

Building a Digital Library System in Academic Libraries in India: Fantasies, Realities and Possibilities

Ramanujam Parthasarathy

Director (Training) and Professor of English, Vignan University, Vadlamudi, Guntur 522213, Andhra Pradesh, India
Email id: partharamanujam@gmail.com

ABSTRACT

This article casts a critical look at what the author, as a library user and spectator of the recent developments in libraries, regards as fantasies in the minds of Indian Library and Information Science (LIS) professionals about Digital Libraries (DLs), especially when they discuss the subject on professional forums; makes a brief survey of the realities vis-a-vis the DL system in the Indian context; and offers, against the background of the realities, an outsider's perspective on what are possible and what should be possible in Indian academic libraries, as far as developing a digital environment is concerned. It also addresses some larger issues vis-a-vis DLs with implications for curriculum design and classroom instruction.

Keywords: Digital Library, Digital Management, Technical Architecture, Copyright, Customised Services

1. INTRODUCTION

Though I am not a LIS professional, I was led to research the subject of DL system by an invitation to give a plenary talk on the subject of this article at a UGC-sponsored national seminar on developing a fully-fledged DL system. As it turned out, I could not attend the seminar and so the talk did not get beyond paper. However, I decided to get the paper published because it discusses some of the fundamental issues that academic libraries aspiring for a DL system need to address as well as deals with some larger issues with implications for curriculum design and classroom instruction – issues which are rarely addressed in the LIS literature. The paper will have served its purpose if it urges LIS professionals and higher education leaders to reflect on the issues and questions it raises.

My purpose in this article is three-fold:

1. Attempting a hard and critical look at the fantasies in the minds of Indian LIS professionals about DLs when they make formal presentations on the subject, or when they write articles on the subject for publication.

2. Making a brief survey of the realities vis-à-vis the DL system in the Indian context.
3. Offering, against the background of the realities, an outsider's perspective on what are possible and what should be possible, in our libraries, as far as developing a digital environment is concerned.

2. FANTASIES

The fantasies about DLs in the Indian context are fascinating. I have recently read an impressive-looking book on DLs which was a collection of articles on cyber libraries written by over 40 Indian LIS professionals representing most of the States of this country. I did not find in the book even one article discussing the building of a DL system against the background of the pragmatic realities operating in Indian libraries in general and libraries in Indian colleges and universities in particular. What I found, instead, was a long wish-list. Here are some grandiose points from the wish list:

1. The digital technology has turned libraries into Cyberaries.
2. Thanks to this metamorphosis, the librarian has become a Cyberarian!
3. A paradigm shift has been effected in library services: Library to Cyberary (or Gutenberg to Global Information Infrastructure).
4. Computer screens and keyboards have taken over from shelves and racks.
5. The Internet is no longer a technology libraries can experiment with; it has become an integral part of the library services.
6. The librarian – who has, of course become a Cyberarian! – navigates in the ocean of information, namely, the Internet, through search engines such as Google, AltaVista, Yahoo, MSN and what have you!
7. Through the Cyberary home page on the World Wide Web, the Cyberarian guides the users to their relevant databases.
8. The library – which has, of course, become a Cyberary now! – can streamline document distribution through the Intranet.
9. The library has become a concept, not a place, an activity, not a building – you may call it a virtual library.

As far as the fantasies on the wish-list are concerned, just as the Indian philosopher sees a serpent in a rope and constructs a theory, so also most Indian LIS professionals working in academic, especially affiliated college, libraries seem to see, in conferences and seminars and when they write papers for publication, a DL where there are only twenty computers, not half of

which are in working condition, and where there is only a fragile, rickety internet connection which threatens to break at any time.

It is all very exciting to imagine that the library has become a “Cyberary” but the problem is that it is not there: I don’t see a Cyberary in affiliated colleges with the “Cyberarian” navigating in the ocean of information even in my imagination. If an American LIS professional says that in this Digital Age, the library is no longer a place or a building and that it has become a concept or an activity, I can understand it to some extent. He speaks by and large from his own experience, though there is certainly some exaggeration in what he is saying. However, when our own LIS professionals operating in academic libraries say such things, they seem to speak in a borrowed voice; the ideas do not seem to come from their own practice or experience.

This leads me to the next part of the article – namely, the reality, as far as the DL system is concerned.

3. REALITIES

3.1. Western Scenario

To gain a deeper understanding of the very idea of the DL system and the functioning of DLs in the West, I read at least a dozen articles on the subject, published by Western, especially American, LIS scholars. The articles I read fell into two convenient periods – those written in the 1990s and those written in the following decade. There was a perceptible difference between these two sets of articles in the way they looked at the DL system. In the articles published in the 1990s, I noticed considerable euphoria about DLs, though, I must hasten to add, that their euphoria could never match our own fantasies like holding fast to the tail of the cyber cow to cross a mythical river to reach the ultimate destination of svargam! But, in the articles published in the next decade, euphoria seems to have given way to cautious optimism.

These articles deal with issues which are based on two fundamental facts about DLs. First, integrating digital media into traditional collections will not be so easy as integrating the previous new media, such as audio and video tapes. It is because digital materials are ‘less fixed, easily copied and remotely accessible by multiple users simultaneously’ (Cleveland, 1998). Secondly, DLs will be viable only within a coordinated scheme. Together, these two factors throw up a whole lot of challenges, five of which, discussed in detail by Cleveland (1998), are reviewed below.

The first major challenge is that of the technical architecture. In a DL, the technical architecture must include high-speed local networks, relational databases that support a variety of formats, full-text search engines, a variety of servers and several other things. As I pointed out in the earlier paragraph, DLs would be viable only within a coordinated scheme of things. In other words, DLs need to interoperate and share their resources. The problem posed by the technical architecture is all the more here. Across multiple DLs, there is a wide diversity of data structures,

search engines, interfaces, controlled vocabularies, document formats and so on. Federating DLs with such diversities nationally or internationally will be an uphill task: it will involve not only enormous technical efforts but also enormous political efforts.

Secondly, digitisation – converting fixed or analogue materials into electronic form – is very expensive. Besides, there are copyright restrictions on conversion. Our digitising effort must cope with this problem. In Indian academia, there is supreme indifference to copyright. In each one of the numerous seminars I have been associated with, often as a plenary speaker, there was a brazen violation of copyright because, in the majority of cases, articles were shockingly – and shamelessly – plagiarised from web sources and the plagiarised articles were not only presented but published in book form with an ISBN number. But, no responsible library which undertakes digitisation can ignore copyright restrictions.

Thirdly, preservation – preserving digital materials in the face of technical obsolescence. Digital materials become obsolete in 2–5 years before they are replaced by better technology. Over a period of time, materials stored on older media may be lost because they will no longer have the required hardware or software to read them. Even if files are moved from one storage medium to another, the formats containing the information may become obsolete. One solution is data migration. But data migration is not only costly but involves information distortion or even information loss. As a result, digital data migration is still at an experimental stage.

Fourthly, developing a simpler scheme of metadata. Since we are talking about a coordinated DL scheme, the metadata must have standards common to all interoperating DLs.

Fifthly, copyright. What Chepesuik pointed out sixteen years ago, namely, that rights management was still the ‘single most vexing barrier to digital library development’ (Chepesuik, 1997: 49), holds good even now. Digital objects are less fixed, easily copied and remotely accessible by multiple users simultaneously. Librarians are not copyright holders; they are only caretakers of information. The copyright is with the private businesses or publishers. So, DLs will have to develop mechanisms for managing copyright. The mechanism will have to include usage tracking, identifying users and authenticating them, providing the copyright status of each digital object and handling transactions with users by allowing only a certain number of copies, or by charging them for a copy, or by passing the request on to the publisher. All this is easier said than done.

These are some of the major challenges libraries in intellectually and technically advanced environments are struggling to cope with in their attempt to develop themselves into DLs. These challenges are not exclusive to the West; the digital environment is a level-playing field and so any library in any part of the world which aspires to go digital will have to confront these challenges. Are Indian libraries equipped with the necessary intellectual rigour, besides infrastructure and expertise, to cope with these major challenges and various minor ones? Have they demonstrated the will to cope with these challenges? Is the intellectual climate of academia in this country promising enough to cope with these challenges? That will be my focus of attention next.

3.2. Indian Scenario

DL initiatives in this country have been few and far between. Besides, these initiatives have by and large taken place in science and technology libraries. In a comprehensive review of the DLs in this country, Mahesh and Mittal, (2008) point out that, even in science and technology libraries, some of the key aspects of the DL system, such as digital rights management, DL security, content management, education and training and marketing, have been ignored. In the LIS literature, the DL development in this country is often described as ‘sporadic and partial’ (Jain and Babbar, 2006), ‘chaotic’ (Deoghuria, 2004) and ‘skewed’ (Mahesh and Mittal, 2008).

But let me move away from science and technology libraries and look at university and college libraries and public libraries which constitute the vast majority of libraries in this country. Have they taken a significant step towards the DL system? If they have not, do they at least have the potential to integrate the DL system into their conventional collections in the near future?

University and college libraries as well as public libraries operate in an environment – and are part of an environment – which does not seem to be favourable to developing a DL system. Their problems may be discussed under three broad categories: financial, technical and cultural.

The financial problems are too obvious to bear repeating. But let me just mention financial problems of two kinds.

As a faculty trainer, I have visited a number of colleges and a few universities. One thing that has unfailingly struck me about the libraries of these colleges is that they do not have the infrastructure for library users to access digital resources from the library itself. If the users of these libraries do want to use digital resources – the “if” is a very big IF, I must say – they will have to do so only from their homes. As a result, they will have to waste precious time searching for relevant and authentic resources without the help of the library personnel – assuming, of course, that library personnel are capable of providing that kind of assistance.

Secondly, resource crunch has hit libraries in three other respects. Thanks to the INFLIBNET N-List, affiliated college libraries now have access to a fairly good number of scholarly journals, but, in the face of the increasing research needs even in affiliated colleges, they are inadequate. The research may be substandard in the majority of cases, but the researchers do need journals. Libraries just do not have funds to meet these needs. Secondly, they need money for hardware and software enhancements because hardware/software obsolescence has become a frequent phenomenon. Thirdly, without adequate funds, how can library personnel be trained periodically to handle digital resources?

Next, technical problems. A DL system basically involves collecting and maintaining digital resources, developing and maintaining online catalogues and library web server and finding scholarly information from “hidden Web.” These are just the basic requirements, not at all advanced ones. But, the expertise available in college libraries just cannot manage any one of these three. At the

most, the IT experts available in these libraries can do only one thing: if a system fails or malfunctions, they can troubleshoot – that, too, on a trial-and-error basis. That is the kind of technical expertise I have seen in college libraries. If the technical expertise does not extend beyond troubleshooting of the trial-and-error kind, it is because the needs of the library users do not demand such extension or expansion.

Thirdly, culture-related problems. I use the word “culture” in the sense of the beliefs and attitudes that people in a particular group or organisation share. One may even call it organisational culture. In a vibrant academic environment, the library is at the centre of the educational process. There is a dynamic connection between the library and the classroom – between the independent work done by students in the library and their academic life. This gives the library a special place in the curriculum and the library personnel a special status – with an added sense of responsibility accompanying the status. Madras Christian College (MCC), where I was a student in the 1970s, seemed to recognise the central importance of the library in the educational process. Our timetable was prepared in such a way that we, arts students, never had classes in the afternoons; I assumed that we were expected to use the library, which is what I did. Though there were no compulsory library hours, a significant number of students visited the library. I believe that the reason was that there was by and large an intellectual atmosphere on the campus which urged even an average student to spend some time in the library. It was the independent work I did in the MCC library, reading Bertrand Russell, Bernard Shaw, Oscar Wilde and various other writers who had little to do with my course of study, that shaped my mind and developed in me the spirit of inquiry and a critical, questioning attitude, rather than the lectures I listened to in the classroom.

However, that is not the case in the vast majority of colleges in this country. The library is not at the centre of academic life; it is on the periphery – it is something extra. And the library personnel are also, in a sense, extra: they are not part of mainstream academic life. The librarian, in particular, is used for PR work, invigilation work and a host of other non-academic matters, including trouble-shooting, if something goes wrong on campus. As a result, their public relations skills are highly developed, because they have had opportunities to develop and exercise those skills and their LIS-related skills, which are not so well exercised, have not developed to the extent the PR skills have. Perhaps, this has implications for the attitudes of library personnel also towards their primary responsibilities. People are often shaped and conditioned by their environments; it is only in rare cases that people break through the environmental influence.

I have made this deep and lengthy – and even polemical – reflection to account for a note of complaint from LIS scholars I have often come across in the LIS literature in relation to the DL system. I shall mention a representative article which has been widely quoted by several LIS professionals: a paper by Deoghuria, (2004), presented at an international conference on DLs. In the article, Deoghuria attempts to answer the question, ‘Are research libraries in India prepared for the Digital Age?’ In the course of his answer, he points out the following inadequacies of library personnel in research libraries:

- Lack of interest in keeping track of the ever-changing information-seeking behaviour of users.
- Lack of interest in adding value to their services.
- Lack of interest in interacting with users.
- Lack of interest in utilising the physical space of the library.

If this is the attitude in research libraries, one can imagine the state of affairs in ordinary libraries.

Recently, a series of blog posts in the *New York Times* has highlighted the deplorable state of archives and libraries in India. In one of them, entitled, 'In India, History Literally Rots Away' (March 20, 2012), Dinyar Patel, a research scholar at Harvard, points out that rare manuscripts are literally rotting away in our libraries and archives owing to lack of preservation in spite of the required equipment being available. When the renowned historian Mushirul Hasan became the Director General of the National Archives of India in May 2010, he described the country's libraries and archives as "appalling." (Patel, *op cit*).

How appalling the situation is can be seen from two incidents which have recently taken place in two well-known university libraries in this country. They are in public domain already, as they have been published in newspapers – one of them an Indian newspaper and the other an American newspaper – and so it will not be scandal mongering on my part if I mention them here.

The first of them, which appeared in *The Times of India* of 22nd May 2011, is about a 93-year-old university central library with three lakh volumes, over 5,000 rare manuscripts, 15,000 research theses and over a dozen memorial collections. The news report says that all these are gathering dust. When the Vice-Chancellor of the University carried out a surprise inspection in the library in May 2011, he found something more alarming: the library was being used as a night shelter (*rain basera*) for outsiders with books having been removed from the racks and bed-rolls kept in their place!

The second one was a column called 'India Ink,' published in *The New York Times* of 27 March 2012. The columnist reports what happened in a well-known university library in a metropolitan city in India. In the library, when an enthusiastic assistant librarian upset the organisational culture of the library by attempting to digitise and better preserve some of the institution's oldest holdings, the custodians of the culture regarded her as a nuisance and demoted her to a third-rate college in the suburbs!

I do not want to give the wrong impression that this appalling organisational culture is something exclusive to our libraries; the malaise is a larger and deeper one and is part of our education system itself. As far as libraries are concerned, it has much to do with the status the library and library personnel enjoy in our education system. Besides, our education system is so casual,

unchallenging and examination-driven that it puts the library on the periphery of the system and as a result, fails to make demands on library personnel.

Given these three types of problems which plague our academic libraries – financial, technical and cultural – I wonder whether there is a favourable environment for developing a fully-fledged DL system in our libraries.

4. POSSIBILITIES

The reality I have presented so far is evidence-based. And my view of this bleak reality is that of a concerned insider-outsider to the system who not only believes that there is a self-correcting mechanism within the system which could be activated but is working towards activating it. But, the self-correcting mechanism will continue to remain inactive as long as we persist in the illusion that the library has become a Cyberary and that the librarian is a Cyberarian navigating in the ocean of information; we must learn to view things as they really are. That is the exercise I have attempted so far.

It is not at all my case that a well-organised, fully-fledged DL system is impossible in our libraries. On the contrary, I believe that a DL system should be made possible, given the realities of the globalised world and given the newer demands that are being made on our higher education system. Against the realities I have presented, let me attempt a brief discussion of the possibilities which can ensure the *gradual* development of a DL system in our academic libraries.

- a. One of the possibilities is establishing a dynamic connection between the library and the classroom in the curriculum and according an academic role for the librarian which expands his traditional role of being a mere information provider. This will lead to two things: one, an increased sense of responsibility and two, partnership with academics. And it will serve two purposes at once: one, it will enable the librarian to gain a good grasp of the needs of the students, which will help him attempt to meet them; and two, it will considerably add to his professionalism.
- b. A second possibility, which is related to the first one, is integrating the library into the curriculum in such a way that the student is required to go beyond textbooks and obtain information from electronic resources. At present, the student's learning is closely tied to the textbook and classroom instruction because the testing procedures, in a vast majority of cases, are content-based and memory-oriented. If the curriculum is restructured in favour of autonomous learning on the part of students with emphasis on empirical pursuits, the library will gain as much importance as the classroom in the curriculum. The library will be at the centre of the educational process rather than on the periphery and this will have far-reaching consequences for the services demanded of the library, including digital services.

Once this takes place, then I envisage each library making a great deal of efforts to meet the e-learning requirements of students. The students will demand a single-point access to information in electronic form and what could be that single-point access except the library website? This will urge the library to develop content management systems using open sources or commercial software to provide customised services to students.

- c. Thirdly, we have reached a stage at which library services need to be broadened through cooperation with other libraries.
- d. Fourthly, all this will be possible only if library personnel are well up in technical aspects, especially digital metadata. Workshops and training programmes are, therefore, necessary on various aspects of the digital management system. LIS seminars in affiliated colleges, which make a mockery of paper presentation, may include a few workshop sessions on managing digital content. LIS courses offered by our universities should also be restructured to include techniques of managing digital content as a strong component.
- e. Fifthly, digital management is an evolving subject and so knowledge obsolescence is inevitable. It is not possible to organise training programmes often. It is not even necessary. We live in an electronic age and it should be possible to organise discussions with experts on electronic forums. As an ELT practitioner, I hold discussions with a few special interest groups (SIGs) on the Internet. Besides, on the LinkedIn professional network, I take part in several discussions on many forums. LIS specialists have their own SIGs which, I believe, take part in electronic discussions. Information about those SIGs could be given to college librarians also and they could be encouraged to take part in electronic discussions and seek clarifications, especially in matters concerning digital management.
- f. Lastly, the higher education system in general and managements of affiliated colleges in particular must recognise LIS personnel as part of the mainstream and demonstrate that recognition by not using them for non-library-related work.

5. CONCLUSION

My point, simply, is this. Unless the foundation is strong, an impressive superstructure cannot be built. Here, the foundation, by LIS professionals' own admission, is not very strong: our libraries are functioning in an environment not conducive to changes of the kind which people are struggling to effect even in progressive environments. I wonder if, on this not-so-strong foundation, we are labouring in vain to build an impressive superstructure. The superstructure is, at the same time, essential. But, my plea, if I might mix my metaphors, is for putting the horse before the cart. In other words, let us look at the foundation and strengthen it and then we can build an impressive superstructure which the foundation will be strong enough to support. The sooner it is done the better for our libraries – and the better for our higher education system.

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About the Author

Ramanujam Parthasarathy is working as a professor of English, teacher educator and placement trainer. In his three-decade-long career, he has taught English at Andhra Loyola College, Vijayawada, conducted teacher-education programmes as Director, Loyola ELT Centre, Vijayawada, and is currently Director (Training) at Vignan University, Guntur, Andhra Pradesh. His specialities include: teaching (English language, literature, English language teaching, journalism, creative writing), action research, ELT consultancy, ELT course design, materials writing, freelance writing, teacher professional development and educational administration.