# Awareness and Use of Electronic Resources through N-List: A Boon to Academic Libraries

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#### ABSTRACT

Library is a repository of resources. It is an integral part of the educational system whose primary function is to serve users (students, faculty, researchers and staff). Computers and related electronic resources have come to play a central role in education. Electronic resources are the prime ingredients and they become a common part of the suite of most academic library resources today. The academic libraries often prefer electronic resources to substitute print collections for optimum use. Many reasons including physical space, escalation in journals' prices, digital literacy, discovery system, and skilled manpower force the academic libraries to opt for electronic resources in meeting needs of the large community of users. Access to e-resources not only influences the way students and scholars to conduct research, it also changes the way they use the traditional library. Especially, online e-journals have become widely popular among library users. A lot of efforts have been taken in past few years to overcome this problem of financial crunch by resource sharing through consortia for university libraries. UGC-INFONET, INDEST-AICTE Consortium and N-LIST are three major initiatives for universities and college library users. These revolutionary steps are providing scholarly resources including peer reviewed journals, databases, abstracts proceedings etc. These efforts must be a boon to library users which will definitely boost the level of higher education system in our country. This paper briefly described the awareness about N-List Project, its components, availability of e-resources through n-list, how to access these resources and outlines the structure and their roles.

Keywords: e-resources, consortia, N-list, INFLIBNET

# INTRODUCTION

Libraries use ICT for better service and satisfying diverse user needs. Libraries have transformed into digital and virtual libraries where books, journals, and magazines have changed into e-books, e-journals, and e-zines. This has increased the global dissemination of information. Electronic resources are easily accessible in remote areas. Electronic resources solve storage problems and control the flood of information. The rapid growth of new technologies has changed the communication process and reduced the cost of communication for individuals. Electronic information sources can be seen as the most recent development in information technology and are among the most powerful tools ever invented in human history. There is a great need to study the awareness and use of electronic resources and investigate the level of satisfaction among academics.

The academic libraries often prefer electronic resources to substitute print collections for optimum use. Many reasons including physical space, escalation in journals' prices, digital literacy, discovery system, and skilled manpower force the academic libraries to opt for electronic resources in meeting needs of the large community of users. Access to e-resources not only influences the way students and scholars to conduct research, it also changes the way they use the traditional library. Especially, online e-journals have become widely popular among library users. A lot of efforts have been taken in past few years to overcome this problem of financial crunch by resource sharing through consortia for university libraries. UGC-INFONET, INDEST-AICTE Consortium and N-List are three major initiatives for universities and college library users. The National Library and Information Infrastructure for Scholarly Content (N-LIST) was proposed to the Ministry of Human Resource Development (MHRD) under its National Mission on Education through ICT to address two issues, namely (i) cross-subscription to e-resources amongst technical institutions and universities i.e. subscription to INDEST-AICTE resources for universities and UGC-INFONET resources for technical institutions; and ii) extending access to selected e-resources to more than 6, 000 government and government-aided colleges. Chaitanya Postgraduate College (Autonomous), Hanamkonda, Warangal, Andhra Pradesh, the library is a member of N-LIST and providing access to the electronic resources to its users.

# N-LIST: (National Library and Information Services Infrastructure for Scholarly Content)

The Project entitled "National Library and Information Services Infrastructure for Scholarly Content (N-LIST)", being jointly executed by the UGC-INFONET Digital Library Consortium, INFLIBNET Centre and the INDEST-AICTE Consortium, IIT Delhi provides for i) cross-subscription to e-resources subscribed by the two Consortia, i.e. subscription to INDEST-AICTE resources for universities and UGCINFONET resources for technical institutions; and ii) access to selected e-resources to colleges. The N-LIST project provides access to e-resources to students, researchers and faculty from colleges and other beneficiary institutions through server(s) installed at the INFLIBNET Centre. The authorized users from colleges can now access e-resources and download articles required by them directly from the publisher's website once they are duly authenticated as authorized users through servers deployed at the INFLIBNET Centre.

The N-LIST Project operates through its Headquarter set-up at the INFLIBNET CENTRE, Ahmedabad, Gujarat, India.

#### How to Access NLIST E-Resources?

Access to NLIST resources are through Proxy servers of INFLIBNET. The URL address of NLIST site is: http://iproxy.inflibnet.ac.in:2048/login Once you visit the site, enter the login and password .The members can obtain user ID and Password from their Libraries.

## Electronic Resources Subscribed under the N-LIST Programme

Electronic resources subscribed by the N-LIST programme can broadly be divided into the following three categories:

## **Full-text Electronic Resources**

Full-text electronic resources contain complete articles along with their bibliographic details. The N-LIST programme subscribes to full-text e-resources from academic societies, commercial publishers and aggregators like American Institute of Physics, American Physical Society, Oxford University Press, Royal Society of Chemistry, Cambridge university Press, H W Wilson, etc. All fulltext resources subscribed under the N-LIST programme contain electronic journals as revealed in the table given below.

	E-resources	Publishing	No. of	Backfiles
		Country	Journals	from
1	American Institute of Physics	USA	18	Five yrs.
2	American Physical Society	USA	10	Five yrs.
3	Annual Reviews	USA	33	Ten yrs.
4	Cambridge University Press	UK	224	Five yrs.
5	Economic and Political Weekly (EPW)	India	1	1966+
6	Indian Journals	India	150	2007+
7	Institute of Physics	UK	46	Vol. 1+
8	Oxford University Press	UK	206	1996+
9	Royal Society of Chemistry	UK	29	Ten yrs.
10	Wilson Omnifile	USA	1, 420	1982+
	Total		2, 154	

#### E-Journals subscribed under the N-LIST programme Source :

# **Electronic Books**

Electronic books are either subscribed on annual subscription basis (ebrary) or are purchased on "one-time payment and perpetual access basis" as in case of NetLibrary, McGraw Hill and Oxford Scholarship. Total number of electronic books accessible to colleges under N-LIST programme exceeds 51, 000 as revealed below in the table reproduced below.

# E-Books subscribed under the N-LIST programme:

	E-resources	E-Books	Website Link
1	Cambridge Books Online	1000 +	http://ebooks.cambridge.org
2	E-brary	70000+	http://site.ebrary.com/lib/inflibnet
3	EBSCoHost-Net Library	936	http://www.netlibrary.com/
4	Hindustan Book Agency	65+	http://hindustan.igpublish.com
5	Institute of South East Asian	382+	http://iseas.igpublish.com
	Studies(ISEAS) Books		
6	Oxford Scholarship	902	http://www.oxfordscholarship.com/
7	Springer eBooks	1500 +	http://www.springerlink.com.
8	Taylor Francis eBooks	1000 +	http://inflibnet.etailer.dpsl.net.
9	Myilibrary-McGraw Hill	1124	http://lib.myilibrary.com/
	Total:	76909+	

# Bibliographic Database Available in N-List

N-LIST subscribes to MathSciNet (American Mathematical Society) that covers reviews of articles in mathematics from 1944 onwards.

• MathSciNet http://www.ams.org/mathscinet/

## **E-Resources for Universities**

• Web of Science http://isisknowledge.com

## E-Resources for Technical Institutions (IITs, IISc, IISERs and NITs)

- Annual Reviews http://arjournals.annualreviews.org/
- Project Muse http://muse.jhu.edu/
- Nature

# **ICT Requirement for Accessing Electronic Resources**

A minimum level of hardware and software infrastructure is a pre-equisite for a user or subscribing institution desirous of subscribing e-resources so as to achieve efficient and effective interaction with subscribed resources. Basic hardware and software requirement for accessing electronic resources is given below:

# 20

#### Minimum Hardware Requirement

Since all e-resources subscribed by the Consortium are web-based, subscribing institutions should have full-featured and configured system with high speed Internet connectivity to get better access to e-resources.

- Windows PC with P-4 CPU @3.0 GHz (HT) or above
- 512 MB DDR 400 MHz RAM
- HDD: 40 GB
- CDROM Drive (optional)
- Monitor: 15" /17"
- Windows OS

Any UNIX workstation capable of running a graphical Web browser with Internet connection can also be used.

• Laser Printer: For grayscale printing for most of the articles. Color printer may be required to print colored figures.

#### **Internet Connectivity**

Subscribing institutions should have minimum of 528 kbps (preferably 2 Mbps) or more connectivity to Internet for improved access depending upon the total population of users. Moreover, most publishers prefer providing access to their e-resources on IP addresses assigned to institutions by Internet Service provider. Several publishers do not even offer password-based access to their resources. As such, institutions desirous of subscribing to e-resources should have static IP address / range of IP addresses with leased line, VSAT or other available options through a standard ISP.

## Minimum Software Requirement:

#### > Web Browser

Most e-resourced offered through the Consortium require an Internet-enabled multimedia PC equipped with an Internet Browser like Internet Explorer or Netscape Navigator as their clients. Most digital collections are accessible without any problem with the web browsers mentioned below:

- IE: 5.x or later
- Firefox Mozilla
- Netscape: 4.79 or later (no lower)
- Opera (Java version required): 6.0 or later

## Browser Configuration

The web browser being used to access e-resources should be enabled for:

- JavaScript/Java
- Acceptance of cookies
- Cascading Style Sheets

• Secure Sockets Layer (SSL) Security (128-bit encryption minimum)

Most browsers are generally configured for the above-mentioned features.

- Viewing and Printing Documents
- E- resources are offered in different file formats. The client-side PCs may, therefore, require the following software packages to download format-specific deliverables from a digital collection:
- PDF Documents: Adobe's Acrobat Reader (5.x or later): for viewing and printing pdf documents.
- PostScript Documents: AFPL Ghostscript Package 8.00 or GNU Ghostscript Package 7.05 or later
- TIFF Documents: TIFF Viewer to view and print TIFF Images

# **N-LIST Operation**

The N-LIST Project operates through its Headquarter set-up at the INFLIBNET CENTRE, Ahmadabad, Gujarat, India.

The NSC's of UGC INFONET Digital Library Consortium and INDEST-AICTE consortium in their joint meeting would take decisions on policy issues under overall policy direction of National Mission on Education through ICT.

# Major Functions and Responsibilities of the INFLIBNET Centre:

- establish proxy servers and associated authentication mechanism for colleges to enable them to access e-resources directly from publisher's site;
- provide full text access to electronic resources subscribed for educational institutions through proxy servers after establishing authenticity of users;
- identify gaps in resources and infrastructure and make attempts to fill in those gaps so as to deliver effective and efficient services;
- Generate alerting services from subscribed e-resources deploying technological tools for content delivery such as RSS feed, Atoms, Blogs etc.
- Setup computer laboratories consisting of 10-20 Internet -enabled PCs to facilitate walk-in users to access subscribed e-resources;
- impart awareness and training programmes for colleges and institutions; and
- Collect and analyze usage statistics of e-resources and find trends of usage in different subject disciplines.

# How to Join N-List?

Faculty, staff, students and researchers from eligible colleges covered under Section 12B/2F of UGC Act and Non-Aided colleges(except Agriculture, Engineering, Management, Medical, Pharmacy;Dentistry and Nursing) are eligible to access e-resources through the N-LIST project. Colleges, desirous of accessing e-resources, are required to register themselves with the N-LIST.

Visit the N-LIST Website and click on Register on the navigation bar. Fillin the Registration Form online and submit it. You may also download the Registration Form and submit it by post.

#### **Current Status:**

As on Jan 9 2013, a total number of 3126 colleges have registered themselves with the N-LIST programme including 2859 Govt. / Govt.-aided colleges covered under the section 12 B/2F of UGC Act as well as Non-Aided colleges. Log-in ID and password for accessing e-resources has been sent to the authorized users from these 2859 colleges. All e-resources subscribed for colleges under the N-LIST Project are now accessible to these 2859 colleges through the N-LIST website (http://nlist.inflibnet.ac.in).

Sr. No	State	Registered	Access Enabled
1	Andaman and Nicobar Islands	3	2
2	Andhra Pradesh	150	127
3	Arunachal Pradesh	6	6
4	Assam	95	93
5	Bihar	24	23
6	Chandigarh	14	13
7	Chhattisgarh	51	46
8	Dadra and Nagar Haveli	2	1
9	Daman and Diu	1	1
10	Delhi	43	40
11	Goa	22	21
12	Gujarat	458	392
13	Haryana	32	26
14	Himachal Pradesh	69	61
15	Jammu and Kashmir	41	40
16	Jharkhand	8	8
17	Karnataka	384	364
18	Kerala	253	224
19	Madhya Pradesh	69	63
20	Maharashtra	619	574
21	Manipur	33	33
22	Meghalaya	25	24
23	Mizoram	9	9
24	Nagaland	13	13
25	Orissa	51	50

STATE WIDE COLLEGES LIST:

26	Pondicherry	56	42
27	Punjab	84	82
28	Rajasthan	39	34
29	Sikkim	4	4
30	Tamil Nadu	249	229
31	Tripura	22	21
32	Uttar Pradesh	66	60
33	Uttarakhand	7	7
34	West Bengal	124	124
		3126	2855

(Source  $< \frac{\text{http://nlist.inflibnet.ac.in/statelist.php} > \text{ as on date January 9th}, 2013)$ 

# Acknowledgement:

The authors is thankful to Dr.Ch.V Purushotham Reddy, Secretary & Correspondent of Chaitanya Postgraduate College (Autonomous) for provide N-List services to our library users, constant encouragement and support for the development of library.

# Conclusion

N List project has been funded by Ministry of Human Resources & Development (MHRD), Govt. of India. It provides access to e-resources to students, researchers & faculty members from colleges & others beneficiary institutions. Academic libraries play a vital role in facilitating the students and the teachers alike in the use of internet and e-resources and other library and information services. The college libraries should organize awareness and training programs and seminars to educate the users on seeking information from e-resources and to maximize the use of library resources and services. The N-LIST programme has successfully filled-in the serious gap of providing access of e-resources to college. Colleges should develop e-infrastructures of computer network and sufficient professional staff & a computer operator will be appointed to make this programme success & help students to go beyond walls of the library of their colleges. The N-List will be boon in future to college students & faculty member.

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