

---

---

## Strategic Planning and Policy for Collection Development of E-Resources to Satisfy User Requirements : A Case Study of J R D Tata Memorial Library

S Venkadesan

Uma Jagannath

Puttabasavaiah

### Abstract

*The library environment is currently undergoing a rapid and dynamic revolution leading to new generation of libraries with an emphasis on e-resources. On one side, there is an increasing demand for good library collection in terms of large amount of data/information and on the other hand, the publishing media is striving hard to support this demand at lightning speed by way of e-publication as well as online access. As a result, a large number of e-resources are published on all subject areas. Therefore, libraries need to adopt electronics media for its collection developments in a better way to fulfill the requirements of users. J R D Tata Memorial Library at the Indian Institute of Science (I.I.Sc), Bangalore with their vision has brought out a policy and adopted a strategic plan for collection development of electronic resources. This paper describes in detail, the steps taken by the library for a comprehensive e-resources access package model so that the researchers at I.I.Sc. Reap the maximum benefits by giving access to reasonable level to meet their information requirements for academic and research activities. This paper also deals with issues like social and Intellectual Property Rights apart from user requirements /satisfaction. Framework and models have been discussed about change in the media of collection development and its management. The success and reality of access to e-resources/digital information has also been narrated in respect of INDEST consortia and other type of subscriptions.*

**Keywords :** E-Resources, Consortia Subscription, Collection Development, Online Access

### 0. Background

Initially, libraries to automate the processing functions of the library i.e. the traditional form of library automation, used information technology. Other applications have since been developed to provide services to and between libraries like bibliographic services, inter-library lending and document delivery. Over the past few years, there has been a visible trend towards using information technology to enhance services to end-users. Issues involved here include increased speed of access and delivery, access to resources not held by the library and remote access by the end-user. The enabling technologies are documents in electronic form and electronic networks for the distribution of such documents/information.

Over the past few years, a number of techniques and related standards have been developed which allow documents to be created and distributed in electronic form. Hence, to cope with the present situation, libraries are shifting towards new media - namely electronic resources for their collection development so that the demands of users are better fulfilled. This paper is aimed at the librarian, as a collection developer who is interested in looking at the range of electronic resources available, how they might be evaluated and whole process of purchasing such documents/resources.

### 1. What are E-Resources ?

Any electronic product that delivers a collection of data, be it text referring to full text bases, electronic journals, image collections, other multimedia products and numerical, graphical or time based, as a

commercially available title that has been published with an aim to being marketed. These may be delivered on CD-ROM, on tape, via the Internet and so on.

## **2. Why to buy E-Resources ?**

The reasons for actually embarking on the purchasing of electronic resources are generally accepted because of the ease of usability, readability, affordability and accessibility and in addition to these, the following are the advantages of e-resources over the print media.

- Multi-access: A networked product can provide multiple points of access (in the campus) at multiple points in time (24 hours a day, 7 days a week) and to multiple simultaneous users.
- Speed: An electronic resource is lot quicker to browse or search, to extract information from, to integrate that information into other material and to cross-search or reference between different publications.
- Functionality: E-resource will allow the user to approach the publication to analyse its content in new ways by click of the mouse on search mode.
- Content: The E-resources can contain a vast amount of information, but more importantly the material can consist of mixed media i.e. images, video, audio and animation which could not be replicated in print.

## **3. Formulating Policy for Electronic Resources Collection Development**

The collection development refers to collection of different types of library materials keeping in view the changing requirements of the users.

Collection development, being a planning function is carefully designed and executed in three levels

1. Collection development policy decisions are made at the highest level (Senate Library Committee)
2. Selection of resources is the second level of decision making and acquisition of materials (Division and Department Chairmen)
3. The third level is the process by which library acquires various materials, implementing selection decision and collection development plan (Librarian)

The single most important message of this paper is the e-resources should be considered alongside printed resources (such as e-journals, books, databases etc.) and the library formulates an overall "Quality" collection development policy covering all material. Such a policy includes:

- Outline the present collection's strength and weaknesses.
- Identify the reader community that the collections are aimed at and recognize their needs, which will be met by the policy.
- Make the policy decisions available to all involved in purchasing activities.
- Most importantly the policy should be open to changes and constantly reviewed and updated.

It was only during the late 1990s that E-resources were made available to various subscribers. Attention was brought to these E-resources through the distribution of catalogues, personal marketing promotion and free online trial access. The evaluation of trial access revealed that there was a great scope for the development of a collection of books and journals in soft copy. The two main advantages of this media of

resources include sizeable cost effectiveness compared to print version and time efficiency as data may be acquired within a short span of time thus increasing the speed and ease with which one acquires information from a resource collection.

Procuring an e-version of the publications as a part of the resource collection was carefully examined by the Senate library committee members comprising Librarian, faculty members representing all the 6 divisions (Biological, Chemical, Information, Electrical, Mechanical and Physical & Mathematical Sciences) and student representatives. This group had the scope to study in detail and identify prospective publishers of e-version, the method of operation and accessibility; the additional/new infrastructure involved (recurring/non-recurring expenditure) and finally savings in subscription in the event of switching over to e-version.

#### **4. Abstracting and Indexing services and other Bibliographic Sources**

The ability of the computer to store information in the form of records, and allow quick searching of these has long been recognised. Therefore it is understandable that one of the most important electronic reference tools used in libraries worldwide is the bibliographic sources. Both major bibliographic resources and numerous Abstracting and Indexing services with the ability to search vast collections of Table of Contents (TOC), Conference Proceedings and data from Books and Serials are offered. The benefit of these large sources is that they cover many subjects and thus facilitate a multidisciplinary approach.

Thus, J R D Tata Memorial Library entered the development phase of e-resources collection during 1994-95 at a time when most of the leading publishers of Abstracting and Indexing periodicals viz, American Chemical Society, Cambridge University Press, American Mathematical Society, Institute for Scientific Information etc. brought out e-version of their publications. The entire collection development was executed in phased manner as explained in the subsequent paragraphs.

As a first phase in e-resource collection development process, library embarked into subscribing e-version of following Abstracting and Indexing periodicals along with the back files and stopped print subscription of the same from 1994. The amount saved by stoppage of print version was diverted for purchasing e-version (CD-ROM) of the following.

- INSPEC (Physics, Electrical & Electronic Engineering, Computers & Control, IT) (1969 +)
- CA (Chemical Abstracts) (Chemistry) (1987+)
- MathSci and MathSciNet (Mathematics) (1940+)
- BIOSIS (Life Sciences) (1992+)
- INIS (Nuclear Research and Technology) (1970+)
- COMPENDEX (Engineering) (1989+)
- MEDLINE (Medicine) (1966+)
- Current Contents (1994+)
- SCI (Science Citation Index) (1993+)

The acquisition of the above mentioned premium Bibliographic databases covering all most all the subjects of interest to faculty, students and staff of IISc opened the Intranet access to meet their information requirements instantly.

## 5. Electronic Journals

From the year 1998, a few publishers namely Elsevier, Academic, Springer etc had offered access to their Online Journals free of cost against subscription to print version as an additional gesture. The library made use of this facility by registering such free online journals officially. Thus, the library entered the second phase towards the e-resource collection development without much of budget constraint.

The goal of E-Journals is to provide desktop access to freely available electronic version of journals subscribed by IISc Library and free e-journals of relevance to IISc. To this end a web-accessible directory was developed containing a database of all journals subscribed by IISc. The directory also contains several free peer-reviewed electronic journals. Thus the database stores a variety of information such as holding details, internet addresses, user IDs and Passwords etc about each journal including links to the journal's website. Using these links, users can visit the journal site and access the full text of articles.

## 6. INDEST (Indian Digital Library in Engineering Science and Technology) Consortia

In the year 2003, JRDTML entered into e-resource collection development in a very big way. Based on the recommendations of the expert group on Consortia-based subscription to Electronic Resources appointed by the Ministry of Human Resources Development under the Chairmanship of Prof. N. Balakrishnan, IISc, Bangalore, it was decided to set-up a consortium for subscription to the following electronic resources\* for IITs, IISc, RECs/NITs and a few other institutions. The consortia is fully funded by MHRD and operated through its headquarters at the IIT, Bombay. The expert group also recommended gradual decrease in print resources to which the beneficiary institutions are currently subscribing. However, the publishers namely Elsevier, Academic Press and Springer Verlag have linked their print subscriptions and the libraries and as such institutions are not allowed to delete these print subscriptions. Hence, JRDTML is continuing their print subscription to journals from these publishers for the time being.

### \* Full Text Databases

- IEL (IEE/IEEE publications includes Journals, Standards and Conference Proceedings)
- Science Direct (Elsevier)
- Springer Verlag's Link
- ASCE Journals
- ASME Journals
- ABI/Inform
- Applied Science and Technology Plus
- ACM Digital Library

### \* Bibliographic Databases

- COMPENDEX
- INSPEC
- Web of Science
- Sci Finder Scholar
- MathSci Net

Through INDEST Consortium, all IITs and IISc have been having access to a large number of e-journals. This initiative from MHRD has certainly enhanced the range of journals accessible to the research communities in these institutions and is bound to yield immense benefits. Through the formation of the consortium, excellent price advantage has been achieved in terms of rates of subscription to e-journals and in some cases, reduced subscription rates to print journals or advantage of price cap on the subscription rates to print journals. Subscription to print journals is, however, being paid for by the individual institutions. All consortia such as INDEST certainly do have objectives of not only to providing wider access to information, but in the long term, also to save the library funds, on the print subscription. The Institute had been subscribing to various database resources that are now currently being subscribed for by INDEST for all its members. Hence, all of the databases hitherto are being subscribed by the J R D Tata Memorial Library is no longer subscribed.

Thus, the Institute faculty, students and researchers are greatly benefiting by the e-resources access, a bulk of which are mainly due to the INDEST consortium subscription which facilitates online access to over 4000 e-journals and a host of databases. Apart from these, over 600 journals are accessible online to Institute researchers due to print subscription or print plus online subscription to some journals like Nature, Science, Proceedings of the National Academy of Sciences, which are heavily used and most popular Science magazines. However, the current level of access to e-resources still appears to be very inadequate mainly due to publishers' policies. Even in the case of INDEST subscriptions, most of the science e-resources are accessible only from 1995 onwards. This may pose a serious setback when one is looking for back-references. Furthermore, in almost all cases where their library subscriptions have online access, the access is not possible beyond the current subscription year. In other words IISc faculty and researchers in most of the cases will not be able to access beyond few latest issues of e-version.

## **7. On-going E-Resources Collection Development Activities**

To overcome the lacuna in e-resources collection and to develop a comprehensive e-resources collection, which will reasonably meet the core information resource access requirements of the faculty and researchers in the Institute, library has planned e-resources development programs in category wise as follows:

1. Extending online access facility to e-resources for which already limited access is available by purchasing back files to access archival data for current and future use. This has complemented the INDEST consortium subscriptions and enhanced the access facilities.
2. Purchase of back-files of core e-resources for perpetual access.
3. Subscribe to online version of core resources for which currently no online access is available particularly Society and Institutional publications.
4. Collection developments of e-resources other than journal such as Books, Reference Works, Standards, Factual Databases etc.

## **8. Analysis and Interpretation**

Time is needed to assess if readers can do away with print journals. The experience in most institutions is that there is a significant population that is comfortable only with printed journals. The faculty members at the IISc presently are more comfortable with print journals than e-version. This would surely change over a period of time when evolving new technologies can make online journal reading as comfortable as reading print on paper. It is noticed that while e-resources have certain advantages over the print version such as ability to search, print version has certain advantages like portability and borrowing

facility, which cannot be substituted by e-version. A user can borrow a document and read it at his convenient time and place. It is also revealed from the analysis of usage statistics of e-resources based on number of hits generated by various Institutions of INDEST, that the usage of e-resources is still low, indicating that we are all in the lower end of learning curve.

Instead of doing away with print journals altogether, as a consortium, INDEST could evolve a policy to avoid multiple print subscriptions amongst its member institutions. However, there will be a need to maintain one print copy as archive for each journal at least at one of the INDEST member institutions. This could be the common archive for the entire INDEST. Similar philosophy is followed by institutional consortia world over. The reason is, to have, in the worst case of loss of access to e-resources, at least one source that is available in the consortium/country as an archive. In case of INDEST, the task of archiving could be shared between the various INDEST members based on the profile of the institution- for example, say all science journals could be archived at IISc and the management journals at one of the IIMs etc. However this issue needs serious deliberations at institutional level and at INDEST.

JRD Tata Memorial Library at IISc is considered a national library of science and technology particularly catering to the needs of the Southern India. In addition to Bangalore University, there are several R&D laboratories / academic institutions exceeding 100 which have directly depended upon the journal resources of the IISc, Library. Further, our Library is identified by the INFLIBNET Centre of University Grants Commission as a Resource Centre for S&T journals, to cater to the needs of academicians / researchers of the Southern Region through Document Delivery Services. Similarly National Bureau of Higher Mathematics (NBHM), has recognized IISc Library as Regional Resource Centre for Mathematics in the Southern Region to cater to the needs of mathematicians. From the above it could be gleaned that the role of the IISc Library is much more than taking care of our own faculties and students. Because of license restrictions, we will not be able to share our e-resources with the above category of users, but have to depend upon our print resources alone.

When the print subscriptions are eventually stopped, there will be a need to provide increased bandwidth to access the e-resources. Considering the fact that IISc Library is treated as a National resource of science information, we also need to evolve a mechanism to take care of external users to IISc library, who do not get access to INDEST e-resources due to license restrictions.

As one of the oldest R&D Institution of the Country, people look at the Library of IISc as a national resource facility in the field of Science & Technology. A library such as JRD Tata Memorial library at IISc is nearly a century old and has the largest collection of back volume archives of many important S&T journals. In fact, it boasts of unbroken volumes right from the first issue in several prestigious journals such as Nature and Proceedings of the Royal Society.

From the above it could be concluded that the role of the IISc is much more than taking care of itself. Conventionally as the oldest R & D Institution of the country, people look at the J R D Tata Memorial Library as a national resource facility in the field of Science and Technology. Because of the license restrictions, we will not be able to share our e-resources with the above said category of external users. This will come in the way of the objective of the Institute which it has persued all these days. Library is making serious effort to evolve a mechanism to help our external users to access our e-resources.

## **9. Recommendations and Conclusions- an overview of e-resources vs print collection**

When a library choose new media for its collection development due to certain problems and limitations inherent in traditional (print) media, it can be well understood and analysed, if a comparative study of both advantage and disadvantages of traditional media and new media is undertaken in the following way.

---

## 10. References

1. Lee, Stuart D: Building an electronic resource collection: A Practical guide, Library Association Publishing, London. 2002
2. Lancaster, F.W. (1995) The evolution of electronic publishing. *Library Trends*, 43 (4), 518-27
3. Johnson, P (1996) Selecting electronic resources: developing a local decision-making matrix, *Cataloguing and Classification Quarterly*, 22 (3-4), 9-24
4. Metz, P (2000) Principles of selection for electronic resources, *Library Trends*, 48 (4) 711-29
5. Lee, S.H. (ed) (1999) Collection development in the electronic environment; shifting priorities, Haworth Information Press
6. Collier, Mel and Arnold, Kathryn (ed) (1995) *Electronic Library and visual information research (ELVIRA 2)* Aslib.

### About Authors



**Dr. S. Venkadesan** is Librarian at Indian Institute of Science Bangalore 560012, INDIA and holds B.Sc., B.E., M.S. and Ph.D. in Metallurgy from IIT, Madras. As a Metallurgist by profession, he was also worked as Head LIS at IGCAR, Chennai and has undertaken several IT related projects and a digital library. He is involved in providing access to online digital information and also in the Universal Digital Library activities at IISc.

**E-mail: [librarian@library.iisc.ernet.in](mailto:librarian@library.iisc.ernet.in), [venky@library.iisc.ernet.in](mailto:venky@library.iisc.ernet.in)**



**Dr. Uma Jagannath** is Deputy Librarian at Indian Institute of Science Bangalore 560012, INDIA and holds M.LISc. and Ph.D.



**Mr. Puttabasavaiah** is Assistant Librarian at Indian Institute of Science Bangalore 560012, INDIA and holds M.LISc. Earlier he worked with American Center Library, NCSI etc.