

# Role of ETD Repository in the University Libraries of Assam

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## Abstract

*One of the most crucial sources and custodians of knowledge and information have been assigned to theses and dissertations. They are the result of long-time engagement in research and hence are of significant authority. Earlier, theses and dissertations found less publication and visibility and hence remained out of reach for researchers of the next generation. Again, given the lack of preservation of the theses and dissertations in most cases it has been observed that such research found duplication without due mention of the original author. In response to this pressing issue, the UGC took a substantial initiative by releasing a notification on May 5, 2016, under the 'Minimum Standards & Procedure for Award of MPhil./PhD Degree, Regulation, 2016,' which made it mandatory for researchers to electronically submit their theses and dissertations to their respective universities. These submissions are subsequently archived in an ETD repository, recognized in India as Shodhganga. Shodhganga the National Digital Repository of India enables the electronic archival of theses and dissertations for the quick availability among the research community and also prevents plagiarism by electronically detecting duplication through the anti-plagiarism software.*

**Objectives:** *1. To show the development of Electronic Thesis and Dissertations (ETD's) which is playing a crucial role in transforming learning, research and all aspect of scholarly communication in the libraries of Assam.*

*2. To show that the ETD repositories are transforming the scholarly research through digital communication among the academic institutions and their scholars in libraries of Assam.*

*3. The present paper explore the operation of ETD repository in the university libraries of Assam. The different universities of Assam, like the Gauhati University, Dibrugarh University, Tezpur University, Assam University and others have gradually signed an MOU with Shodhganga and have been contributing towards the archival of digital theses and dissertations.*

*4. The research paper give an overview of the quality of research as improved by the "ETDs" in the major university libraries of Assam.*

**Results:** *The paper put a view on how the ETD repositories have been benefiting students, researchers, universities and society by enhancing the research production and promoting the university's visibility and quality of research in Assam. The paper presents the fact that the university libraries of Assam have witnessed tangible benefits from the ETDs. The wide accessibility and utilization of ETDs shows the clear benefits to the scholar community of Assam.*

**Conclusion:** *The paper proves the fact that ETDs bring to light the transparency and visibility in research promoted by universities of Assam. The functioning of ETDs in universities library has shown that the quality of research has improved in recent times.*

**Keywords:** Dissertations, Electronic Theses and Dissertations (ETD), IFLA, India, INFLIBNET, Institutional Repositories, PQDT, Shodhganga, Theses

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## **1. Introduction**

Prior to the advent of Information and Communication Technology (ICT), the research discoveries originating from institutions and universities faced limited utilization, primarily owing to their restricted accessibility. The expansive strides in ICT have since dismantled these barriers, rendering research outputs globally accessible for their effective application across associated fields. An Institutional Repository (IR) serves as a digital repository comprising comprehensive and accessible collections of scholarly works that exemplify an institution's academic and intellectual prowess. It stands as the digital reservoir housing the research achievements originating within a university, facilitating the institution's ability to manage and disseminate digital scholarship, thereby enhancing society's access to research outputs. The burgeoning proliferation of universities has spurred the electronic submission of theses and dissertations.

The UGC Regulation titled "Minimum Standards and Procedures for the Award of MPhil/PhD Degrees" dated June 1, 2009, has instituted a mandatory requirement for all universities in India. This requirement mandates the submission of electronic versions of all doctoral theses to the INFLIBNET center within thirty days of the announcement of the award of a PhD degree.

In response to this directive, the Shodhganga repository was established in January 2010 with the purpose of facilitating the upload of electronic versions of theses by research scholars. Furthermore, in accordance with this regulation, universities are obligated to establish Institutional Repositories, tasked with hosting all PhD theses and MPhil dissertations. This move aims to provide accessible, readable, and viewable access to these academic works for anyone interested.

The International Federation of Library Associations (IFLA) is dedicated to fostering collaborations between libraries, faculty, and research managers. Their goal is to establish open-access repositories and assist faculty and students in depositing their research outputs (IFLA, 2011).

In a similar vein, UNESCO (2001) envisions that the positive impacts of Electronic Theses and Dissertations (ETDs) on students will have ripple effects, influencing not only universities but also entire societies, countries, and regions. Therefore, it's crucial to emphasize that the significance of ETDs extends from students to universities, societies, and the global community.

Universities frequently serve as custodians of ETDs, making them accessible to the public as a means of disseminating valuable research contributions to society.

## **2. Objectives**

The objectives of the study are

- i. To examine the evolution and progress of Electronic Theses and Dissertations (ETDs) in the prominent university libraries of Assam

- ii. To evaluate the contribution of Assam's University Libraries to Shodhganga through Electronic Theses and Dissertations (ETDs).
- iii. To show the development of Electronic Thesis and Dissertations (ETD's) which is playing a crucial role in transforming learning, research and all aspect of scholarly communication in the libraries of Assam.
- iv. To show that the ETD repositories are transforming the scholarly research through digital communication among the academic institutions and their scholars in libraries of Assam.
- v. The present paper centers on the operations of Electronic Theses and Dissertations (ETD) repositories within the university libraries of Assam. The different universities of Assam, like the Gauhati University, Dibrugarh University, Tezpur University, Assam University and others have gradually signed an MOU with Shodhganga and have been contributing towards the archival of digital theses and dissertations.
- vi. The research paper gives an overview of the quality of research as improved by the ETD in prominent university libraries across Assam.

### **3. Scope and Limitations**

The current paper presents an overview of the evolution, progress, and management of Electronic Theses (E-Theses) repositories in university libraries across Assam. It offers an evaluative analysis of the commitment of Assam's university libraries to Shodhganga, focusing on the integration of ETDs.

In Assam, the development of ETD repositories at the university level is still in its nascent stages. Among the numerous universities in the region, only six have actively contributed to ETDs, while the rest have not made significant contributions. This disparity could be attributed to factors such as their relative newness or recent entry into the realm of research and innovation.

### **4. Benefits of ETDs**

The submission of content within Electronic Theses and Dissertations (ETDs) facilitates global access to research findings, fostering connections not only at a national but also at an international, and indeed, worldwide level. ETDs serve as a conduit for recognizing and connecting research groups with shared interests, thereby creating opportunities for robust collaborations.

In contemporary times, diverse metrics have emerged to gauge university performance, serving as benchmarks for international university rankings and global visibility. In this context, both the quality and quantity of research outcomes derived from ETDs serve as crucial indicators and metrics, influencing a university's ranking.

### **5. Methodology**

To conduct this study, data were gathered through email correspondence and telephonic interviews with librarians from various universities in Assam concerning the management of their Institutional Repositories

and Electronic Theses and Dissertations (ETDs). The information collected from these universities was consolidated and analyzed. Additionally, data for this paper were sourced from the INFLIBNET website, specifically Shodhganga at INFLIBNET Centre (<http://www.inflibnet.ac.in>). As of August 2023, this repository housed more than 479,740 theses from 261 universities. However, this study focuses solely on the six major university libraries in Assam that have made substantial contributions to the Shodhganga repository. While numerous universities in Assam have signed Memorandum of Understanding (MOUs) with the INFLIBNET Centre, many have yet to contribute their ETDs. Ultimately, the collected data underwent content analysis and were presented through straightforward tabulations and diagrams.

## **6. Review of Literature**

A thorough review is conducted of multiple sources, and findings are presented here.

### **6.1 International Scenario**

Moxley (2001) points out: “Theses and Dissertations reflect an institution’s ability to lead students and support original work. As digital libraries of ETDs become more commonplace, students and faculty will make judgments regarding the quality of a university by reviewing its digital library.”

Moxley (2001) states that, “In future, a university’s quality will be linked to its digital library of the theses and dissertations.”

Lypincott and Lynch (2010) surveyed about ETDs in the graduate education programmes and addressed key issues related to the development and use of ETDs. They have also documented about the concerns by faculty and students about public access to ETDs. They suggested libraries can play a broader role in graduate education by arranging for the IR services, which will enhance student dissertation experiences.

Copeland and Penman (2014) described how ETDs support for Research and Development in an academic setting. ETD Repositories have become bearers of the torch of discovery in researcher’s mission for knowledge. ETDs lead us to a new picture of the Institutional repositories and its different from traditional repositories.

### **6.2 National Scenario**

The initial significant step in the direction of Electronic Theses and Dissertations (ETD) in India occurred through the University of Mysore’s Vidyanidhi Project, funded by the National Information System for Science and Technology (NISSAT). Urs. and Raghavan (2001) explained how the project emerged as a national effort to create, motivate and provide network access to digital library of Indian theses.

Massive research work has been conducted by Vijayakumar, Murthy and Khan (2004,2005, 2006) on various aspects of ETDs like software, copyright and IPR issues, contribution of INFLIBNET and UGC towards popularization of ETDs, barriers, experiences by librarians in Indian Universities towards deposition of these and Dissertation in electronic format.

UGC, India (2009) provides guidelines for 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 throughout the world.

Bhat and Mudhol (2014) conducted a survey of Indian ETD Repository Shodhganga, to study on the ‘Importance of Electronic Thesis and Dissertation on the Internet’ and claimed that the electronic publications act as a substitute for the print publications.

Gayan (2014) studied about the development and status of the ETDs in India and found that there is importance of ETDs in Technology driven era and especially in a developing country like India. The study also revealed that most of the Indian ETD repositories have adopted open source software DSpace for building up the repositories.

Gayabyab (2015) reviewed on ETDs and compared developed and developing countries. She found that while the ETDs mushroomed swiftly in developed countries, in developing countries the institutions are isolated and still at the initial stage.

ETDs are known to be rich and unique source of information for research work. ETDs are a relatively new mode of research and scholarly communication. (Khaparde and Ambedkar, 2014) have clearly described the importance of ETDs for research work and what scholars get from ETDs cannot be found in any other source of information.

## **7. Challenges and Considerations in Establishing an ETD Repository**

Numerous significant challenges confront the inclusion of e-content in Electronic Theses and Dissertations (ETD) repositories within university libraries:

- ❖ **Lack of Specialized Expertise:** A critical deficiency exists in the requisite expertise needed to ensure the seamless uploading of ETDs into repositories, thereby enabling global accessibility. Proficiency in this field is also indispensable for the accurate provision of metadata.
- ❖ **Copyright and Intellectual Property Rights:** ETDs pose significant concerns related to copyright protection and intellectual property rights. The expansion of Information and Communication Technology (ICT) in publishing theses and dissertations has given rise to a multitude of copyright and licensing issues that demand primary attention. In response, universities and national entities like the UGC can play a pivotal role in formulating intellectual property rights (IPR) frameworks to govern electronic visibility and accessibility.
- ❖ **Insufficient Support from Management and Academic Staff:** The limited training and awareness in this domain have resulted in a lack of enthusiasm among administrative staff for uploading e-content into repositories.

- ❖ **Lack of Fund/ Infrastructure:** A primary issue behind the ETDs is that of the required fund and finance. Affected by lack of fund the impact is seen in infrastructure and physical development very much needed for the raising and maintenance of ETDs.
- ❖ **Access and Security Concerns:** Security is a major issue as far as the ETDs are concerned and no such plan has been available till now regarding security concerns. To ensure the success of Electronic Theses and Dissertations (ETDs), it is imperative to implement a robust long-term preservation strategy.

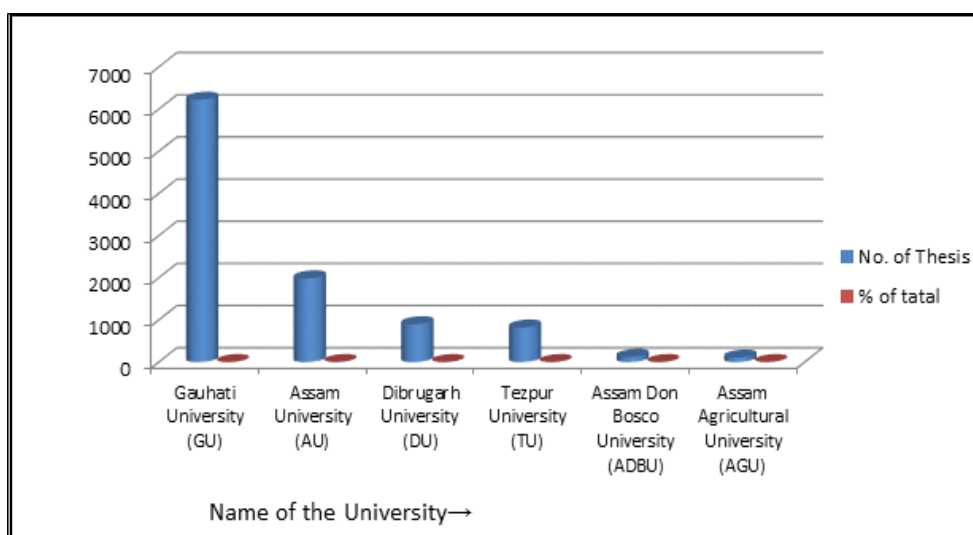
### 8. Data analysis and Interpretation

As of August 17, 2023, Shodhganga has received a total of 479,740 theses, with the following contributions from the prominent university libraries in Assam:

#### 8.1. Universities of Assam contributed to Shodhganga (as on 17.08.2023)

**Table 1: Assam Universities' Contributions to Shodhganga (as on 17.08.2023)**

Name of the University	No. of Thesis	% of total
Gauhati University (GU)	6224	1.3%
Assam University (AU)	1986	0.45%
Dibrugarh University (DU)	898	0.18%
Tezpur University (TU)	820	0.17%
Assam Don Bosco University (ADBU)	123	0.03%
Assam Agricultural University (AGU)	107	0.02%



**Figure: 1**

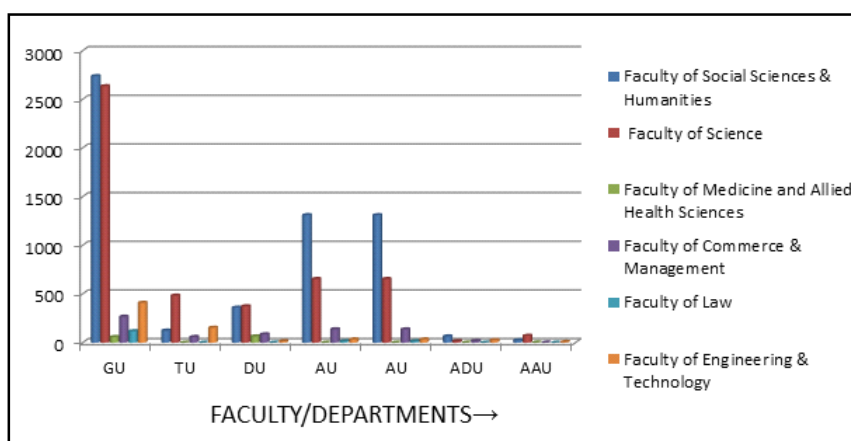
Analysis of the data from Table 1 reveals that only six universities in Assam have actively made significant contributions to Shodhganga, with Gauhati University leading the way in terms of the number of theses submitted. The figures and the table above illustrate the total number of theses submitted and their respective percentages in the ETD Database. Notably, Gauhati University (GU) has made the most substantial contribution, with 6,224 theses (1.30%), followed closely by Assam University (AU) with 2,150 theses (0.45%), Dibrugarh University (DU) with 898 theses (0.18%), and Tezpur University (TU) with 820 theses (0.17%). Assam Don Bosco University contributed 123 theses (0.03%), and Assam Agricultural University (AAU) contributed 107 theses (0.02%). As mentioned earlier in this paper, other universities in Assam have signed MOUs but are currently in a passive stage with limited or no completed research work for submission to Shodhganga

**8.2. ETD Contribution by field of studies**

In this context, the collected data has been categorized by subject. For the subsequent analysis, we have focused on six universities: GU, TU, DU, AU, ADU, and AAU. Certain universities have been excluded from this analysis due to their minimal overall contribution.

**Table 2: Subject wise ETD Contribution**

S.No	DEPARTMENTS	GU	TU	DU	AU	ADU	AAU
1	Faculty of Social Sciences & Humanities	2738	124	360	1310	65	25
2	Faculty of Science	2635	484	374	654	15	71
3	Faculty of Medicine and Allied Health Sciences	58	00	64	00	00	02
4	Faculty of Commerce & Management	267	59	86	138	17	02
5	Faculty of Law	117	00	00	14	00	00
6	Faculty of Engineering & Technology	409	153	14	34	26	07



**Figure: 2**

“In Table 2 and Figure 2, the collected data are categorized into six broad areas, providing a comprehensive breakdown of the subject-wise contributions to Shodhganga’s database by university libraries in Assam. Notably, certain universities have recorded zero submissions in specific subject areas such as Medical Science and Law.

Subsequently, we endeavored to compare the subject areas across the six universities, aiming to highlight their respective developments more prominently.

### 8.3 Universities of Assam with less contribution to Shodhganga (till 17<sup>th</sup> August, 2023)

**Table 3: Universities of Assam with less contribution to Shodhganga**

S.No	Name of university	Mou Signed	Thesis Submitted
1	Bodoland University	8 <sup>th</sup> September 2015	89
2	Assam Down Town University	28 <sup>th</sup> April, 2018	64
3	Cotton University	10 <sup>th</sup> October 2018	15
4	National Law University and Judicial Academy	30 <sup>th</sup> May 2019	9
5	Assam Kaziranga University	28 <sup>th</sup> September 2020	5
6	Assam Science and Technology University	24 <sup>th</sup> October 2019	2

### 8.4 The University of Assam, which has not made any contributions to Shodhganga (till 17<sup>th</sup> August, 2023)

**Table 4: Universities of Assam with no contributions**

S.No.	Name of the University	Year of Establishment	Status	Remarks
1.	Majuli University of Culture	2018	State University	MOU signed 25 <sup>th</sup> May, 2023
2.	Assam Royal Global University	2009	Private University	MOU signed 11 <sup>th</sup> March, 2023
3.	Srimanta Sankardeva University of Health Sciences.	2009	State University	
4.	Mahapurusha Srimanta Sankardeva Viswavidyalaya	2012	Private University	MOU signed 3 <sup>rd</sup> December, 2019
5.	Kumar Bhaskar Varma Sanskrit and Ancient Studies	2011		MOU signed 3 <sup>rd</sup> December, 2019
6.	Assam Rajiv Gandhi University of Co-operative Management, Sivasagar	2010	State University	MOU signed 10 <sup>th</sup> October, 2020
7.	Bhattadev University	2017	State University	
8.	Rabindranath Tagore University	2019	State University	
9.	Kumar Bhaskar Verma Sanskrit and Ancient Studies University,	2011	State University	
10.	Madhabdev University	2017	State University	
11.	Assam Women’s University	2013	State University	



## 9. Practical Implications/New Light Thrown to the Society

From the paper it can be drawn that ETDs are playing one of the major roles in the field of research and communication. It is enabling the distribution of specific content of university generated knowledge. The advent of ETDs has resulted in preservation, while concurrently leading to a substantial influx of user data from diverse and extensive geographical locations. Based on the data and discussions presented earlier, it is evident that researchers derive significant benefits from the timely accessibility of content offered by ETDs. Uploading of research outputs into ETDs have made the research acclaim national as well as international recognition and are also connecting researchers with common research interests. The caliber and volume of research output obtained from ETDs also have a significant influence on determining university rankings, both on a domestic and global scale. In the year 2017, two theses from Gauhati University gained significant visibility and accessibility through the ProQuest Dissertations and Theses platform (PQTD)

### 9.1 Highest Access of PhD theses from Gauhati University in the World through PQTD

In the year 2017 two theses from Ggauhati University were recorded to be highly accessed through the platform of ProQuest Dissertations and Theses (PQTD)

**Table 5: Highest access of Phd Thesis from Guwahati University**

Author	Subject	Title	Rank:World	Database
Dr. Bidyut Jyoti Sarmah	Chemistry	Chemical composition of the Street dust of Guwahati with special reference to speciation of the heavy metals.	1 <sup>st</sup>	PQTD
Dr. Phani Dutta	Environmental Science	Studies on the physico chemical characteristics of surface water, Sediment and groundwater and bioaccumulation of heavy metals in Eichhornia crassipes of Greater Guwahati	3 <sup>rd</sup>	PQTD

It is a matter of great pride for Gauhati University to get recognition through its scholars in a global stage. The top-ranking position in terms of accessibility through PQTD—an electronic medium has also given ranking position to the University itself along with the scholars which have been possible through ETDs. It is only because of the fact that these today have the medium of open access, Gauhati University's potentiality in field of research has become visible.

Both Dr. Sarmah and Dr. Dutta are grateful to such a provision which have made their work known to the world. Appreciating the field of electronic distribution and maintenance of research work in e-content they say:

“ETD provides worldwide visibility and accessibility of research produced at the university, thereby producing increased readership and more citation. A university with a track record of successful, impactful and high quality research earns reputation at global level and the best staff, students and funding”. (Dr, Sarmah).

“It would improve our university reputation and helps in occupying a good rank throughout the world. After entering in ETD would research communities can access our research work easily. It also helps in exposing our research work throughout the world. Physical library works in research is very time consuming and tedious. In ETD it is instant and easy. Definitely ETD improve our university reputation and helps in occupying a good rank in university ranking.” (Dr. Dutta).

## **10. Suggestions**

For ETDs to enjoy greater practice and usability the following points has been suggested:

- i. Universities must mandate the submission of research work, the e-content in the repositories of their libraries.
- ii. Universities, as well as national bodies like UGC (India) and others, can establish guidelines and regulations to safeguard copyright of research outputs, thereby encouraging researchers to submit their work while preserving intellectual property rights.
- iii. Additional awareness programs targeting scholars are required.
- iv. Social networking sites can serve as a potent medium for raising awareness about e-theses repositories.
- v. Earlier plagiarized content should be removed after identification and replaced by newer ones.

## **11. Summary of findings and Conclusion**

Enhancing access to information and research elevates the caliber of theses, dissertations, and knowledge. ETDs by enabling the distribution of intellectual production worldwide are ensuring such accessibility and utility of research work for further research output. In India, Shodhganga INFLIBNET is an initiative by the Indian Government (MHRD) to be a part of such a digitization. As the above analysis shows the university libraries of Assam are playing a major role in this regard. The K.K.Handiqui Library in this sense is playing a major role to promote the digitization and uploading of Research content that will improve the quality of Research. The aforementioned process has not only led to substantial time and space savings but has also played a pivotal role in enhancing research communication. In light of this discussion, we have emphasized the ethical considerations surrounding Electronic Theses and Dissertations (ETDs) and their profound impact on research and development within the university libraries of Assam. The heightened accessibility and visibility of research materials facilitated by ETDs in these libraries are garnering increased recognition and are significantly bolstering research efforts by offering swift access to valuable resource.

By implementing comprehensive awareness programs, robust training initiatives, and providing substantial financial support, we can foster the growth and development of Electronic Theses and Dissertations (ETD) repositories within the University libraries of Assam, ensuring their success and sustainability.

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