

A New Proposal of eTD & Initiatives for the National Brain Research Centre, Manesar

Abstract

This study paper attempts to find the ways and means of developing eTD in Neuroscience for NBRC. Conducting a literature survey it looks for the needs and importance of electronic thesis and dissertation adopt with their organizational goals, strategies and constructions. It also enumerates the collection and its traditional documentation structure and function of the existing system. Coinciding with the library development the acquisition process of thesis and dissertation also improved with the library automation. The aim of this paper is to establish standard eTD programme for assemble and circulate institutional intellectual product as Ph.D, M. Sc. Neuroscience etc.

This study elaborates the project of initiating electronic thesis digital library at National Brain Research Centre (NBRC). It starts highlight the nature and scope of important and current usage of eTDs and eTD digital libraries. And then it covers the need for eTD at NBRC, implementation plan, workflow plan, linking, and uploading and access management of eTD at NBRC Library. It provides the comprehensive idea of how this project has been conceived, planned and implement to create the digital library within the constrained of government sponsored institute's procedures.

It explores the how to digitize, archiving and disseminating the Doctoral Theses & Dissertations of NBRC and propose the structure and development of Electronic Thesis and Dissertation Digital Library through DSpace. It also propose how the linking and inter linking facility can be provide for accessing through Web OPAC, web scale discovery service etc.

This study may be very useful & helpful for those who wish to initiate to do digitization and creating digital library and institutional repository for the access management to their users.

Keywords: Electronic Thesis and Dissertation (eTD), Digitization, Digital Library, Digital Access Management (DAM), Metadata.

Introduction

The National Brain Research Centre (NBRC) is a global importance institute in the field of Life Science & Neuroscience that generates and disseminates knowledge through its teaching, research, innovation to the community. Due to this, the institute will be given the powers and functions of a Deemed University because it will make revolutionary changes in curriculum and its mode of teaching. The institute is entitled to give its own degree in Neuroscience. The institute presently comprises 3 teaching & research divisions such as Cells & Molecules, Systems & Behaviour, and Computation and Cognition with total 70 students and research scholars (Annual Report 2017-18). NBRC conducts advanced research in diverse areas of the interdisciplinary field of neuroscience. The Neuroscience is interdisciplinary in nature. The students from diverse academic backgrounds can excel in neuroscience research. The current pool of Ph.D. students have diverse background such as Biology, Physics, Chemistry, Engineering and Medical Science.

The NBRC provide two type of course-works since the year 2000 such as Integrated Ph.D. & Ph.D. Programme in Neuroscience areas. There are presently 18 faculties and 70 students available. Every year students are awarded with Ph.D. and Integrated Ph.D. Degrees and the students submit 6 copies of their thesis & dissertations to Institution and a separate copy of Hardcopy & CD/DVD (Digital Format) to the NBRC Library.

For the partial fulfillment of the M.Sc. & Integrated Ph.D. Course the students, Research Scholars and the PhD scholars should submit their dissertation for getting the doctorate of philosophy.

Why Electronic Thesis and Dissertation (eTD)

Electronic submission increases availability of research and allows it to be shared more effectively. Access is world-wide, timely, and economical. Work is preserved as submitted: with the "born digital" version, all color images, graphs, multimedia files, etc., can be captured exactly as intended. eTDs also provide true accessibility for the vision-impaired, since only PDFs created from the original electronic document are readable.

Status of Thesis and Dissertation at NBRC Library

An eTD at NBRC refers to post graduate thesis and/ or dissertation that will be archived and circulated electronically rather than archived and circulated in traditional print and bound format. The term thesis and dissertation are often used interchangeably. eTDs are created using standard word processor software once completed, the thesis and dissertation is converted to portable document format (PDF), ensuring that the data contained are independent of the platform and which created. It is then submitted electronically to precisely repositories on the institute's server and subsequently to information resources for storage and circulation. Conventionally, thesis and dissertation are underutilized because these documents have only been produce in very limited print quantities. Generally a copy of these documents have been available at NBRC Library or the academic department. These print copies are rarely demanded from the students, scientists, faculties, researchers & specialist for various motives such as : lack of knowledge that thesis exists, lack of information about its contents, lack of availabilities, and also getting photocopies, interlibrary loan etc.

Findings

During 2000s to 2010, the thesis and dissertation received from the academic division in Hard copy (without CDs) after the viva examination to the NBRC library. After receiving the thesis library catalogued the thesis and dissertation in LibSys integrated library automation package system. After the technical process, the thesis bibliographic information can be browse and retrieve from the Online Public Access Catalogue (OPAC). These thesis and dissertation was for consultation & reference only. It should not be photocopied due to damage and avoiding other privileges. Even then during those days some of the important thesis are missed from the library by mutilation. From the Year 2011 onwards, the NBRC formed a rules for getting thesis & dissertations in both Hardcopy (Print format) as well as softcopy (CD/DVDs format) and the NBRC library received both copies hard copy and CD-ROMs of the thesis and dissertation. Both forms are properly recorded in the library record and kept for accessing to the readers. The same traditional methods follow such as consultation purpose only. From the year 2011 onwards, the authority & academic council of NBRC decided to receive thesis & dissertation in the both format Print copy & softcopy (such as CD-ROM/DVDs) formats.

The Institute (NBRC) requires submission of eTDs may permit their students and scholars after clarifications of copyright issues to choose whether they want to:

1. Make the full text eTD available with unlimited worldwide access,
2. Make the full text eTD available for their institute only, OR
3. Make the full text eTD available with unlimited access after 1-2 years. Access to specific sections, an entire chapter or even a diagram can also be limited for a set period of time (embargo), if necessary.

Scope of the eTD Project

Citing the policy of the UCG and Shodganga architecture and development the scope of this project has been submitted to the authority & management of the NBRC. To execute and implement any project

successfully in an Central Government sponsored institute, it is mandatory to plan the proposals, calls for budget and tendering process. The terms of reference are for Digitization, Archiving, and Preservation of Doctoral thesis and dissertations. Under this project the institute intends to digitize the scholarly works, i.e. theses and dissertations (Approx. 110 theses, with average 200+ pages per thesis) that exist in print format by adopting the best practices of digitization for long-term preservation via Microfilming & DVD/Hard Disk. The theses and dissertations will have to be digitized, archived, and preserved for posterity with a provision to be hosted on an International eTD platform that has content from other leading Universities and Institutions in the world and providing royalty benefits. The platform should also have the provision to contribute eTDs in future on the same platform.

Approximately 15 theses & dissertations are transformed/converted into the digital format at NBRC. The summary of detailed work for digitization of theses & dissertations are as follows:

- This project will be an onsite project and will be processed & completed at NBRC Library's premises.
- The library staffs will also provide hard copy of thesis & dissertation for digitization purposes.
- The staffs will collect the thesis & dissertation as provided and bibliographic information will be entered in the digitization software.
- After entry in system, they will scan all the pages through ADF Scanners.
- ADF scanners will be used to scan the documents. Two separate scanned copies will be maintained by the vendor/agency. First copy is original document without any modification (i.e. Raw TIFF Images) and the second copy will be used for further processing.
- Cleaning of images, Skew correction to make the image straight, De-Speckle providing the equal margin all around the text and maintaining Same Page Size as per original for all pages of each Thesis.
- Extract text from the images and converting to Searchable PDF-A (OCRing)
- They have to generate an Excel file which contains complete bibliographic information of document.
- Assign the metadata with subject heading & Linking of scanned images with metadata
- Upload the digitized PDF - DSpace Institutional Repository & eTD database.
- Making theses available in WebOPAC & eTD

Conclusion

In NBRC Library, this project on digitization of Theses and Dissertation is now started. Provision of accessing theses and Dissertation has to be given to students, researchers, faculties, teachers, scientists with the coincide development of library as well as readers continuously. But taking a task of digitizing, archiving, preservation and dissemination of these documents through eTD digital library is new to the research libraries in India. The eTDs are more popular in present new generation readers.

These are various advantages of establishing eTD at NBRC Library that are as follows:

- Space and Dust
- The NBRC Library keep the thesis and dissertation in open shelf for display. After ensuring the project successful and all the theses will be accessible electronically then these documents will be shifted to other locations.
- Quick accessibility to research (a) Scientist, faculties, researchers & students will be able to obtain immediate access to theses in 24 hours a day (b) Theses can be accessed through remote access and simultaneously will be used by a number of readers (c) The content of theses may be better conveyed in digital form rather than hard copy (print on paper). As digital version allows colour diagrams and images, hyperlinks, audio, animations, videos and datasets etc.
- Avoiding duplication & Long term preservation
- Most importantly wider dissemination of the institute's intellectual output to the research domain.

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