1987
11.	Panjab University*	1947	1989
12.	Benaras Hindu University*	1915	1990
13.	University Of Roorkee	1947	1997
14.	Jadavpur University	1952	2005

*Central Universities

national achievements that too visually. Despite the merits and achievements of Universities in academic field over the years, as well as the role of stamps in displaying national achievements and culture, it is very surprising to discover a lack of University theme on postage stamps. They are a kind of rara avis in the philatelic world, which is supersaturated by millions of stamps depicting hundreds of topics – royalty, other government leaders, well-known personalities, national symbols, flora and fauna, and sports, to name a few.

Analysis for Universities on Indian Stamps

The literature survey shows that there is no detailed study carried on Universities on Indian Postage Stamps. Out of thousands stamps issued by India after independence; only a few number just countable on fingers

Table 6: Indian universitiescommemoration on stamps

S.N.	Type of commemoration	Number of Universities
1.	150 th Anniversary	01
2.	Centenary Celebration	04
3.	75th Anniversary	01
4.	60th Anniversary	01
5.	50th Anniversary	05

have been issued stamps with noted universities and are not with the frequency of other topics for their philatelic repertoire.

The themes 'Education' have three sub themes namely *Schools*, *Teachers and Universities*. The WNS database provides information from 2002, thus out of 554 total registration, search for university stamps in the database with Indian issues shows only two useful entries while other resources23,24, provides information with complete reference and an online catalog on Indian stamps issued from its independence.

Table 5 below presents the universities that have appeared on postage stamps, issued by India after independence with date where they appeared for.

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After independence of country, India Issued three stamps in 1957 to mark the Centenary of Bombay University, Calcutta University, and Madras University; Stamps are issued to mark the 50th Anniversaries of Jamia Milia Islamia, (1970) Osmania University (1969), Kashi Vidyapith University (1971) and Viswabharati University & Rabindranath Tagore (1971);On 98th anniversary Aligarh Muslim University & Syed Ahmed Khan, (1973); Stamp on S.N.D.T. Womens' University, Bombay (1976) marked the 60th Anniversary; To mark the Centenary of Allahabad University (1987), Panjab University, Chandigarh (Est. 1947) Issued in 1989; while to mark the 75th Anniversary of Benaras Hindu University - the first central university of India & Madan Mohan Malaviya stamp is issued in 1990. University of

Roorkee (1997) now holding status of IIT and Jadhavpur University got stamped in 2005 for its 53rd anniversary; while Madras University is the only university to have stamp for second time in 2006.

It took almost 10 years from independence to issue first stamp commemorating any university; however, it came out with three stamps on three universities simultaneously in 1957; then it took about twelve years (1969)

Table 7: Depiction on the universitystamps

S.N.	University	Commemoration	Depiction
1.	Bombay University	Centenary	Building
2.	Calcutta University	Centenary	Building
3	Madras University	Centenary	Building
4.	Osmania University	50th Anniversary	Building
5.	Jamia Milia Islamia	50th Anniversary	Building
6.	Kashi Vidyapith University	50th Anniversary	Building
7.	Viswabharati University	50th Anniversary	Building & Founder
8.	Aligarh Muslim University	98th Anniversary	Building & Founder
9.	S.N.D.T. Women's' University	60th Anniversary	Building
10.	Allahabad University	Centenary	Building
11.	Panjab University	42 nd Anniversary	Building
12.	Benaras Hindu University	75th Anniversary	Building & Founder
13.	University Of Roorkee	50th Anniversary	Building
14.	Jadavpur University	53 rd Anniversary	Building& Edu. tools
15.	Madras University	150th Anniversary	Building

for second when it issued one stamp for a university, thereafter it became quite regular (still not every year) for issue of stamps with theme on university with issues in 1970, 1971, 1973, 1976, 1987, 1989, 1990, 1997, 2005 and 2006 one each except two in 1971. Thus after 50 years of independence when nation celebrated its 50 year achievements had commemorated just more than a dozen universities.

As on today, the educational services of only 14 Universities are commemorated by the issue of 15 stamps. It comprises one fully devoted to women, one recognized as IIT and six are central universities. Looking to table showing type of commemoration it is observed that Indian Post have no specific policy on issue of stamps in commemoration of universities; out of 15 university stamps 05 are representing 50th anniversary, 04 are representing centenary celebration while one each for 150th, 98th, 75th, 60th, 53rd and 42nd anniversaries as shown in Table 6.

Table 7 reveals that almost all university stamps depict the university buildings, while founders of 03 universities also appear and educational tools apart from related logos and graphics are found on one stamp. One university namely University of Madras have been commemorated for twice depicting its building on both stamps.

Conclusion and suggestions

Postage Stamps that were introduced as a token for payment of postal taxes, as a historical document can visually and potentially record the national history due to their constituent core elements like denomination, country name, graphical design, and the textual element. They carry both mail and message; while working like an ambassador, they represent the country through the people, places and history depicted on them. The large number of commemorative stamps issued every year worldwide is because of their capability that authorities could disseminate message (information). This reveals their role apart from source for extra revenue.

The above discussion puts stamping impression that the postage stamps- that are issued by a nation or country with utmost care and time, works as an information source, have communicative value and play effective role as information disseminator due to their easy availability to anybody at anywhere.

Universities serve as disseminator of information/knowledge and also as collaborator in the process of teaching and learning. They prepare generations through education for the nation. Regional universities, traditionally play a major role in development process, utilizing heritage and transferring the study results and innovative research to the community. To appreciate the vital role of universities, postal authorities of a nation commemorate their services by issuing postage stamps while celebrating various anniversaries.

Even though Universities are recognized for their valuable role; the importance of such institutions in the shaping of the national culture is well accepted, still analysis for this work shows the fact that they are not too numerous on postal stamps, not issued regularly and not an important subject on the postal administrations. agendas of Universities on stamps are relatively rare compared to other topics, issued irregularly, and in many years even decades entirely remain absent from the Indian Philatelic repertoire.

We urge the postal administration to include University Publications like books, journals/ periodicals; University related Buildings that may include university libraries, university colleges; Educational tools and University related Personalities like university founders, academicians for depiction while issuing commemorative stamps. They are further requested to have specific policy on their schedules and have university stamps on a regular basis. These topics are the pride of culture and heritage preservation and deserve much more attention. UNESCO should have the same agenda and energetically lobby for the above cause, which is intrinsically connected to the organizations' missions. Let us hope our aim will be achieved in the nottoo-distant future.

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Information Journey through Knowledge Desegregation in Digital Environment

Manoj Kumar Verma

Abstract

The temporal elements of users' information requirements are a continually confounding aspect of digital library design. No sooner have users' needs been identified and upported than they change. This paper evaluates the changing information requirements of users through their 'information journey in domains academia. In-depth analysis of findings from interviews, focus groups and observations of users have identified three stages to this journey: *information initiation, facilitation* (or *gathering*) and *interpretation*. The study shows that, although digital libraries are supporting aspects of users' information facilitation, there are still requirements for them to better support users' overall information work in context. Users are poorly supported in the initiation phase, as they recognize their information needs, especially with regard to resource awareness. The user satisfying them that the information is trustworthy and understanding what it means for a particular individual.

Desegregation is the breakdown of observations, usually within a common branch of a hierarchy, to a more detailed level to that at which detailed observations are taken a scientific journal article is comprised of standard components, such as author names, an abstract, figures, a bibliography, and sections describing methods and results. With the creation of digital documents and new tools for manipulating them comes the ability to facilitate the desegregation of journal articles into separate components.

Introduction

If, a digital library (DL) information requirement are simple and lives by now. However, digital library designers not only deal with increasingly complex data sources but are continually confronted by the complexity of different user needs and abilities. Furthermore, no sooner are user needs and abilities supported than they change. The focus of this paper is on the way that users' information requirements change over time. We do this by reference to the user's "information journey", which has been found to consist of three important stages: initiation, facilitation (or gathering) and interpretation.

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Most existing work on information seeking has focused attention on what we are calling here facilitation; this work sets that within the broader context of information use and, in particular, considers how an information need arises (and how existing tools support that early phase of information work), and subsequently how people make sense of (or interpret) information in the light of their own needs – for example, interpreting the significance of a clinical finding in relation to the treatment of the current patient.

Users' changing needs

Within the academic domains, time-based aspects of social and contextual issues are key elements of information usage (e.g. who's responsible for providing or interpreting the next bit of information, how important the information is at this stage, etc). As digital libraries can change the context of people's work practices, and therefore restructure their

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relationships with each other and the task at hand, these elements need to be understood.

Research reveals that the temporal elements of information seeking behaviors in an academic domains report that faculties/ guides are the most important drivers for the information journey:

- 1. Faculties/ guides are the first information reference point for academic (for initiation and facilitation).
- 2. Library staff provided the contextual information and interpretation that cannot

usually be provided in a hardcopy format (interpretation).

Within the academic domain, contextualization of information is also important, and that contextualized understanding is often achieved through negotiation with library staff. However, the crucial difference between the domains is that the collaboration highlighted in the academic domain is that between librarian and user, while colleagues take on this role within the clinical domain. This difference in work



Figure 1: Academic domain libraries

(a) ACM digital library



(b) Cochrane library

practices may reflect the different social structures within these two domains. Although digital library research has concentrated on the facilitation of information, there have been a growing number of studies analyzing the interpretation and use of information. Brewer argues those digital libraries should be more pro-active, and notes the importance of interpretation and application of information for digital libraries. He argues that value can be added during the mediation process through information translation (e.g. language services) and publication. Recent applications demonstrate how digital library information can be integrated within the authoring and publishing process and support the interpretation of information. Integrated environments for both seeking and organizing information are utilized to support the sequential activities of the writing process.

Digital library applications used

A pre-defined concept of a 'Digital Library' was not employed, so that users could explore

what they perceived as comprising a digital library. However, the resources referred to most frequently by the users as digital libraries were similar kinds of systems such as the ACM Digital Library and the Cochrane Library(as shown in Figure 1).

Academics and academic librarians

The findings within the academic domain are based on data gathered from a university that is split over several geographically distributed campuses. Focus groups and indepth interviews were used to gather data from 25 academics and librarians from 4 different campuses within the university. All of the respondents had a high degree of

Result

The data analysis from all 5 settings showed that users interact with information temporally, traveling through a personal or a team-based information journey. The journey has three stages:

- Information initiation: someone, something or some event initiates information requirements.
- Information facilitation: someone or some system facilitates required information retrieval.

Group	Job	Status & Role	No	Major DLs Used
Academic	Lectures(CS,	Research &	12	ACM DL &
	Business &	Teaching roles (LEXIS
	Humanities)	from Lecturer to top		
		ranking professor)		
	Librarians(CS,	Subject Librarian	13	Several DL
	Business &	through to senior		like
	Humanities)	library		Cochorane
	,	management		ACM Digital
				library

Table 1: Participant descriptive Data

computer literacy and had used digital libraries at some point.

Data Collection and Analysis

Four issues guided the focus of questions within all the studies:

- Perceptions of individuals' roles within the organization and their information requirements (both changing and constant).
- Perceptions of information practices, social structures and organizational norms (again, both changing and constant).
- The evolution of practices, structures and norms, and their impact on information resource awareness, acceptance and use.

 Information interpretation: someone or some system supports contextual information interpretation and / or modification.

The results are reviewed in two sections: an overview of the resources used within the information journey, then a detailed analysis of the sub-issues relating to each stage of the information journey (i.e. initiation, facilitation, interpretation), specifically in relation to digital libraries.

Users' Information Journey (Resources Use)

People are supported on their information journey by both online and offline resources, and also by their social interactions. The findings from our studies reveal the role of different resources in the users' transitions through the stages of their information journeys (see Table 2). Digital libraries were identified as mainly supporting the facilitation of information (rather than initiation or interpretation) in the users' information journey. Academic librarians were found, however, to utilize Digital Libraries in this role more than any other users. It was also only this user group that referred to information needs being initiated by email alerts or bulletin boards linked to digital libraries. Typically a DL designers will learn from these findings that there are many additional ways that users within the academic and health domain require information resources to support their journeys. Recent digital library advances have facilitated access to different types of temporal data [3]. However, digital libraries have further to go in supporting users' changing needs for all types of information (both theoretical and practical) according to varying contextual

	Initiation		Facilitiations	
Academic Librarian	Colleague, DL email alert & bulletin	coursework / personal query,	Digital library, Book, Web.	Colleague
Lecturers	Colleague	Course development, Research	Book, Colleague, Web, Some Digital Libraries	As above

Table 2: Information Journeys of Users

clinical users initially skim-read journal offline to initiate information requirements and use digital libraries to facilitate information retrieval. The offline resources also support their need for serendipitous interactions with articles indirectly related to their area of expertise.

Conclusion

This paper identifies users' changing information needs over time via an 'information journey' that involves the use of both online and offline resources. In the first stage of the information journey, information requirements are initiated by either an active specific task or condition, or passively (e.g. by friends and family, information intermediaries or the press). After initial information requirements have been established, most users require support in facilitating its retrieval and then its interpretation and application. requirements. Few other users were aware of these tools and when some clinicians introduced to these mechanisms they greatly appreciated their usefulness. The findings presented here also highlight the need for press-alerts that would link recent press articles on a particular subject with related current research and professional articles, and then gather them for the users. Ultimately, digital library applications should seek to support users' changing needs in the type of information required and what they wish to do with that information.

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Web Based Library Information System of Hindalco, Renukoot

Sanjay K Kaushik*, V.S. Bisht**

Abstract

The use of IT tools is nowadays has become a necessity for a library. The Works Library of Hindalco, Renukoot is exploring computer and allied technological advances for better organization of information sources and fruitful delivery of information services since its inception. Recently added Library Information System (Library Home Page) is a feather in its crown. The aim of the system is to provide quality services to its clientele and facilitates round the clock availability of information at the workplace of clientele through intranet. This project was done on Works Library of Hindalco, Renukoot using FrontPage and HTML code under WindowXP environment.

Keywords: Web authoring; Web design; Web page; HTML code; HTML tag; Hypertext Markup language; Home page.

Introduction

The home page of any institution is the gateway to its information resources. The home page of a library enhances the visibility of its information system - its resources, various activities and a varied range of services - in an effective way to its clienteles. This adds to the responsibilities of the librarian to properly plan and design the home page of his/ her library. Just as a book has a content page listing all about what a book has in it, the home page of a library should also have the same features. In other words, the home page works as content to its collection, services and activities.

Since the time immemorial the libraries are acting as the institution of Information acquisition, processing and dissemination. With the innovation in Information

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Technologies and Digitization, the basic nature of document has now been changed and it took the shape of electronic or more specifically digital. On the other hand the nature of document is no longer remained static rather it becomes dynamic. This changing information format has greatly influenced the information seeking behaviour of library users and ultimately the library professionals, as they have to acquire, process, organize and manage the information in the changing environment. The present paper is aimed at sharing the practical experiences at HINDALCO Industries Library.

Why a Library Web page?

The most obvious question now is, "Why do library need a web page when already there is a well organized and maintained collection in the library? By using the modern gadgets and with the help of a web page, the use of information resources and services can be enhanced multifold. The features of its online accessibility of resources and services of a library within the library premises as well as to the outside world through a network to prospective clientele in 24X7X365 mode adds a feature to the crown of the library. More and

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more users these days are using the online accessible tools because of its convenience and to save their time. Users of today expect from a library online services and a website is the best tool for it. The users who wish to know about the availability of a document or library service, they simply can visit the website of the library to seek information of their interest. Some advantages of a web page are: -

- 1. It facilitates the access to the resources and services within library as well as outside the library.
- 2. In networked environment, through a web page library services can be provided the round the clock.
- 3. The users can be kept informed about library activities and new services.
- 4. It saves the time of the users, which can be utilized in other productive jobs.
- 5. Obviously, it increases the use of library resources to the optimum level.
- 6. It helps to publicize services and/or resources to unlimited number of potential users.
- 7. It can be updated with latest activities much easier and in a cheaper way than print based media.
- 8. Huge expenses on communication and administrative costs can be saved.
- 9. It can easily be integrated with the parent organization's site therefore creating brand awareness with whole group.
- Web sites are easier and cheaper to change / update, than conventional print based media.

Objective of the system

The main objective of this project was to provide better services at minimum cost, efforts and time and to make library resources accessible round the clock through Intranet to all plant personnel who are engaged in the process of world-class manufacturing. The system ultimately helps them to access information at their convenience and with less physical activity.

Hindalco and its library

Hindalco, Renukoot (A Flagship Company of Aditya Birla Group) is the largest integrated aluminium industry in India. "Hindalco" was set up in collaboration with Kaiser Aluminium & Chemicals Corporation U.S.A, in a record time of 18 months. The plant started functioning in the year 1962 with a Capacity of 20,000 tons of aluminium per annum. The Company has grown manifold today and at present its production of aluminium is more than 3,45,000 tons per annum.

Since its inception Hindalco has a Centralized Works Library for organization and control of technical documents with the aim of preservation for future reference and to assist various departments by providing necessary information required by them in their day to day working, in emergencies & shutdown and for knowledge enhancement with a purpose of quality improvement in their work resulting higher productivity. The collections of library include technical books, standards specifications, vendor catalogues, vocational trainees' project reports, capital equipment manuals and drawings, journals and reports. Total collection is around 25000.

The library is a reference library and users are mostly plant personnel (engineering degree holders, diploma holders and other graduates). Prompt and pinpointed information has to be provided to them, which is the motive of the library. Earlier this was done manually and there was a total dependency upon the memory and expertise of the reference librarian. The coverage of the service was limited within the library premises. With the availability of webpage quality of services to the clienteles has improved many folds. Moreover, now users can access information through library homepage at their work place through intranet without going to library, which resultantly saves their time.

Methodology

The various methods adopted for the planning and designing the home page

include customer satisfaction survey, discussion with plant personnel who are our users, reviewing the organization's requirements, and observation. A pilot home page was firstly activated and feedback from the users was sought which attracted very good suggestions.

- 2 Ghz Processor or more
- 512 MB RAM or more
- 40 GB free hard disk (minimum)
- STD Colour monitor

Minimum software requirements

- Windows XP or later versions
- A Web browser like Internet Explorer or Google Chrome
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- An editor like Microsoft Front Page or Notepad etc.
- HTML (Hypertext Markup Language)

Homepage creation

Creating Web Page for a library is quite exciting and at the same time challenging too. Today's librarians have to understand the importance of web page for their libraries. Thus by recognizing the need of the hour, developing a library Web site is almost mandatory. The web pages are easy to navigate which facilitates the users a quick and effective access to the e-resources. Here basic question arises how to start with and from where to begin? The planning and designing a successful library web page requires a well-

• Pentium Core or higher

Minimum hardware requirements





Indian Journal of Library and Information Science

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formulated strategy. We can design simple web page if we know a little bit of HTML and can effectively utilize the potential of web design techniques for improvement of the library system. Any library of today be it a small or large, be it a public or academic or special, with a well planned web page is of worth for its clientele.

In the present project before creation of homepage, retrospective data conversion form printed to digital mode was done. Though, a number of library softwares are available in the market which includes some are freeware, which librarians can, choose according to their requirement and need. In our case, we created bibliographic list of library record in MS-Excel as we have a small collection of around 25000 different records in all and can easily be managed by using Ms-Office. MS-Excel has been used for making Bibliographic list of books, standards & codes, Capital equipment list (it is a list of plant equipment), Vocational training project reports etc. and searching by ALT+ F is enough to meet the requirements of our library users.

Some in-house e-journals and technical presentations are available in PDF format and MS-PowerPoint format. Images are made in Bitmap and JPEG format. List of articles in journals and conference proceedings are made in MS-Word. A separate folder of all such documents that are linked in homepage is created. Utmost care is taken to avoid any Copyright violation. A folder is made as D:\\LIBRARYPAGE, a snapshot is provided below:-

Once this is done the next stage was to design the layout of homepage using HTML code. The Web Page of Works Library consists of pictures of Hindalco, Renukoot at the top, objectives, scope and services at the left hand column scrolling upward. A logo of our company is also pasted at the bottom. Rest of the page displays library resources with a link. In one column a heading "Library holdings" is provided to list "Books", "Standards & Codes", "Capital equipment" and "Project Reports". On clicking any of them will open a bibliographies list. All these lists are prepared in Ms Excel.

Next column lists the conference proceedings and journals subscribed by Works Library with a link to their contents. In order to save space, name of journals is displayed in right to left scrolling in MS-Word format and at the bottom jackets of some popular books are displayed using jpg or bitmap images.

Next two columns display "e-books & vendor catalogues", in house "e-journals" and "technical presentation" of Hindalco. All these documents are prepared in PDF or MS-POWERPOINT format. Some useful "Publishers Catalogues" are also downloaded and linked with the pages. In order to give an aesthetic look to the page, background colour is provided. The whole page looks simple but very useful source of information to the clienteles. This web page is also saved in same folder in which different records are created i.e. folder D:\\LIBRARYPAGE.

After designing the HTML document, the next step was to upload it on a server from where it can be accessed by the users. We have our company's HR portal namely Renu Gyan Ganga on the server where works library's home page is uploaded and a link is provided as "LIBRARY INFORMATION SYSTEM".

On clicking "Workds Library Information System" homepage of works library opens as given below: -

Similarly on clicking "Standards & Codes", "Capital Equipment", "Project Reports" and "New Arrivals" their respective list is opened in MS-Excel. In similar way list of articles for journals "Light Metals", etc can be opened in MS-Word. A snap shot is provided below for perusal:

Various documents are also linked under ebooks & catalogues, e-journals (in house journals of Hindalco) and technical presentations (Hindalco) in PDF and MS-PowerPoint form.

Conclusion

The art of creating and launching web page is becoming much friendlier now a days due to the availability of web designing tools like MS-FrontPage, etc. With the macro knowledge of web publishing technology a librarian is able to design web page for his library. In this way, the libraries can market their resources and services to the clienteles. A web site of a library with or without network environment acts as a document or bulletin of the various events that library organizes, the host of services it offers to its clienteles, an interactive catalogue - say the books collection, a periodical list of additions, an array of pointers to other useful sites / links, etc. Its scope is unlimited and can prove to be very effective tool in providing services or solving user's query from librarian / reference desk.

Therefore the authors are of the opinion that a library web page is very much essential requirement of today's library as it facilitates users to have access to the resources of and services provided by the library. In a networked environment, a web page can provide the library services round the clock. It is a useful tool to keep informed about library activities and new services. Most importantly, it saves the time of the user, which can be utilized in other productive activities. Libraries of any kind and any size should maintain its web page.

Acknowledgements

This paper is dedicated to all the professionals working at Hindalco, Renukoot and engaged in world class manufacturing process through their hard work and dedication who always keep our spirits high to maintain the quality.

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An Overview of Academic Librarians Status in US Libraries

Subhash Chandra

Abstract

The issue of faculty status for academic librarians has been the hotly and much debated topic in recent decades. There are those who believe that librarians have no business operating under the rubric of faculty, while there are others who just as fervently assert that librarians have rightly won the status and must do any thing in their power to keep it. Central to the issue is how faculty status is defined. The purpose of this paper is to examine the key points raised during this debate. The paper shows that with faculty status, academic librarians receive the same rights and privileges as other faculty members in the academic institutions.

Keywords: Academic Librarians; Status; Faculty; ACRL; United States of America.

Introduction

Status and role are two sides of the same coin. A's behaviour as determined by the norms towards others is A's role. Other's behaviour, opinions and attitudes towards A as a consequence of the role which A plays, is A's status. One's duty is one's role; the privileges one gets for playing one's role determine one's status. Status is considered of paramount importance in life. "It is a place in the sun, position in the scheme of things, niche, in the town or community: How a man ranks in the society of which he is a part and the necessity of establishing this status, figure in every activity of man"[1]. Actually status refers to one's position in relation to something else. Thus, in life, every individual has a plurality of statuses in conformity with the number of situations or relative position he occupies. A father's status as head of the family is high, though his occupational status

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may be very low- if he is a street cleaner, for example. It means everyone has then a personal or social status, and at the same times an economic or occupational status. The two are, of course inter-connected. One may directly affect the other. The street-cleaner referred to above with his low occupational status but high personal status by virtue of being the head of the family, is not likely to have a very high social status in the community.

The academic librarian plays an important role in the overall mission of any university. This role is both overt in the day-to-day involvement between librarian and students and faculty in the institution as well as subtle in the librarian's continual awareness of changes in available resources and technologies to aid the campus community. Though the academic librarian, clearly, is a vital member of the university community, his or her organizational classification in the hierarchy of the institution can be murky, and this murkiness may have effects, both understated and profound, on the librarian's attitude, motivation, and outlook regarding his or her chosen profession.

Reference to the quest for faculty status in US can be found as early as 1878, when

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Sawtelle declared that "librarianship ought not to be annexed to a professorship, but be itself a professorship" [2] (as cited by McAnally in 1975). In his statement on the historical development of faculty status in academic libraries, McAnally warns that librarians must join the faculty or remain forever in peripheral and inferior roles. The information explosion of the post world war II period, coupled with the move towards the German model in American Universities, saw academic librarians move from a conservation function to a utilitarian function as research became a central role of the university [3]. As their roles became more complex, requiring better training and specialization, academic librarians became increasingly dissatisfied with their relatively low status and looked to the faculty model as a means for attaining the recognition they felt they deserved [4].

Emergence of ACRL

In order to talk about what it means to be a faculty librarian, it is helpful to have a benchmark that enables us to compare and contrast the extent to which a particular person is indeed faculty. In 1958, the Universities Library Section of the Association of College and Research Libraries (ACRL) established the Committee on Academic Status, which was the first body of the American Library Association (ALA) to officially and formally endorse faculty status as a policy and right. In 1969, this committee was converted to a general committee of the entire ACRL. In 1971, the ACRL approved its "Standards for Faculty Status for College and University Librarians" which was reaffirmed by the ACRL and ALA in 2001. The standards include professional responsibility, library governance, college and university governance, compensation, tenure, promotion, leaves, research and development funds, and academic freedom. In 1972, a "Joint Statement on Faculty Status of College and University Librarians"[5] was issued by the ACRL, the Association of American Colleges (AAC), and the American Association of University Professors (AAUP) and it was reaffirmed in

June of 2001. The ALA defines faculty status as "an official recognition by an institution of higher education that librarians are part of the instructional and research staff by conferment of rank and titles identical to those of faculty and commensurate benefits, rights, and responsibilities" (as cited by Werrell and Sullivan). In 1973, the ACRL issued the "Model Statement of Criteria and Procedures for Appointment, Promotion in Academic Rank and Tenure for College and University Librarians" which was later revised in 1987. The Model Statement was superseded by "Guidelines for Appointment, Promotion, and Tenure of Academic Librarians", which was approved by the ACRL board in June of 2005. Thus, the most useful and widely accepted measuring tool is the Association of College and Research Libraries Standards for Faculty Status for College and University Librarians.

First laid down in the early 1970's, these guidelines have been revised over the years, with the latest revision approved at the American Library Association Annual Conference, June 2007 and prepared by the ACRL committee on the Status of Academic Librarians. Institutions of higher education and their governing bodies are urged to adopt the following standards [6], which basically delineate various facets in which librarian faculty status is deemed equivalent to the faculty at large on a given campus.

- (a) Librarians perform professional responsibilities.
- (b) Librarians have an academic form of governance for the library faculty.
- (c) Librarians have equal representation in all college or university governance.
- (d) Librarians receive compensation comparable to that of other faculty.
- (e) Librarians are covered by tenure policies.
- (f) Librarians are promoted in rank based on a peer review system.
- (g) Librarians are eligible for sabbatical and other leaves in addition to research funds.
- (h) Librarians have the same academic freedom protections as other faculty.

The standards entailed above represent the best case scenario, the optimal situation for library faculty or at least the situation that would most nearly equate them with other campus faculty. In truth, all eight standards are rarely seen implemented fully at any given institution. Rather than being a yes/no dichotomy, it is clear that "faculty status" for librarians may be implemented in a variety of ways, with some facets apparent and other absent. The degree to which each facet is implemented also varies and further complicates the issue of how well the ACRL standards are being met.

Librarians Status Typology

There are four (three types in which librarians are faculty and one in which they are staff) types of academic librarians as under:-

- (a) Faculty: Professorial ranks
- (b) Faculty: Other ranks with tenure

ranks" (parallel ranks, e.g., Assistant Librarian, and librarian ranks, e.g., Librarian I) with tenure and other ranks without tenure. Tenure is a salient aspect of faculty status, and it plays an important role in creating a typology of status.

Type1 and Type 2 are generally readily identified, because librarians who are tenuretrack faculty are clearly identified in university documentation. Type 3 and 4, on the other hand, can be harder to distinguish, because some institutions have given librarians a status that parallels or has some features of faculty status.

There are various schemes for evaluating what type of status a given academic librarian might have, but one that is particularly useful has been laid out by Bolin, who examined typologies of librarian status across American land grant universities, these being state universities that share the three pronged mission: teaching, research, and service. The approach is an attempt to provide deeper

Туре	Frequency	Percent
1. Professorial	33	27.7
2. Other ranks with tenure	28	23.5
3. Other ranks without tenure	13	10.9
4. Non-faculty (staff)	45	37.8
Total	119	100.0

Table:	Distribution	of	Status	Types[7]
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- (c) Faculty: Other ranks without tenure
- (d) Non-Faculty: Professional or academic staff

The typology was first developed based on data about land grant universities only. The rationale for the typology begins with the idea that professional rank represents the universal teaching faculty model and is one necessary category. Academic or professional staff status is also a necessary category, since it represents a model in which librarians are not faculty. Between those two end points are "other

by examining individual characteristics and how those characteristics relate to each other
[8]. The following types of data were gathered proactively from the libraries' websites:
(a) Employee group (faculty or staff)

- (b) Title of library administrator (dean, director, etc.)
- (c) Rank system (professorial ranks, parallel ranks, librarian ranks, other)

meaning than simple binary categorizations

(d) Tenure eligibility

(e) Representation on faculty senate

From the findings[9], Bolin was able to determine that the status typology frequencies were: professorial 42%, other ranks with tenure 28%, other ranks without tenure 10%, and non-faculty 20%. The rationale for this typology is that professorial rank is an obvious category, because it is the universal faculty teaching model, while academic or professional staff status is the other option for those librarians who are not faculty. Overall, combination "Employee the of Group=Faculty" and "Tenure=No" is rare. The "Other ranks" categories encompass such positions as Assistant Librarian or Librarian I, positions that may or may not carry tenure. These librarian ranking systems offer some degree of equivalence to teaching faculty by paralleling professorial ranking schemes. Bolin brings up an interesting point concerning the "professional librarian" type of status that is instituted in lieu of faculty status. While it does recognize the education and expertise of the library profession, it may negate one of the main rationales for faculty status for librariansthat being strength in numbers. This larger faculty group that librarians are often a part of helps them reach their goals of recognition, appropriate salaries, etc.

Through the use of frequency and cross tabulation, correlations are described that show how the combinations of characteristics fit together. The combinations that are most relevant are listed [10]as under:-

Employee Group-Rank System

Only faculty members are called professor, while two-thirds of Parallel and Librarian rank group members are faculty.

Employee Group-Tenure Eligibility

A large majority of faculty librarians have tenure. Among librarians who are staff, forty percent have a form of continuing appointment.

Employee Group-Faculty Senate Representation

Only a small number of librarians who are faculty are not represented in the faculty senate. Even fifty percent of staff librarians are represented.

Rank System-Tenure Eligibility

There is a very occurrence of tenure accompanying professorial rank. Librarian ranks are evenly split, while parallel ranks have tenure in the majority of cases.

Rank System-Faculty Senate Representation

In all rank systems where all or most librarians are faculty, they are overwhelmingly represented in the faculty senate.

Tenure Eligibility-Faculty Senate Representation

There is a hundred percent overlap between these characteristics. Even librarians without tenure serve on the senate more than sixty percent of the time.

In the process of creating the typologies, Bolin found that drawing the line between faculty and staff is not always easy. There are those who have parallel ranks, but their documents refer to them as faculty. Bolin goes on to point out that, "There are cases, however, in which librarians have many characteristics of faculty, including a form of tenure (continuing appointment); are represented in senate; have responsibilities for teaching, research, and service; but are, in fact, staff. The University of California System is an excellent example of this. In other cases, such as the University of Georgia, librarians have almost none of the characteristics of faculty, but they are faculty, and refer to themselves this way". Regardless, a strong model of faculty status is found in these universities as a whole and even librarians who are not faculty have a status that recognizes their expertise and which is often indistinguishable from faculty status.

Views against Faculty Status

There are so many opposing views to faculty status for academic librarians can be found in the literature. Some disagree with the basic tenet that librarians are primarily teachers. Shapiro [11] state that the work librarians do is "fundamentally different" from teaching faculty. Peele views teaching as only a small part of what a librarian does and that it does not compare to classroom teaching. He also states that teachers are an "originating force" and that librarians are a "responding force" [12] (as cited by Johnson). Leonhardt [13] states that librarians must remember that they have a service mission of providing access to information. He believes that academic librarians "promote learning in a different context and have to know more than a little about a lot". The benefits of faculty status to the librarians are also disputed. According to Shapiro respect and status cannot be granted, but must be earned and that faculty status does not automatically make librarians equal partners with the teaching faculty. Nor does it guarantee fair compensation or academic freedom. Librarians should not be starry-eyed about the capability of tenure to protect freedom of speech.

Critics of faculty status are also quick to dispute claims of benefits to the institution, especially in the area of research. Anderson believes that library schools do not prepare students sufficiently to do research. Shapiro claims that empirical research is not essential to the basic mission of librarians. Others feel that the research that is published is of poor quality.

As for faculty governance, Shapiro [14] says faculty status is not required to ensure a system of collegial governance and that "faculty status provides no guarantee that librarians will be considered central to the educational process". According to the Cronin [15] their role is to support and not to define the academic mission of the university. In general, English [16] has found that most university administrators believe granting faculty status to librarians does nothing to

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benefit the university and that faculty appointments are unsuitable for librarians.

Ambiguities of Faculty Status for Librarians

The ambiguities of faculty status for librarians can oftentimes lead to conflict among administrators and other faculty. Weaver-Myers [17] provides a case-in-point in her study of the challenge faced by University of Oklahoma librarians. It came about that a dual status was proposed after one particular library faculty member was granted tenure and, another, upon not receiving tenure was offered professional status. This suggested that librarians could successfully perform their duties without faculty status. An untenured clinical faculty status was also suggested by university administration. Ultimately, it was decided that librarians would choose their preferred status. With an even 50/50 split deciding for and against a tenure-track position and subsequent new hires were all appointed to non tenure-track positions, as required by the provost. Although this type of arrangement can suffice in a difficult situation, it does serve to create further ambiguities and many potentially polarize faculty librarians within a single library or institution. Inconsistency regarding faculty status among academic libraries is one thing, but inconsistency within a single library is another thing entirely with its own ramifications. This situation affords new librarians more alternatives in the profession, but at the cost of identity ambiguity. As we know, faculty status is a very important issue for new academic librarians entering the field because it can have long-term consequences for their careers.

ACRL conducted a survey of academic libraries in 1999 which included a series of questions designed to determine the extent to which institutions offer faculty status to academic librarians, which was subsequently summarized by Shannon Cary. The survey questions asked which of the nine conditions listed in the ACRL Guidelines for Academic Status were provided by each institution. The results indicated whether an individual institution was providing complete faculty status, a limited version of faculty status, or no faculty status at all. Not surprisingly, the condition that almost all institutions grant their librarians is academic freedom however, the majority of respondents felt that this academic freedom was only partially granted. It appeared that faculty librarians were gaining equality with teaching faculty in the areas of leaves of absence and research funding. The area in which librarians most often responded that they are not on equal footing with their teaching counterparts was salary scale, benefits, and appointment period. As Cary [18] points out, "Tenure and peer review were also areas where a significant number of librarians indicated they are not on equal footing with other academic faculty, with 35.5 percent indicating they were not covered by the same tenure policies as other faculty and 35.2 percent indicating they were not promoted through the ranks on the basis of professional proficiency and effectiveness via a peer review system with standards consistent with other faculty".

Realities of Faculty Status for Librarians Arguments for and against librarian faculty status aside, it is apparent that the ideal held up by the ACRL is seldom found in its entirety. It forms more of a "wish list" for academic librarians who seek equality with the rest of the faculty on campus. Although the model of teaching faculty is strong and forms the basis for what we measure ourselves against, it may not always be the most appropriate measuring stick. Certainly, if the majority of ACRL's standards for faculty status are not being met, yet we are named "faculty", we must question this faculty status. It is likely a nominal status, one that fails to bolster the individual and collective psyche of the profession. Nominal faculty statuses may be the worst of both possible worlds in that library faculty know they are not being treated equitably, yet at the same time, they are not in a position to achieve equality. In some instances, the reverse may be true and librarians should indeed be considered fullfledged faculty, based on the scope of their current position. The determination should be made based on what a particular librarian actually does vs. how they want to *appear*. According to Richard Slattery (as cited by Welch and Mozenter) [19], "At issue is whether academic librarians 'qualify' as college and university faculty, and to what extent performance criteria should take into account differences in 'duties and schedules' between librarians and teaching faculty".

Summing up

According to Oberg [20] and others "Faculty status accords librarians full partnership in the creative, cooperative, synergistic, and collegial relationship between students, teaching faculty, and campus administrators that today's volatile academic environment requires". The faculty status option has also support of three professionals associations like the ACRL, AAUP and AAC. Ultimately, the most critical aspect of navigating through the particulars of a career is to fully understand the system at a particular institution and how to succeed within that system. Before accepting a faculty librarian position of any kind at any institution, one should understand the activities and responsibilities expected to him/her as a scholar librarian.

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An Impact of Open Source Softwares for Libraries in Higher Education: The Global Perspectives

Baskaran C*, Sadik Batcha M**

Abstract

The growth of open source software which has now become a culture of openness and other related trends is advancing from the edges of society to the core of academic culture. In this article we provide an overview of how the expansion of open source software in culture at large has affected the world of education, describe how the greater use of open source software in education has unfolded hand-in-hand with the development of open course content and open access research. We also argue that this more comprehensive shift towards "openness" in academic practice is not only a positive trend, but a necessary one in order to ensure transparency, collaboration, and continued innovation in the academy.

Introduction

There was once a time when open source software was the sole province of the geek and existed behind barricades impassable by ordinary computer users. The first major barrier was inscrutable jargon; users who did not understand the meaning of commands such as "configure; make; sudo make install" were often simply left out. A second obstacle was that most open source programs, such as Web servers and mail servers, were limited primarily to applications and utilities that were useful to servers and network administrators. Such resources went beyond the needs of the average desktop computer user. Even those applications that might have broader appeal, such as text editors, were often so complex that running them seemed to require a specialized degree. A further limitation was that most open source software

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was written exclusively for free. Finally, these tendencies, in turn, contributed to another major barrier—namely, the common perception among average computer users that free applications must surely lack the intuitive features and accompanying technical support of commercial applications.

In short, the world of open source was closed off to normal people. Recent developments, however, are bringing open source into the lives of average desktop computer users. In addition to their availability for open source operating systems like Linux, many open source applications are also available for proprietary operating systems like Windows and Mac OS X. Installing these applications generally works like installing commercial software-users. All one need to do is just double-click to begin the install process. In many ways, recent trends in the open source world can be seen as a distributed effort to replace popular proprietary software with easy-to-install-and-use open source software. In the light of this, this paper presents an overview of the general open source software used in higher education the world over.

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Open source softwares

Open source is a software development model as well as a software distribution Model. In this model the source code of programs is made freely available with the software itself so that anyone can see, change, and distribute it provided they abide by the accompanying license. In this sense, Open Source is similar to peer review, which is used to strengthen the progress of scholarly communication. The open source software differs from the closed source or proprietary software which may only be obtained by some form of payment, either by purchase or by leasing. The primary difference between the two is the freedom to modify the software. An open system is a design philosophy antithetical to solutions designed to be proprietary. The idea behind it is that institutions, such as libraries can build a combination of components and deliver services that include several vendors' offerings. Thus, for instance, a library might use an integrated library system from one of the major vendors in combination with an open source product developed by another library or by itself in order to better meet its internal or users' requirements.

Definition

According to Open Source Initiative (http://www.opensource.org/): "Open source promotes software reliability and quality by

supporting independent peer review and rapid evolution of source code. To be certified as open source, the license of a program must guarantee the right to read, redistribute, modify, and use it freely. Open source software is typically created and maintained by developers crossing institutional and national boundaries, collaborating by using internetbased communications and development tools; · Products are typically a certain kind of "free", often through a license that specifies that applications and source code.

Open source software are written to create applications, free to use, modify, and redistribute as long as all uses, modifications, and redistributions are similarly licensed; · Successful applications tend to be developed more quickly and with better responsiveness to the needs of users who can readily use and evaluate open source applications because they are free. Quality, not profit, drives open source developers who take personal pride in seeing their working solutions adopted. Intellectual property rights to open source software belong to everyone who helps build it or simply uses it, not just the vendor or institution that created or sold the software.

Comparative study of D-Space and GSDL

Gowtam Biswas & Dibyeadu Paul (2010) have conducted web survey among 72 Institutions have installed the repository

Component	D-Space	GSDL	
Creator	MIT Libraries and Hewlett-Packard	University of waikato	
		2	
Open Source/Free	Yes	Yes	
Operating System	Unices, Linux, Windows	Unices, Linux, Windows	
Language	J2SDK v.14	PERL	
Databases	Postures 7.3	Its own	
Resource identifier	CNRI Handles	No	
Dublin Core	Qualified Dublin core	Dublin core	
MITS	Version 1.2	No	
OAI-PMH V20	Yes	No	
Subscription	No	No	
Supported file format	MS word, PDF, PPTs, JPEG, GIF	MS word, PDF, PPTs,	
		JPEG, GIF	

Table 1: Comparative study of GSDL and D-space

Country	D-space	GSDL
India	13	4
USA	4	2
UK	1	-
Germany	1	-
Argentina	-	1
Netherlands	1	-
Bangladesh	2	-
Azerbaijan	1	-
China	2	-
Australia	1	-
Jamaica	1	-
Costa Rica	1	-
Belgium	1	-
Estonia	1	-
Finland	1	-
Canada	4	-
Mexico	1	-
Brazil	1	-
Columbia	1	-
Ecualor	3	-
Venezula	1	-
Total	42	7

Table 2: Country wise distribution of
software packages

softwares various part of the world. It has also found that 7 Installation of GSDL. We have taken only those Institutes which has found on-line. Dspace with 42 installations seems to be the most popular choice among the digital library software packages and Greenstone has seven installations. The other software package it include software like E-Print. Here we have mainly highlighted popular open source repository building software D-Space and GSDL (Tables 2 - 3) and It has found 35 educational institutions have installed Dspace software and 5 GSDL. On the other hand 13 other software like E-print, fedora etc. In the study it found that Dspace and GSDL are equal installation.

Table 1 shown, the comparative study was made between GSDL and D-Space, It is stated that both softwares are free of cost. In d-space supported qualified Dublin core but GSDL supported only Dublin core. D-Space and GSDL supported MS-word, PDF, HTML, Post script, JPEG, GIF etc.

Table 5. Open Source repository with OKI	Table	3:	Open	Source	repository	with	URL
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Software	Institute	URL	
1.D-space	BRAC University	http://dspace.brace.	
	Institutional	ac.bd/	
	repository		
2. D-space	International centre	http://dspace.icddrb	
	for diarrhea disease	.org/	
	digital repository,		
	Bangladesh		
	(ICDDRB)		
3. D-space	Xiamen University	http://dspace	
	institutional	xmu.edu.on	
	repository china		
4. D-space	DSTO Scientific	http://dspace.dsto.d	
	publication online	efence.gov.au/dspac	
	repository	e	
5. D-space	University of West	http://dspace.mona.	
	Indies at Mona	uni.edu/	
	Jamaica		
6. D-space	Instituto technologo	http://www.tec.cr	
	de Costa. Rica		
7. D-space	Bolivariam,	http://dspaceboliva	
	Venezuela	rium.vsb.ve/dspace	

There are identified twenty one countries have installed open source Library software are D-Space and GSDL, 13 institutions have installed D-space and 4 intuitions installed GSDL in India. Among the 21 countries, 42 institutions have been installed D-space and only 7 institutions having been installed GSDL is given in Table 2.

Open Source Integrated Library Systems

Integrated Library Systems (ILS) is the current wave in the field of library automation. An ILS combines several activities of the library into one integrated system, allowing the library staff to perform all their functions online. These activities include simple housekeeping activities like acquisition, cataloguing to user services, and inter-library loan activities. In the last few years we have seen the development of a number of ILS products in the open source world. One important trend in these kinds of products is the use of web-based client/server architecture.

Different OSS Integrated Library System Products

Some open source library software with URL have been listed below,

Koha

The First Open Source Integrated Library System. Koha is the first open source fully featured integrated library system (ILS) used by a considerable number of libraries in USA, New Zealand, and Europe. The Koha ILS includes catalogue, OPAC, circulation, member management, and acquisitions package. Koha is used by public libraries, private collectors, not-profit organizations, churches, schools, and corporate.

URL: http://sourceforge.net/projects/ koha, http://www.koha.org/download/

Further Information

Php My Library

PhpMyLibrary is a web-based library automation application meant for smaller libraries. The system consists of cataloguing, circulation, and the OPAC module. The system also has an import export feature. It strictly follows the USMARC standard for adding materials.

URL: http://sourceforge.net/projects/ phpmylibrary/

Further Information: Project Homepage: http://phpmylibrary.sourceforge.net/

Open Biblio

Open Biblio is an easy to use, open source, automated library system written in PHP containing OPAC, circulation, cataloging, and staff administration functionality. The purpose of this project is to provide a cost effective library automation solution for private collections, clubs, churches, schools, or public libraries.

URL: http://sourceforge.net/project/ showfiles.php?group_id=50071

Further Information: Project Home Page: http://obiblio.sourceforge.net/

GNU Library Management System (GLIBMS)

GLIBMS is Library management software developed using PHP and PostgreSQL to automate the different activities carried out in the library. The project is currently inactive at Source forge. It is renamed as Karuna and hosted at sarovar.org.

URL: http://sourceforge.net/projects/ glibs/

Further Information: Project Home Page: http://sourceforge.net/projects/glibs/

Avanti: An Open Source Library Computing System

Avanti MicroLCS is an open source general purpose library computing system that is small, simple, and easy to install and use. Written in Software Tools for Automation Java, it is platform independent and can run on any system that supports a Java runtime environment. Although it targets small libraries, it has a powerful and very flexible architecture that allows it to be adapted for use in libraries of any type.

URL: http://home.earthlink.net/ ~schlumpf/avanti/downloads.html

http://home.earthlink.net/~schlumpf/ avanti/index.html

Conclusion

There are number of Library management software customizing at Higher education institutions, though Open source library software recently come in to existence for plasticizing in the library and Information centers . We have observed that D-space only predominant software among open source library softwares have been installed at global level. It is also highly compatibles and user friendly ness in access and preservation of all resources in academic and Higher education Libraries. OSS needs to develop a participatory organizational model that allows many to contribute perhaps in different ways to OSS development. OSS is not always easy to use. It is therefore largely inaccessible to the many libraries and library system departments that require plug-and-play software that is well documented and supported and can be easily installed (and uninstalled). OSS initiatives do not always do enough to get non-systems librarians and library patrons involved in design and testing of OSS. As such, they are seen as being something that exclusively offers benefits to and holds interest for library

systems staff and not for the wider library community. Another factor that often comes up is the usability of open source software.

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Review of Modern IT Tools Adopted by M.P.K.V Library, Rahuri

Syed Fayyaz Mohsin*, PA Shinde**

Abstract

The influence of IT tools or ICT in developing countries makes more demand for web based and accurate information. Application of modern IT tools in a academic environment has increased gradually in the recent decade. This IT study scrutinized the availability and utilization of IT in establishment of Digital Library. And for more benefits university library also decided to make almost all services through computer via Internet and LAN. At present e-GRANTH NAIP project is in progress with the financial assistance of ICAR, New Delhi through which AgriCat (National) and WorldCat (International) union catalogue is going to be developed. This paper is aim to take the review of modern IT tools and its utilization in the Mahatma Phule Krishi Vidyapeeth Library, Rahuri.

Keywords: Institutional Repository; Digital Library; Library Consortium; Blog.

Introduction

Due to technological revolution, there is vast difference between the traditional library and digital library setup. The emphasis is now on access to information instead of possession of documents in timely manner irrespective of formats such as audio, video, picture etc. The user's demands are increasing day by day which every librarian's need to take care of and that too in cost effective manner. In such scenario there are many IT tools available which are simple to use from users point of view, giving technological edge, which assures satisfaction of users. This review of services has been taken to examine how and what IT applications adopted by this library to keep abreast of latest technologies.

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University Library

University library promotes the higher education, supports the teaching and extension programme of the University. The University Library, MPKV, Rahuri started functioning at Central Campus in the year 1971. Since its inception, the library is developing steadily and has been playing a vital role in providing all types of technological information to the students, teachers and scientists from Faculty of Agriculture and Faculty of Agricultural Engineering at Central Campus as well as to the progressive farmers. The students appearing for MPSC and other competitive examinations are greatly benefited by the services of University Library.

Development of Library services after Introduction of IT

Application of IT in Libraries

Digitization

Digitization is the process of converting information into a digital format. In this format information is organized into discrete units of data that can be separately addressed.

Digitized data either digitally borned or required Retrospective Conversion

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- i. Digitally Borned
- ii. Retrospective Conversion/ Digitization

For effective digitization there are some steps to follow

Material

Scanning

Cleaning of Data

PDF Editor

Storage

OCR Check

Metadata for OPAC

Online ETAD (Electronic Thesis Abstracts Database)

Thesis contains valuable findings. Theses available have been digitized and electronic thesis Abstracts Database (ETAD) has been created by the MPKV library and made available through internet at MPKV's website http://mpkv.mah.nic.in. with user friendly search module, Now one can retrieve abstract of thesis from database from any corner of the globe free of charge.

Full text Database of Doctoral Dissertation on Agricultural and allied Subject submitted to MPKV University is going to made available through internet. This work is in Progress and soon will be available for the users.

Barcode / RFID Technology

A barcode is an optical machine-readable representation of data, which shows certain data on certain products. Originally, barcodes represented data in the widths and soakings of parallel lines, and may be referred to as linear or ID barcode or symbologies. They also come in patterns of squares, dots, hexagons and other geometric pattern within images termed 2D systems use symbols other than bars, they are generally referred to as barcodes as well. RFID or Radio Frequency Identification is the Auto-ID technology by which one can identify objects and track information about them wirelessly using radio waves. In the simplest terms an RFID system consists of a TAG (transponder) and a READER (interrogator).The technology of RFID deals with the remote collection of information stored on a tag using radio frequency communications.

As the RFID Technology is so costly MPKV Library adopted Barcode Technology. There are 2 barcode reader and 1 barcode printer available in library.

Library Management Software

There are various library management software available in market such as :Slim++, SOUL, Libsys, Librarian, Library Management etc. The MPKV library using Slim ++ library automation software.

Slim++

Slim++ is integrated, Multi-user, Multitasking library information software for the windows environment. Slim++ helps to catalogue books, films, sound recording, drawings, clippings, articles, reports, letters, pamphlets, serial publications.. all those things that contain information so vital to your organization. Slim++ cataloguing adhere to popular international standards. This means you can exchange dat with the world. Retrieval of the data is simple, fast and efficient. Even a catchy phrase in the description of the catalogued item can be used for searching.

SLIM++ contains the following modules

Cataloguing, Circulation, Serial Control, Acquisition, OPAC, Web based OPAC, Bulletin Printing (CAS), Statistical Analysis.

MPKV Library uses Slim++ software because of their salient feature are as below:

- Slim++ can be configured for specific requirements by choosing one or more of these standard and add-on modules.
- 2) These modules work on the same data from different nodes of a network.
- Slim++ works just as well on a stand-alone machine as it does in a network of computers.
- 4) Library can be browsed through the Internet/ Intranet with SLIM++.

Computer based Library Services

Intranet Services

Book Issue

Book issue to strengthen the transaction services and to bring accuracy in issue and return of book at the circulation desk, The library is now in last phase to make the system functional for issue of books through bar code system.

OPAC Searching

Computerized library catalogue were first introduces during the late 1960's. the online catalogue, known as the Online Public Access Catalogue, or OPAC, has gradually become more user friendly with the use of menus and simple commands. MPKV library using the Slim++ as OPAC.

DVD/CD ROM Data Base

CD-ROM is a digital optical disk. CD-ROM has provide new dimensions for information storage. In MPKV library the thesis are accepted in a Electronic format on DVD and also to download the data from the internet, DVD ROM are used.

In MPKV Library the collection of DVD's are 57 and CD ROM databases are 21 for retrieval of references of interest with abstract from 1972 to 2009 on agriculture and allied subjects.

Addition to this two online virtual data bases are subscribed by the MPKV library for its users. They are 1) Krishi Prabha and 2) Indiastat.com

Krishi Prabha

Indian Agricultural Doctoral Dissertations Repository

There are 45 Agricultural Universities/ Deemed Agricultural Universities in India which award Doctoral Degrees in agriculture and allied disciplines. These doctoral dissertations are one of the very important and valuable original sources of Information. It is accessible online to the national and international users. This Project was sanctioned by ICAR under its National Agricultural Innovation Project (NAIP) in 2007. At present there are 7500 theses in the database and can be retrieved from the URL: http://hau.ernet.in

Doctoral dissertations - the end product of doctoral research is a rich source of original information, access to which is severely restricted due to absence of information in digital form. Over 10,000 doctoral dissertations produced in India during 2000-2006 are digitized and made available online and offline.

Indiastat.com

Indiastat.com has endeavor at Datanet is to collect, collate and compile in ready to use socio-economic information about India and its states and to make it available. Datanet India Pvt. Ltd. was established as an ITenabled company in February 2000. Today, Indiastat.com is a cluster of 51 sites including India-specific, Sector specific and State specific sites rendering its dedicated services to the fraternity research from academic, professional and corporate world with authentic and comprehensive compilation of secondary level socio-economic statistical data about India and its states on more than 35 variables.

MPKV library has the collaboration with the Indaistat.com and provides it user every statistical information about India and its states.

CAS(Current Awareness Service)

Different types of CAS are involve like title announcement services, announcement of research in progress, notification of forthcoming conferences etc.

MPKV library has started CAS, whatever library receives (journals), the content page is made available at the desktop of the user through Intranet. The library member avail this service through Intranet of the University.

Internet Services

Internet is usually referred as "a network of networks". Internet, as a name itself indicates, that it is essentially a worldwide network of the computer networks. In MPKV a 50 computer internet is available for the students.

Interlibrary Loan Service

ILL activities can be automated through workstation connected to the OCLC system and utilizing their ILL module or through local or regional networks, which provides online information about resources in other libraries. MPKV library registered for the membership of OCLC for ILL.

Accessing the E-journal/E-Books

These days many academic and research journals are made available in the electronic format. These are full text journals accessible via internet. MPKV has the collection of 5 ejournals and 26 e-books. It also has the 58 online Indian and 2 foreign journals like CeRA and J-Gate.



Indian Journal of Library and Information Science

Digital Library of MPKV

A digital Library is a group as distributed repository in digital form. According to Berkeley of digital library project, University of California, "the digital library will be a collection of distributed information sources. Producers of information will make it available and consumers will find it perhaps through the help of automated agents."

In a broad sense digital library is a computerized system that allows users to obtain coherent means of access to an organized, electronically stored repository of information and data.

The University Library, MPKV, Rahuri is using Slim++ for digitization of documents with OPAC search module. At present MPKV library is in last phase of computerized library management system but moving towards fully digital steadily.

Commercial Digital Library Software has been purchased by the MPKV library and will be functional soon.

A separate digital library infrastructure is also going to be established in library for which 80 computers with latest configuration have been purchased.

e-Granth Project

ICAR initiated its strengthening of digital library and information management system, for its community of users, with the following objectives:

- 1. Development of a digital library system that networks and integrates twelve of its physical libraries and their collection, accessible by all its user community.
- Creation of an institutional repository for its digitized content ant to promote author archiving of research papers Published agricultural scientist in India.
- 3. Creation of AgriCat, a Union Catalogue of books and other learning resources held by the libraries in Universities and research institutes under its domain.

4. Capacity building.

Project Scope

AgriCat project conceived by ICAR as a part of ICT under component I of NAIP. The objective of AgriCat is:

- i) To promote shared access to books and other learning resources currently held by the libraries under ICAR domain.
- ii) To create a common catalogue (Union catalogue) of these learning resources.
- iii) To standardized and modernize cataloguing practices among its libraries.
- iv) To create common infrastructure for cooperative cataloguing for the current and future acquisition of books and learning materials by all the participating libraries.
- v) To join global network of libraries in agricultural education and research, to explore visibility to publications from India in agriculture and related disciplines.

Other IT Tools which are used in the current IT based services in the Libraries

E-Books

An electronic book (also e-book, ebook, digital book) is a text- and image-based publication in digital form produced on, published by, and readable on computers or other digital devices. MPKV library has the 26 E-Books in its Collection.

E-Journals

Electronic journals, also known as ejournals, e-journals, and electronic serials, are scholarly journals or intellectual magazines that can be accessed via electronic transmission. In practice, this means that they are usually published on the Web. MPKV Library has 5 E-Journals in its collection.

J-gate is one of the online journal which is subscribe by the MPKV library and it has the

more than 4380 online full text journal with their archives are available.

J-Gate

J-Gate is an electronic gateway to global ejournal literature. Launched in 2001 by Informatics India Limited, J-Gate provides seamless access to millions of journal articles available online offered by 7478 Publishers. It presently has a massive database of journal literature, indexed from 23173 e-journals with links to full text at publisher sites. J-Gate also plans to support online subscription to journals, electronic document delivery, archiving and other related services. J-Gate Features and Benefits

- Truly e-journal portal
 J-Gate excludes journals that are not available online.
- Portal with largest number of e-journals As an e-journal portal, J-Gate presently hosts content from 23173 e-journals.
- Access to 1844 e-only-journals
 J-Gate provides access to 1844 online-only journals, which are not available in print.
- 7566 open-access online journals Captures and indexes articles from more

than 7566 open-access e-journals and maintains links to them.



- Links to 3009927 open-access articles Provides links to over 3009927 open-access articles.
- Full-text link to largest number of publisher sites presently links to e-journals from 7478 publishers.
- Union List linkage

This useful feature enables a J-Gate subscriber to check the availability of journals in local libraries.

Customization features

J-Gate Custom Content (JCC) and J-Gate Custom Content for Consortia (JCCC) are Intranet solutions offering customization, making J-Gate a local gateway for subscribed journals.

Constant updating

The J-Gate site is updated every day, ensuring the freshness and reliability of content.

- Comprehensive journal classification Three level hierarchical classification of journals is available.
- Easy-to-use search functionalities

TOC and Database allow various search options for the user's convenience. The subscriber can choose to search by Title, Author, Authors' Address/Institution, Keywords, etc.

Archives

An archive is a collection of historical records, as well as the place they are located. Archives contain primary source documents that have accumulated over the course of an individual or organization's lifetime. The library has some archival collection of crop diseases.

Knowledge Portals

Knowledge portals increase the effectiveness of knowledge workers by providing easy access to information that is necessary or helpful to them in one or more specific roles. Knowledge portals are not mere intranet portals since the former are supposed to provide extra functionality such as collaboration service, sophisticated information discovery services and a knowledge map.

Institutional Repository

An Institutional Repository (IR) is a contemporary concept that captures and makes available as much of institutional research output as possible to the users. It is a sort of database of digital information resources accessible through Internet of Intranet. In the first instance this might include electronic versions of documents such as research papers, project reports patents, theses and dissertations.

IR is an online locus for collecting, preserving, and disseminating — in digital form — the intellectual output of an institution, particularly a research institution.

Blog

A blog is a type of website or part of a website. Blogs are usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video. Entries are commonly displayed in reverse-chronological order. Blog can also be used as a verb, meaning to maintain or add content to a Blog.

The library has its Blog which can be access on http://mpkvlibrarian.wordpress.com

Social network

Social Networking is a social structure made up of individuals (or organizations) called "nodes," which are tied (connected) by one or more specific types of interdependency, such as friendship, kinship, common interest, financial exchange, dislike, or relationships of beliefs, knowledge or prestige.

Twitter

Twitter is a website, owned and operated by Twitter Inc., which offers a social networking and microblogging service, enabling its users to send and read other users' messages called tweets. Tweets are text-based posts of up to 140 characters displayed on the user's profile page. Tweets are publicly visible by default; however senders can restrict message delivery to their friends list. Users may subscribe to other author tweets – this is known as following and subscribers are known as followers. As of late 2009, users can follow lists of authors instead of just following individual authors.

Orkut

A social networking site sponsored by Google and named after Google developer Orkut Buyukkokten. Launched in early 2004, Orkut was originally an invitation-only site, but was later opened to the general public. Membership exceeded 40 million users within two years.

Consortium

A consortium is an association of two or more individuals, companies, organizations or



governments (or any combination of these entities) with the objective of participating in a common activity or pooling their resources for achieving a common goal.

Library Consortium

Brings together librarians and libraries for activities and objectives that cannot be as effectively undertaken individually. ICAR launched Project CERA-Consortium of E-Resources in Agriculture with objective of providing shared access by its academic and research community to e-journals etc. Through consortium licensing of e-content and creating a common access platform for all the content subscribed and held by libraries in 120+ institutions. These institutions include Agricultural Universities and ICAR funded research institutes in the country.

The following are type of Library Consortium CeRA

CeRA (Consortium for e-Resources in Agriculture)

Objectives of CeRA

- To upscale the existing R & D information resource base of ICAR Institutions/ Universities comparable to world's leading institution/Organizations.
- To subscribe e-journals and create e-access culture among scientists/teachers in ICAR Institutes/Agricultural Universities.
- To assess the impact of CeRA on the level of research on the level of research publications measured through NAAS ID and Science Citation Index.

RSS

RSS (most commonly expanded as Really Simple Syndication): is a family of web feed formats used to publish frequently updated works—such as blog entries, news headlines, audio, and video—in a standardized format.

RSS is a content delivery vehicle. It is the format used when you want to syndicate news and other web content. When it distributes the

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content it is called a feed. You could think of RSS as your own personal wire service.

Podcast

A Podcast (or non-streamed webcast) is a series of digital media files (either audio or video) that are released episodically and often downloaded through web syndication. The word usurped webcast in common vernacular, due to rising popularity of the iPod and the innovation of web feeds.

Podcasting

Podcasting describes the process of using audio files to deliver syndicated content to a digital audience. In Podcasting, you create audio files that are available on your website, which people can then download to their iPods or MP3 players and listen to. "Podcast" are delivered through RSS (Rich Site Summary) feeds; users subscribe to various Podcast which are then checked regularly for updates – just like blogs.

Conclusion

In order to render quality services to the students and readers, it is necessary to every library to keep pace with modern IT tools. Tremendous changes have been taken place with the advent of computer and communication technology. The library and information professional has to work in IT environment. Keeping in mind the University library of MPKV has adopted modern IT tools such as CD-ROM databases, e-books, ejournals, OPAC, Library Portal, Blog, Library Consortium etc which is found to be noteworthy changes. As well as MPKV library has working for the development of Agri-CAT and World-CAT with association of ICAR & NAIP. It shows that university library has committed towards its vision of adopting the IT tools in this IT world.

To make aware of all IT services, the course of Library and Information Services has been incorporated by the ICAR, New Delhi from last year in curriculum of PG Studies. The library is conducting this course by using modern tools such as power point, Video orientation etc.

The Vision with action is the only way to change the World.

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Utilization of Information Resources by the Faculty and Research Scholars in Kannada University Library Hampi: A Study

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Abstract

This paper towards light on the step-by-step process of information resources in Kannada University, Hampi. Kannada University specialized in Kannada studies and have specialized research centres. A survey conducted at Kannada University Library, Hampi

Keywords: Library Resources; Faculty; Research Scholar; Kannada University; Hampi.

Introduction

Information is an important national resource. It is required and consistently been a significant element at every phase of human development. In one form or other it has it is an indispensable resource for right decisionmaking at governmental, organizational and personal levels. Vital ingredients for the socioeconomic and cultural development of any nation especially for developing countries like India. It is well-accepted fact that the country, which is rich in information is always ahead in socio-economic spheres. The countries, which suffer from information gap due to non-transfer of information, lag behind in socio-economic development.

Modern Society is characterized by an increasing need for specialized institutions in various fields of human activities.

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Specialization is the order of the day. Research and development (R&D) has become a primary function of institutions such as universities, industries, government and private institutions and associations.

Majorities of the libraries even today are providing only traditional services to its users. It is high time to go beyond this and think of providing intensive services to its users. A library may be having rich resources in the form of materials and manpower, but it is not successful to provide expected services to its users, unless the resources are not used to the optimum levels. Information is one of the basic needs of mankind today's research scholars are totally lost in obtaining the required information amidst the information flood. Hence to organize the mass of information, after its evaluation in terms of quality, quantity, and reliability, is the need of the hour.

The libraries being communication centers attached to various institutions endeavor in providing relevant information to its users whenever required. The importance of library use for research work cannot be over emphasized. Research is an activity, which is directed to see something knew, to find out what was not known before and thus expand

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man's fund of knowledge. Research scholars are specialists working in the narrower areas of a selected subject. Naturally their information requirements are also of special nature to be supplied in a special way. Newly generated information constitutes an essential resource for the research worker. Knowledge builds on knowledge as new inventions are reported.

Today, due to the impact of team relay research, research activity is becoming multi disciplinary in nature. There is seepage of literature. The documents in every field are being published at on accelerated rate. In this situation it is not possible for any library, especially university library to acquire everything, which is needed by its users. Most of the higher educational libraries are facing financial constraints. Therefore, it becomes necessary for the library to develop a needbased collection. Thus it is necessary to understand the user's needs, so that one can be able to provide better services to his users. To know the information needs of the users, "User Studies" are necessary during planning and designing library and information systems/services.

Need for the study

The present study focuses on the information seeking behavior of the faculty members and research scholars of the Kannada University, Hampi and the user satisfaction. The main focus of this study is to describe the information needs and requirements in general and to analyze the research scholar's information search activities, there use behavior and use pattern. The studies also endeavor to find out the ability of the existing library and its organizational structure for disseminating information to satisfy the needs of the end users.

Objectives of the study

The specific objectives of the study are as follows

- a. To know the frequency of visits to the library by the research scholars;
- b. To find out the information needs of the teachers & research scholars;
- c. To trace the potential utility of the library resources;
- d. To identify the types of information sources required by the users;
- e. To identify the different methods of literature search used by the scholars;
- f. To know the use and adequacy of the information sources by the teachers & research scholars; and
- g. To understand the extent of help sought by users and the services offered by the library staff;
- h. To suggest the ways and means for the further improvement of the library services.

Methodology

The main purpose of the present study is to assess the various facilities available for the teachers and research scholars in the library of Kannada University. There are many techniques to carry out such on investigation. Which include interview method, schedule method, observation method and questionnaire method. In the present case a questionnaire method was applied. A structured questionnaire was prepared keeping in view of the objectives of the study and personally distributed to the 150 randomly selected teachers and research scholars of Kannada University, Hampi. Sufficient time was given to fill the questionnaire. After the stipulated time the questionnaires were collected back and analysed for collecting information and recorded in the present work.

Kannada University, Hampi: A Profile

Introduction

The Government of Karnataka through the Kannada University Act 1991 established Kannada University-Hampi, in 1991. Though the University was established in 1991, the demand for such a University was there in Karnataka since the mid 1980s. The Government of Karnataka established a commission under the chairmanship of Sadashiva Wodeyar to look into the demand. This committee after consulting various intellectuals, education experts, political thinkers, social activists, literary personalities and representatives of people came out with a report and recommended for the establishment of Kannada University.

Kannada University is located near Hampi, an historical place in Karnataka State. The very name HAMPI evokes mythological and historical memories. People lived here since the Stone- age, as it is evident in the cave paintings left here for posterity by the Stoneage people. Historically this place has been the abode of many religions – Buddhism, Jainism, Virashnavism. Islam and many popular religious cults like Huligemma cult, Galemma cult, Mylaralinga cult, Balabasava cult which exist to this day. This has been an important place for many kingdoms like Hoysalas, Sindhs, Kapilas, not to speak of the Vijayanagar kingdom, which originated here and reigned over most part of South India for more than three centuries. Vijayanagara Kingdom has also been the icon of Kannada identity and has inspired the Karnataka unification movement. Hampi has also been the abode of many a well-known Kannada poets like Harihara, Raghavanka, Kumaravyasa and Purandaradasa. Hampi is the treasure house of Indian architecture and has been recognized by the UNESCO as a World Heritage Center.

Stone Mantapas to Vidyaranya

The University moved from the stone mantapas of Hampi, where it was initially located to the preset campus, Vidyaranya, in 1994. It now has three more satellite compuses: one in Badami, an historical place, where the Department of Sculpture and Visual Arts is located; other at Kuppalli, the birth place of the poet Kuvempu, where the Kuvempu Research Centre is located and other research centre at Kudalasangama.

Vidyaranya

The present campus of Kannada University spans a hilly terrain of 680 acres situated amidst a natural forest and beautiful lake. A small brook runs through the campus. The campus is named Vidyaranya after the 'founder-Guru' of the Vijayanagara Empire. It also means the 'forest of knowledge'. The University has departments of research in History, Religion and Philosophy that have developed on the basis of the Kannada language and literature.

- 1. To translate books in other languages into Kannada according to the needs in consonance with the objectives of the university and also to translate books in Kannada into other languages.
- 2. To preserve and publish palm leaf manuscripts and rare ancient books.
- 3. To search for and compile epigraphs relating to Kannada language and literature, Kannada culture and history of the Kannadigas and publish them with its findings based on research.
- 4. To compile and publish Kannada words, expressions, colloquial terms, words peculiar to Industries and Agriculture, which are used by the Kannadigas in Karnataka and in other countries where the Kannadigas live.
- 5. To provide for research in Kannada language and literature of the ancient times with an eye on future scientific developments.
- 6. To provide for research and determine the procedure regarding development of Kannada language and literature embodying in itself all the educational

fields existing in the developing world and evolving suitable approach.

- 7. To institute studies in Kannada language and literature in relation to other Indian cultures.
- 8. To organize advance studies and research programmes based on a deep understanding of the trends in Kannada language and literature.
- 9. To promote archaeology in all its various aspects with a view to resurrecting and rediscovering the ancient Kannada culture.
- 10. To document the monuments in the state so as to facilitate future research.
- 11. To project Kannada culture, expressed through art, architecture, sculptures, painting, iconography, epigraph, theatre, dance, music, tribal, art, religion, philosophy of life, social movements; etc.
- 12. To document, analyse and preserve traditional tribal folk-art forms and performing arts.
- 13. To develop Kannada as a medium of instruction in relation to modern advances in sciences and technology.
- 14. To foster comparative studies of Kannada with other Dravidian and Aryan languages.
- 15. To build a museum that would store classic objects and artifacts of Karnataka.

The University has three main wings

- 1 Adalitanga (Administrative wing)
- 2 Adhyayananga (Academic wing)
- 3 Prasaranga (Publication wing)

Faculty of Language

- Department of Kannada Language Studies
- Department of Dravidian Studies
- Department of Translation Studies
- Department of Manuscriptology
- Department of Women's Studies

Faculty of Arts

- Department of Sculpture, Iconography, Painting and other Visual arts
- Department of Music and Dance

Faculty of Social Science

- Department of Folklore Studies
- Department of History
- Department of Archaeology and Ancient History
- Department of Ephigraphy
- Department of Tribal Studies
- Department of Development Studies

Chairs for Focused Research Activities in the University

- 1. Chair for Studies in Dalit Culture
- 2. Chair for Lohia Studies
- 3. Chair for Studies on Shamba Joshi
- 4. Chair for Studies on Purandara Dasa
- 5. Chair for Hyderabad -Karnataka Regional Studies
- 6. Chair for Valmiki Studies
- 7. Chair for Jaina Studies
- 8. Chair for Dr. Rajakumar Studies

Specialized Research Centres

Center for Women's Studies was established in the University in 2005 with funding from UGC, to conduct research in that area.

The Kuvempu Research Centre has been established in 2002 at Kuppalli, the birth place of Kuvempu, a renowned Kannada poet.

Profile of Kannada university libary

A library with a meaningful collection and effective library service is the fundamental requirements for the efficient academic functioning of any university. The achievements of a university can be gauged by the effectiveness of its library service. The library collection instead of being merely qualitatively rich must also be quantitatively rich responding to the academic needs of the university. Such an institution would automatically attract good faculty and students. The Kannada University central library came into existence in the year 1991. The central library is equipped with a good number of books and national and international book, journals related to the mandatory disciplines of the university. All out efforts are being constantly made to procure all publications relating to Kannada and Karnataka. Though priority is given to Kannada publications relatively important and useful English publications are also procured for effective library development. The main objective of the central library is to support staff and students of research by providing up-to-date information.

The central library housed in Akshara a big temple-like structure, has two distinct branches:

- 1 Library of modern texts
- 2 Sirigannada (Special library for reference studies).

At present, total computerization of the library collection and connecting it to other libraries via Internet has been taken up to facilitate smooth and effective functioning. The library offers on-line references and downloading facilities on payment from the ERNET. It has valuable audio video cassettes of folk epics of Gonda, Kudubi, Myasa Beda, Mansa, Lambani and Soliga communities.

Sirigannad rederence library

Sirigannada reference library is housed in a separate building 'Sirigannada' is a distinct library that exclusively stocks the source materials, both primary and secondary, necessary for anyone doing research on Karnataka. The objective of this library is to bring all the available sources and studies under one-roof. A database of descriptive bibliography of Karnataka Studies is presently underway. Information on individuals, institutions, which have contributed substantially for the development of Kannada, will be made available in this database.

Kannada University has an MOU (Memorandum of Understanding) with the state public library under this, one copy of the publication published in Karnataka and duplicated in the state central library under copyright act in being received in the university central library.

Computerisation of Library

To modernise the library the University Grants Commission provided financial grants of Rs. 25 lakhs which has been utilised for infrastructure development such as purchasing computers, providing Internet service, Web page designing for the university and the library, etc.

U.G.C sponsored INFLIBNET located at Ahmedabad, (Gujarath) state has given additional grants of Rs. 6.50 lakhs for computerising the library ,for house-keeping operations and training of the staff. The professional staffs of the library are regularly deputed to undergo training at INFLIBNET center. The SOUL software developed by INFLIBNET for computerization of library activities has been procured and implemented.

The users are making use of OPAC since May 2004. Bar coding for the library collection is under progress.

Internet & Digital Library Services

Internet access is provided to all the users of the university. C.D-ROM and DVD' based databases are acquired in the library on various subject fields and are provided to the users on demand. A multimedia regional language encyclopedia entitled "Kannada Vishvakosha " and the Encyclopedia Britannica are two of the most used CD databases in the library. Electronic Journals through U.G. C. Info-net Consortia

Kannada University Library being the member of U.G.C- Info-net programme avails the Internet Protocol authenticated Electronic Journals subscription facility extended by the INFLIBNET center.

Journals through Developing Library Network (DELNET)

Kannada University Library is an institutional member of the DELNET. Through this institutional subscription library user has access to over 70 lakh records of books, journal articles, non -print materials etc. This is a popular service in the library.

Academic Year 2004-05

	No. of Books	Cost	
		Rs.	Ps.
Purchase	6880	4,78,73	2=00
Donations	17,520	9,30,27	3=00
Total	24,400	14,09,0	05=00

Academic Year 2005-06

	No. of Books	Cost	
		Rs.	Ps.
Purchase	2978	4,50,45	6.00
Donations	2225	1,70,60	2.00
Total	5203	6,21,05	8.00

Academic Year 2006-07

	No. of Books.	Cost	
		Rs.	Ps.
Purchase	1496	2,47,2	297.66
Donations	5925	4,29,5	539.90
Total	7421	6,76,8	37.56

Books procurement Statistics (2004-2007)

Newspapers Subscribed

- 1. Deccan Herald
- 2. Economic Times
- 3. Hospet Times
- 4. Kannada Prabha
- 5. New Indian Express
- 6. Prajvani
- 7. Samyuktha Karnataka
- 8. The Hindu
- 9. Times of India
- 10. Udayavani
- 11. Vijay Karnataka

Journals Subscribed (In Kannada language)

- 1. Abhivruddi Adyayana
- 2. Achala
- 3. Agni
- 4. Anikethana
- 5. Aseema
- 6. Basava Belagu
- 7. Budakattu Adhyayana
- 8. Cheluva Kannada
- 9. Deshakala
- 10. Diksuchi
- 11. Dravida Adhyayana
- 12. Gandi Bazar Patrike
- 13. Gruhashobha
- 14. Hai Bangalore
- 15. Hambala
- 16. Hastaprati Adyayana
- 17. Hosatu
- 18. Janapada Veechara
- 19. Janapada Jagattu
- 20. Janapada Karnataka
- 21. Kannada Adyayana
- 22. Kannada Sahithya Parishatpatrike

- 23. Karmaveera
- 24. Karnataka Lochana
- 25. Kasturi
- 26. Lankesh Patrike
- 27. Madipu
- 28. Mahila Adhyayana
- 29. Mayura
- 30. Mogaveera
- 31. Namma Kannada
- 32. Neenasam Mathu kathe
- 33. Prapancha
- 34. Priyanka
- 35. Pusthaka Mahithi
- 36. Rangathorana
- 37. Sankalana
- 38. Sankramana
- 39. Sudha
- 40. Sujata
- 41. Taranga
- 42. Tushara
- 43. Vijnana Sangathi
- 44. Vikrantha Karnataka
- 45. Viveka Prabha

Journals Subscribed (In English Language)

- 1. Art India
- 2. Artha
- 3. China Report
- 4. Competition Success Review
- 5. Digit
- 6. Down to Earth
- 7. Front line
- 8. Health & Nutrition
- 9. India Today
- 10. Journal of Karnataka Studies
- 11. Kurukshetra
- 12. Manushi
- 13. Men's Health

- 14. Political and Economy Journal
- 15. Sanctuary
- 16. Social Action
- 17. Social Scientist
- 18. Southern Economist
- 19. Sport Star
- 20. The Week
- 21. University News
- 22. University Today
- 23. Ushas
- 24. Yogasudha
- 25. Yojana

International Journals Subscribed

- 1. Chain Report
- 2. Contemporary India
- 3. Contemporary Review of Historical Studies
- 4. DESIDOC Bulletin Information Technology
- 5. Developer I. Q.
- 6. Economic and Political Weekly
- 7. Herald of Library Science
- 8. Indian Epigraphy
- 9. Indian Journal of Applied Linguistics
- 10. Indian periodical literature
- 11. International Journal of Communication
- 12. International Journal of Rural Management
- 13. Journal of Historical Review
- 14. Journal of Librarianship & Information Science
- 15. Language
- 16. Language Forum
- 17. Marg
- 18. National Geographic
- 19. Quarterly Journal of Mythic Society
- 20. Quarterly Review of Historical Studies
- 21. Quest Historica

- 22. Reader's Digest
- 23. Reserve Bank of India Bulletin
- 24. Seminar
- 25. SRELS Journal of Information Management
- 26. Text
- 27. The Book Review
- 28. Time
- 29. Twentieth Century Literature

Electronic Journals accessed through U.G. C. Infonet Consortia programme

Kannada University Library being the member of U.G. C- Infonet programme avails the I.P. authenticated E- Journals subscription facility extended by INFLIBNET, Ahamedabad.

Some reference resources in the library

Dictionaries

- 1. English Konkani Dictionary
- 2. Chamber's English Dictionary
- 3. English Dictionary
- 4. English Kannada Dictionary. 3 Vols.
- 5. Halagannada Niganttu
- 6. Kannada English Dictionary
- 7. Kannada- Kannada- Kasturi Kosa
- 8. Kannada Niganttu; Kannada Sahithya Parisatu
- 9. Law Dictionary
- Oxford Dictionary of English Proverbs Ed.
 3. 1975.
- 11. Oxford English Dictionary. Vol. 3; 1961.
- 12. Oxford Thesaurus: A to Z dictionary of synonyms

Tulu English Dictionary

Encyclopedia

- 1. Bharatha Samajakarya Vishvakosha: 1994
- 2. Encyclopedia America: Vol.10, 1965

- 3. Encyclopedia Backward Castes: Vol.4, 2004.
- 4. Encyclopedia Indica: 1999.
- 5. Encyclopedia Mundarica: 16 Vols, 1998.
- 6. Encyclopedia of Britannica: Vol.30,1981.
- 7. Encyclopedia of Buddhist :Vol.2.
- 8. Encyclopedia of Communication Media: 4 Vol.
- 9. Encyclopedia of Library and Information Science: Vol.8, 1972.
- 10. Kannada Janapadha Vishvakosha: Kannada Sahithya Parisat, Bangalore.
- 11. Kannada Vishvakosha: Mysore University, Mysore.
- 12. Kiriyara Vishvakosha: Perambar Publishing, Bangalore.
- 13. Religion Encyclopedia.
- 14. Vaidhya vishvakosha: Kannada University, Hampi.

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- 1. Analytical and Critical Bibliography.
- 2. Bibliography of Dissertation Theses: New Delhi.
- 3. British Books in Print: London, 1965.
- 4. British National Bibliography: London, 1950-1974.
- 5. Cumulative Book Index: Newyork, 1969.
- 6. Indian Books in Print: Delhi.
- Indian National Bibliography: Calcutta, 1957.
- 8. National Bibliography of Indian Literature: New Delhi, 1901-1953.

Year Book

- 1. Europa yearbook 1987.
- 2. India: a reference annual: 1985.Govt. of India.
- 3. Press and Advertisers yearbook 1981.
- 4. Reader's Digest Almanac Yearbook 1981.

5. The Stateman's Yearbook and historical annual of the states of the worldfor the year 1981.

Biography

- 1. Chambers Biographical Dictionary 1989: New York.
- 2. Current Biography 1940: London.
- Dictionary of National Biography, 1972-74; Calcutta.
- 4. India: Who's who : New Delhi, 1969.
- 5. The International Who's who, 1987: London.
- 6. Webster's Biographical Dictionary 1976.
- 7. Who's who in India 1986: Bombay.
- 8. Who's who of Indian Writers , 1961: New Delhi.

Geographical Sources

- 1. Gazetteer of India and Indian Women, 1965: India.
- 2. Imperial Gazetteer of India, 1907: Oxford.
- 3. Karnataka Gazetteer: Bangalore.

Indexing and Abstracting

- Biographical and Agricultural Index; 1934: NewYork
- 2. Chemical Abstracts, 1907: USA
- 3. Index India, 1976; Jaipur
- 4. Indian Library Science Abstract, 1976: Calcutta
- 5. Indian science index, 1976: Gurugav
- 6. Library and Information Science Abstracts: London, 1950.
- 7. National Union Catalogue of Scientific Serials, 1965: New Delhi
- 8. Social Science Index, 1974: NewYork
- 9. Union Catalogue Periodicals INSDOC
- 10. World list of Scientific Periodicals

Statistics of the Kannada University, Hampi Library: (As on year 30.11.2007)

Number of books	=	90,887
Number of Reference books	=	3,246
Number of International Journals sub	oscri	bed=11
Number of Journals subscribed	=	82
Number of Theses/dissertation	=	388

Questionnaires di	istributed: 150	
Faculty members:	75	
Research Scholar	s: 75	
4.1 Languages known to read and write/ understand only		
Efforts have been made to check the efficiency and proficiency		
in languages. Table. 1 indicates the different languages known		
by the respondents.	0 0	

Table 1	
---------	--

	Read	Write	Read/	Understand
			Understand	only
Kannada	100%	100%	100%	
English	95 %	67%	50%	45 %
Telugu	50%	35 %	30%	
Hindi	49%	30%	39%	
Any Others	20 %	15%	15%	
Tamil	NIL	NIL	NIL	NIL



Number of Projects Reports	=	200
Number of CD-ROM	=	150
Number of Floppies	=	53

Analysis and interpretation of data

Utility of the library resources by the users is the main aim and purpose of the library. The use studies are more useful to understand the psychology of the user in getting information. With this objective the user group is studied to introduce modify the services and tools of the information handling system.

In this chapter, an attempt has been made to interpret and analyse the use of library resources by the faculty members and research scholars of Kannada University, Hampi. A Questionnaire was designed and distributed among 150 randomly selected sample population they were requested to go through each set of questions and to answer the questions along with their opinion towards the same.

The preliminary questions asked were about the background information of the individual regarding the name, sex, qualification, language known etc.

The table indicates that majorities of the respondents are well versed with the Kannada language followed by English, Tamil language was alien to them.



Teaching	50%
Research	30%
Administration	10%
Others	10%



Activities

Majorities of respondents were involved in teaching activities (50%) followed by research (30%) as indicated in table 2.

Modify the respondent were enviable in tracing activities (50%) followed by research (30%).

Table 3

Research	50%
Teaching	40%
Others	10%

Association with any other Institution(s)

In addition they were also associated with other institutions in teaching and research activities table 3.

Table 4

M.Phil	60 %
Ph.D	40 %

Table 3 in addition they were also associated with other institution in tradition and us, activities.

Kannada Literature	30%
Folklore	12%
Anthropology	11%
Tribal Studies	10%
History	10%
Sociology	8%
Education	7%
Women Studies	7%
Social work	5%

Table 5



Research related information

To a question about the research students under there guidance it was reviled that a large majority had registered for M.Phil (60%) degree programme table 4.

Table	6
-------	---

Grants	70%
Scholarship	20%
Any other	10%

Table	7
-------	---

Greatly	50%
Considerably	40%
Moderately	5%
Scarcely	5%
Not at all	_
Areas of specialization	

Table	8
-------	---

Daily	60%
Once in three days	15%
Once in a week	10%
Fortnightly	10%
Once in a Month	5%
Not at all	-

Diptychs the areas of specialization of the respondent's Kannada literature toped the list (30%) followed by the folklore (12%) and anthropology (10%).

Research Scholarships/grants

Financial assistance for research studies was in the form the grants 70% followed by the scholarship (20%) as received.

Use of personal library collection

Use of University Library

Use of the library

Library resources are for use. They are known as Knowledge reservoirs. To check the utility of these sources / collections a questions has been posed to the is tabulated as under table 7, 8 and 9.

It was found that the make respondents use of the library gather information for their day to day need. Majority of them (60%) visited the library almost every day while 15% used the library twice a week.

The reason for this may be that they do not get sufficient time because of getting sufficient

Table 9	
Fortnightly	35%
Once in week	30%
Once in a three days	15%
Daily	10%
Once in a Month	10%
Not at all	

Table 9

information by surfing the Internet in their home or at the cyber café. Still, some are in the habit of visiting the library regularly for accessing the traditional book collection.

Table 10: Library resources and its impact on user

Greatly	60%
Considerably	15%
Moderately	10%
Scarcely	5%
Not at all	

Table 11

Greatly	80%
Considerably	10%
Moderately	7%
Scarcely	3%

Table 12

5-6 hours	60%
3-4 hours	30%
0-2 hours	10%

Utility of other libraries

Use of other libraries

It is fact that no libraries are self-sufficient. No single libraries can meet the needs of requirements of its users. An open-ended question was asked about utilizations and results are presented in Table 9.

Table 9 indicated the many of respondents have a good personal library collection. In addition they make use of the university library and other libraries almost Eveready for collecting information.

Impact of the library collection

Publications of Kannada University research activities

These tables indicate that the library collection has a great impact on the users (60%) in them research activities. The publications of the Kannada University have greater influence (80%) as they deals with on going research activities as well as completed research programs of the university.

Reading habits of users

It was observed that 5 to 6 hours were utilized for reading and information gathering purpose by (60%) of the respondents. Perhaps they are the research scholars and the faculty member who ever more involved in research activities than the seniors who are engaged mostly in teaching functions these active users suggested that the library should have optimum collection print and non print sources of information in all the fields of the specialization under taken by the university

Table 13

Biographical sources	1
Books	1
Dictionaries	1
Index and Abstracting sources	1
Reports	1
Any other	2
Current journals	2
Encyclopedias	2
Geographical sources	2
Handbook	2
Bibliographical sources	3



Table 14

Scanning latest periodicals in	30%
the library	
Utilizing institute's current	20%
awareness service	
Participating in discussions	20%
with experts	
Utilizing personalized service	10%
from external source	
Participating in Conferences	10%
Participating in Seminars	5%
Through Correspondence	5%

the had informed that on this part they are making provision for literature collection in their project proposals seeking financial aids.

Resources

Utility of library reference sources (rank wise) Update of knowledge practice

An analysis of the utilization of the library reference collection (Table 13) indicated that bibliographical resources were the list



consulted sources for the information collection.

Books, Dictionaries, Reports, Indexing sources were the first priority followed by Encyclopedias and current journals.

However while updating the knowledge in the respective fields of specialization latest issues of the journals formed the primary source (30%). The next practice was discussion with experts (20%). Participation in seminar and conferences, utilization external sources

Reference services/Referral services	20%
Reprographic Services	20%
Circulation services	15%
Reader Guides Assistance	10%
Internet Services	10%
Current Awareness service	8%
Selective Dissemination of	5%
Information services	
Bibliographic Services	5%
On line Data Base Services	5%
Inter Library Loan services	2%
Any Other, Please Specify	

Table 15



and correspondences formed the other practices for keeping one self abreast of the latest developments (Table 14).

Awareness of library services

Libraries are always eager to provide different services to save the time of the users and to keep them abreast about the latest developments in their subject fields.

Library's success lies in its user satisfaction. It is the user not the manager of the library who judges the efficiency of the library. Therefore the user opinion is very much important to develop the library. Open-ended question was formed in this regard and the respance is presented in Table 15.

Use of Library Services

Even though the analysis reveled that the respondent were using the library collection effectively in their information collection activities it was on their personal endevours Majority of them were not making use of the sources available within the library as can be seen in Table 15. The general demand was for reprographic service (20%). The Internet services (10%) on-line database services (5%), and inter-library loan service (2%) were not fully utilized.

Library is mainly known by its collection rather than its building. Efficient collection of the library helps the users to satisfy their information needs.

Need For instructions and assistance in the use of library resources

Introducing the library to the new comers and explaining the rules and regulations, providing the instructions to maintaining library decorum and discussing the do; and don't activities in the library needs a lot of support from the library staff. A question was asked in this regard and it was found that not many represents aware of the sources as offered to use the library resources. They expressed the urgent need of assistance by the staff in this matter by way of orientetion cources.

Findings and Suggestions

Suggestions

- 1. The changing nature of Information and Communication Technologies (ICTs) has brought in challenges for information users and organizers. This has completely changed the way in which users access and use information.
- 2. There is a growing demand from the student's community for accessing the digital information on various subjects fields. To cater to this demand sufficient financial aids, technology and place must be allocated by the authorities to establish a good digital library with good number of digital collection.
- 3. Most of the academic libraries in Karnataka have not got a reasonable strength of the traditional multimedia products like audio, visual or audio-visual aids and of course microforms except the collection of maps and atlases. In this situation a digital library is a powerful alternative to have all kinds and different formatted information sources.
- 4. Present day academic library is ever in transition due to many reasons including the budgetary constraints and nonvoluntary demands of its non-committal users and the centralized organization set up. All these factors must be considered before setting a digital library. Adequately qualified and trained staff must be recruited to handle the media.
- 5. Modern academic libraries do not run by themselves; they require a lot of organization and administration strategies to run with multifarious activities and resources. An array of responsibilities is vested upon the librarian as an entrepreneur in the industry of knowledge. This demand's him to have an adequate knowledge of the management techniques for adjusting the working force to the working environment and the working

force to maximize the library service to the academicians at the lowest cost and with reasonable effort.

- 6. Presently most of the academic institutions in Karnataka are trying to build their own data banks or repositories in digital form for many purposes with the help of their digital library.
- 7. Academic librarians in Karnataka have an inherent potentiality, as many of them are trying hard to gain new knowledge from world wide digital libraries. World Wide Web is used as communication media for the modern digital library from where all users are able to access unlimited resources in their desired areas of knowledge.
- 8. All modern gadgets like computers, printers and other facilities must be made available for the effective and potential in house operations of the library.
- 9. For designing a digital library prototype there is a lack of Organisational Models in Indian context. The LIS professionals must try hard to solve this problem.
- 10. Specialized organizational skills or apentid to bring semblance between the user demands and the varieties of information sources. The profession of Librarianship is encountering this contemporary transformation in the media change as well as meeting the equally changing demands of the users.
- 11. The variety of materials held by the libraries also demands their handling and maintenance skills. For example, in the traditional as well as in emerging trends the library personel needs the knowledge and skill to demonstrate the use of microforms as well as surfing and navigating Internet.
- 12. Library finance should represent effective portion towards the digital/multimedia sources.

Conclusion

Information is generated through a number of communication channels through print and

electronic media viz, books journals, websites, etc. These sources generate a large quantity of information, which has led to the phenomena of information explosion/ deluge. It is estimated that the growth of literature is roughly three times faster than the growth of population. This phenomenon of information flood has created various problems for information workers in respect to retrieval of information exhaustively, expeditiously, pinpointedly and with precision. The essence of information is a critical factor not only for the countries, but for the individuals also besides its multiplier effect on the efficiency and effectiveness of an entity for which it is being utilized. An individuals need for information arises, when his stock of knowledge does not give any answer to a particular concept. The information needs of human beings are to a large extent affected by the environment in which they work. To understand the information needs of a particular group of users, it is essential to undertake user's studies. The purpose for conducting user studies in the field of library and information science are varied in number, important among them are: to know the users and their information needs; to identify the levels and kinds of user needs; to identify the approach, perception and information-seeking behaviour of users in the parent library environment; to identify, by the results, the real strength and weaknesses of the existing library resources and services; to specify the limitations or problems which might appear to discourage the use of the library; to perceive the level of involvement and participation of the users in building a good library environment; and to improve the library system as a whole. User studies are essential not only for planning and designing information systems but also for their efficient and effective operation. User studies would help to improve the relation of the library with user community in an objective way. The success of any information system depends considerably on how best the system design is based on a close and accurate understanding of the users. The concept of information need, information seeking and use studies are synonymously used in the area of user studies. The user studies involve study of information seeking behaviour of users in a particular discipline and environment. Several studies have been undertaken in the areas of information needs and use and information seeking behaviour of various groups of users such as scientists, technologist, social scientists, economist, students etc,. All the studies have reveled that the information need use and information seeking patterns of groups of users varied depending upon level, areas study or research and field of study. The methods and channels used by them also vary depending on the parameters.

The electronic or Internet era has brought in far reaching changes in how users seek information. With the advent of Information and Communication Technologies (ICTs) and their massive use in libraries, patterns of information seeking behaviour of users have experienced a changed phenomenon. The users find it interesting and easy to browse web for required information than to search the library documents. The availability of Internet based information sources and successful use of search engines guides the behavioural pattern of information seeking. The growing popularity of the Internet has given wide variety of choices for users to browse and seek information from a wide variety of resources. However, it has also given a concern of accuracy and quality of information, as Internet is not a controlled medium of information like scholarly publications.the libraries and library professionals have a greater roll to play in this ever changing nature and types information to meet the information needs of library users effectively.

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Research Trend in the Field of Nanotechnology: A Bibliometric Study

Keshava*, Kusugal NB**

Abstract

The paper presents a bibliometric study of research trends in the field of nanotechnology for the period 1999-2009, based on Web of Science. It deals with the growth of nanotechnology literature ; institutions' contribution; productivity of top ten countries of the world; language of the articles, and most productive authors. The present study may help library professionals in developing strategic plan for the management of science and technology libraries.

Keywords: Bibliometrics; Nanotechnology; Growth; Productive authors.

Introduction

The term "nanotechnology" was coined in 1974 by Norio Taniguchi (1912-1999) at the University of Tokyo. It includes a number of technologies that deal with the miniaturization of existing technology down to the scale of a nanometer (one-billionth of a meter) in size, about the size of molecules and atoms. Potential effects of nanotechnology include microcomputers capable of storing trillion of bytes of information in the size of a sugar cube; portable fluids containing nanobots that are programmed to destroy cancer cells: and airborne nanobots that are programmed to rebuild the thinning ozone layer. A key understanding of nanotechnology is that it offers not just better products, but a vastly improved manufacturing process. A computer can make copies of data filesessentially as many copies as you want at little or no cost. It may be only a matter of time until the building of products becomes as

cheap as the copying of files. That's the real meaning of nanotechnology, and why it is sometimes seen as 'the next industrial revolution' [1]. Therefore, in the present paper an attempt has been made to know the research trend in the field of nanotechnology through bibliometrics.

Information mangers have adopted a number of quantitative methods in recent years in order to evaluate library resources and services more objectively and effectively. Bibliometrics is one of the quantitative techniques applied by information managers measure the records of human to communication. It is used to identify the pattern of publication, authorship, citations used for a subject etc over a period of time and thereby offering insight into the dynamics of the area under a particular study [2]. Therefore, in the present paper an attempt has been made to know the research trend in the field of nanotechnology through bibliometrics

Objective of the study

The main objectives of the study are

- i. To investigate the nature of year-wise growth of articles;
- ii. To know the contribution of various institutions;

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- iii. To observe productivity of top ten countries of the world;
- iv. To study the language of the articles;
- v. To investigate the most productive authors.

Database and methodology

The data for the study were retrieved from the *Web of Science, Science Citation Index Expanded* (*SCIE*), published by Thomson Reuters, by using relevant keywords related to Nanotechnology field. Records pertaining to Nanotechnology were collected from 1999-2009.

Growth of Articles

The changes in the size of literature over a specific period may be termed as growth of literature (articles) [3]. Growth of has been identified by looking at the yearly distribution of the articles in a chosen field Nanotechnology.

Table 1 shows Year-wise distribution of articles in ISI Web Knowledge database in the

Table 1: Year-wise growth of articles

Years	No. of articles	Cumulative No. of articles	% of 4624	Cumulative %
1999	43	43	0.93	0.93
2000	67	110	1.44	2.37
2001	89	199	1.92	4.30
2002	170	369	3.67	7.97
2003	248	617	5.36	13.34
2004	339	956	7.33	20.67
2005	458	1414	9.90	30.57
2006	540	1954	11.67	42.25
2007	704	2638	15.22	57.48
2008	944	3602	20.41	77.89
2009	1022	4624	22.10	100
Total	4624		100	

Table	2:	Institutional	Affiliation	of	the			
authors								

Institution(s)	No of	%
	Articles	
Universities	3642	78.763
Research	722	15.61
Institutions		
Others	260	5.62
Total	4624	100

field of "Nanotechnology" .During the year 1999, 2000, 2001, 2002, 2003 and 2004 there were 43 (0.92%), 67 (1.44%), 89 (1.925), 170 (3.67%), 248 (5.36%) and 339 (7.33%) articles. From 2005 onwards, there is a steady increase in the number of articles. The year 2009 recorded the highest number of articles with 1022(22.10%).

Table 3: Scientific productivity of top ten countries according to Number of publications

Country/ Territory	No. of Articles	Cumulative No. of Articles	% of 4624	Cumulative %
USA	1917	1917	41.46	41.46
Peoples R China	473	2390	10.23	51.69
Germany	377	2767	8.15	59.84
Japan	321	3088	6.94	66.78
England	230	3318	4.97	71.75
India	177	3495	3.83	75.58
Italy	151	3646	3.26	78.84
France	148	3794	3.20	82.04
South Korea	144	3938	3.11	85.15
Canada	128	4066	2.77	87.92
Others	558	4624	12.07	100
Total	4624			

Fig 1: Scientific productivity of top ten countries



Institutional Affiliation

Table 2 from the above analysis could be deduced that Universities contributes 3642(78.76%) articles of the total 4624. The remaining are Research Institutions 722(15.61%) and others (includes colleges;

Table 4: La	anguage	wise d	listributi	ion c)f			
Articles								

Language	No. of Articles	Cumulative No. of Articles	% of Articles	Cumulative %
English	4512	4512	97.5778	97.5778
German	36	4548	0.7785	98.3563
Chinese	30	4578	0.6487	99.005
Japanese	15	4593	0.3243	99.3293
French	13	4606	0.2811	99.6104
Spanish	6	4612	0.1297	99.7401
Portuguese	5	4617	0.1081	99.8482
Croatian	4	4621	0.0865	99.9347
Polish	3	4624	0.0648	99.9995
Total	4624		99.9995	

Fig 2: Language-wise distribution of articles



institute of technology; medical school etc) 260(5.62%) articles respectively.

Cross National Assessment

The above table shows the country wise distribution of articles in the field of "Nanotechnology". Out of the total 4624 articles, 1917(47.14%) articles have been published from U.S.A. showing its dominance

in the field. Peoples R China stands second in the table with 473(11.63%) articles, followed by Germany 377(9.27%), Japan 321(7.89%), England 230(5.65%), India 177(4.35%), Italy 151(3.71%), France 148(3.63%), South Korea

Table 5: Productivity top ten researc	h
Institutions according to Number of	£
Articles	

Institutions	No. of Articles	Cumulative No. of Articles	% of 454	Cumulative %
Purdue Univ.	71	71	15.63	15.63
(United Stats)				
Univ. Illinois (Chicago)	57	128	12.55	28.19
Nat. Univ. Singapore	48	176	10.57	38.76
Harvard Univ. (United Stats	46	222	10.13	48.90
Univ. Calif Los Angeles	44	266	9.6	58.59
Northwestern Univ. (Chicago	39	305	8.95	67.18
Univ. Washington(USA)	39	344	8.59	75.73
Univ. Michigan	38	382	8.37	84.14
Univ. Cambridge	37	419	8.14	92.29
Arizona state Univ.	35	454	7.70	100
Total	454		100.	

Fig 3: Scientific productivity of top ten research institutions



Name of the authors	Rank	No. of articles	Cumulative no. of articles	% of articles	Cumulative %
Seeman N.C	1	29	29	26.8518	26.8518
Webster T.J	1	29	58	26.8518	53.7036
Feng S.S	2	17	75	15.7407	69.4443
Liu Y	2	17	92	15.7407	85.185
Anonymous	3	16	108	14.8148	99.9998
Total		108		99.9998	

Table 6: Most productive authors

144(3.54%) and Canada 128(3.14%) articles respectively.

Language of the Articles

4512(97.57%), out of 4624 articles are published in English language; 36(0.77%)articles in German language; 30(0.64%) articles in Chinese language; 15(0.32%) articles in Japanese language; 13(0.28%) articles in French language; 6(0.12%) articles in Spanish language; 5(0.10%) articles in Portuguese language; 4(0.08%) articles in Croatian language and 3(0.06%) articles in Polish language. This shows English language is the main language used by the scientists to communicate research output through different channels of communication.

Institutional Assessment

Table 5 shows the scientific productivity of top ten research institutions according to number of articles. Purdue University contributed 71(15.63%) articles ; University of Illinois(USA) 57(12.55%) articles; National University, Singapore 48(10.57%) articles; Harvard University 46(10.13%) articles; University Calif Los Angeles 44(9.69%) articles; Northwestern University 39(8.59%) articles; Washington University of (USA) 39(8.59%) articles; University Michigan 38(8.37%) articles; University of Cambridge 37(8.14%) articles and Arizona State University 35(7.70%) articles are contributed.

Prolific Authors

Table 6 gives ranked list of the most prolific authors. A total of 11,739 authors have been

contributed 4624 articles over the period of 11 years (1999 to 2009). It is observed that Seeman N.C and Webster T.J (USA) are contributed maximum numbers of articles i.e. 29(26.85%) articles followed by Feng S.S and Liu Y (Peoples R China) are contributed 17(15.74%) articles and 16(14.81%) articles do not have authors.

Conclusion

Bibliometrics as technique has extensive applications in identifying the research trends in a subject, trends in a authorship and collaboration in research, core periodicals; obsolescence and dispersion of scientific literature useful in estimating the comprehensiveness of the sources of information. It will help in formulation o need based collection development policy, weeding out of unused documents and make science policy for the libraries of the present era.

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Human Resource Development in the State University Libraries & Information Centers in Utter Pradesh: A Survey in the Perspectives of Information Technology

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Abstract

The present article discusses Human Resource Development in the State University Libraries & Information Centers in Utter Pradesh it highlights the trends in HRM studies recently done. The paper highlights the HRM activities and various adopted ways to improve HR in these libraries. It discusses the present status of staff (i.e. Human Resource) of state university libraries of U.P. The paper tried to explain strategic and operational planning for HRD. It concludes with the advantages of applying HRD principles to Indian libraries and information centers.

Keywords: (Human Resource Management) HRM, Information & Information Centers.

Introduction

Human Resource Development (HRD) is a process of increasing knowledge, skills, capabilities and all positive work attitude and values of people working at all levels in a public or private organizations. The greatest asset of any nation is its human resources. The economic development of any nation depends on a number of factors, of which human beings are recognized as the main sources. A country which is unable to develop the skill and knowledge of its people and to utilize them effectively in the national economy, will be unable to develop anything else. Bronowski [1] in his book 'The Ascent of Man', stated that man has achieved ascendancy over other mammals. Behavior, discipline and character are all ingredients of a human being. Human beings are therefore, the primary and most

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important resource. They create other resources through their ability. The human sources, therefore, should be developed as a resource so that the other resources multiply. Accordingly to Javagopal [2] in his book 'Human Resource Development: Conceptual Analysis and Strategies' defined as a process of measurement and reporting of the end value of people as organizational resources. It involves accounting for investment in people and their replacement cost, in addition to accounting for the economic value to an organisation. Nadler [3] used the term human resource developments which in turn help in knowledge augmentation. He also observed that HRD is an organized learning experience, within a period of time with an objective of producing the possibility of performance change and knowledge.

Review of Literature

Jain [4] examines the main critical qualities required to provide efficient public library services were revealed as: enthusiasm, positive attitude, innovative thinking, commitment. The other staff related and motivational issues were identified as: a sense of achievement, a feeling of self-worth, job-security, staff recognition, status, career development, good

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salary, effective communication, job satisfaction, delegation of authority, clear job description, performance feedback, conducive working environment. Some other strategic management issues were acclaimed as: organisational culture, transformational leadership, employee recognition and reward systems, performance measurement system, productivity improvement, and customer orientation.

References and further reading may be available for this article. To view references and further reading you must purchase this article. Matthews [5] reviews recent preservation activity in Britain considers the place of preservation in library management and looks to its future development. The many and broad aspects of preservation which impinge on library management are indicated. Much progress has been made in recent years, but there remain those who need persuading to reassess their attitude towards it. If the current preservation impetus is to be maintained and extended, then the question of funding, in particular, must be successfully addressed. Co-operative programmes and integration of preservation into overall library management and policy will be significant in achieving this. Smith [6] states Library services face many problems at the present time: problems to do with funding and priorities which lead to questions about how we can change and where our future lies, These questions concern the library's relationship with its external environment-its strategy. Such a strategic focus is one which all library managers would do well to develop. Hayden [7] discusses one of the tasks of the university librarian is to facilitate current awareness: services are set up to encourage user groups to keep up-to-date with development in their own and related subject areas. The librarian advocates current awareness as an essential prerequisite for members of that user group to remain effective practitioners, researchers or teachers within their subject area. The librarian encourages and advocates because unfortunately some of those practitioners, researchers and teachers are either unconvinced of the need for current

awareness or haven't the time/are not interested/cannot be bothered. Roknuzzaman [8] conducted a survey in five prominent pubic university libraries in Bangladesh to explore the extent of Human Management (HRM) usually practiced by them. The survey used a combination of structured questionnaire, unstructured interview, and observation methods to examine the nature and type of library human resources, their professional categories, management issues including staff selection and recruitment salaries and wages, Job analysis methods, performance evaluation, audit, and promotion, supporting Human Resource Development (HRD) programmes, etc. The study used a five point Likert scale to rank major problems of HRM in libraries, and also to record staff's opinion on twelve (12) indicators measuring their levels of job satisfaction. He provided future directions for better HRM practices in the common interest of public university libraries in Bangladesh. Devi and et al [9] highlight the scenario of application of information technology in the three types of libraries i.e. Publics, Special and Academic Libraries residing in the valley of Manipur. It also states the problems and prospect regarding the areas, which can be developed in future for effective functioning of the libraries in Manipur. Roknuzzaman [10] conducted a survey in state university libraries in Utter Pradesh to explore the extent of Human Resource Management (HRM) usually practiced by them. The survey used a combination of structured questionnaire, unstructured interview, and observation methods to examine the nature and type of library human resources, their professional categories, management issues including staff selection and recruitment, salaries and wages, job analysis methods, performance evaluation, audit, and promotion, supporting Human Resource Development (HRD) programmes, etc. The study used a five point Likert scale to rank major problems of HRM in libraries, and also to record staff's opinion on twelve (12) indicators measuring their levels of job satisfaction. Muogilim [11] investigates the inability of students to utilize library facilities after taking a course in the use of library. The

finding showed that there is little interaction between the students and the library staff during the orientation programme. They were also overloaded with so much information with in a short time that the chances of retention and interalisation of avalanche of new information is quite slim.

This study is related with the following libraries

- 1. Bundelkhand University, Jhansi
- 2. C.S.A. Univ. of Agri. & Tech., Kanpur
- 3. C.S.J.M. Kanpur University, Kanpur
- 4. C.C.S. University, Meerut
- 5. D.D.U. Gorakhpur University, Gorakhpur
- 6. R.M.L. Awadh University, Faizabad
- 7. B.R. Ambedkar University, Agra
- 8. Lucknow University, Lucknow
- 9. M.J.P. Rohilkhand University, Bareilly
- 10. M.G.K. Vidyapeeth, Varanasi
- 11. N.D. Univ. of Agri. & Tech., Faizabad
- 12. S.S. Vishwavidyalaya, Varanasi
- 13. V.B.S. Purvanchal University, Jaunpur

Objectives of the Study

- To find out the human resource management activities performed in these libraries.
- To find out various adopted ways to improve HR in these libraries.
- To find out the present status of staff (i.e. Human Resource) of state university libraries of U.P.
- To explain strategic and operational planning for HRD.
- To describe HRD mechanism and instruments.
- To perceive the advantages of applying HRD principles to Indian libraries and information centers.

Scope of the Study

Human resource management is concerned with managing people effectively in the workplace. This function is carried out by most managers in organizations. However, it is the duty of a specialist human resource manager to provide advice, guidance, assistance and support on employment matters to all those who have direct responsibility for the management of people in the organization. The main function of a human resource department is to ensure the recruitment, selection, training, development and retention of staff necessary for the efficient and effective management of the organization. The purpose of this study is to emphasize these skills and knowledge in human resource management.

Research Methodology

The proposed research study is based on primary as well as secondary data. The primary data and other relevant information pertaing to different areas of activity of Human Resources Management in state university libraries of U.P. will be based on personal observation, interviews with the workers and questionnaire method. The target group comprises almost all the staff of each and every library. Data will also be used wherever necessary. Due to personal limitations the coverage of the study has been confined to the state university libraries only.

The above table shows that the Bundelkhand University library's book collection are 1 lakh books,30000 Reference Books, 1000 Membership,10000 Bound Periodicals, 150 CD/Cassette/Tapes and they gives no response about the Patents/ Standards. C.S.A. University of Agri. & Tech. library's book collection are 39506 books & Reference Books, 2890 Membership,25000 Bound Periodicals, 200 CD/Cassette/Tapes and they gives no response about the Patents/ Standers. C.S.J.M. University library's book collection are 1.5 lakh books,10000 Reference Books, 8000 Membership,5000 Bound

S.No.	University			Collection	of Library		
		Books	Reference Books	Membership	Bound Periodicals	Patents/ Standards	CD/Cassett e/ Tapes
1.	Bundelkhand University, Jhansi	1 lakh	30000	1000	10000	-	150
2.	C.S.A. Univ. of Agri. & Tech., Kanpur	39	9506	2890	25000	-	200
3.	C.S.J.M. Kanpur University, Kanpur	1.5 lakh	10000	8000	5000	-	3000
4.	C.C.S. University, Meerut	133347	12896	350	26262	-	560
5.	D.D.U. Gorakhpur University, Gorakhpur	5 lakh	-	450	-	-	-
6.	R.M.L. Awadh University, Faizabad	80000	20000	2500	200	-	200
7.	B.R. Ambedkar University, Agra	110000	35000	3000	32000	-	250
8.	Lucknow University, Lucknow	53.	5000	40000	50000	-	-
9.	M.J.P. Rohilkhand University, Bareilly	67325	32385	300	2425	-	589
10.	M.G.K. Vidyapeeth, Varanasi	235000	195000	8000	4500	-	125
11.	N.D. Univ. of Agri. & Tech., Faizabad	55000	30000	2270	1290	20	08
12.	S.S. Vishwavidyalaya, Varanasi	214500	15000	3000	220	-	1485
13.	V.B.S. Purvanchal University, Jaunpur	94	000	5000	2000	-	1600

Table 1: Analysis and Interpretation of Data

Periodicals, 3000 CD/Cassette/Tapes and they gives no response about the Patents/ Standerds. C.C.S. University library's book collections are 133347 books, 12896 Reference Books, 350 Membership, 26262 Bound Periodicals, 560CD/Cassette/Tapes and they gives no response about the Patents/ Standerds. D.D.U. University library's book collection are 5 lakh books, 450 Membership, and they gives no response about the Reference Books, Bound Periodicals, Patents/ Standerds, CD/Cassette/Tapes. R.M.L. University library's book collection are 80000 books,20000 Reference Books, 2500 Membership,200 Bound Periodicals, 200 CD/ Cassette/Tapes and they gives no response about the Patents/Standerds.B.R. Ambedkar University library's book collection are 110000 books,35000 Reference Books, 3000 Membership, 32000 Bound Periodicals, 250 CD/Cassette/Tapes and they gives no about response the Patents/ Standerds.Lucknow University library's book collection are 535000 books & Reference Books, 40000 Membership, 50000 Bound Periodicals, and they gives no response about the Patents/Standerds & CD/Cassette/ Tapes.M.J.P. University library's book collection are 67325 books,32385 Reference Books, 300 Membership,2425 Bound Periodicals, 589 CD/Cassette/Tapes and they gives no response about the Patents/ Standerds.M.G.K. Vidyapeeth library's book collection are 235000 books,195000 Reference Books, 8000 Membership,4500 Bound Periodicals, 125 CD/Cassette/Tapes and they gives no response about the Patents/ Standerds.N.D. University of Agri.& Tech. library's book collection are 55000 books,30000 Reference Books, 2270 Membership,1290Bound Periodicals, 20 Patents/Standerds & 08 CD/Cassette/ Tapes.S.S. Vishwavidyalaya library's book collection are 214500 books,15000Reference Books, 3000 Membership,220 Bound Periodicals, 1485 CD/Cassette/Tapes and they gives no response about the Patents/ Standerds.V.B.S. Purvanchal University

Table 2	: Who	is	Responsi	ble for	r Managing	; and	Supervisin	g the	Library	Services	and
	Facili	ties	s (list job	title,	indication	of de	signation, o	qualif	ications	etc)?	

S.No.	University	Responsible for Managing and Supervising the Library Services and Facilities (list job title, indication
		of designation, qualifications etc).
1.	Bundelkhand University, Jhansi	Librarian.
2.	C.S.A. Univ. of Agri. & Tech., Kanpur	University Administration through Librarian.
3.	C.S.J.M. Kanpur University, Kanpur	Different Section Incharge. If many problem arises that it's shortout through discussion with them.
4.	C.C.S. University, Meerut	Concerned Incharge.
5.	D.D.U. Gorakhpur University, Gorakhpur	University Librarian.
6.	R.M.L. Awadh University, Faizabad	Librarian.
7.	B.R. Ambedkar University, Agra	Librarian as well all library staff.
8.	Lucknow University, Lucknow	Dy. Librarian, Assistant Librarian & other Professionals.
9.	M.J.P. Rohilkhand University, Bareilly	Hon' Librarian with the help of a Assistant Librarian &
		Supporting staff.
10.	M.G.K. Vidyapeeth, Varanasi	Librarian, Assistant Librarian & Supporting staff.
11.	N.D. Univ. of Agri. & Tech., Faizabad	Librarian is Overall Responsible.
12.	S.S. Vishwavidyalaya, Varanasi	Top Management-Librarian, Middle Management-
		Assistant Librarian & Operational Management-Library
		Assistant etc.
13.	V.B.S. Purvanchal University, Jaunpur	Librarian.

library's book collection are 94000 books & Reference Books, 5000 Membership,2000 Bound Periodicals, 1600 CD/Cassette/Tapes and they gives no response about the Patents/ Standerds.

The above table shows that the librarian is responsible for managing and supervising the library services and facilities in Bundelkhand University library. University Administration through librarian is responsible for managing and supervising the library services and facilities in C.S.A. University of Agri. & Tech. library. Different Section Incharge. If many problem arises that it's shortout through discussion with them is responsible for managing and supervising the library services and facilities in C.S.J.M. University library. Concerned Incharge is responsible for managing and supervising the library services and facilities in C.C.S. University library. University Librarian is responsible for managing and supervising the library services and facilities in D.D.U. University library. Librarian is responsible for managing and supervising the library services and facilities in R.M.L. Awadh University library. Librarian as well all library staff is responsible for managing and supervising the library services and facilities in B.R. Ambedkar University library. Dy. Librarian, Assistant Librarian &

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other Professionals is responsible for managing and supervising the library services and facilities in Lucknow University library. Hon' Librarian with the help of a Assistant Librarian & Supporting Staff is responsible for managing and supervising the library services and facilities in M.J.P. University library. Librarian, Assistant Librarian & Supporting Staff is responsible for managing and supervising the library services and facilities in M.G.K. Vidyapeeth library. Librarian is Overall Responsible is responsible for managing and supervising the library services and facilities in N.D. University of Agri.& Tech. library. Top Management _ Librarian, Middle Management - Assistant Librarian, & Operational Management - Library Assistant etc. is responsible for managing and supervising the library services and facilities in S.S. Vishwavidyalaya library. Librarian is responsible for managing and supervising the library services and facilities in V.B.S. Purvanchal University library.

The above table indicates that Bundelkhand University library, C.S.J.M. Kanpur University library, C.C.S. University library, D.D.U. Gorakhpur University library, R.M.L. Awadh library, B.R. Amdedkar University library, M.J.P. Rohilkhand University library, M.G.K. Vidyapeeth library, S.S. Vishwavidalaya,

Table 3: In your opinion, are the ICT facilities provided (hardware, software, peripherals, Internet access and technology-based learning materials) adequate to meet the needs of the staff teaching collaborative programmes and the needs of the students following those programmes?

If no, please comment:

S.No.	University	In your opinion, are the ICT facilities provided (hardware, software, peripherals, Internet access and technology-based learning materials) adequate
		to meet the needs of the staff teaching collaborative programmes and the needs of the students following those programmes?
1.	Bundelkhand University, Jhansi	Yes
2.	C.S.A. Univ. of Agri. & Tech., Kanpur	No; Long Power cut & shortage of Professional Staff.
3.	C.S.J.M. Kanpur University, Kanpur	Yes
4.	C.C.S. University, Meerut	Yes
5.	D.D.U. Gorakhpur University, Gorakhpur	Yes
6.	R.M.L. Awadh University, Faizabad	Yes
7.	B.R. Ambedkar University, Agra	Yes
8.	Lucknow University, Lucknow	No; More hardware & software is required to fulfill the needs.
9.	M.J.P. Rohilkhand University, Bareilly	Yes
10.	M.G.K. Vidyapeeth, Varanasi	Yes
11.	N.D. Univ. of Agri. & Tech., Faizabad	No; ICT is important.
12.	S.S. Vishwavidyalaya, Varanasi	Yes
13.	V.B.S. Purvanchal University, Jaunpur	Yes

V.B.S. Purvanchal University library are provided the ICT facilities adequate to meet the needs of the staff teaching collaborative programmes & the needs of the students but C.S.A. University of Agri. & Tech. Library, Lucknow University library & N.D. University of Agri. & Tech. library are not provided the ICT facilities.

The above table exhibits that Bundelkhand University library use the internet ICT facility, C.S.A. Univ. of Agri. & Tech. library use the smooth functioning of ICT facilities is essential first. C.C.S. University library use the online/ E-mail ICT facility. R.M.L. Awadh University library promote the librarian ICT facility. B.R. Ambedkar University library use the Information Technology ICT facility. M.G.K. Vidyapeeth library use the internet, CD ROMs & website to make the use of ICT facility. S.S. Vishwavidyalaya library use the Tanning facilities for use of ICT in library should be provided to all level of library & information

Table 4: Please Outline the Mechanisms that are in Place for Teaching Staff to Make their Requirements for Library and ICT Facilities Known

S.No.	University	Outline the Mechanisms that are in Place for
		Teaching Staff to Make their Requirements for
		Library and ICT Facilities Known.
1.	Bundelkhand University, Jhansi	Internet.
2.	C.S.A. Univ. of Agri. & Tech., Kanpur	Smooth functioning of ICT facilities is essential first.
3.	C.S.J.M. Kanpur University, Kanpur	-
4.	C.C.S. University, Meerut	Online/e-mail.
5.	D.D.U. Gorakhpur University,	-
	Gorakhpur	
6.	R.M.L. Awadh University, Faizabad	Librarian can promote it.
7.	B.R. Ambedkar University, Agra	Information Technology.
8.	Lucknow University, Lucknow	-
9.	M.J.P. Rohilkhand University, Bareilly	-
10.	M.G.K. Vidyapeeth, Varanasi	Internet.
11.	N.D. Univ. of Agri. & Tech., Faizabad	Teaching staff consult internet, CD ROMs & website
		to make the use of ICT is teaching.
12.	S.S. Vishwavidyalaya, Varanasi	Tanning facilities for use of ICT in Library should be
		provided to all level of Lib. & Info. Professional.
13.	V.B.S. Purvanchal University, Jaunpur	-

Table 5: Please Describe How Matters Relating to Library and ICT Facilities are Included in Staff Review and Feedback and Evaluation procedures

S.No.	University	Describe How Matters Relating to Library and ICT
	-	Facilities are Included in Staff Review and
		Feedback and Evaluation
1.	Bundelkhand University, Jhansi	Services.
2.	C.S.A. Univ. of Agri. & Tech.,	Long Power cut & shortage of Professional Staff.
	Kanpur	
3.	C.S.J.M. Kanpur University, Kanpur	-
4.	C.C.S. University, Meerut	Through E-mail & Circulars.
5.	D.D.U. Gorakhpur University,	-
	Gorakhpur	
6.	R.M.L. Awadh University, Faizabad	Training.
7.	B.R. Ambedkar University, Agra	Good Services
8.	Lucknow University, Lucknow	-
9.	M.J.P. Rohilkhand University,	-
	Bareilly	
10.	M.G.K. Vidyapeeth, Varanasi	-
11.	N.D. Univ. of Agri. & Tech.,	Staff & Students giving the feedback to the Librarian
	Faizabad	& Assistant Librarian.
12.	S.S. Vishwavidyalaya, Varanasi	Through Suitable Library Software.
13.	V.B.S. Purvanchal University,	-
	Jaunpur	

professional facility. C.S.J.M. Kanpur University library, Lucknow University library and M.J.P. Rohilkhand University library gives no response. Table 5 gives the information about the library and ICT facilities are included in staff review and feedback and evaluation procedures in Bundelkhand University library, C.S.A. University of Agri. & Tech. library give

S.No.	University	What are the Practices University Library is
		Currently Applying?
1.	Bundelkhand University, Jhansi	-
2.	C.S.A. Univ. of Agri. & Tech., Kanpur	E-Books & Springer protocol is under
		consideration.
3.	C.S.J.M. Kanpur University, Kanpur	-
4.	C.C.S. University, Meerut	Bar Code technology.
5.	D.D.U. Gorakhpur University,	-
	Gorakhpur	
6.	R.M.L. Awadh University, Faizabad	Information Communication Technology.
7.	B.R. Ambedkar University, Agra	Seminars etc.
8.	Lucknow University, Lucknow	Workshops & Tanning programmes.
9.	M.J.P. Rohilkhand University,	-
	Bareilly	
10.	M.G.K. Vidyapeeth, Varanasi	Library Administration Practices.
11.	N.D. Univ. of Agri. & Tech., Faizabad	We have Acquisition, Technical, Circulation
		& follow DDC system.
12.	S.S. Vishwavidyalaya, Varanasi	Hybrid System.
13.	V.B.S. Purvanchal University,	-
	Jaunpur	

Table 6: What are the Practices University Library is Currently Applying?

the response about the ICT facility that long power cut & shortage of professional staff, C.C.S. University library's ICT facility is E-mail & circulars, R.M.L. Awadh University library ICT facility is Training, B.R. Ambedkar University library ICT facility is Good Services, N.D. University of Agri. & Tech. library ICT facility is staff & students giving the feedback to the librarian & Assistant librarian, S.S. Vishwavidyalaya library ICT facility is suitable library software, but C.S.J.M. Kanpur University library, D.D.U. Gorakhpur University library, Lucknow University library, M.J.P. Rohilkhand University library, M.G.K. Vidyapeeth library and V.B.S. Purvanchal University libraries gave no response about the ICT facility.

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The above table shows that C.S.A. University of Agri. & Tech. library practices is E-Books & Springer protocol is under consideration, C.C.S. University library practices is Bar Code Technology, R.M.L. Awadah University library practices is Information Communication Technology, B.R. Ambedkar University library practices is seminars etc., Lucknow University library practices is workshop & training programmes, M.G.K. Vidyapeeth library use the library administration practices, N.D. University of Agri. & Tech. library practices is librarian acquisition, Technical, Circulation & follow DDC System and S.S. Vishwavidyalaya library practices is Hybrid System but Bundelkhand University library, C.S.J.M. Kanpur University library, D.D.U. Gorakhpur University library, M.J.P. Rohilkhand University library & V.B.S. Purvanchal University library gave no response.

Table 7 shows that Bundelkhand University library, C.S.A. University of Agri. & Tech. library, C.S.J.M. Kanpur University library, C.C.S. University library, R.M.L. Awadh University library, Lucknow University library, M.G.K. Vidyapeeth library, N.D. University of Agri. & Tech. library and V.B.S. Purvanchal University library says Yes library administration practices towards its personnel affect their productivity but D.D.U. Gorakhpur University library, B.R. Ambedkar University library & M.J.P. Rohilkhand University library gave no response and S.S. Vishwavidyalaya says no library administration practices towards its personnel affect their productivity.
Table 7: Do th	le Library	Administration	Practices	Towards i	ts Personnel	Affect	their
Productivity?							

S.No.	University	Do the Library Administration	
		Practices Towards its Personnel	
		Affect their Productivity?	
1.	Bundelkhand University, Jhansi	Yes	
2.	C.S.A. Univ. of Agri. & Tech., Kanpur	Yes	
3.	C.S.J.M. Kanpur University, Kanpur	Yes	
4.	C.C.S. University, Meerut	Yes	
5.	D.D.U. Gorakhpur University, Gorakhpur	-	
6.	R.M.L. Awadh University, Faizabad	Yes	
7.	B.R. Ambedkar University, Agra	-	
8.	Lucknow University, Lucknow	Yes	
9.	M.J.P. Rohilkhand University, Bareilly	-	
10.	M.G.K. Vidyapeeth, Varanasi	Yes	
11.	N.D. Univ. of Agri. & Tech., Faizabad	Yes	
12.	S.S. Vishwavidyalaya, Varanasi	No	
13.	V.B.S. Purvanchal University, Jaunpur	Yes	

Table 8: Do Effective Planning, Training and Compensating Affect Workers' PerformanceCareer Planning is positively Correlated to Personnel's Performance.

S.No.	University	Do Effective Planning, Training and Compensating		
		Affect Workers' Performance Career Planning is		
		Positively Correlated to Personnel's Performance.		
1	Bundelkhand University, Jhansi	Yes		
2	C.S.A. Univ. of Agri. & Tech., Kanpur	Yes		
3	C.S.J.M. Kanpur University, Kanpur	No		
4	C.C.S. University, Meerut	-		
5	D.D.U. Gorakhpur University, Gorakhpur	-		
6	R.M.L. Awadh University, Faizabad	Yes		
7	B.R. Ambedkar University, Agra	-		
8	Lucknow University, Lucknow	Yes		
9	M.J.P. Rohilkhand University, Bareilly	-		
10	M.G.K. Vidyapeeth, Varanasi	Yes		
11	1 N.D. Univ. of Agri. & Tech., Faizabad Yes			
12	S.S. Vishwavidyalaya, Varanasi Yes			
13	V.B.S. Purvanchal University, Jaunpur	No		

Table 8 exhibits that Bundelkhand University library, C.S.A. University of Agri. & Tech. library, R.M.L. Awadh University library, Lucknow University library, M.G.K. Vidyapeeth library, N.D. University of Agri. & Tech. library and S.S. Vishwavidalaya libraries says yes and C.S.J.M. Kanpur University library & V.B.S. Purvanchal University libraries says No effective planning, training and compensating affect workers performance career planning is positively correlated to personnel's performance but C.C.S. University library, D.D.U Gorakhpur University library, B.R. Ambedkar University

library & M.J.P. Rohilkhand University library gave no response.

Table 9 indicates that major functions and concepts in Human resource Management in particular, planning and selection in C.S.J.M. Kanpur University library use POSDCORB, R.M.L. Awadh University library use the personnel invitations & personnel relationship also, B.R. Ambedkar University library use the library software, N.D. University of Agri. & Tech. library use the interview is important for good HRM, S.S. Vishwavidyalaya library use the concept of TQM is only solution in

Table 9: Identify the Major Functions and Concepts in Human Resource Management in Particular, Planning and Selection

S.No.	University	Identify the Major Functions and Concepts in Human Resource Management in Particular, Planning and Selection.		
1.	Bundelkhand University, Jhansi	-		
2.	C.S.A. Univ. of Agri. & Tech., Kanpur	-		
3.	C.S.J.M. Kanpur University, Kanpur	POSDCORB is worked.		
4.	C.C.S. University, Meerut	-		
5.	D.D.U. Gorakhpur University,	-		
	Gorakhpur			
6.	R.M.L. Awadh University, Faizabad	Personnel invitations & personnel Relationship also.		
7.	B.R. Ambedkar University, Agra	Library Software.		
8.	Lucknow University, Lucknow	-		
9.	M.J.P. Rohilkhand University, Bareilly	-		
10.	M.G.K. Vidyapeeth, Varanasi	-		
11.	N.D. Univ. of Agri. & Tech., Faizabad	Interview is Important for good HRM.		
12.	S.S. Vishwavidyalaya, Varanasi	The concept of TQm is only solution in HRM in Lib. &		
		Info. Centers specially in planning & selection.		
13.	V.B.S. Purvanchal University, Jaunpur	-		

Table 10: Strategies to Improve the Performance of the Staff

S.No.	University	Strategies to Improve the Performance of the Staff			
		Learning and Developmen t Strategy	People Management Strategy	Leadership and Management Strategy	
1.	Bundelkhand University, Jhansi			-	
2.	C.S.A. Univ. of Agri. & Tech., Kanpur	-	-		
3.	C.S.J.M. Kanpur University, Kanpur				
4.	C.C.S. University, Meerut		-		
5.	D.D.U. Gorakhpur University,	-	-	-	
	Gorakhpur				
6.	R.M.L. Awadh University, Faizabad	-	-		
7.	B.R. Ambedkar University, Agra			-	
8.	Lucknow University, Lucknow				
9.	M.J.P. Rohilkhand University, Bareilly	-	-		
10.	M.G.K. Vidyapeeth, Varanasi				
11.	N.D. Univ. of Agri. & Tech., Faizabad				
12.	S.S. Vishwavidyalaya, Varanasi				
13.	V.B.S. Purvanchal University,		-		
	Jaunpur				

HRM in Library & information centers specially in planning & selection but Bundelkhand University library, C.S.A. University of Agri. & Tech. library, C.C.S. University library, D.D.U. Gorakhpur University library, Lucknow University library, M.J.P. Rohilkhand University library, M.G.K. Vidyapeeth library and V.B.S. Purvanchal University library gave no response.

Table 10 shows that the Bundelkhand University library use the Learning and Development Strategy & People Management Strategies, C.S.A. University of Agri. & Tech. library use the Leadership and Management Strategy, C.S.J.M. Kanpur University library use the Learning and Development Strategy, People Management Strategy & Leadership and Management Strategy, C.C.S. University library use the Learning and Development Strategy & Leadership and Management Strategy, D.D.U. Gorakhpur University library do not use any strategy, R.M.L. Awadh University library use the Leadership and Management Strategy, B.R. Ambedkar University library use the Learning and Development Strategy, People Management Strategies & Leadership and Management Strategy, Lucknow University library use the Learning and Development Strategy, People Management Strategies & Leadership and Management Strategy, M.J.P. Rohilkhand University library do not use any strategy, M.G.K. Vidyapeeth library use the Learning Strategy, Development People and Management Strategies & Leadership and Management Strategy, N.D. University of Agri. & Tech. library use the Learning and Development Strategy, People Management Strategies & Leadership and Management Strategy, S.S. Vishwavidyalaya use the Learning and Development Strategy, People Management Strategies & Leadership and Management Strategy, V.B.S. Purvanchal University library use the Learning and Development Strategy & Leadership and Management Strategy.

Discussion

In this study we discuss that how many collection of books, reference books etc. in state university libraries, who is responsible for managing and supervising the library services and facilities etc., How ICT facilities collaborate teaching staff and students, Teaching staff fulfill their requirements by the ICT facilities and how matters relating to library and ICT facilities are included in staff review and feedback and evaluation procedures and practices university library is currently applying and library administration practices towards its personnel affect their productivity and here we discuss that how effective planning, tanning and compensating affect worker's performance carrier planning is positively correlated to personnel's performance and identify the major functions concepts and in Human Resource Management in particular, planning and selection and the type of the strategies to improve the performance of the staff. Human Resource Development as a positive method to upgrade the employees abilities and capabilities enabling them to work towards the achievement of set goals and objectives. HRD philosophy is to respect and value human beings as the prime and invaluable contributors to higher productivity and quality of products and services. This study can be achieved through strategic and includes planning and operational mechanisms, instruments and systems.

Conclusion

Development of human resources lies at the core of the knowledge productive organizations, like libraries. The survival and success of organizations will increasingly depend on their ability to ensure that they are "smart" at all levels rather than only at the top. In this fast changing environment the library and information workers are required to possess enhanced managerial, professional and technical skills, adequate knowledge and right kind of experience. So, training the existing manpower or recruiting new professionals will become essential. They must possess flexibility of attitude, imagination and scientific bend of mind. Further, the libraries need to be upgraded along with the changing environment from its traditional to a digital environment. Steps may be taken up to develop the libraries with IT rather than being just a custodian of documents. In the near future, if the conditions of the libraries doesn't change within 5-10 years than there is a chance that the libraries may be replaced by Internet café, knowledge kiosks etc. making way for other IT professionals. Immediate steps should be taken up for Human Resource Development keeping into view the changing digital environment.

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Article in supplement or special issue

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[9] National Statistics Online – Trends in suicide by method in England and Wales, 1979-2001. www.statistics.gov.uk/downloads/theme_health/HSQ 20.pdf (accessed Jan 24, 2005): 7-18. Only verified references against the original documents should be cited. Authors are responsible for the accuracy and completeness of their references and for correct text citation. The number of reference should be kept limited to 20 in case of major communications and 10 for short communications.

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