

IMPORTANCE OF ELECTRONIC THESES AND DISSERTATIONS (ETD,S) ON INTERNET: A SURVEY OF INDIAN ETD REPOSITORY SHODGANGA

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ABSTRACT

ETDs can contain non-text elements such as multimedia, sound, video, and hypertext links. This enables scholars worldwide to locate, search, and download ETDs. For most scholars, the the Ph.D thesis and M.phil dissertations are the first major work of scholarship they produce. To make those works more readily available to other scholars, as well as to save money, many universities and libraries are now making digitized (or electronic) versions available. The Shodhganga@INFLIBNET is set-up using open source digital repository software called DSpace developed by MIT (Massachusetts Institute of Technology) in partnership between Hewlett- Packard (HP). The DSpace uses internationally recognized protocols and interoperability standards. Shodhganga provides a platform for research scholars to deposit their Ph.D. theses and make it available to the entire scholarly community in open access. An attempt has been made to determine the present status of participating Indian Universities in Shodhganga.

Key Words: Electronic theses and dissertations, Shodhganga, Inflibnet, Indian Universities and Open access.

1. INTRODUCTION

Theses and dissertations are known to be the rich and unique source of information, often the only source of research work that does not find its way into various publication channels. Theses and dissertations remain an un-tapped and under-utilized asset, leading to unnecessary duplication and repetition that, in effect, is the anti-theses of research and wastage of huge resources, both human and financial. In all of the universities participating in the ETDs Initiative, libraries are responsible for maintaining accessibility by ensuring that files produced by outmoded or obsolete applications are translated into newer media as necessary. That has resulted in the creation of new positions or added responsibilities for many library staff members and administrators. The move from paper to electronic versions of theses and dissertations has been possible only through expenditures of time and money on the part of library and information sciences programs. That need for more resources, however, is not unique to ETDs. Libraries are devoting resources to digitizing all kinds of information, not only ETDs, but traditionally published works as well. While some fear that all the work being done to digitize information will be lost with the next major change in technology, in fact, software publishers in

recent years have been careful to assure that newer versions of software usually accommodate files produced by older versions. Thus it is not likely that changes in technology will make ETDs inaccessible. ETDs are easily backed up, so the risk of losing information is minimal. ETDs stored electronically are less likely to be damaged than their print counterparts, since they have no physical form to yellow and decay with age, and since loaning out a copy does not include relinquishing the original. And advances in technology have made possible increases in electronic storage capacity (such as advances in file compression technology and the availability of larger hard drives) those substantially lower costs. The storage potential of libraries may increase exponentially. Electronic publication of theses and dissertations can make access and distribution faster and less expensive for most scholars. NDLTD, for example, makes theses and dissertations available free on the Web, and many libraries and universities offer computer access to the World Wide Web. Most universities also provide printing. As projects like the National Digital Library Project make more information available online, it is likely that the trend toward providing faster, cheaper, and easier public access to ETDs will continue.

Shodhganga maintained by INFLIBNET replicates academic structure of each Indian University in terms of Departments/ Centres/ Colleges each University has to facilitate ease of navigation. This structure facilitates research scholars from universities to deposit their theses in the respective Department / Centre / College. The Centre is also developing a semantic web-based interface to facilitate subject-based browsing, navigation, search and retrieval of content available in the repository. A brief report of the survey about Shodhganga has been presented in the following paragraphs.

2. REVIEW OF LITERATURE

Many libraries are now in the process of digitizing information in an effort to preserve it and to make it more widely available. The Library of Congress's National Digital Library Project plans to digitize 17 million items by 2015, and many university, public, and private libraries worldwide are currently working on digitizing their collections as well. The Networked Digital Library of Theses and Dissertations (NDLTD), funded by a grant from the U.S. Department of Education, is a collection focused specifically on digitized versions of theses, dissertations, and technical papers that began in 1996 at Virginia Tech. The NDLTD reports that more than twenty universities around the world have become official contributing members of the Initiative within just the past year, and nearly twice that number have expressed interest or are taking steps to participate. with University Microfilms International (UMI), a commercial service that, according to its Web site (1997), "publishes and archives dissertations and theses; sells copies on demand; and maintains the definitive bibliographic record for over 1.4 million doctoral dissertations and master's theses. Shodhganga of INFLIBNET in India is playing a major role in providing access to electronic thesis and dissertations (ETD,s) submitted to Indian Universities across India. The main aim of Shodhganga online service is provide information about research works in India to users, so that duplication of work can be avoided.

3. FORMATS FOR ETDS

Most students already prepare their theses or dissertations electronically, using computers and word-processing software. Formats proposed to make ETDs easily viewable through different platforms include the use of PDF (or Print Document Format) files created with Adobe Distiller. That software creates an exact, digitized picture of a document, page by page, including any graphics and fonts. The file can then be downloaded and viewed using the Adobe Reader,

available free on the Web. PDF documents retain all formatting and graphics and also allow the author to include links to other sites on the Web or annotations within the article. In addition, Adobe files can be indexed easily and searched by keywords specifically chosen by the author or indexer. PDF documents available on the Web may also be searchable using words or phrases found anywhere within the document, thus greatly facilitating a researcher's task. For larger and more complex documents, Virginia Tech encourages submission of ETDs in LaTeX or TeX format. LaTeX and TeX are device-independent document formatting systems that use PostScript fonts. They are particularly useful for formatting complex mathematical equations in electronic documents. Those files are then converted to PDF format.

4. COPYRIGHT AND PUBLICATION

Publishers are concerned about the relationship of ETDs to other forms of publication. Often a dissertation becomes the basis for a scholar's first book. While most of those works are considerably revised for publication, some are published with relatively few changes. Even though paper theses and dissertations are available, most academic presses are not as concerned that they represent prior publication, probably because of the barriers of time, distance, and cost. However, the prospect of having full texts available on the World Wide Web, given that the market for scholarly books is very small, may worry some publishers. On the other hand, greater access might be seen as a way to induce readers to preview a book.

5. SHODGANGA INFLIBNET

Shodhganga" is the name coined to denote digital repository of Indian Electronic Theses and Dissertations set-up by the INFLIBNET Centre. The word "Shodh" originates from Sanskrit and stands for research and discovery. The "Ganga" is the holiest, largest and longest of all rivers in Indian subcontinent. The Ganga is the symbol of India's age-long culture and civilisation, everchanging, ever-flowing, ever-loved and revered by its people, and has held India's heart captive and drawn uncounted millions to her banks since the dawn of history. Shodhganga stands for the reservoir of Indian intellectual output stored in a repository hosted and maintained by the INFLIBNET Centre. In India the UGC (University Grants Commission) Notification (Minimum Standards & Procedure for Award of M.Phil. / Ph.D Degree, Regulation, 2009) dated 1st June 2009 mandates submission of electronic version of theses and dissertations by the researchers in universities with an aim to facilitate open access to Indian theses and dissertations to the academic community world-wide. Online availability of electronic theses through centrally-maintained digital repositories, not only ensure easy access and archiving of Indian doctoral theses but will also help in raising the standard and quality of research. This would overcome serious problem of duplication of research and poor quality resulting from the "poor visibility" and the "unseen" factor in research output. As per the Regulation, the responsibility of hosting, maintaining and making the digital repository of Indian Electronic Theses and Dissertation (called "Shodhganga"), accessible to all institutions and universities, is assigned to the INFLIBNET Centre.

6. OBJECTIVES OF THE STUDY

1. To study the use of Shodhganga by Indian Universities.
2. To Examine total no. of ETD,s submitted to Shodhganga by Indian Universities.

7. METHODOLOGY AND ANALYSIS OF DATA

In order to know the usage of Shodganga by Indian Universities. The online website of Shodganga@INFLIBNET was studied, Where a detailed data about participating Indian Universities has been given. The website also provides the detail of all ETD,s submitted by participating Universities.

Table-1 Top 40 participating Universities

Name of University	No. of ETD,s Submitted	Rank
Bundelkhand University	1436	1
Mahatma Gandhi University	1164	2
Pondicherry University	679	3
University of Hyderabad	418	4
Punjabi University	335	5
Aligarh Muslim University	263	6
Goa University	237	7
Jawaharlal Nehru Technological University, Hyderabad	234	8
Shri Jagdishprasad Jhabarmal Tibarewala University	207	9
Shivaji University	183	10
Sant Gadge Baba Amravati University	144	11
Guru Nanak Dev University	134	12
Jiwaji University	114	13
Lakshmi Bai National University of Physical Education	102	14
Maharaja Krishnakumarsinhji Bhavnagar University	101	15
Maharishi Markandeshwar University	90	16
Manonmaniam Sundaranar University	88	17
SNDT Womens University	83	18
University of Delhi	78	19
Kannur University	69	20
Cochin University of Science & Technology	1275	21
Jawaharlal Nehru University	1024	22
Anna University	532	23
Bharathidasan University	342	24
University of Pune	290	25
Saurashtra University	251	26
Acharya Nagarjuna University	235	27
Maharshi Dayanand University	213	28
University of Calicut	199	29
Andhra University	150	30
Manipal University	137	31

Homi Bhabha National Institute	133	32
Tilak Maharashtra Vidyapeeth	106	33
Karnataka Veterinary University.	102	34
Karnatak University	96	35
Jawaharlal Nehru Technological University, Anantapuram	88	36
Sardar Patel University	83	37
Maharaja Sayajirao University of Baroda	80	38
University of Kerala	70	39
Gujarat University	62	40

Table-1 shows that Bundlkhand University has submitted 1436 ETD,s and occupies the first rank among 40 Universities and Mahatma Gandhi University has 2nd rank with 1164 ETD,s. Universities of Pondicherry, Hyderabad and Punjab have got 3rd, 4th and 5th rank and so on. It shows that now the Indian universities are in race of submitting ETD,s to shodganga, which will ultimately benefit all the users across India and Globe. But number of Indian Universities are not interested in Submitting ETD,s to shodganga. Table-2 shows even till jan-2014, some Universities have not submitted even a single ETD to Shodganga.

Table-2 All the Indian Universities participation up to Jan-2014.

Name of the University	No's		
Acharya Nagarjuna University	235	Gujarat University	61
Aligarh Muslim University	263	Gulbarga University	0
Amity University	1	Gurukul Kangri Vishwavidyalaya	1
Andhra University	150	Hemchandracharya North Gujarat University	1
Anna University	532	Himachal Pradesh University	14
Avinashilingam Deemed University for Women	51	ICFAI Foundation for Higher Education	1
Banaras Hindu University	1	Indian School of Mines	15
Bangalore University	0	Integral University	29
Bharathiar University	1	Jadavpur University	2
Bharath University	20	Jain Vishwa Bharati University	9
Bundelkhand University	1401	Jamia Milia Islamia University	0
Chaudhary Sarwan Kumar Himachal Pradesh Krishi Vishwavidyalaya	53	Jawaharlal Nehru Technological University, Hyderabad	234
Cochin University of Science & Technology	1275	Jaypee Institute of Information Technology	43
Deccan College Post Graduate And Research Institute	2	Jaypee University of Information Technology, Solan	46
Devi Ahilya Vishwavidyalaya	3	Jiwaji University	114
Dr. Babasaheb Ambedkar Marathwada University	48	Kadi Sarva Vishwavidyalaya	5
Dr. Ram Manohar Lohia Avadh University	0	Karnataka State Womens University	10
Forest Research Institute University	15	Karnatak University	96
Goa University [237	KLE University	14
Gujarat Ayurveda University	5	Kumaun University	4
		Kuvempu University	0
		Lovely Professional University	0

Madurai Kamraj University	0
Maharaja Krishnakumarsinhji Bhavnagar University	101
Maharashtra Animal and Fishery Sciences University	7
Maharshi Dayanand Saraswati University	0
Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya	1
Mahatma Gandhi University	1164
Mangalayatan University	3
Manipal University	137
Manonmaniam Sundaranar University	88
Maulana Azad National Urdu University	0
Mizoram University	20
Mother Teresa Womens University	1
Narsee Monjee Institute of Management Studies	39
Nirma University	28
Padamshree Dr. D Y Patil Vidyapeeth	2
Panjab University	11
Periyar Maniammai University	4
Pondicherry University	697
Pt. Ravishankar Shukla University	22
Punjab Technical University	33
Rani Durgavati Vishwavidyalaya	1
Sam Higginbottom Institute of Agriculture, Technology and Sciences	7
Sant Longowal Institute of Engineering and Technology	14
SASTRA University	1
Saveetha University	3
Shobhit University	1
Shri Jagdishprasad Jhabarmal Tibarewala University	207
Siksha 'O' Anusandhan University	6
Sree Sankaracharya University of Sanskrit	34
Sri Padmavathi Womens University	35
Sri Venkateswara University	0
St. Peter's University	7
Swami Ramanand Teerth Marathwada University	1
Symbiosis International University	21
Tamil University	5
Teerthanker Mahaveer University	2
Tezpur University	16
The ICFAI University	1
Tilak Maharashtra Vidyapeeth	106

University of Agricultural Sciences, Bangalore	14
University of Calicut	199
University of Hyderabad	418
University of Kalyani	1
University of Kerala	70
University of Madras	1
University of Mysore	52
University of Pune	290
U P Rajarshi Tondon Open University	16
V. B. S. Purvanchal University	10
Vels University	17
V O Chidambaram College of Education	1
Alagappa University	2
Allahabad University	0
Amrita Vishwa Vidyapeetham (University)	51
Annamalai University	0
Assam University	3
Babasaheb Bhimrao Ambedkar University	0
Banasthali Univesity	0
Berhampur University	0
Bharathidasan University	342
B S Abdur Rahman University	3
Chaudhary Charan Singh University	1
Chhatrapati Sahuji Maharaj University	1
Dayalbagh Educational Institute	45
Deendayal Upadhyaya University	0
Dravidian University	1
Dr. Harisingh Gour Vishwavidhyalay	0
D Y Patil University	1
Gauhati University	19
Graphic Era University	3
Gujarat Forensic Sciences University	2
Gujarat Vidyapith	11
Guru Ghasidas University	60
Guru Nanak Dev University	134
Hemwati Nandan Bahuguna Garhwal University	0
Homi Bhabha National Institute	133
Indian Institute of Foreign Trade	5
Institute of Chemical Technology	23
International Institute of Information Technology Bangalore	3
Jai Narain Vyas University	2

Jamia Hamdard University	56	Punjabi University	335
Jawaharlal Nehru Technological University, Anantapuram	88	Rajiv Gandhi University	0
Jawaharlal Nehru University	1004	Rashtrasant Tukadoji Maharaj Nagpur University	1
Jaypee University of Engineering & Technology, Guna	11	Sant Gadge Baba Amravati University	144
JECRC University	0	Sardar Patel University	83
JSS University	14	Saurashtra University	252
Kannur University	69	Shivaji University	183
Karnataka Veterinary, Animal and Fisheries Sciences University	102	Shoolini University of Biotechnology and Management Sciences	1
Karunya University	40	Shri Mata Vaishno Devi University	13
Krishna Institute of Medical Sciences University	1	SNDT Womens University	83
Kurukshetra University	51	Sri Krishnadevaraya University	8
Lakshmibai National University of Physical Education	102	Sri Ramachandra Medical College and Research Institute	44
Madhya Pradesh Bhoj (Open) University	1	SRM University	38
Magadh University	2	Suresh Gyan Vihar University	37
Maharaja Sayajirao University of Baroda	80	Swami Vivekananda Yoga Anusandhana Sansthana	22
Maharishi Markandeshwar University	90	Tamilnadu Physical Education and Sports University	19
Maharshi Dayanand University	213	Tata Institute of Social Sciences	38
Mahatma Gandhi Chitrakoot Gramodaya Vishwavidyalaya	1	Teri University	25
Manav Rachna International University	1	The Gandhigram Rural Institute	4
Mangalore University	4	The Tamilnadu Dr Ambedkar Law University	2
Manipur University	21	Tripura University	6
MATS University	2	University of Calcutta	1
Mewar University	0	University of Delhi	78
Mohan Lal Sukhadia University	1	University of Jammu	0
Nagaland University	0	University of Kashmir	35
Netaji Subhas Open University	1	University of Lucknow	1
North-Eastern Hill University	41	University of Mumbai	1
North Maharashtra University	1	University of North Bengal	1
Pandit Dwarka Prasad Mishra Indian Institute of Information Technology, Design and Manufacturing	1	University of Rajasthan	0
Patna University	2	Utkal University	2
Periyar University	47	Veer Narmad South Gujarat University	49
Prist University	11	Vel Tech Dr. R R & Dr. S R Technical University	1
		West Bengal University of Technology	5

Table-2 shows the full detail of all Indian Universities participation upto Jan-2014. Some Universities have zero submission like Bangalore University, Dr. Ram Manohar Lohia Avadh University, Gulbarga University, Jamia Milia Islamia University, Kuvempu University, Lovely Professional University, Madurai Kamraj University, Maharshi Dayanand Saraswati University, Maulana Azad National Urdu University, Sri Venkateswara University, Allahabad University, Annamalai University, Babasaheb Bhimrao Ambedkar University, Banasthali University, Berhampur University, Deendayal Upadhyaya University, Dr. Harisingh Gour

Vishwavidhyalay, Hemwati Nandan Bahuguna Garhwal University, JECRC University, Mewar University, Nagaland University, Rajiv Gandhi University, University of Jammu and University of Rajasthan. All these above 23 Universities have zero result submission.

8. CONCLUSION

Electronic publication can make works more accessible to students, researchers, and others who lack the time, search capabilities, finances, or other resources to locate them in traditional print formats, the system works only if they have access to the necessary computer resources and know-how. As we move beyond thinking of scholarship as print-based, however, we need to consider how we make our works of scholarship available. We need to consider how we can foster scholarship that is innovative as well as substantive. Print forms also have limitations: they cannot include multimedia elements, they cannot include interactive elements, and accessing them through interlibrary loans or repositories such as UMI can be time consuming, expensive, and limiting. Just as the invention of the printing press wrought changes in how scholarship was produced and disseminated, technological innovations are having an impact on our conceptions of reading, writing, research, and publication. Electronic theses and dissertations are only one small part of the move to make information available through electronic means to as wide an audience as possible, and to allow scholars to continue to do what they have always done: participate in the creation of knowledge. In India Universities should be encouraged to participate in Shodganga ETD project for the benefit of users across India and Globe as well.

9. LIMITATIONS OF ETD,S

Like print, electronic publication has limitations:

- PDF files can be created and read only with Adobe software. If the Adobe reader becomes the standard for publication of ETDs, there is no guarantee that Adobe will continue to offer it free. That could mean that either scholars will again have to face cost prohibitions or that libraries will have to pursue other means of making ETDs freely available.
- Learning to use markup languages such as SGML adds additional layers of complexity to the already complex task of producing scholarship.
- Access to technology is still limited, limiting the availability of ETDs to some scholars.
- The costs of gearing up, including the costs of training scholars, researchers, and staff to implement the ETD initiative, are substantial.
- Access to hardware and software, access to telephone connections, and knowledge of protocols can limit access to important information if it is available only online

REFERENCES

1. Eisenberg, Daniel. 1997. "Re: Electronic Dissertations." *Digital Libraries Research Mailing List*. DIGLIB@INFOSERV.NLC-BNC.CA. (23 January). Also at [formerly <http://www.cas.usf.edu/english/walker/papers/etds/etdsml.html>] (1 November).
2. "ETD Initiative Homepage." 1997. <http://etd.vt.edu/> (10 October).
3. Fox, Edward A., et al. 1996. "National Digital Library of Theses and Dissertations: A Scalable and Sustainable Approach to Unlock University Resources." *D-Lib Magazine* (September). Also at <http://www.dlib.org/dlib/september96/theses/09fox.html> (18 July 1997).

4. Fox, Edward A., et al. 1997. "Networked Digital Library of Theses and Dissertations: An International Effort Unlocking University Resources." *D-Lib Magazine* (September). Also at <http://www.dlib.org/dlib/september97/theses/09fox.html> (10 October).
5. Kipp, Neill A. 1997. "Document Type Definition for Electronic Theses and Dissertations." <http://etd.vt.edu/etd/etd-ml/dtdetds.htm> (1 November).
6. Library of Congress. 1997. "National Digital Library Program." <http://rs6.loc.gov/ammem/dli2/html/lcndlp.html> (25 October).
7. National Digital Library of Theses and Dissertations. 1997. "NDLTD Project." <http://www.ndltd.org/index.htm> (1 November).
8. Networked Computer Science Technical Reports Library. 1997. "A Brief Description of NCSTR." [formerly <http://www.ncstrl.org/Dienst/htdocs/Info/ncstrl.html>] (25 Oct.)
9. <http://www.inflibnet.ac.in/>

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