Higher Education Demands: Institutional Modern Library as a Centre for School of Information Studies

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ABSTRACT

In the library, the performance of its users to get the information is very important to meet the individual and organizational objectives. Several new products and services have been developed in the present day libraries with the help of Information and Communication Technology (ICT).

The College and University libraries in India have a significant role to play in higher education. Institutional libraries in India are striving to provide necessary and relevant information to their users. The College libraries particularly in our state West Bengal have a most significant role to play in higher education. Limited resources have been one main barrier to satisfying the growing informational needs of the users. Infrastructure and poor staffing is another most important barrier to satisfying the growing informational needs of the users of institutional libraries, mostly the college libraries also. Now, the Indian institutional libraries are planning various methods of resource sharing to help meet information demands. Attitudes of institutional libraries and institutional managements have undergone a change, to become more open to the benefits of resource sharing. A number of resource-sharing activities are involved National Information System in Science and Technology (NISSAT); National Information Centres (NIC); Library Consortia; Document Delivery Services; and Interlibrary Cooperation India presently appears to have a well organised, functioning system of academic libraries that attempt to supply the reading needs of all its student members or citizens. The college library to help its student users to get right and sufficient information about career development. The issue of library and information consciousness in the nation is relevant here. One could receive the impression that a commitment to the value of reading, information, and libraries is not high among professionals and sponsoring agencies. Some in the library establishment are convinced that the government is interested in libraries and literacy on only a marginal level. Another issue for observation is the role of the Indian library profession. Judged

on its past, the Indian library establishment has been unable to mount an effective effort to achieve some short–term and medium–term goals with respect to library development. The tension between the specialized libraries connected with government agencies and the commercial sector, and public libraries and academic libraries associated with educational institutions has been one reason for the lack of success. The historian can examine actions taken, and not taken, by library associations to discover their impact on library progress. One persistent problem has been the creation of professional standards. Another has related to the proper duties and responsibilities of librarians.

In his 1987 presidential address to the Indian Library Association, T. S. Rajgopalan rightly remarked: It is generally acknowledged that our libraries are underutilized in relation to investments being made in them. Non–use and low–use of libraries amount to wastage of facilities being made available. Maybe the literacy rate, lack of reading habits, etc., are the causes for low use from the side of patrons…User education and user orientation programs must be organised by libraries in a way that libraries are fully utilized. If library historians would address the roots and trends of library use issues, they would provide a valuable service to their profession and society.

Keywords: Higher Education, College Libraries, University Libraries, Information, Information Communication Technology, User, Information Needs, Satisfying, Institutional Libraries, Academic Libraries, User Trends, User Education, User orientation

INTRODUCTION

India is one of the largest countries in Asia and world also, with a land area of 3,287,263 square kilometers (1269338 sq miles). India has 28 States and 07 Union Territories (UT). It has a land frontier of 15,200 kilometers and a coastline of 7,516.5 kilometers. Andaman and Nicobar Islands in the Bay of Bengal and Lakshadweep in the Arabian Sea are parts of India. India is the second largest country in the world, its population is 1,210,193,422 (2011 census). India covers a total geographical territory of 3,287,240 sq km (1,269,210 sq miles) and according to the census conducted in 2011, the population of India is 1,210,193,422, which makes it the 2nd most populated country in the world (In 1951, Population 361088000 ;In 1961, Population 439235000 ;In 1971, Population 548160000 ;In 1981, Population 683329000 ;In 1991, Population 846421000 ;In 2001, Population 1028737000 ;In 2011, Population 1210193422). Today India is producing a very large number of skilled workers. It has an active satellite space program and is recognized as a nuclear power. India's recent achievements are possible at least in part due to information and knowledge dissemination. Therefore, India is striving to become a knowledge superpower. The contribution of libraries to India's advancement is phenomenally important. Libraries in India have struggled with many problems, but recent government support for

research has provided an opportunity for the development of library services and increased access to information. Government encouragement of funding of private organizations through tax benefits has also led to investment in libraries and information as part of research activities. The need for Indian students, researchers and scientists to compete in the global context has led libraries to seek several alternatives for providing increased access to information. Resource sharing is one of the primary functions of the libraries today, which has enabled them to provide increased access to information for their users. Every library attempts to use all its resources to achieve its stated objectives, to provide the best possible services. It is usually not possible for any single library to procure all the materials that are relevant to its users. This has become especially true with the literature explosion in recent decades. Naturally, libraries try to borrow materials from one another informally, but informal borrowing is difficult to sustain without more formal agreements between libraries. In the context of ever-increasing demands for information and limited resources, it became necessary for all libraries to develop agreements for the sharing of materials and information. Libraries in developing countries face particular problems procuring library materials and information resources. This is due to lower currency values in the international market and to limited financial resources, along with regular increases in subscription prices. Most libraries are supported by different levels of government either directly or through government funded agencies. In India many libraries were procuring the same materials from the same sources and spending large amounts of funds. In turn, libraries were finding it difficult to procure alternate resources due to limited funds. Therefore, they were denying access to a full selection of information resources. There was increasing frustration among the information providers and seekers about limited access to existing and available information resources. India presently appears to have a well–organized, functioning system of academic libraries that attempt to supply the reading needs of all its citizens.

Information is like an inexhaustible and renewable source of energy. Information superhighway will destroy copyright act most of the cases. The issue of library and information consciousness in the nation is relevant here. One could receive the impression that a commitment to the value of reading, information, and libraries is not high among professionals and sponsoring agencies. Some in the library establishment are convinced that the government is interested in libraries and literacy on only a marginal level. Another issue for observation is the role of the Indian library profession. Judged on its past, the Indian library establishment has been unable to mount an effective effort to achieve some short–term and medium–term goals with respect to library development. The tension between the specialized libraries connected with government agencies and the commercial sector, and public libraries and academic libraries associated with educational institutions has been one reason for the lack of success. The historian can examine actions taken, and not taken, by library associations to discover their impact on library progress. One persistent problem has been the creation of professional standards. Another has related to the proper duties and responsibilities of librarians.

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THE LIBRARY

Books add a lot to our knowledge. These are our best friends and teachers. Standards for Libraries in Higher Education is need of the hour. We have an idea that library is a store house of knowledge. It generally gathers in its collections of all ancient thoughts and current thoughts in different media, in different recording formats, in different languages, in different subjects. The aim of the libraries irrespective of its type, are to spread knowledge to all its members or community people.

Libraries as physical collections

- World libraries.
- National libraries.
- Public libraries.
- Academic libraries.
- School libraries.
- Government libraries.
- Private libraries.
- Special libraries.
- Science libraries.
- Technical libraries.
- Health libraries, Medical libraries.
- Archival Library and,.
- Museums.

VALUE OF THE LIBRARY

Standards for Libraries in Higher Education are need of the hour. Recent value-related research has investigated the correlation between library material usage and library instruction with student grade point averages, the impact of liaison librarians, how low library use is related to student achievement, and how library resources contribute to student and faculty success. Work also is underway to show the environmental value of academic libraries.

SCHOOL LIBRARY

A school without a library is unthinkable these days. It must have books on various subjects, newspapers, journals and magazines. Students, those especially who want to add to their knowledge, go to the library in their vacant periods and study. It adds to their knowledge. Present situation demands, every student should say, my school also has a big library. It is housed in a big hall. There are many almirahs in it. Each almirah has books on one subject only. There is a card for every book. Books are arranged according to their numbers. Every student applies for a card and gets it. The librarian issues books against the card. No student can keep a book for more than fourteen days. Defaulters are fined. On one side of the library hall there are long tables and benches. Students sit there and read newspapers, journals and magazines; some take down notes. Nobody is permitted to talk to disturb others. Every class has one library period once a week. Students go to the library in the period and study. The library also has reference and text books. These are meant for studying in the library only. The calm and quiet atmosphere of the library helps the students to work attentively. The school librarian is a trained and qualified person and well-experienced. He gives advice to students on the choice of books. He is an expert in his work. He understands his duty well and is of great help to students. We find him busy all the time. He advises students not to spoil books by scribbling in them or tearing off the pages. Books add a lot to our knowledge. He advises students not to spoil books by scribbling in them or tearing off the pages. Books add a lot to our knowledge. These are our best friends.

COLLEGE LIBRARIES

The College libraries in India have a significant role to play in higher education. Majority of the undergraduate students and graduate students attend these college libraries. When India attained Independence many among the 533 affiliated colleges (Sharma, 1986) did not have their own libraries but at present every college in the country has a library. Majority of the college libraries do not have proper facilities to meet the needs of their users. Most of the colleges do not have sufficient collections and proper reading room facilities. They're not proper collections and poor collections are one of the main barriers to supply the needs of their users. Their collections are not up-to-date, budgets are their very inadequate and limited, and a large number of them are single libraries. (Deshpande). In many colleges, there is neither a library hall nor a sufficient big room, not to think of a separate building for the library. Any unused room, quite often somewhere out of sight, would be considered adequate to house a few shelves of books. And in most college libraries there is complete darkness even during the day time, as the windows are closed out of a fear that the books may be stolen. Users of the college libraries are

not to give return the books proper time and sometimes may lost the library books. The conditions of the college libraries in India are far from satisfactory. Sometimes the college libraries services are may not satisfactory. The college libraries are open only six to eight hours a day. Many do not have any qualified librarian on their staff and have closed stacks only. And not only qualified librarian, staffs and other assistant staffs are not in the libraries. Sometimes only one librarian or only one casual or permanent staff is in the library. The several commissions and committees, like the Radhakrishnan Commission of 1948, did not stress the importance of the college libraries in their reports. However, the University Grants Commission (UGC) gives more importance to the college libraries. As the quality of higher education and research, especially at the graduate level, depends upon, among other things, the standard of the college libraries and their services. College libraries can play important role by providing information about various professions, admissions, availability of jobs, eligibility criteria, procedure of applications, syllabi, schedules of competitive examinations, various examinations, important addresses and contacts and information about various institutions etc. Therefore, the UGC has played a significant role in the growth and development of college libraries since 1953 by giving grants for books, equipment, staff and library buildings and has done a remarkable job in salary improvement of the college librarians. The UGC's contribution to the college libraries is at the rate of Rs. 15 per student with a maximum of Rs. 10,000 with some additional and special grants for text books, when a new subject is introduced in the .(Vyas, 1974) On the other hand, the colleges and the state governments have failed to provide their equal share. The total Expenditure on the college libraries according to the recommendation of the Education Commission should be 6.25 per cent of the total budgets of the colleges, but in most cases it has remained between 1.5 per cent and 2.3 per cent. Sardana) Collection development of the college libraries are done without taking into consideration the actual needs of the faculty and the students of the colleges as sixty per cent of them consist of text books and 20 per cent cover fiction. (Reddy, 1974) Even this small inadequate collection, in depth and content, is not used effectively due to the closed stacks system and lack of staff and facilities for instruction concerning their use. The net result is that the utility factor of the college libraries comes practically to nothing. (Trehan, 1974) In most college libraries, books are neither properly classified nor catalogued. In several libraries no systematic classification is followed for collection arrangements. The only service the college library renders to its clientele is book-lending. There are colleges where students are not even allowed inside the library.(Bavakutty, 1982) The UGC is aware of the slow progress of the college libraries. In addition to providing financial help for development, it has also from time to time organized seminars to keep the college librarians aware of the new developments in the field. But these seminars have made only a limited effect on the progress of the college libraries. The condition of the college libraries in the country should be a cause for alarm among the academic community. In the interests of the development of higher education in the country along proper lines, it is important to make a detailed study of the style of functioning of the college libraries and of the utilization of the

library resources and facilities by the students and teachers. This will help in the preparation of more realistic and operational policies and programmes for ensuring the proper functioning, utilization and development of the college libraries. The college library has to be made the intellectual hub of the institution, serving equally, both the students and teachers. This is all the more necessary because about 90 per cent of the students in higher education in India pursue their studies in colleges and they have only very small and substandard college library resources to fall back upon. Although, owing to various efforts of the UGC and NAAC as well as other forces, the traditional concept that the college library is a custodian of books has changed, yet there is evidence enough to show that the condition of the college libraries is generally poor, their development is rather slow and that the position of the college libraries and their librarians in India, with a few exceptions, is pitiable.

India presently appears to have a well–organized, functioning system of academic libraries that attempt to supply the reading needs of all its citizens.

The issue of library and information consciousness in the nation is relevant here. One could receive the impression that a commitment to the value of reading, information, and libraries is not high among professionals and sponsoring agencies. Some in the library establishment are convinced that the government is interested in libraries and literacy on only a marginal level.Another issue for observation is the role of the Indian library profession. Judged on its past, the Indian library establishment has been unable to mount an effective effort to achieve some short–term and medium–term goals with respect to library development. The tension between the specialized libraries connected with government agencies and the commercial sector, and public libraries and academic libraries associated with educational institutions has been one reason for the lack of success. The historian can examine actions taken, and not taken, by library associations to discover their impact on library progress. One persistent problem has been the creation of professional standards. Another has related to the proper duties and responsibilities of librarians.

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COLLEGE LIBRARY A REALITY

In our country most of the college libraries are full of printed books, journals and Newspapers. Books and journals are arranged in stack/shelves by category and alphabetically. Most of the library operations are manual. Recently college libraries are using computers and softwares

(open source or proprietary). College libraries have the acute shortage of staff. College libraries have not the qualified administrative head or professional (Librarians)E-resources are now being added with printed resources. College libraries are in way of using IT equipments for library operation and services. College libraries are lacking of IT skilled staff position. In reality, college libraries are now adopting some policies changing towards automated 'Hybrid Library' to 'Digital Library', but the process is very slow.

COMMUNITY INFORMATION CENTRES

The Community Information Centre (well known as CIC) Project has been implemented on pilot basis in 30 blocks of the North Eastern states and Sikkim in India. State wise list of blocks for Pilot implementation is given below and the main project was inaugurated on 17th August 2002 with the dedication of 457 CICs to the people of the North-East India by Hon'ble Minister for Communications and Information Technology and Parliamentary Affairs, Shri Pramod Mahajan in Guwahati.

In view of the successful implementation of the CIC Project in the North Eastern States it was decided to extend the same to other parts of the country. The first state to be taken up was the state of Jammu and Kashmir. This was due to the fact that the barriers for access to ICT, such as difficult geographical terrain and lack of infrastructure which were found in the North Eastern states were also an issue for Jammu and Kashmir. It was felt that the basic needs of citizens such as information, education, entertainment and health services can be addressed through the establishment of Community Information Centres in the state. These centres would serve as a platform for e-governance, e-learning and other IT enabled services in the state.

Infrastructure and Management

Each Centre is well- equipped with infrastructure including one server machine, five client systems, one each of a VSAT, Laser Printer, Dot Matrix Printer, modem, LAN hub, TV, Webcam and two UPS (1KVA, 2 KVA).

Each CIC has two CIC Operators (CICOs) for managing the centers and providing services to the public. CIC operators in all states have been trained on networking equipment and software applications available at their sites.

The project is a joint effort by Department of Information Technology (DIT) under Ministry of Communications and Information Technology (MCIT), National Informatics Centre (NIC) and the State Governments of the North-Eastern states.

DIT has funded the project and has the responsibility of overall monitoring and management. NIC is the Implementation agency. Application Software development and Training of CIC Operators are a part of NIC's responsibilities. The State Governments were entrusted with the mandate of site selection, preparation and maintenance, manpower recruitment and identification and creation of content for various services/applications to be delivered through the CICs.

Project Implementation and Monitoring

In addition to the CIC Cell at DIT and the CIC group at NIC Headquarters, the project has been executed with the contribution of NIC's State Informatics Officers (SIOs) and District Informatics Officers (DIOs) who have liaised with the state government authorities and the vendors delivering and installing the equipment at the CICs. Eight State coordinators have been appointed at NIC Headquarters to facilitate implementation at the local and central levels.

The CIC group at NIC, New Delhi has developed a comprehensive information system for the CICs wherein every aspect of the progress of the project is remotely monitored. The delivery, installation and operation status of all hardware and software is logged into this site by the SIOs and CIC Operators themselves, including post-installation malfunction of machines and applications.

The CIC group holds review meetings, twice a week, over Video Conference, with the SIOs of the North-Eastern states, vendor representatives both in Delhi and in Guwahati and Calcutta, State Coordinators and officers from other NIC divisions associated with the project such as SATCOM division. Chat sessions are held everyday between staff from CIC group and SATCOM division at Headquarters and the CIC Operators at remote sites for troubleshooting. A Visual Monitoring system is in place whereby CICOs can send images captured with the Web Cameras to Delhi for attendance and general observation. TVs have been provided at each site to disseminate educational programmes through Doordarshan and IGNOU in addition to general entertainment which is anticipated to attract visitors to the CICs.

Basic services to be provided by CICs include Internet Access and E-mail, Printing, Data entry and Word processing and Training for the local populace. In addition, several citizen-centric or Government to Citizen (G2C) services are to be delivered from the CICs. Some such services are

- Birth and Death Registration
- Service Facilitation Centre (e-Suvidha) wherein different types of certificates issued by Block and District administrations like SC/ST, Marriage etc can be disseminated through CICs
- Prices and other market information of Agricultural produce

- Information on Educational opportunities
- Job portals etc.

INFORMATION SOCIETY

An information society is a society where the creations, distribution, use, integration and manipulation of information is a significant economic, political, and cultural activity. The aim of the information society is to gain competitive advantage internationally, through using information technology (IT) in a creative and productive way. The knowledge economy is its economic counterpart, whereby wealth is created through the economic exploitation of understanding. People who have the means to partake in this form of society are sometimes called digital citizens. This is one of many dozen labels that have been identified to suggest that humans are entering a new phase of society. The markers of this rapid change may be technological, economic, occupational, spatial, cultural, or some combination of all of these. Information society is seen as the successor to industrial society. Closely related concepts are the post-industrial society (Daniel Bell), post-fordism, post-modern society, knowledge society, telematic society, Information Revolution, liquid modernity, and network society (Manuel Castells).

OPEN SOCIETY VIEW

The open society is a concept originally developed in 1932 by the French philosopher Henri Bergson and then, in 1945, by Austrian and British philosopher Karl Popper. In open societies, government is purported to be responsive and tolerant, and political mechanisms are said to be transparent and flexible. Advocates claim that it is opposed to closed society.
The state in an open society would keep no secrets from itself in the public sense; it would be a non-authoritarian society in which all are trusted with the knowledge of all. Political freedoms and human rights are claimed as the foundation of an open society.
In Karl Popper's definition, found in his two-volume book The Open Society and Its Enemies, he defines an "open society" as one which ensures that political leaders can be overthrown without the need for bloodshed, as opposed to a "closed society," in which a bloody revolution or coup d'état is needed to change the leaders. He further describes an open society as one "in which individuals are confronted with personal decisions" as opposed to a "magical or tribal or collectivist society." In this context, tribalistic and collectivist societies do not distinguish between natural laws and social customs. Individuals are unlikely to challenge traditions they believe to have a sacred or magical basis. The beginnings of an open society are thus marked by a distinction between natural and man-made law, and an increase in personal responsibility and

accountability for moral choices. (Note that Popper did not see this as incompatible with religious belief.) Popper argues that the ideas of individuality, criticism, and humanitarianism cannot be suppressed once people become aware of them, and therefore that it is impossible to return to the closed society. Popper's concept of the open society is epistemological rather than political. When Popper wrote The Open Society and its Enemies he believed that the social sciences had failed to grasp the significance and the nature of fascism and communism because these sciences were based on what he saw to be faulty epistemologies. Totalitarianism forced knowledge to become political which made critical thinking impossible and led to the destruction of knowledge in totalitarian countries. Popper's theory that knowledge is provisional and fallible implies that society must be open to alternative points of view. An open society is associated with cultural and religious pluralism; it is always open to improvement because knowledge is never completed but always ongoing.

INFORMATION OVERLOAD

Stress induced by reception of more information than is necessary to make a decision (or that can be understood and digested in the time available) and by attempts to deal with it with outdated time management practices.

NEW SOCIETY NEW DEMAND

Today the ability of a nation to use and create knowledge as capital determines its capacity to empower and enable its citizens by increasing human capabilities. India today stands poised to reap the benefits of a rapidly growing economy in rural as well as urban areas. The challenge and the opportunity are to galvanise our national potential into a dynamic resource. An informed, enlightened and capable Indian citizenry would not only enhance and enrich the process of national development, but could be a positive force in the world. The development of Library has been parallel to the development of civilization, culture and education. Library is a manifestation of cultural maturity of society as it further enriches culture and civilization. It is repeatedly stated that a library is a pulsing heart of an educational institution and an invaluable asset of the nation. The library is an agency that helps to carry out three objectives of an educational institution or institution viz; teaching, research and dissemination of knowledge, to which it is attached. This developmental programme aims for preparing human power to be dynamic social change agents in managing, monitoring and disseminating information by utilizing the ICT and related technologies. The contemporary LIS curriculum, education, creation of knowledge, professional development and better service have been restructured and reviewed to cope with changing socio-economic, cultural and technological environment.

- To prepare proactive Library and Information Science professionals to serve the cause of social justice, democracy, rights equity and to work as the partners in the progress of the nation by monitoring the ever growing information.
- To train professionals to create a development oriented, people friendly learning support system and serve the cause of social justice by rendering the information requirements of all users.
- To create an awareness of the evolution of knowledge society & its role in the social transformation & economic prosperity of the nation.
- To educate & train learners to enable and empower the users community with different types of knowledge & information to function smoothly
- To create understanding about the methods, techniques, skills as well as approaches in information processing & management.

HIGHER EDUCATION DEMANDS

According the ACRL Discussion Forum Higher education institutions are entering a period of flux, and potentially even turmoil. Trends to watch for are the rise of online instruction and degree programs, globalization, and an increased skepticism of the "return on investment" in a college degree. Shifts in the higher education surround will have an impact on libraries in terms of expectations for development of collections, delivery of collections and services for both old and new audiences, and in terms of how libraries continue to demonstrate value to parent institutions. The report "Disrupting College," asserts that the current model for higher education is broken; therefore, susceptible to "disruptive innovation. According to the report, institutions of higher learning have evolved into a nonsensical hodgepodge that cannot effectively and simultaneously support both teaching and learning functions alongside high-quality research, and that organizations that focus on one and not the other will gain cost and market advantage. Online learning environments are identified as "disruptors," and the rise of "competency certification" supports alternatives to traditional education options. Taylor Walsh provides an in-depth study and analysis of several online learning experiments, suggesting that online education may provide a sustainable path forward for institutions of higher education. In December 2011, MIT announced an online certification program, MITs (which will be launched in early fall 2012), leveraged from MIT's ten-year experiment with Open Course Ware. The book The Great Brain Race: How Global Universities Are Reshaping the World looks broadly at the globalization of higher education. Not only are academic institutions from Western countries expanding their footprint into the Middle East and Asia, but universities in China and India are making their mark on the global ranking tables, offering increased competition for Western institutions. Those who are interested in tracking internationalization in higher education should monitor the World Wise blog on The Chronicle of Higher Education Web site. Peter Theil, founder of eBay, correctly predicted both the technology bust in the early 2000s and the recent

housing crash. Now he asserts that higher education is overvalued and comes with an inflated price tag. The book, Academically Adrift: Limited Learning on College Campuses, also questions the value of today's college education. The journal Academic Questions devoted two issues to examining all sides of the "bubble" issue. Further evidence that students seek value for their education dollar is reflected in the strong enrollment numbers in community colleges.

DIGITAL DIVIDE

A digital divide is an economic inequality between groups/students/people, broadly construed, in terms of access to, use of, or knowledge of information and communication technologies (ICT). The divide inside countries (such as the digital divide in India) can refer to inequalities between individuals, households, businesses, and geographic areas at different socioeconomic and other demographic levels.

DIGITAL DIVIDE AND KNOWLEDGE DIVIDE IN REMOTE RURAL AREA

The information and Information Communication Technology (ICT) systems that support knowledge are very important. This is why digitisation is viewed closely related to knowledge. Scientists generally agree that there is a digital divide, recently different reports also showed the existence of knowledge divide. The creation and effective use of knowledge are increasingly related to the development of an ICT infrastructure. Without ICT, it is impossible to have an infrastructure able to process the huge flow of information required in an advanced economy. In particular, without adequate technical support, it is difficult to develop and use e-learning and electronic documents to overcome time and space constraints.
The knowledge divide is, however, but one important part of the larger knowledge divides. As UNESCO states, "closing the digital divide will not suffice to close the knowledge divide, for access to useful, relevant knowledge is more than simply a matter of infrastructure—it depends on training, cognitive skills and regulatory frameworks geared towards access to contents."

USER BEHAVIOURS AND EXPACTATIONS

With the widespread use of the Internet and search engines such as Google, individuals have little or no problem finding sources. Since libraries are now competing for user attention, the current challenge is to provide immediate, seamless access to sources and information in order to remain in the game. Steven Escar Smith and Carmelita Pickett stated, "The new library should be based on the just-in-time model, where access is more important than vast quantities of nearby inventory."

Not only is immediate access to electronic sources a critical component of meeting the information needs of students and faculty, but access to human sources also is important. When

students and faculty to identify how they get their information for both academic and personal situations, parents, friends, family, colleagues, and professors are often the first sources queried. These sources immediately can be reached by texting, voice calling, IMing, or e-mailing, with an often instantaneous response. Librarians, too, are making themselves available to students and faculty through a number of channels, including social media, chat, IM, and text reference, as well as making themselves physically available or embedded within academic departments, student unions, and cafeterias. Martin Kesselman and Sarah Watste in believe that with the dramatic increase in electronic resources and technological capabilities, bringing the library and the librarian to the user, wherever they are—office, laboratory, home, or even on their mobile device—is at the forefront of what it means to be embedded. Although campus Information Commons, with cafés and 24/7 access to the facilities and resources, still are popular with students and faculty, convenient access to resources, whether human, print, or electronic is the most critical factor.

INFORMATION LITERACY

Ability to define problems in terms of their information needs, and to apply a systematic approach to search, locate, apply, and synthesise the information and evaluate the entire process in terms of effectiveness and efficiency. Information Literacy as "...the ability to know when there is a need for information, to be able to identify, locate, evaluate, and effectively use that information for the issue or problem at hand." This is the most common definition; however, others do exist. For example, another conception defines it in terms of a set of competencies that an informed citizen of an information society ought to possess to participate intelligently and actively in that society.

COMPUTER LITERACY

Computer literacy is defined as the knowledge and ability to use computers and related technology efficiently, with a range of skills covering levels from elementary use to programming and advanced problem solving. Computer literacy can also refer to the comfort level someone has with using computer programs and other applications that are associated with computers. Another valuable component of computer literacy knows how computers work and operate. Having basic computer skills is a significant asset in the developed countries.

DEMAND FOR LIS PROFESSIONALS

Several organizations in India are embarking on new concepts in handling information with the changing times. Information formats have changed rapidly from print on paper to digital formats. There is need for qualified and trained Library and Information Science professionals to take the lead and guide developments in helping the end users in the changing environment. With so

much of thrust being given to education at all levels: primary, secondary, college, university and higher education, there is a huge demand for professionally well qualified librarians who can handle the integration of ICT and learning resources in this new digital environment. So the possibility of employment in educational sector is encouraging. But, as a library professional we should keep our philosophy and ethics of the profession to provide quality information and knowledge to all. Librarians must be able to convert the general feelings of goodwill towards the library to effective communication to all stakeholders that clearly articulate its value to the academic community. In this race, first we should unite together through our activities and fight for the primary requirement of our society. Though, I am not satisfied with the activities of our associations, in this juncture, it is high time to evaluate ourselves.

LIBRARY FUNDS

Academic libraries as well as college libraries must prove the value they provide to the academic enterprise. Unless we give our funding bodies better and more compelling reasons to support libraries, they will be forced by economic reality to stop doing so. Funded by the Institute of Museum and Library Services, is developing assessment tools that will allow libraries to show their contributions to teaching and learning; research; and social, professional, and public engagement. Librarians and other information workers will collaborate with their research communities to facilitate this process.

STAFFING

Academic libraries must develop the staff needed to meet new challenges through creative approaches to hiring new personnel and deploying/retraining existing staff. Staff development and personnel are the top work place issues for academic librarians, staffing issues are a major concern for academic librarians, describing compelling issues facing academic and research librarians. Continuing education, professional development, strategic and creative approaches to hiring for vacant or new positions, retooling existing positions, and retraining the staff currently in those positions are some of the ways libraries can "grow" the staff they need.

I T (INFORMATION TECHNOLOGY)

Technology continues to drive much of the futuristic thinking within academic libraries. The key trends driving educational technology identified in the 2012 Horizon Report are equally applicable to academic libraries: people's desire for information and access to social media and networks anytime/anywhere; acceptance and adoption of cloud-based technologies; more value placed on collaboration; challenges to the role of higher education in a world where information is ubiquitous and alternate forms of credentialing are available; new education paradigms that

include online and hybrid learning; and a new emphasis on challenge-based and active learning. The report cautions that social networks and new publishing paradigms, such as open content, challenge the library's role as curator and place libraries under pressure to evolve new ways of supporting and curetting scholarship. These may include helping students develop digital media literacy skills and creating appropriate metrics for evaluating new scholarly forms of authoring, publishing, and researching. The Horizon Report indicates that mobile apps and tablet computing are near-term drivers (discussed as a separate trend below); game-based learning and learning analytics are mid-term (2-to-3 year) drivers; and gesture-based computing and the Internet of Things (ubiquitous computing) are long-term (4-to-5 year) drivers. Other technology forecasts also highlight virtual faculty, staff outsourcing, and next generation interfaces and content. Technology trends specific to libraries include Web-scale discovery systems with enhancements such as discipline-scoped searching and customized widgets, community-source library management systems, and vending machines to handle loans of equipment.

MOBILE ERA

Mobile devices are changing the way information is delivered and accessed. An increasing number of libraries provide services and content delivery to mobile devices. According to the 2011 EDUCAUSE Center for Applied Research (ECAR) study of undergraduate students, 55% of undergraduate students own smart phones, while 62% have iPods, and approximately 21% have a net book, iPad, or other tablet. More than two-thirds of these students use the devices for academic purposes. Fifty-nine percent use smart phones to get information on the Internet, and 24% use them to access library resources. A comparison with the 2009 ECAR study—in which less than 15% of students said they would likely use mobile library services if they were available—shows how quickly the environment is changing. Also of note is the 2011 Pew Internet Project finding that 25% of U.S. adults with smart phones use them as their primary information source. Industry leader EBSCO host has apps for the iPhone, iPod touch, and Android as well as a mobile interface. Many other vendors, including JSTOR, Elsevier, and Thomson Reuters, have mobile interfaces or apps. Sir-siDynix and Innovative Interfaces integrated library systems offer mobile access to library OPACs, while OCLC provides mobile access to World cat. Self-service features such as renewing books, placing holds, and finding recommended titles are among the apps library users want. The 2012 Horizon Report reviews ways higher education institutions are using apps and tablets to enhance learning inside and outside the classroom. Some schools have replaced print textbooks with tablets preloaded with course materials while others use them for lecture capture, tutorials, orientations, and interactive publications.

DIGITAL PRESERVATION NEEDS TODAY

As digital collections mature, concerns grow about the general lack of long-term planning for their preservation. No strategic leadership for establishing architecture, policy, or standards for creating, accessing, and preserving digital content is likely to emerge in the near term. Academic libraries will increasingly focus on distinctive and unique collections in service to regional and national scholarly audiences. Many of these collections, particularly those that include rare or unique content or institution-specific materials such as university records and grey literature, are or will be digitized. However, local digital collections are at risk when the individual institution lacks a comprehensive preservation plan. Most institutions, according to a Portico and Cornell University Library report, are only beginning to understand that their investment in creating digital collections "must be met with a commitment and infrastructure to protect this content for its lifetime. There also is a lack of significant and standardized architecture and policy. James Neal predicts that the "preservation and archiving of the cultural and scientific record will remain balkanized and episodic with no leadership coordination.

TECHNOLOGY OR COMPUTER SYSTEM FOR USER

A computer receives incoming data, processes them and produces an output. Hence, in a typical computer, there is (a) An input device i.e., a key board (b) A Central Processing Unit (CPU) i.e., a box and (c) An output device i.e., a monitor or a Visual Display Unit (VDU)

(a) Input Devices

The most commonly used input device is a key board. It is just like a type-writer keyboard. Other types of input devices are Bar-Code Recognition, Hard-Held Terminal, and Hard Print Terminal or also called data tablet, Optical Mark Reading, Magnetic Ink Character Recognition (MICR), Optical Character Reader (OCR) etc.

(b) Central Processing Unit (CPU)

It has a box like appearance and is considered as the heart of the computer. It is consisted of;

i. **Control Unit (CU)**
ii. **Arithmetic and Logic Unit (ALU) and**
iii. **Primary Storage Unit,**

(i) Control Unit (CU): The control Unit organizes all the operations. It selects, interprets and executes the programme instructions,

(ii) Arithmetic and Logic Unit (ALU): It does all the arithmetic and logic operations i.e., adding, subtracting, multiplying, dividing and comparing,

(iii) Primary Storage Unit: It is the memory section of CPU that stores data and programmes that are waiting to be processed or currently being processed.

Generally two different types of memory are used in the computers; i.e.

(1) Random Access Memory (RAM), and
(2) Read Only Memory (ROM)

1. **RAM:** It allows read/write but is volatile i.e., loses Memory when power is cut.
2. **ROM:** It is non-volatile and is put in by the manufacturer. It is commonly used not storing of programme instructions that are not subject to change. There are various ROM chips to meet user's specifications; like

2.1 PROM: Programme Read Only Memory
2.2 EPROM: Erasable Programme Read Only Memory
2.3 EEROM: Electrically Erasable Read Only Memory
2.4 All the information's within the computer is stored in the form a BINARY SYSTEM i.e. 0's and 1's.

(c) Output Devices:

Output devices communicate the result to the users. They are

i. **Visual Display Unit (VDU)**
ii. **Printers**
iii. **Plotters**

(i) VDU: It is like a T. V. screen or a monitor where all data can be displayed.

(ii) Printers: The printers are devices that can be reproduced on papers, copies of programs, data or output from the computer's memory. Different kinds of printers are, Dot Matrix. Thermal, Ink Jet, Daisy wheel, Thimble, Spark, Drum, Chain and Laser printer. In Dot-matrix, characters are made up of patterns of dots. Dot-Matrix image with overlapping dots gives rise to Laser Printer. In Page Printer, one page is printed at a time, (iii) Plotters: A plotter is a device used to draw graphs, diagrams or any other drawings on the paper.

Secondary Storage Devices: All devices that are connected to the CPU for storing information's but are not part of the CPU, are called Secondary Storage Devices. The examples are; Magnetic Tap, magnetic disk. Optical disk, Winchester or Hard disk and Floppy disk.

Floppy Disk: Floppy disks or diskettes are most widely used in microcomputers and are very popular. These are thin, plastic disks on which computer data and programmes can be stored. The sizes may vary from 3.5" to 5.25" to 8" and have large storage capacity. The information can be stored on the floppy either on one side, i.e., single-sided (ss) or in both sides i.e., double-sided (do) and in single density (sad) or double density (did) or high density (had).

Winchester Disk or Hard Disk: These are IBM innovation and can store much more data that can be stored in floppy disk and have more reliability. Hard disks usually come as sealed units. So they cannot be removed or changed like floppy disk and cost is also 2-10 times more than floppies. But they have greater protection and do not need periodic maintenance.

Hardware and Software: Computer ware can be divided into two types e.g. hardware and software.

Hardware: All electronic, mechanical, magnetic, electrical and other devices used with the computer constitute the hardware.

Software: Software refers to various Programs or routines used on the hardware to facilitate the user's efficient operation of the computer. The software can be divided into two kinds; System software used to manage the operations of the machine i.e., the Operating Systems (OS) and Application software's are used for the user applications i.e., a programme that is employed for data bases for railway enquiry or reservation system or airlines booking etc..

THE OPERATING SYSTEM (OS)

The Operating System (OS) of a computer is a set of specialized programmes that manages all the operations of the computer; such as CPU, Memory, key board, Floppy Disks, VDU etc. The Operating System is responsible for the communications between the computer and its peripheral. From small personal computer (Micro Computer) to super computers, the OS operates in all the computer systems. Very commonly used operating systems for microcomputers are PC-DOS (Personal Computer Disk Operating System), MS-DOS, Window and XENIX. IBM's PC-DOS is a very popular OS. UNIX another very powerful OS is much more versatile and also offered many more capabilities than any other OS.

PROGRAM AND PROGRAMMING LANGUAGE

A Program is a sequenced set instruction to a computer to do a particular job and the art of writing a program is called programming. A language is used by programmers to write computer programs and routines and is called programming language. In a binary-coded digital computer, Os and Is are used as low level language called machine language. But for better use, several hundreds of easier high level programming languages like FORTRAN (Formula Translation), ALGOL (ALG Orithmic Language) BASIC (Beginners All Purpose Symbolic Instruction Code). COBOL (Common Business Oriented Language) PASCAL and C etc. are developed. Among them, BASIC is the most fundamental and commonly used language whereas COBOL is mostly used in business application. C is the latest development. All these are third generation languages. But there are also the fourth generation languages, like ORACLE, INGRESS etc.Computer can understand two types of programming languages i.e. either compiled or interpreted languages. The high level programming languages used by users are called Source Code. But the machine cannot understand these.Hence these languages are being translated into a machine language program called object code. The translation jobs are done by translators which are actually the compilers. The source code program is being translated by the compiler to object code for execution of next stage operation. Source – Translator - Object code. Thus in a compiled language, to run the program, two phases are there i.e., the compilation phase and the execution phase. But in an interpreted language, on the other hand, the source program is directly translated line by line into machine language instructions for execution of any program. BASIC language on a micro computer is an interpreted language. Actually the manufacturer of the computer supplies the required software; either a compiler or an interpreter. But in latter case, it is easier to develop a program using this language.

ROLE OF LIBRARIANS

In the library, the performance of its librarians is very important to meet the individual and organizational objectives.The value of the skills librarians already possess and in developing roles that were previously not associated with librarians. Librarians and information workers have a vital role to play in helping their research communities design and implement a plan for data description, efficient storage, management, and reuse. Several discipline data repositories already exist, and include librarians as principal collaborators.

CONCLUSION

The information society is where everyone can create, access, utilize and share information and knowledge, enabling individuals, communities and peoples to achieve their full potential in

promoting their sustainable development and improving their quality of life (Olorunda, 2004). The main objective of information society is to empower all the people through access to and use of information. There is a transformation taking place in the attitude of Indian institutions towards service, use and sharing of their library resources. All libraries are feeling the pinch of limited resources in the context of increased user demand for information. The training of users and professionals has become part and parcel of every library activity. The training must include not only internal staff but also be extended to other institutional staff. Training is an important component of many organizations' development, especially for the national-level organizations. Since technology-based programs have been innovative and new, the training programs have been important to enable both the users and professionals to become acquainted with new resources and methods. Staff and users are being trained to make use of the resources at their institutions and resources subscribed to under these programs. The major problem for libraries has been limited funding. Involvement of the students and academics has helped to deal within the problems faced by libraries. The experiences of students in accessing information have caused them to initiate and put forward several proposals to the government for funding the acquisition of library resources. They have put in a lot of effort to convince the government and its agencies of the need for funding. These efforts will hopefully result in additional funding as well as in the sponsoring of various programs related to information dissemination, including funding for consortia programs.

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