

Digital libraries in S&T in India – what purpose do they really serve?

In the 21st century, development of digital libraries in science and technology (S&T) is considered as the latest craze for many research institutions, universities and even undergraduate colleges in India. Digital libraries are complex and advanced forms of information systems that can be endowed with a multiplicity of functions and special features. India has the potential and technological expertise to meet the challenge to set up and run efficient state-of-the-art digital libraries. There are a lot of enthusiastic digital library initiatives in S&T in India, but most of them do not possess even the basic ingredients – sufficient digital contents or resources. In spite of this, a large sum is invested to set up the latest digital library infrastructure. What purpose do these digital libraries really serve?

The advent of moveable type system for printing by Gutenberg (1455) and subsequent developments in printing technology helped in the production of a large number of books at lower cost. However, the publication of numerous books of different subject fields created a lot of problems associated with existence of a particular book and its finding at a given point of time. This gave birth to a new concept and thus an institution – to satisfy scholars by providing them with the required information at the right time by organizing the knowledge in the form of books. The institution where we acquire and organize books became known as the library. So it can undoubtedly be said that without sufficient number of books there is no relevance of a library.

Both science and the literature of science are universal in nature. Most of the latest developments in S&T are first reported in research papers published in the Western world – until the World War II it was mainly in Europe and afterwards in the United States. So till today the latest research literature in S&T is mostly published in the Western countries. Indian research institutions and universities seriously lack latest primary literature of S&T, even those originating from India. Most of the high-quality research papers generated in the country are published in high impact international journals published in Western countries.

Barring few exceptions, only a few of them are published in Indian journals. The fact is also true in case of publication of books by Indian publishing houses. Most of the monographs, advanced treatises and even proceedings of major conferences (held in India) of S&T are first published in Western countries. Indian publishers are either distributing these publications in the subcontinent or publishing Indian/South Asian editions after completion of the mandatory embargo period.

Most of the resources accessed by Indian scientists are licensed e-resources of foreign publishers. The publishers of e-resources have already developed their respective in-built search platforms from which any user can easily find his/her required information as well as latest developments in any field of S&T. So a library does not require setting up a digital library for using these e-resources. The only thing required is to link all licensed e-resources in a common search platform for integrated and customized searching. This arrangement is now known as ‘federated search engine or discovery service’ by which users can search all e-resources (both licensed and open access) simultaneously. There are a number of such services for different subject groups available commercially and a library can license any one or more according to requirement.

So creating effective digital libraries in S&T in India poses serious challenges as the country lacks latest research publications in S&T, which are the main attraction of the researchers of any institution. Urs¹ has rightly pointed out that one of the main issues in creating digital libraries is the building of digital collections. Obviously, for any digital library to be viable, it must eventually have a digital collection with the critical mass to make it truly useful. Most of the foreign publishers put their materials in their proprietary technological format and a vast majority of the scholarly content rests in the journal literature. So due to technological differences and copyright-related issues, they cannot be easily added into the collection of a digital library. Indian technical education regu-

lator, AICTE² entrusted subscription of e-journals as mandatory requirement for all engineering institutions, even those imparting only undergraduate education. It is needless to mention that use of e-journals among undergraduate students is low. On the other hand, Indian technical education accreditation agency, NBA³ earmarked one-fifth weightage of total library services for maintaining a digital library by these institutions. But these digital libraries will be useful only if local digital contents, i.e. course materials, important lectures, etc. are uploaded regularly.

So without wasting too much time and effort in building digital libraries in S&T, it will be better if the libraries attached to the universities and leading research institutions in India concentrate on developing institutional repositories, which self-archive research papers of their members. These repositories are beneficial to all researchers, institutions and the entire research community and help in achieving open access. Moreover, the repositories are especially helpful to the institutions in developing countries like ours as these research papers (mostly published in low impact local journals) are little represented in the international literature of the field. Researchers and institutions may immediately become visible as their works will be automatically indexed by different search engines.

1. Urs, S. R., Proceedings of the CALIBER, 8–9 February 2007; http://www.vidya-nidhi.org.in/shaliniurs_files/caliber.pdf
2. AICTE Approval Process Handbook 2013–2014, p. 134; http://informindia.co.in/education/Approval_Process_Handbook_091012.pdf
3. NBA Manual for Accreditation of Undergraduate Engineering Programs, March 2012, p. 23; <http://www.nbaind.org/Files/general-manual-on-accreditation-by-nba.pdf>

HARI PRASAD SHARMA

*Bengal Engineering and Science
University, Shibpur,
Howrah 711 103, India
e-mail: sharma_hp@hotmail.com*