

## OPPORTUNITIES AND CHALLENGES OF PROVIDING ELECTRONIC INFORMATION SERVICES THROUGH PUBLIC LIBRARIES IN INDIA

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Public demand for library services has not only grown enormously but is also becoming more diversified. This is due to the widespread acceptance of libraries as central to education and research, community development and nation building programmes. Libraries are expected to meet this critical challenge by providing adequate and effective services to the public. This paper examines the concept of public libraries in general, as well as the state of public libraries in India in the light of the new and emerging technological dispensation. It proceeds to give a detailed account of recommended steps for introducing and maintaining electronic information services for public use. Some fledgling real cases involving impressive attempts of delivering much needed information services in rural areas, using electronic or "digital" media, are mentioned. Conceivable suggestions for the way forward affecting public libraries are given, wherever applicable.

**KEYWORDS/DESCRIPTORS:** Electronic information services, Digital information resources, Public libraries, India

### 1 INTRODUCTION

It cannot be overemphasized that the global civilization of the 21<sup>st</sup> century is bound to have at its disposal more and far much better organized information resources than ever before. Alvin Toffler (1981) observed that during the First Wave of civilization, knowledge was principally preserved by the minds of individuals. Tribal elders, wise men and others carried these memories with them in the form of history, myth, lore and legend. They transmitted the same to children by the way of speech, song, chant, preaching and so on.

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Adjacent to that came the Second Wave of civilization, which smashed the memory barrier. It spread mass literacy by introducing systematic record keeping (mainly using paper together with other media). This encouraged the proliferation of libraries, archives, records centers, museums and other types of repositories specifically intended for preservation and transmission of recorded knowledge for the prosperity of humankind.

Ultimately came the Third Wave of civilization, the threshold in which we currently live. Technological devices that not only have the capacity to instantaneously store, organize and retrieve vast quantities of information resources but enable divergent thinking as well, characterize this era. This Wave provides powerful facilities for machine-to-machine communication in order to facilitate rapid dissemination of information. The trickle-down effect is thus felt in all areas of contemporary life. Public libraries for instance, are among the numerous service-oriented departments that have to contend with insurmountable pressure to join the technological fray, in order to assert their unique role in society.

## 2 CONCEPTUAL FRAMEWORK OF THE PUBLIC LIBRARY

Public libraries are a worldwide phenomenon. They occur in different forms and in a variety of societies. Philip Gill et.al. (2001) defined the public library as follows:

*“An organization established, supported and funded by the community either through local, regional or national government or through some other form of community organization. It provides free access to knowledge information and works of imagination through a range of resources and is equally available to all members of the community regardless of race, nationality, age, gender, religion, language, disability, economic and employment status and educational attainment”.*

Agarwal (1999) explicitly stresses on the following as symbolizing the internationally accepted definition of a public library. That it is:

*“A library (i.) Which is financed for most part out of public funds; (ii.) Which charges no fees from readers and is yet open for full use by the public without distinction of caste, creed or sex; (iii.) Which is intended as an auxiliary educational institution providing a means of self-education which is endless; and (iv.) Which houses learning materials giving reliable information freely and without partiality or prejudice, on as wide a variety of subjects as will satisfy the interests of readers”.*



Thus, public libraries are somewhat distinguished from private or subscription libraries. In fact, the public library is pseudonymed "the people's university" due to the fact that it maintains the principle that knowledge should be democratized and is therefore free of cost to everyone, regardless of colour, caste or creed. Public libraries serve citizens at all stages of life, perhaps at a wider range of information needs and objectives than most of the other libraries (namely school libraries, academic libraries and special libraries).

Public libraries are particularly designed to enable all people (from toddlers to senior citizens) to pursue their own search for knowledge in the available collections. For instance, their reference sections, periodicals, fiction and non-fiction collections supplement local academic libraries. Their business and adult service sections provide information services to the local populace and to business concerns that may be too small to maintain their own libraries. The same applies even to larger companies, which may need information services outside their primary focus. In general, public library services relate to information, literacy, education and culture. The IFLA/UNESCO Public Library Manifesto (1994) outlines the following key missions of the public library in society:

- i. Creating and strengthening reading habits in children from an early age;
- ii. Supporting both individual and self-conducted education as well as formal education at all levels;
- iii. Providing opportunities for personal creative development;
- iv. Stimulating the imagination and creativity of children and young people;
- v. Promoting awareness of cultural heritage, appreciation of the arts, scientific achievements and innovations;
- vi. Providing access to cultural expressions of all performing arts;
- vii. Fostering inter-cultural dialogue and favouring cultural diversity;
- viii. Supporting oral tradition;
- ix. Ensuring citizens to all sorts of community information;
- x. Providing information services to local enterprises, associations and interest groups;
- xi. Facilitating the development of information and computer literacy skills; and
- xii. Supporting and participating in literary activities and programmes for all age groups and initiating such services if necessary.

The current trend of affairs is drawing public libraries into the realm of providing electronic information services to the populace. The use of computer technology coupled with the new and emerging telecommunication services is now in vogue, through the application of CD-ROM / DVD-ROM and the Internet. In fact, the biggest challenge is to develop and deliver the state-of-the-art electronic information services while at the same time providing top-notch traditional library services to all members of the community. This entails the attainment of a perfect balance between both the cyber and paper-based services. In fact, due to the vast amount of funds and efforts invested in the setting up and maintenance of the public libraries it would be a complete waste to discard all the hard copy documents acquired, just for the sake of information technology. Brophy (2001) recommends that the pragmatic view of the foreseeable future of public libraries is likely that they would base their services on a mix of physical objects (books, paper-based journals, videotapes and so on) as well as electronic information resources (Web pages, online journals and textbooks, remote data services, CD-ROMs, DVD-ROMs and so on). For this reason, approaches that stress the management and delivery of "hybrid library" services would appear to be most useful.

### **3 PUBLIC LIBRARY SET-UP IN INDIA**

The public library system in India was developed over the years for more than a century. One can trace back to 1836, when the Calcutta Public Library was established. This was not a government institution and was run on a proprietary basis. Every person subscribing Rs. 300/= in one or three installments was considered a proprietor, at that time. Next followed the formation of the Imperial Library in 1891, by combining a number of Secretariat Libraries (National Library of India: 2004). In due time, the new independent India, which developed a democratic society, recognized the need for public libraries to work for the common good of citizens and also build a strong foundation for a democratic setup.

According to Agarwal (1999) and Buragohain (1999), the enacted public library legislations in India, began with Madras state, now Tamil Nadu in 1948, Andhra Pradesh in 1960, Karnataka in 1965, Maharashtra in 1967, West Bengal in 1979, Manipur in 1988, Kerala in 1989, Haryana in 1989, Mizoram in 1993 and Goa in 1995. The Constitution of India recognizes the public library development as a state responsibility. Therefore all states are vested with the mandate of



setting up suitable libraries for public use, at different levels within their own jurisdiction. Though library legislation is almost a pre-requisite, not all the Indian states have as yet, passed the library legislation. It is reported that states like Uttar Pradesh, Rajasthan, Orissa, Madhya Pradesh and Assam are actively trying to come up with their own legislations (Bhattacharjee: 1999). In a nutshell, the public library legislations have proved to be very crucial for the sake of securing funding, formulation of the structures of library systems, definition of powers and functions of authorities and other such matters pertaining to public libraries.

Interestingly, the Madras Act originally drafted under the chairmanship of Dr. S. R. Ranganathan appears to have served as the model for subsequent public library legislations in India. Each has been modified by the parent state to suit purposes in line with its own development agenda. Moreover, contrary to the international convention of assigning the responsibility of overseeing the development of public libraries to local councils, adhoc independent local library authorities were created. Coupled with this came the collection of library cess upon local properties, to which matching grant was given by the government. It was also decided that the highest state library committee should be advisory to the government rather than being autonomous.

Due to the diversity in the levels of state-wise development, the Department of Culture, Government of India set up the Raja Rammohun Roy Library Foundation on May 22 1972

to serve as a nodal agency for development of public libraries in India. Bhattacharjee (1999) quotes the important objectives cited in the Memorandum of Association when setting up the foundation as comprising the following:

- To promote library movement in the society
- To enunciate a National Library Policy and work towards its adoption by the central and state governments;
- To help build up a National Library System by integrating the services of national libraries, state central libraries, district libraries and other types of libraries;
- To propagate the adoption of library legislation in the country; and
- To provide financial and technical assistance to libraries.

The Raja Rammohun Roy Library Foundation is working towards a model Public Library Bill that may be able to encompass all facets needed for the

development of public libraries to suit the new and changing environment. Dasgupta (2000) observed that in the rural sector, the local governments have been made responsible for the development of public library facilities through new constitutional amendments.

The Central Government is also taking well-considered steps to make information dissemination the main activity in all sectors that deal with rural and social development. The Raja Rammohun Roy Library Foundation was also given the responsibility of resource mobilization for the modernization of the state and district central libraries, the development of infrastructure and the training of personnel. On the other hand, the Department of Culture through the Central Secretariat Library (CSL) has laid down standards for library development software and networking as well as for bibliographic description to ensure standardization both in infrastructural development as well as retro-conversion of library catalogues in machine-readable format.

#### **4 QUASI-PUBLIC LIBRARIES FOR PUBLIC USE**

In India, not all libraries used by the public are run by the state. Vasanthi (2002) observes some so called "Private-public Libraries". Examples of such libraries are: Maraimalai Adikal Library – Chennai, Saraswathi Mahal Library – Tanjore, Owen Trust Library – Nagercoil, Raja Ram Mohan Roy Library – Kolkata, among others. The users of private-public libraries include students, teachers, scholars, business people, housewives, professionals, retirees, the newly literate and so on. They use the libraries either for general reading or for obtaining documents or information on a subject of interest.

Private-public libraries are variants of public libraries in that private management runs them. Private-public libraries get their operating expenses from donations, subscription or membership fees and user community grants from the Department of Culture of the Government of India. Also, private agencies or registered societies maintain private-public libraries. They have the right to allocate funds for both recurring and non-recurring expenditure. The administrators of these libraries create policies for management and administration.

#### **5 PUBLIC LIBRARIES HELPING SCHOOLS**

Children are sent to schools with the hope of being transformed into educated and well-informed adults. Most parents know that real education is not confined to the study of prescribed texts only. Children should be thoroughly exposed to



the world of books. Swami Vivekananda, the great Indian monk and philosopher, once said, "*We want that education by which character is formed, strength of mind is increased, the intellect is expanded and by which one can stand on one's own feet*". The achievement of such a noble wish, even in part, is easy where the schools have at least an average sized library. While in Western countries there was a norm of 8 to 10 books per child. Studies have revealed that in India, libraries exist in only a small percentage of schools. Unfortunately, libraries are almost absent in primary schools within the country mainly due to scarcity of funds.

In places such as Himachal Pradesh and a few other states, there was a policy under the National Literacy Mission for libraries and reading rooms, where they existed in educational institutions, to be opened to the public in the evenings after school hours. However, this arrangement proved not to be as successful as originally intended. During the recent years, the National Book Trust, Publication Division, the Government of India and other non-profit organizations have brought out many interesting titles at low cost and useful for school students (both in English as well as regional languages). Heads of the schools have had to provide a period a week in the timetable (of all classes) for library work. A representative from the school may collect 50-60 titles from the District Library at regular intervals for use by students during the library period. After a couple of weeks books can be returned to the district library and exchanged for another set of books. This experiment was tried in Andhra Pradesh with some success. The success of scheme depends upon the enthusiasm and teamwork between the District Librarian and heads of schools concerned.

## **6 INCORPORATION OF INFORMATION TECHNOLOGY IN PUBLIC LIBRARIES**

By employing modern technology in the delivery of services, public libraries have the added capacity of supplying desired information at faster speeds, in the right form and at the right time. Public libraries need to be increasingly equipped with computers to automate library activities and also to make management and administration more effective. Computers acting in partnership with telecommunication technology have the powerful potential of assisting library clientele to share resources, ideas and knowledge online and also to communicate seamlessly through the Internet.

On the flip side of the coin, users expect library staff manning public libraries to exhibit thorough leadership skills in most aspects concerning the modern technology, once it is in the library. The staff are expected to transmit the same knowledge so that users can be able to use the technology to their greatest advantage. Librarians should therefore be very patient with novice users, since to implement and to understand new technology is a tedious process to both sides.

It is apparent that the contemporary information user happens to be much more aware of his/her information needs as the world becomes more affluent. Vavrek (1995) studied the information needs of the general public in India and identified them as follows:

- Local information/news;
- How to do it information/ reference material;
- Government programmes for development (local, state, central)
- Current information (e.g. radio, TV, train timings);
- Agriculture and related information (technical);
- Programmes of education;
- Legal, medical, health related issues;
- Addresses;
- Crafts, hobbies;
- Travel information;
- Consumer information;
- Careers, employment (vocational guidance);
- School assignments; and
- Political information – biographical data.

The aforementioned user-needs are increasing both in terms of intensity as well as complexity. This justifies the need to introduce computers and other emerging electronic forms of information access in public libraries.

Planning for the acquisition of electronic services in public libraries is such an intricate process that all perceived stakeholders need to be deeply involved at various stages as need arises. The stakeholders include policy makers, the librarians, computer professionals, other technical experts, funding agencies and the representatives of the user-groups concerned. At the drawing board, nothing ought to be left to chance, be it the feasibility studies, systems analysis and design, pilot testing, user and staff training, promotion of new products and services, maintenance and upgrading of both equipment together with electronic



information resources, the works. It is widely adduced that "one plans to fail if one fails to plan". Therefore the successful implementation of such expensive and highly technical projects should come only as a result of plenty of man/woman hours of planning. The involvement of the private sector in the implementation is also gaining acceptance. Private firms can be approached to donate equipment or electronic information resource materials. In turn they may be offered lucrative opportunities of suitably promoting their products and services within public library premises, free of any encumbrances.

Once computerized and empowered with sufficient capacity, public libraries should make real attempts to join various information networks that are available, for the sake of enabling users to benefit from information lying outside the physical "four walls" of the library buildings. In India, several wide area networks (WANs) exist, linking several organizations nationally and internationally. They are connected by means of telephone cables or satellite links or broadcasting.

Some of the networks worth linking up to include: DELNET (Delhi Library Network); NICNET (National Informatics Center); INDONET (a commercial computer-based network commissioned by the CMC Limited); INFLIBNET (Information and Library Network, set up by the University Grants Commission) and the CSIRNET (setup by the Council of Scientific and Industrial Research to provide on-line databases on subjects such as drugs, toxicology, food technology, medicinal plants, electronics, physics, chemistry and other areas). For this purpose, the public libraries should be developed to prepare for joining various consortia, not only to improve value-added services to the library users but also to maximize the resources of the libraries at a cheaper cost. Inevitably this will help to overcome the isolation that public libraries often encounter.

Never the less, the greatest challenge facing public libraries in the advent of electronic information resources is to spearhead the compilation and digitization of information pertaining to the local community in which it is situated. Here the construction of community-relevant databases and consistent management of database content is strongly emphasized and highly recommended.

The onus is on the librarians and information professionals concerned to reach out into the parent community and accurately map out the addresses and functions of all forms of expertise and social amenities available. They should create an annotated database of all agricultural experts, health specialists, veterinarians,

electricians, plumbers, masons, carpenters, restaurants, hospitals, recreation centers, places of worship, real estate agents, transport companies and so on. This type of information could then be digitized and saved onto media such as CD-ROMs or even DVD-ROMs and availed to the public for use, either in the form of hard copy printouts or soft copies viewable on computer screen or saved as files on floppy disks.

## **7 POTENTIAL MODES OF DELIVERING USEFUL ELECTRONIC INFORMATION RESOURCES TO THE PUBLIC**

Admittedly, lack of sufficient financial support has been the main problem facing public libraries in India. Libraries have had to compete with basic services such as health, food, communication and so on. India has generally been faced with rising unemployment, inflation, exponential population increase as well as a looming energy crisis. It is logical that the central government has had to channel more resources from its exchequer to alleviate these problems as opposed to enhancing the development of public libraries.

Notwithstanding, with the help of well meaning friends India can still boast of a number very innovative projects that are guiding lights of things to come, in the line of provision of electronic information services to serve its rural populace. It would be a noble idea if public libraries combined forces with the endeavours described in this paper, all in the effort of demystifying the computer and thereby bringing electronic information services much closer to the people.

Raju (2002) describes the e-seva kendras in the twin cities of Hyderabad and Secunderabad, where the local Andhra Pradesh state government has in place a project called "On-line Transaction Processing" (OLTP). It enables the integrated use of data from various sources and is purported to cover 11 key offices at Mandal level. Public libraries in the area are strongly advised to come forth very powerfully to take up such activities as additional dimension to their day-to-day activities. Among the proposed services of the multipurpose village information kiosks are:

- Birth, death, caste, income, residence (domicile) certificates;
- Grievances and petitions follow-up information (legal aid);
- Applications for power connection;
- Health services and professional information provision;
- Child care;



- Application for welfare schemes like loans and pensions;
- SC/BC housing corporations information;
- Employment applications;
- Women development; and
- Information on water related issues and so on.

With such an information kiosk adjunct to a public library with the proper computer facilities, the public librarian would definitely find himself offering novel types of information services that the ones he or she is used to.

An even more exiting project by the name India Development Gateway (InDG) is in the offing (C-DAC Noida: 2003). It is the product of the Center for Development of Advanced Computing (C-DAC) Noida of the Department of Information Technology, Ministry of Communication and Information. It hopes to bring a large number of digitally preserved books to the doorsteps of common citizens in India, using the practical application of modern electronic-based technology. With its research and training center currently in Bangalore, the InDG is actually a joint initiative of the Indian Government, the World Bank and the Development Gateway Foundation, Washington (USA).

Through the mentioned project there already are two vans on the road in the neighbourhood of Delhi. They are currently loaded with a total of over 10,000 books in languages ranging from English to Hindi to Telugu all available via the Internet. The vans are fitted with powerful satellite connection for direct connectivity to the Internet. They also have fully functional computer units, laser printers, scorers, paper cutters and binding machines for providing bound books to end users from one single point.

The books do not have to be returned since their original copies are safely preserved on a remote server on the Internet and therefore can always be accessed repeatedly. The collection is scanned and the full-text content indexed using Optical Character Recognition (OCR) technology. The books can be searched, selected and printed either in part or whole from a website depending upon the following criteria:

- Language;
- Author; and
- Title.

These two mobile libraries are the “humble” beginnings of a fleet of about 30 vehicles planned to roll out to cover the vast country, in future. The initial users of such innovations are school children and their teachers in rural areas, but the

idea could be extrapolated to address the information requirements of rural folk in areas such as agriculture, education and healthcare.

In conjunction with the aforementioned developments, the Digital Library of India (<http://www.dli.ernet.in/>) is also emerging very strongly.

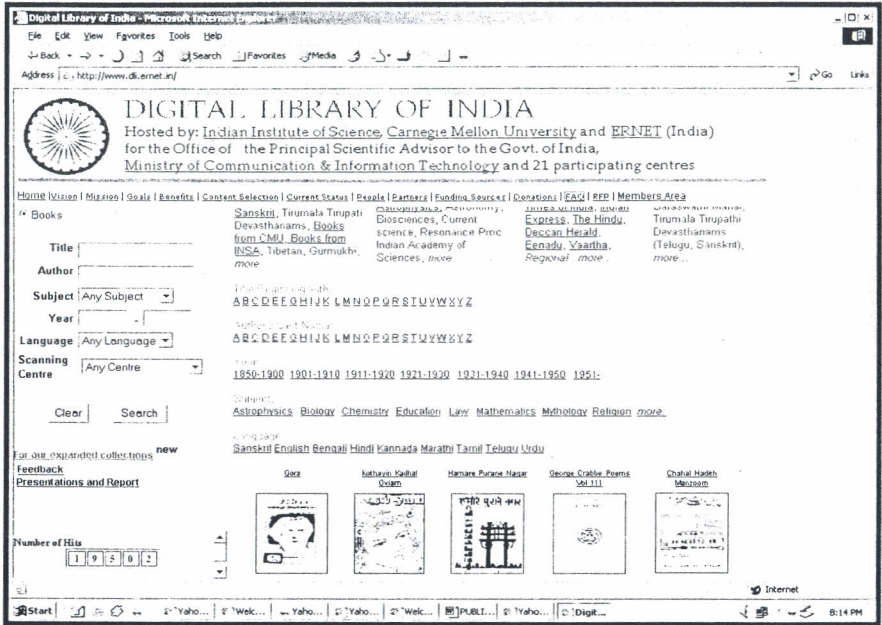


Figure 1: Homepage of the Digital Library of India Website

It is a million - book project, a collaborative effort between Indian Institute of Science and Carnegie Mellon University with partners from Government, Academia and Religious Institutions. Approximately 54000 books have already been scanned and 29000 books are available for online access. It is one of the biggest digital library initiatives in India. The objective of this project is clearly mentioned in its mission statement given below:

*"The mission is to create a portal for the Digital Library of India which will foster creativity and free access to all human knowledge. As a first step in realizing this mission, it is proposed to create the Digital Library with a free-to-read, searchable collection of one million books, predominantly in Indian languages, available to everyone over the Internet. This portal will also become an aggregator of all the knowledge and digital contents created by other digital library initiatives in India. Very soon we expect that this portal would provide a gateway to Indian Digital*



*Libraries in science, arts, culture, music, movies, traditional medicine, palm leaves and many more. The result will be a unique resource accessible to anyone in the world 24x7, without regard to socioeconomic background or nationality."*

The renowned scientist Isaac Newton is credited with having written the following words to his counterpart by the name Robert Hooke, way back in 1676: "If I have seen further it is by standing on the shoulders of giants". Indeed this statement is valid even today in the era of decreasing competition and increasing cooperation, consortia, partnerships and so on. In January 2004, the India Post in association with the National Informatics Centre (NIC) started a magnificent service called "E-post". It was introduced with a view to attempt to bridging the widening digital divide between the information haves and the have - nots. Since public libraries are spread over the vast countryside, we see a lucrative opportunity where they could negotiate to collaborate with the post offices to boost this noble service as surrogate sending/dispatch offices, once they are able to build sufficient capacity.

Through *E-post*, email messages can be sent and received without the sender or addressee having access to a computer or the Internet. The *E-post* messages can also be booked from the local post office or from the computer or office (such as the public library, in this case, by accessing the URL: <http://www.indiapost.nic.in/>) and can be sent to any e-mail ID(s) in the world.

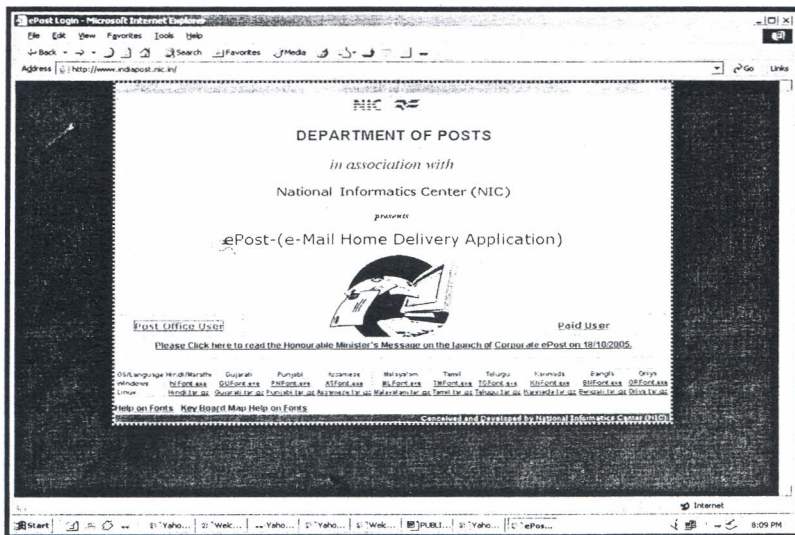


Figure 2: Home page of the E-post Website

Messages can be transcribed in any language and even can be hand written. It also does not really matter whether they contain pictures or graphics. The designated *E-post* centres then scan and use the Internet to convey the messages to the desired destination, via e-mail. The destination *E-post* centers are assigned the obligation of printing and delivering the *E-post* to the addressees through postmen. The only catch is that this service has to be approached with the full blessings of the India Post and that such a library planning to offer such services has to be ready to prove that it has the desired capacity to run them without undue interruptions. This entails the acquisition of state-of-the-art information technology and also specialized all-inclusive training for the staff who are to serve the public in this manner.

## 8 CONCLUSION

Despite the fact that public libraries have admittedly lagged behind in the application of information technology, the unclaimed opportunities that lie ahead for them are vast. The Government of India aided by the state governments and the private sector could promote computer application thereby encouraging a computer environment and the widespread usage of electronic information services in public libraries. A lot more players need to be convinced to make a concerted effort to actively support public libraries in India, not just the Raja Rammohun Roy Library Foundation or maybe the Rajiv Gandhi Foundation acting in isolation. Most importantly, a national information and informatics policy on the development of public libraries should be formulated and adhered to. Further, an enactment of public libraries legislation is necessary in order to set up an electronic network of public libraries and also to enhance proper coordination, moderation as well as standardization efforts contributed by various participants who choose to join the fray. In view of the implementation of the suggestions mentioned above, there is every possibility that in the twenty-first century, public libraries in India will advance technologically, with leaps and bounds. The main beneficiaries of such developments would always remain the clientele of the public libraries, majority of them being the ones residing in the rural areas.

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