

INFLIBNET: VISION 2020

Dissolving the Digital Divide in Indian Higher Education Scenario



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INFLIBNET Should Dissolve the Digital Divide

- ◆ INFLIBNET Should Dissolve the Digital Divide in Higher Education Scenario of India
- ◆ INFLIBNET is envisaged as a Gateway to India's Academic and Research Community
- ◆ But even after more than fifteen years of its establishment it has not achieved 25 % of what it originally planned to materialize in VIII th Plan 1990-95

INFLIBNET Since 1989

- ◆ INFLIBNET Report was published in 1989. A Classic Project envision under the Chairmanship of Prof. Yaspal the then Chairman of UGC.
- ◆ Established in 1991 it became an Inter-University Centre in 1996.

Objectives: Resource Sharing

- ◆ To establish communication facilities that can improve transfer and access of information supporting teaching, learning and research
- ◆ To establish a computer communication network linking libraries and information centres in universities, colleges, UGC information centres, and national level R & D institutions for enabling resource sharing between them and for avoiding duplication of efforts.

Objectives: Library Automation

- ❖ to computerize library and information services of academic institutions in the country.
- ❖ to evolve standards and guidelines in techniques, methods, procedures, computer hardware and software, services and implement them to facilitate pooling, sharing and exchange of information to optimize use of resources and facilities
- ❖ to train and develop human resources for ICT application required to establish, manage and sustain academic libraries

Objectives: Bibliographical Control

- ◆ to provide reliable access to bibliographical information on document collections of academic libraries of India through on-line union catalogues
- ◆ to facilitate on-line access to national and international databases.
- ◆ to digitally archive valuable information available in manuscripts and rare documents in different Indian languages

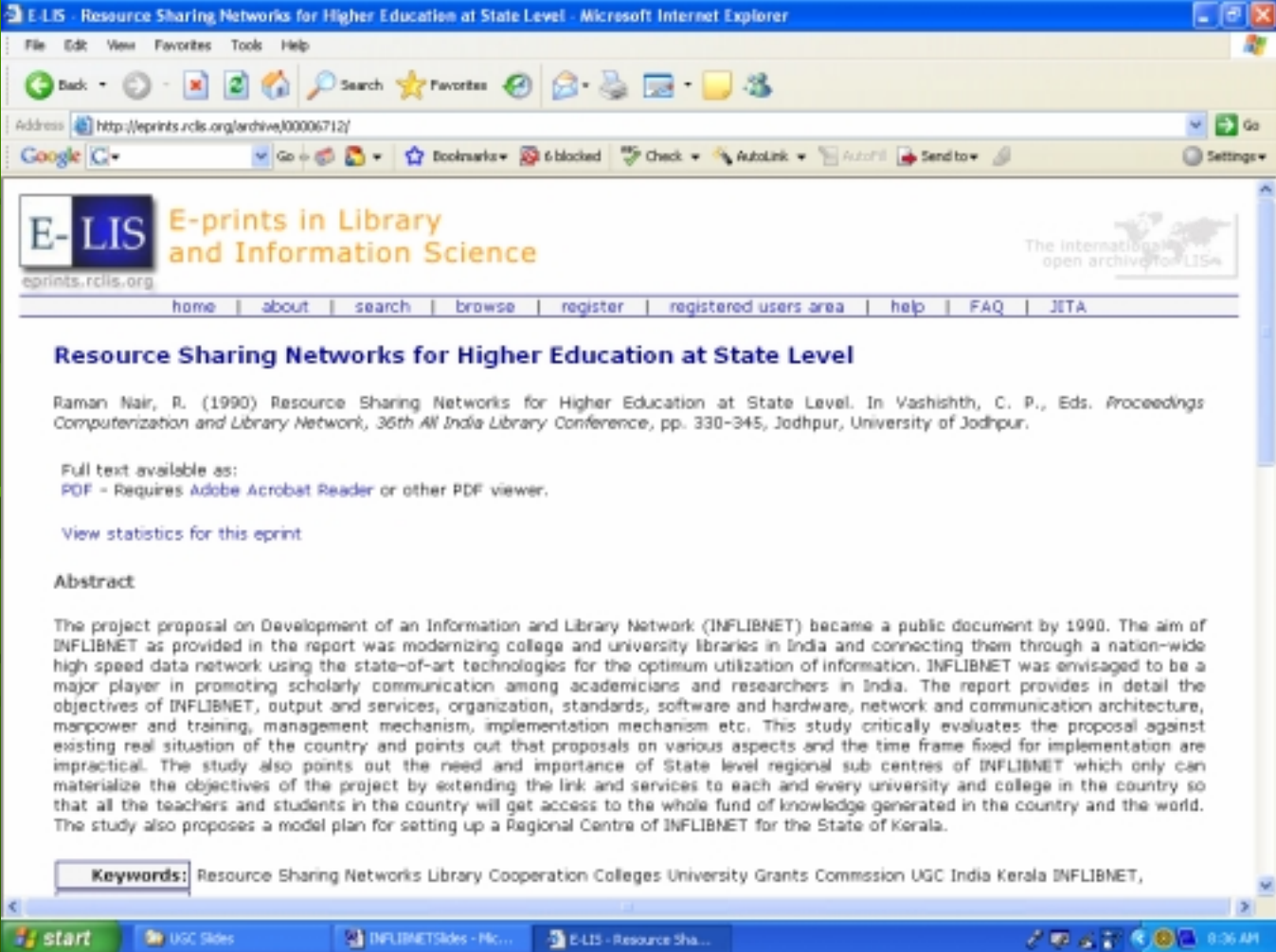
Objectives: Information Access

- ◆ To enable the students and teachers dispersed all over the country, irrespective of their location or social and economic status to have access to information stored in academic libraries.
- ◆ To facilitate academic communication amongst scientist, engineers, social scientists, faculties, researchers and students through networks, web, electronic mail, video conferencing, etc

INFLIBNET: A Dream Coming True

- ◆ Such a system was a dream of every Academic Librarian for his country
- ◆ As a novice then and one interested in automaton of academic information systems I presented my observations on INFLIBNET plan in a national seminar at Jodhpur University in 1990
- ◆ It mainly dealt with how INFLIBNET should reach/connect up to the college level

INFLIBNET Project: Comments and Suggestions, 1990.



E-LIS - Resource Sharing Networks for Higher Education at State Level - Microsoft Internet Explorer

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Resource Sharing Networks for Higher Education at State Level

Raman Nair, R. (1990) Resource Sharing Networks for Higher Education at State Level. In Vashishth, C. P., Eds. *Proceedings Computerization and Library Network, 36th All India Library Conference*, pp. 330-345, Jodhpur, University of Jodhpur.

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Abstract

The project proposal on Development of an Information and Library Network (INFLIBNET) became a public document by 1990. The aim of INFLIBNET as provided in the report was modernizing college and university libraries in India and connecting them through a nation-wide high speed data network using the state-of-art technologies for the optimum utilization of information. INFLIBNET was envisaged to be a major player in promoting scholarly communication among academicians and researchers in India. The report provides in detail the objectives of INFLIBNET, output and services, organization, standards, software and hardware, network and communication architecture, manpower and training, management mechanism, implementation mechanism etc. This study critically evaluates the proposal against existing real situation of the country and points out that proposals on various aspects and the time frame fixed for implementation are impractical. The study also points out the need and importance of State level regional sub centres of INFLIBNET which only can materialize the objectives of the project by extending the link and services to each and every university and college in the country so that all the teachers and students in the country will get access to the whole fund of knowledge generated in the country and the world. The study also proposes a model plan for setting up a Regional Centre of INFLIBNET for the State of Kerala.

Keywords: Resource Sharing Networks Library Cooperation Colleges University Grants Commission UGC India Kerala INFLIBNET,

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INFLIBNET Coverage

- ◆ Main points I brought to the attention were that
- ◆ India has a large higher education system.
- ◆ In (1990) there were about 180 universities and 6000 college. 2, 25 lakh teachers and 40 lakh students.
- ◆ Library services to teachers / students in university campuses were some what satisfactory
- ◆ But this community was les than 5% say 2. lakhs of the total 45 lakhs in our Higher Education system

Reaching the Unreached

- ◆ 95% of teachers/students in higher education depend on college libraries which remained in worst condition.
- ◆ Lacked Qualified Librarian / Collection / Physical Facilities / Automation
- ◆ It make any improvement UGC has to implement standards for colleges / universities through INFLIBNET and monitor the use of funds at University / State / Regional / national levels

Scenario After 15 Years: Universities

- ◆ Now there are approximately a total of 357 universities
- ◆ Only 50 % comes under 12 (b) of UGC and have minimum quality
- ◆ Only 128 that is 40% has got NAAC Accreditation
- ◆ Even among this most institutions do not have a Qualified Librarian
- ◆ Till now NAAC has not given much importance to Library for accreditation.

Scenario After 15 Years: Colleges

- ◆ There are 18,000 colleges that provide education in all disciplines.
- ◆ Of this only 5589 comes under 2 (f) Category of UGC
- ◆ Only 2780 that is 15% of colleges got accredited by NAAC
- ◆ There also Library was not an important criteria for accreditation.

Scenario After 15 Years: Academic Community

- ◆ The number of teachers is 4.75 lakhs,
- ◆ Students enrolled for higher education is approximately 150 lakhs.
- ◆ Of this more than 95 % of students and teachers are in colleges or are under going open courses using the facilities provided by colleges/public libraries which are within their reach.

Reach of INFLIBNET

- ◆ INFLIBNET has to cover the 18000 and more colleges and 95 % of students/teachers under going higher education / teaching there.
- ◆ Without that creating infrastructure for sharing of knowledge/information resources and services among Academic and Research Institutions /promoting scholarly communication among them can never be achieved.

Limited to A Non-poor Minority

- ◆ Reach of INFLIBNET will be limited to nearly 5 % of the student / academic community.
- ◆ Less than 1 million teachers and students of the 15 million in higher education and research institutions of India.
- ◆ A Minority group who stands forward in their economic, social, religious, gender and rural/urban status.

INFLIBNET Programmes & Results

- ◆ Connectivity
- ◆ University/College Library Automation
- ◆ SOUL Package
- ◆ Databases/Catalogues
- ◆ Digital Content
- ◆ Institutional Repositories
- ◆ Journal Sharing
- ◆ Physical Facilities
- ◆ Integration of Functions
- ◆ Human ware

Library Connectivity

- ◆ Internet /World Wide Web have emerged as important tool for information services
- ◆ No library system can provide timely and effective service without such connectivity
- ◆ The extension of services as intended by INFLIBNET also requires such connectivity
- ◆ Of the 18000 libraries less than 3500 that is 2% have such connectivity.

Library Automation

- ◆ INFLIBNET Project states bibliographical control of academic library collections in India as a main objective to enable users irrespective of location and distance, to have access to information on availability of documents and to enable obtaining it
- ◆ This requires automating the libraries of all universities/colleges in India or at least development of their automated catalogues and connectivity.
- ◆ This is a basic minimum requirement also

SOUL Software

- ✦ INFLIBNET has developed SOUL : A library automaton package which is an important product/achievement
- ✦ Every college/University getting UGC Support should use it or a better package to get UGC Grants / NAAC Accreditation.
- ✦ SOUL should be provided free of cost to all academic libraries.
- ✦ Library automation and completion of catalogue data entry in prescribed time limit should be mandatory for getting UGC grants for Library development.

SOUL: Status

- ❖ Of the 18000 colleges and universities only 600 are using SOUL
- ❖ SOUL is cheapest and is an Integrated Package and so there is no cost effective Alternative
- ❖ So consider and additional 2400 have gone for other software.
- ❖ Even than More than 95% of the College/universities remain un automated.
- ❖ Why, How we can bring them into the INFLIBNET system.

SOUL: Scaling Up

- ◆ SOUL needs more interfaces/ facilities/ provisions/ Revision/Technology Up gradation
- ◆ Data export/Import facility for all other popular Library packages
- ◆ Regional Language Interfaces/ UNICODE Compliance
- ◆ Additional Modules for adding Full Text – DL is essential

Data Bases /Catalogues

- ✦ Already many databases/ catalogues of books/ serials etc have been developed at INFLIBNET pooling records.
- ✦ The coverage is only less than 10% of Libraries
- ✦ But the bibliographical data for the 75% of the records to be created in remaining 90% of the libraries are related to the same titles/books.

Data Bases /Catalogues

- ❖ As per the present method of automation remaining university and college libraries have to enter data of their holdings in SOUL or other Library packages.
- ❖ Consider that there will be an average 50000 books in all these 18000 libraries and the cost per book for classification/cataloguing/data entry comes to Rs. 10 per book
- ❖ Total cost of Catalogue data base preparation will be $18000 \times 10 \times 50000 = \text{Rs. } 9000\ 000000$ (Rs. Nine hundred crores)
- ❖ INFLIBNET took 17 years to complete this work in 10% of institutions. How much time will be required to complete this project.

A Magical Formulae

- ✦ Instead of again allowing to duplicate this work at say in about 16000 colleges and remaining universities INFLIBNET can perfect the records it has received in regard to classification, entry elements, spelling etc
- ✦ Can put the standardized records in its site which can be down loaded and incorporated by colleges/universities in their database by adding their stack numbers, which will lead to enormous savings.

How INFLIBNET Can Save Rs. 750Million

- ◆ Say Prof. R.C Majumdars Advanced History of India will be available in 15000 libraries. Cost of the country for technical processing catalogue/classification/data entry at Minimum Rs. 10 per book Rs.10 x150000 for one book is equal to Rs.1.50 lakh for one book. So if INFLIBNET Catalogue has 50000 unique records that can be downloaded savings in the country will be 1.50 lakhs x 50000 = 75000 lakhs.
- ◆ This is not a huge task or requires high technical capacity. It is a simple VISION of an ordinary professional coming from a remote village for whom every rupee is the result of hard work.

Institutional Repositories

- ◆ Should develop Open Archives of Books/Papers/Reports/Theses
- ◆ Open source software like D Space, Greenstone, E-Print can be used
- ◆ Developing such one by INFLIBNE is unnecessary for international organizations like UNESCO are putting millions of dollars for their development and maintenance
- ◆ What we can do is customizing them for our requirement, our language, script following Unicode standards

INFLIBNET/ Open Archives

- ◆ Like E-Prints etc INFLIBNET should start an Open Archives in which academicians and researchers can archive their research publications.
- ◆ INFLIBNET should support universities and research institutions for such initiatives.
- ◆ Developing Open Archives/Institutional Repositories is not a costly affair
- ◆ One who has required familiarization in Linux can establish such an archive for INLIBNET or an university in a single day

PhD Thesis Digitization

- ◆ INFLIBNET or any university has not till now launched a Thesis Digital Library even though too many seminars / workshops discussions /funds for that have already been gone
- ◆ I have a PhD Thesis DL collection developed by me in 1997 when these software and awareness was not there
- ◆ Still it can stand with any present system
- ◆ These are matters to be brought into action along with the intellectual exercises.

Linux Familiarization

- ◆ Linux is the platform for most of the Open Source packages used in Open Archives initiatives
- ◆ Hence INFLIBNET should support continuous Linux Familiarization programmes at colleges and universities

INFONET e-Journal Consortia

- ◆ A Millstone in the History of UGC Support to Higher Education and Research
- ◆ Access to 4500 + journals, most from their first issue onwards
- ◆ To 125 universities, but no colleges
- ◆ These resources are not utilized at universities according to the vision of UGC due to lack of required infrastructures, competent managers, professional staff.
- ◆ Fails to reach a 95%

Physical Facilities/ Building: Integration

- ◆ Information related activities in an university / College are many
- ◆ Library, UGC INFONET e-Journal access, EDUSAT, Central Computer Facility, Campus LAN, Digital Library, Web based Services, exhibition / seminar facilities Information Science Teaching, Informatics
- ◆ Their physical facilities/buildings are important
- ◆ But most institutions disregard this aspect and establish them in non functional spaces when they are forced to provide space
- ◆ Once I have come upon a toilet space hastily modified to accommodate computers in a college
- ◆ Some policy on this aspect is very important and funding agencies have to monitor if the resources they provide for ICT are properly utilized and maintained.

Integration of Information Related Activities

- ❖ Integrating information related systems and their facilities in higher education and research is essential to harness the possibilities of ICT for improved access to current information and cost effectiveness.
- ❖ Integrating their physical facilities at a central place in the campus can avoid duplication of huge investments for costly physical infrastructures and connectivity
- ❖ Integrating these facilities can contribute immensely to their efficiency
- ❖ Information Infrastructure Complex Building at a central place in campus is advisable to house all these.

Integration of Networks

- ❖ ARIS, INFLIBET, Networks under AICTE CSIR, Management Institutes, and ICMR needs to be integrated to form a single national network.
- ❖ This can avoid duplication of facilities and resources and sustaining cost.
- ❖ Examples of costly information resources duplicated are CAB Abstracts, Current Content, Biotechnology Abstracts, etc.
- ❖ Even systems under UGC like INFLIBNET, INFONET, UGC NET etc needs integration.

Effective Information Management

- ◆ If the support / resources provided by UGC/INFLIBNET for ICT developments in universities / colleges to give optimum results and if the infrastructures are to be sustained proper management for ICT at universities/colleges is very crucial
- ◆ But 95% of our academic institutions are not having qualified and competent librarians due to failure to implement proper standards

Information Management: Human Resource

- ◆ University Librarian post in 50 % of the universities is vacant.
- ◆ In Kerala - Kerala University from 1989 (for 18 Years)
- ◆ Cochin University of Science and Technology from 2006
- ◆ Sankaracharya University from Day of Inception that is (1994) Downgraded
- ◆ Calicut University from 2006
- ◆ Kannur University from Date of Inception (2000)
- ◆ Kerala Agricultural University from 1971-1995 and from 2000 (for 32 years)

Without Capable Management Resources Go Waste

- ❖ If we take the 18000 and more colleges more than 15000 will not be having a qualified Librarian as per UGC standards
- ❖ In Kerala of the 225 colleges surveyed only 12 colleges have a librarian with PG
- ❖ Of the 24 Govt PG Colleges only one Librarian is having UGC Qualification
- ❖ With such a incumbents managing 99% of the library and information systems of HE how ICT infrastructures can be sustained/ will give optimum/minimum results
- ❖ The resources spent by UGC/INFLIBNET will go waste without giving any permanent result.

Competent Management: Solution

- ◆ UGC's strict implementation of the standards and monitoring the use of support provided by it is the only method to ensure results
- ◆ UGC Regulation should clearly State that 'No person shall be appointed to a **teaching /library** post in the university or in any institution including constituent or affiliated colleges recognized under Clause (f) of Section 2 of the UGC Act 1956'.
- ◆ Presently the terminology used in **teaching** only which is taken as a license to appoint non qualified librarians.
- ◆ Qualification of the Librarians as well as syllabi of the Library Science courses needs to be revised to incorporate relevant ICT aspect.

Should Connect All Colleges / Universities

- ◆ INFLIBNE should not be a system providing services, But a system enabling to provide services
- ◆ Should have a plan to cover all the 18000 colleges and universities in the next Plan at least.
- ◆ Connectivity / extension of services / setting standards / developing packages
- ◆ Prof. Yaspal has envisioned full connectivity by 1995 and that was not an un attainable dream also.

Governance: Suggestions

- ◆ Representation in the Council, the Governing Board and the Finance Committee
- ◆ In Council as well as in Governing Board there should be two eminent working librarians one from university and one from college with proved record of achievements in ICT application.

Internal Organization: Necessary Changes

- ◆ Presently the Departments are for Database Management, Database R&D, E-Learning, HRD, Informatics, Network & QC, Software R & D and Web Devt.
- ◆ A close examination of these Groups and their sub groups reveal that the names denote different terms with the same meaning. The same or related works specified for subgroups of different Departments.
- ◆ Needs total reforming and re organization of work.

Facility or Facilitator

- ◆ INFLIBNET has now become a University or Research Institution like organization.
- ◆ Instead it should empower universities to improve systems
- ◆ Facilitate and ensure connectivities and extension of information services
- ◆ Provide standards and packages
- ◆ Monitor things to see that the resources provided fetch optimum returns

Quality Improvement in Higher Education and Research

- ◆ The programmes for connectivity, library automation, digitization, etc here if completed in within a time limit can effect revolutionary changes in our higher education and research information support
- ◆ INFLIBNET can reach the 95 % of the community presently not covered by it, without much additional expenditure.
- ◆ By enabling up to date ness of academic community and quality improvement in teaching and learning INFLIBNET can do miracles in the country's education and research.

Further Reading

- ◆ <http://www.inflibnet.ac.in>
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Thank You