LIBRARIES AND INFORMATION SYSTEMS IN THE NEW MILLENNIUM

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I deem it to be my good fortune and high privilege to be invited to deliver the keynote address at the inauguration of the National Seminar on "Libraries and Information Profession on cross roads". Being associated with the University system for over 30 years in this country as well as abroad, I am conscious of the responsibility of putting together my thoughts on the **Libraries and Information Systems of 21st Century,** a subject so important for the creation of I.T. driven knowledge society in the new millennium. I am equally conscious of the significant role, which the libraries both in the academic institutions and in public have played in the development of today's modern society. With the advent of Information Technology revolution the role of Information Systems and the Libraries is undergoing a rapid change and it is important for us to understand as to how best we can assimilate the impact of IT for the rapid track development of modern IT driven Information Systems and the Libraries.

Last year, while visiting the book exhibition here at BHOPAL, I had enquired from the book sellers and publishers, if the books being sold by them were the **books of 21st Century?** They were rather surprised that such a question is being asked, specially that most of the books were the latest editions. I remember it made a headline in local newspapers that the Vice-chancellor of the Technological University in MP says that the libraries of 21st Century and the books of 21st Century will be largely available on CDs and in the form of data-bases. **The libraries of the 21st Century will in fact look like a Computer Centre rather than a "Pustkalaya" or "Granthalaya" at as present.**

The New Information Order :

The new millennium has brought us face to face with the new realities of 21st Century. These new realities are visible in all sphere of human activity

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whether it is the world of learning, world of scientific and technology innovations and R&D, the world of business, the world of industry, the system of governance, and in the world of national and international co-operation every where the new global order has compelled us to think afresh about the way we work, the way we transact our business and the way we manage and govern an activity. In fact, the new global order has given rise to the fast emergence of a **new information order**, which is exerting a powerful influence on the global economic order, the **new social order** as the **new education order**. It is, therefore, important for us, specially that we have assembled here at the inauguration of the National Seminar on the theme so closely related to this new information order, to examine the compelling influence which the new information order is exerting on the world of learning, the world of education and the world of higher education. We have also to understand as to how best to exploit the advances in IT for the best benefits of modernizing our libraries and information systems.

Changing role Of Libraries :

Let me spend a few minutes on the changing role of the libraries. You all are aware that the libraries in our country and for that reason abroad were originally conceived as **"Pustakalaya"** or **"Granthalaya"** i.e., a store house of books and literature meant for dissemination of knowledge to its users. The libraries were therefore expected to store in a systematic manner the literature, records, books and encyclopedia so as to facilitate their users to have an access to the knowledge base contained in these publications. A Librarian was supposed to maintain the records of the library through a well-defined accession and issue and return system. He was also required to preserve the records, books and literature so that it could be utilized over a long period of time. New books and periodicals were procured and kept in library to provide in those days what was referred to as up-to-date knowledge. The Librarian, therefore, was the custodian of the rich intellectual wealth kept in the library.

In today's context when we look at the role of the libraries, we are confronted with the new challenges, a new reality which has arisen because of the advent of the rapid changes in the knowledge base. The changes taking place in the scientific and technical arena are such that the half-life of knowledge, i.e, at least half of the knowledge becoming obsolete in a given time span has reduced to less than a year in many disciplines and in some disciplines, such as those related to Information Technology the knowledge base is changing at a much faster rate than ever anticipated in the past. In fact, the knowledge base in the modern disciplines of Science and Engineering is changing at such a fast pace that the **published books being made available in the library are no longer a guarantee of the availability of the up-to-date knowledge**. It has happened primarily because of the compelling influence of Information Technology, currently being exerted in all domains of human activities. It is, therefore, quite clear that printed books and publications in the library cannot provide access to the latest knowledge and know-how, vital for

working in today's I.T. driven environment. **The libraries of today and undoubtedly of tomorrow have to tackle this challenge of rapidly reducing half-life of knowledge**.

Another point of considerable interest to all of us associated with cultivation of knowledge and its dissemination is that the books till yesterday were written by the authors in a manner that they were able to pack up and encase a large amount of information and knowledge to be read by the users, often facilitated by a teacher through the class room teaching. Without a good teacher having a thorough knowledge of the subject matter, it was often very difficult to decipher the information and knowledge contained in the books and periodicals without expert support. In today's context of Information Technology driven education, it is important for us to realize that **the books of 21st century will have to be written differently than the books of the 20th century** and this difference will be in the style of writing the books. Today's books have to be written from the point of view of facilitating **interactive learning** i.e. they should be user friendly enabling the cultivation of knowledge through, by and large, self learning. Therefore, there is a paradigm shift that has taken place in the modern education systems. The **teacher-centered education system has changed to a learner centered system**, the teacher performing the role of a facilitator rather than that of a preacher in the changed environment. It is this shift, which is to be supported and facilitated by the books and libraries of the 21st century. We are already on the verge of witnessing a IT led revolution in the education sector. On line learning, virtual classrooms, virtual institutions and virtual universities are fast becoming a reality and as the integration of Information Technology inputs is accelerated in the education system in India, we shall witness a sea change in the teaching-learning environment. The challenge, however, is how to retain the joy of reading in an on-line learning environment using the electronic media and reduce the enormous stresses, which the electronic media creates in the human mind?

The books of 21st century will have to be written in such a manner that they facilitate interactive learning and are written using the modern digital communication systems so that they are made available in the libraries of the 21st century on the CDs and databases. Let them not deprive the reader joy of reading.

Libraries Of 21st Century:

The libraries of 21st century have to be conceived not merely as the storehouse of the knowledge but an effective mechanism to facilitate dissemination of knowledge, promoting information and knowledge sharing, while, at the same time, supporting the growth of knowledge and the growth of intellectual property. In essence the libraries of 21st century have to be an effective support mechanism for both the dissemination as well as cultivation of knowledge. **The libraries of 21st century should facilitate the transition of today's literate society to a knowledge base society of tomorrow**. This undoubtedly requires

that the libraries and education systems in 21st century should take advantage of the development in the Information Technology. We have to go beyond automation of libraries. We have to create local area networks, national networks and link our local and national networks to the global network of libraries and Information systems so as to facilitate global access of knowledge and promote information and knowledge sharing. **Networking, therefore, is one of the frontal area of focus for the libraries of 21st century**. The digitization of records and rich intellectual wealth currently available in the form of print media, books, periodicals and other forms of literature is an emergent task to be addressed to in this country. This would require a committed and sustained effort so that we are in a position to down load the available information and knowledge currently available in our libraries and integrate our information and knowledge base with the global databases. The penetration of I.T. in the libraries and information systems is already exerting a compelling influence in this regard and I would invite the library professionals and I.T. experts present here to spare no efforts to take the best advantage of the developments in I.T. for significantly *improving our information systems and for modernizing our libraries.*

Challenges for Library Professionals:

In the context of the impact of Information Technology on the libraries and information systems described above it is worthwhile to ponder over the challenges to be met by the library professionals and those working and managing the modern information systems. I personally see that the librarians have to function as the managers of knowledge systems. They have to be, in the right earnest the knowledge workers themselves so that they are in a position to assimilate, access and manage the vast reservoir of knowledge which the world of learning would possess. They have to be an active ingredient of the knowledge management system so that they are in a position to contribute effectively for constant update and up-gradation of the knowledge base and are able to constantly improve upon the information systems which they handle and manage. The following main challenges are therefore to be met by those involved in the libraries and information systems of 21st century:

- **The Challenge of networking** - Establishing local area networks, developing national networks and providing connectivity to global networks. This is a major challenge for the libraries in India and is undoubtedly a challenge to be met by all those involved in the libraries and information systems.

- **The challenge of coping up with the vast and ever expanding knowledge base** is another major challenge specially since it is related to availability of large new information base and at the same time obsolescence of a large proportion of existing Information and knowledge.

- Third is **the challenge relating to developing necessary skills and acquire the requisite knowledge** for protection of the large size

information and data, maintaining its confidentiality wherever required and protecting the intellectual property from any internal or external threats.

- The next challenge **is the challenge of transforming India** currently having a little share of the world intellectual property, to an India, phenomenally rich and developed in the domain of intellectual property.

The library professionals and those working and managing modern information systems are therefore required to possess the knowledge and skills to handle the above challenges. They are required to constantly update their own knowledge and skill base so as to work in today's rapidly changing information and knowledge systems. **Managing libraries of tomorrow and managing the information systems of tomorrow, requires that a focused attention be paid to professional development of those involved in the management and functioning of libraries and information systems.** I have no doubt that many of the issues indicated above will be deliberated and discussed during the course of technical sessions in this national seminar. Let me therefore congratulate the organizers, especially the Madhya Pradesh Council Of Science and Technology and All India Association of Libraries and Information Centres for jointly taking a timely initiative to organize this national seminar.

Let me close by not merely hoping but inviting you to make a firm commitment and resolve to work together to make India one of the most developed countries in the arena of the world of learning, the world of intellectual property and the world of knowledge and innovation management. Ladies and Gentlemen, let you resolve today that you will be the partners in progress for the creation of such an environment in this country and let me pray that you succeed in achieving with certainty what you commit during the course of this seminar. Thank you Ladies and Gentlemen for your patient hearing.

Jai Hind