

Streamlining, Sharing and Showcasing the Research: An Example of JNU, New Delhi Library Electronic Thesis and Tracking System

Shiva Kanaujia Sukula¹, Mahesh Chand², Mamta Rani³, Amar Singh Yadav⁴, Babar Raees⁵

How to cite this article:

Shiva Kanaujia Sukula, Mahesh Chand, Mamta Rani et al. Streamlining, Sharing and Showcasing the Research: An Example of JNU, New Delhi Library Electronic Thesis and Tracking System. *J Lib Inf Sci* 2020;14(1):33-39.

Authors Affiliation:

¹Dy. Librarian, ^{2,3}Assistant Librarian,
^{4,5}Professional Assistant, Dr. B. R. Ambedkar
Central Library, Jawaharlal Nehru University,
New Delhi 110067, India.

Address for correspondence

Shiva Kanaujia Sukula, Dy. Librarian, Dr.
B. R. Ambedkar central Library, Jawaharlal
Nehru University, New Delhi 110067, India.

E-mail: Shivasukula25@gmail.com

Abstract

The Emergence of digital thesis system and tracking procedures are much in practice globally since last two decades, though the early initiatives have shown their presence around end of last millennium. Few organizations in Europe, and America reflected the early developments in Electronic Thesis and Dissertations (ETDs) which are now the path-leaders along with the developments taken place in the libraries of other countries. The present paper highlights the ETD development and Thesis tracking system journey embarked in Jawaharlal Nehru University, New Delhi Library.

Keywords: ETD; Thesis Tracking System; JNU library; Research Sharing.

Introduction

The electronic thesis and dissertation (ETD), have been in vogue since last more than three decades helping the scholars to streamline the thesis submission. ETD system has proven to be a one-stop shop for the research scholars. The journey began in 1997 when Virginia Tech was the initiator of electronic thesis submission (Thompson, 2001). The vision and objective to ensure the fast, free access on a global platform became the scenario. Another initial example of digital thesis is related with Rhodes University, way back during 1998. This set up motivated other organizations and scholars to submit the digital form of dissertations. The encouragement and acceptance of ETDs have been major factors while observing the then status of the international 'Networked Digital Library of Theses and Dissertations' (NDLTD), as there were Two hundred and three institutions became members in 2003. The roles of UNESCO, Virginia Tech and Joint Information Systems Committee (JISC) from UK (Copeland & Penman, 2004) have been positive in proliferation of ETD phenomena. The policies were framed to facilitate the submission and thus

this ETD initiative was strengthened. The journey of ETDs moves forwards at various regional levels. The mention of the South East Academic Libraries (SEALS), has been significant in order to understand the ETD program. The SEALS is a library consortium in the Eastern Province of South Africa. Such initiatives have been helpful in augmenting the research submission and systematization; collaborations and visibility. The digital revolution of ETD has made it possible to not only disseminate but also preserve the research output. The Database of African Theses and Dissertations (DATAD) as well as the African Universities Dissertations Abstracts (AFUDA) projects are few of the examples of very early developments in this perspective (Ubogu, 2001).

ETDs and Scholars

The mechanisms include in electronic ways to provide simple steps solutions to the students. The university libraries are supporting this revolution among the students by providing the awareness, learning, training and various guiding materials. Such instruments helps them to understand the



This work is licensed under a Creative Commons
Attribution-NonCommercial-ShareAlike 4.0.

step-by-step instructions, along with graphical and visuals in order to describe the techniques to format and submission necessities. Sometimes, the availability and applications of ETD templates extends great support to scholars. Usually the students are advised to review the documents, drafts and processes related with ETD. The theses and dissertations in electronic forms and submission involve the ETD reviews, final submissions, approvals at various stages. The example from the University of Louisville (Ashman, 2013) expresses the comparison of "ETD and non-ETD producing authors' use of the professional literature", and finds that there has not been any significant difference. The outcome of the study reflected that there is no requirement to amend the endeavors in context with the development of ETDs. Such studies help in understanding the relation of citation analysis and ETDs.

The initial stages of ETD programs require long-term planning which involve the communication and understanding, effective use of ICT and human resources. It also depends upon the library strategies related to reach to users; such as outreach strategies and programs. The contributions and collaborations among the faculty, scholars, and library professionals build a smart and effective team. The administration and functioning of ETD system depends upon of the policies and organizational structures including the practical approaches and information. The simplification of procedures also depends on standard process, ETD implementation, smooth workflow and removal of any barriers [3]. The efforts in India to set up a national level repository meant to "deposit, discovery, use and long-term care" related with theses have been discussed. The ETD repositories delve upon various aspects such as "subject coverage, number of items, access policy, browse/search option, and value added services". The policies, planning and strategies related to e-theses development has been a recent trend in India related to electronic storage and retrieval. Few organizations of national importance in the areas of Science and technologies and other applied science have been instrumental at greater level (Ghosh, 2009).

ETDs, Cataloguing and Metadata

The role of efficient approaches creation is very crucial. The cataloguing and metadata facets of ETDs are few of the tools to be utilized later on, once the retrieval process begins. The

responsibility of staff and input data make a thesis 'searched'. The searching and retrieval in ETD relates to author-supplied metadata, keyword searching and approaches. The identification of 'simple frequencies' within the catalog helps in understanding the search ability of thesis. The ETD contributors, the mechanism and options along with the library staff involve with ETD section are responsible for the retrieval approaches such as metadata. The example of "KentLINK catalog" relates to metadata analysis by "combinatory cataloging" with the examination of data and the provision of rubric for framework. (Maurer, McCutcheon & Schwing, 2011). The cataloguing practices have been changed since the ETD system emerged into information product arena. The access points in cataloging scenario are the class numbers related subject headings, along with the additional MARC fields for description related to the electronic nature of document [4]. The quality cataloging provides guarantee for the better access to the ETDs. The ETDs cataloged almost a decade ago in USA have been discussed in context with classification, various access points, along with the professionals involved with the process (Hoover & Wolverton, 2003). There have been times when semi-automated workflow existed including a 'Perl' script to establish the query for the metadata, thus creating a MARC record, later to be imported into the (OCLC) WorldCat database with the "Connexion service" (Surratt & Hill, 2013).

The metadata component is also significant in the perspectives of information retrieval and increasing the search results. The example of University of New Mexico from the year 2009 expresses the mandatory system of electronic theses and dissertations (Lubas, 2009). At that time, DSpace platform was being used for the said purpose and the metadata creation was done in the perspectives of DSpace instances. Even today, issues related with author-submitted metadata, subject analysis etc., are prevalent. This facet also includes the metadata quality control, further enhancement, provisions for full discovery. The inclusion of metadata best practices plays a great role in such practices. The recent trends include automated as well as semi-automated approaches for harvesting the ETD metadata. The approaches can be segregated in forms such as; automated approaches (entire and semi, both) depending upon aggregators, technical tools and MarcEdit OAI Harvester. The spread of bibliographic records related with ETDs is found into the large databases. The treatment of such bibliographic records is done automatically by harvesting author-supplied

metadata (McCutcheon, 2011). The metadata harvested from ETDs is required for maximum access, and the technical person interference is very much significant to minimize and remove various errors etc. The ETDs and metadata are connected with platforms such as OCLC Digital Gateway, WorldCat Digital Collection Gateway, and ProQuest (Veve, 2016). The comparison between ProQuest's Dissertations and the Online Computer Library Center's (OCLC's) WorldCat Databases has brought two aspects in light (Prociuous, 2014); provision of access to a similar number of citations and, WorldCat emerged as provider of twice as many citations when compared with ProQuest.

Persistent Access and Preservation

The preservation component related with ETDs is for the future perspectives. The digital technologies have been supportive in preserving the knowledge; thesis and dissertations are also touched by such mechanisms. Not only the preservation, but also the access on the networked environment is facilitated by ETD system. One of the tasks was to relate with engendering the persistent accessibility. One study from Oregon State University Libraries (Boock & Kunda, 2009) highlighted the "ScholarsArchive@OSU". It has been an experience reflecting the comparison between, past processes and workflows with the then status in context with changes and cost- and time-savings. The ETD life cycle commences with the work's creation, followed by storage and provision of access (McMillan, 2004).

The plans, policies and work-flow are bound together to lead the preservation of research output. The ETDs support for scholars include the sharing the research, providing access, cost-effective methods and IT skills. The ETDs are the platforms for obtaining remote access. The organizations get a way to showcase and promote the research output of its academic community.

The Case of ETD@JNU

The technologies and times affected the research scenario at Jawaharlal Nehru University, New Delhi. The Jawaharlal Nehru University is a research university, established in 1969 by an act of the Parliament. The university was established to promote the study of principles of national integration, social justice, secularism, democratic way of life, international understanding and scientific approach in solving the problems of society. The

multidisciplinary approach in study and research is one of the unique characters of the university. The ETD system has been implemented and supporting the scholars. The access to thesis and dissertations in JNU has been implemented in various phases; hard copies with access by card catalogue, emergence of OPAC and acting as an information retrieval tool, bringing the table of contents (TOC) in OPAC later on, and finally ETD in the beginning of this decade. The e-Thesis Tracking System has been the next step in this direction. JNU Thesis Tracking System is designed, and implemented in-house; it is web based software, accessible by only authorized users. The thesis tracking system functions through collecting the correct information, getting approved synopsis/proposal at appropriate time, and submission of final thesis in appropriate format. The present study is related with following objectives:

1. To identify and relate with examples of current scenario in India and worldwide through literature review.
2. To understand and express the methods of creation, storage, organization and access of thesis and dissertation.
3. To relate with the thesis tracking system and role of JNU library in current scenario.
4. The Thesis Digital Tracking System

While visiting the history, the first Theses awarded by JNU in the year 1970. As on March 2014 the JNU library had over 21,000 theses and dissertations, which belongs to Humanities, Social Sciences & Sciences discipline awarded by the University and its affiliated Institutes. The collection contains approximately 18,000 unique theses and dissertation titles. Broadly the theses and dissertation collection of the JNU Library has passed three main phases of transformation. The transformation has witnessed with regard to the physical format of theses and dissertations, bibliographic record format and ways and means of access to its contents. The following Figures (1, 2) reflect the process of digital tracking system at Jawaharlal Nehru University, New Delhi.

The Figure 3 is displaying the form to register new thesis page. At this stage, the dealing assistant from subject department/center/school registers the thesis details and student details along with the files (Abstract/Synopsis, Complete Thesis, Thesis Certificate, and Annexure which include Metadata Certificate, Consent Form, and Authenticate form).

The Figure 5 related with second option shows complete list of pending thesis in the library. The

details are listed with the features such as thesis id number, physical file number, name of the student, status of pending thesis and the last update. This helps in understanding the status of pending thesis of students.

The Figure 6 shows the information about the author/student/researcher like as Title, Course, School /Centre etc. This form is required to store the desired information for searching purpose in future.



Fig. 1: Home Page of ETTS showing Office and User section.



Fig. 2: Login Page of Thesis Digital Tracking System.



Fig. 3: Registration Page for new thesis.

The Figure 7 shows the files are submitted by the student. When all the submitted files are correct then various options are pressed Ok. The submitted files should be according to the various

fields and submission requirement. Once it is found that submitted files are "not Ok", the student thesis file is reverted back to the dealing assistant of the centre. The file(s) are resubmitted again by the



Fig. 4: List of Pending theses in the library page
The above figure shows the initial stage of pending thesis at the library.

S.No.	Thesis ID	Paper file no.	Student's Name	Status	Last update
1	7216	10725	PANKAJ KUMAR KASHYAP	Pending - Receipt of examiners' report on thesis	23-01-2020 11:12:56
2	7343	561	SDARTHA SUBHANKAR DHAL	Pending - Receipt of result from School	27-01-2020 16:41:19
3	8102	10874	R. CHANDRASEKAR	Pending - Receipt of examiners' report on thesis	25-01-2020 17:11:14
4	8415	10928	CHANDRA SHEKHAR YADAV	Pending - Send request for consent to examiners	31-01-2020 12:50:20
5	8602	11017	CHANDRA VEER SINGH BHATI	Pending - Receipt of examiners' report on thesis	25-01-2020 11:58:38
6	8603		SAKREEN HASANI	Pending - Enter Paper file no.	22-01-2020 16:29:21
7	8771		RITU JAIN	Pending - Forward Panel by School to Eval -I	04-02-2020 18:02:05
8	8832	11254	SUJATA RAKSHET	Pending - Receipt of examiners' report on thesis	04-02-2020 15:13:29
9	8941	11386	AKHLESH KUMAR	Pending - Receipt of examiners' report on thesis	23-01-2020 14:56:12
10	8955	11199	NEHA LOHAMAROR	Pending - Receipt of examiners' report on thesis	30-01-2020 16:33:47
11	8958	11298	MEGHNAD SAHU	Pending - Receipt of examiners' report on thesis	04-02-2020 15:29:26
12	8989	11316	VIKAS BAJPAI	Pending - Send Thesis to examiners	05-02-2020 11:14:12
13	8990	11204	ARISH JAVAD	Pending - Receipt of examiners' consent	30-01-2020 14:29:09
14	8991	11205	SHIVANI SHARMA	Pending - Receipt of examiners' report on thesis	04-02-2020 17:25:14
15	8993	11203	IBRIT LAL	Pending - Receipt of examiners' consent	04-02-2020 11:54:10

Fig. 5: Status of pending thesis.

Fig. 6: Thesis Details in the form.

Dealing Assistant/staff from the center/school. Once the Thesis\others documents are found suitable and pressed "OK", the files move towards

the Evaluation Branch for further process. Once the steps taken by library are complete in process, the evaluation branch sends the thesis copies to



Fig. 7: Various submissions of files.

the external examiners/experts for assessment/evaluation thesis. Once the examiners' reports are received, university conducts the VIVA Process towards completion of the research program of a student.

Conclusion

The ETD system and thesis tracking system have been very supportive and innovative in streamlining the thesis submission, evaluation and organization for the better services. This process has been the outcome of planning at various stages and steps taken to achieve the desired results. The roles and responsibilities played by Dr. B. R. Ambedkar Central Library and Evaluation Branch of JNU are tremendous. Apart from these two major departments of university, the data entry step taken at centre / school level is also very significant. The provisions of loginId/Password at school level along with the few specific operational pre-requisites are also crucial. The process may include the affiliated institutions as well for better organization as the related procedures can be planned and executed by E-governance Cell (CIS) of the university. Since the technologies are deeply rooted in the electronic thesis storage and tracking system, there is constant need of updating and maintenance. The policies at university level, involving the roles of various stake-holders will prove to improve the system and providing solutions.

References

1. Ashman, Allen B. A Citation Analysis of ETD and Non-ETD Producing Authors. *The Reference Librarian* 2013;54(4):297-307. DOI: 10.1080/02763877.2013.802153.
2. Boock, Michael & Kunda, Sue. Electronic Thesis and Dissertation Metadata Workflow at Oregon State University Libraries. *Cataloging & Classification Quarterly* 2009;47(3-4):297-308. DOI: 10.1080/01639370902737323.
3. Chapter 2. The Development and Assessment of ETD Initiatives. *Technical Services Quarterly* 2008; 25 sup1:11-21. DOI: 10.1080/07317130802127827.
4. Chapter 4 Cataloging and Treatment of ETDs. *Technical Services Quarterly* 2008;25sup1:43-73. DOI: 10.1080/07317130802127884.
5. Copeland, Susan & Penman, Andrew. The development and promotion of electronic theses and dissertations (ETDs) within the UK. *New Review of Information Networking* 2004;10(1):19-32. DOI: 10.1080/13614570412331311978.
6. Ghosh, Maitrayee. E-theses and Indian academia: A case study of nine ETD digital libraries and formulation of policies for a national service. *International Information & Library Review* 2009; 41(1):21-33. DOI: 10.1080/10572317.2009.10762794.
7. Hoover, Lona & Wolverton, Robert E. Cataloging and Treatment of Theses, Dissertations, and ETDs. *Technical Services Quarterly* 2003;20(4):3-57. DOI: 10.1300/J124v20n04_02.
8. Lubas, Rebecca L. Defining Best Practices in Electronic Thesis and Dissertation Metadata.

- Journal of Library Metadata 2009;9(3-4):252-263. DOI: 10.1080/19386380903405165.
9. McMillan, Gail. Digital Preservation of Theses and Dissertations through Collaboration. *Resource Sharing & Information Networks* 2004;17(1-2):159-174. DOI: 10.1300/J121v17n01_13.
 10. McCutcheon, Sevim. Basic, fuller, fullest: Treatment options for electronic theses and dissertations. *Library Collections, Acquisitions, & Technical Services* 2011;35(2-3):64-68. DOI: 10.1080/14649055.2011.10766300.
 11. Maurer, Margaret Beecher, Sevim, McCutcheon & Schwing, Theda. Who's Doing What? Findability and Author-Supplied ETD Metadata in the Library Catalog. *Cataloging & Classification Quarterly* 2011; 49(4):277-310. DOI: 10.1080/01639374.2011.573440.
 12. Prociuous, Aaron W. WorldCat, the Other ETD Database: An Exploratory Study. *The Reference Librarian* 2014;55(2):144-150. DOI: 10.1080/02763877.2014.880276.
 13. Surratt, Brian E. & Hill, Dustin. Etd2Marc, Library Collections, Acquisitions, Technical Services 2004;28(2):205-223. DOI: 10.1080/14649055.2004.10765985.
 14. Thompson, Larry A. Electronic Theses and Dissertations at Virginia Tech. *Science & Technology Libraries* 2001;20(1):87-101. DOI: 10.1300/J122v20n01_05.
 15. Ubogu, Felix N. Spreading the ETD Gospel: A Southern Africa Perspective, *International Information & Library Review* 2001;33(2-3):249-259. DOI: 10.1080/10572317.2001.10762552.
 16. Veve, Marielle. Harvesting ETD Metadata from Institutional Repositories to OCLC: Approaches and Barriers to Implementation. *Journal of Library Metadata* 2016;16(2):69-79. DOI: 10.1080/1051712X.2016.1215730.

