

Analyzing the Electronic Theses and Dissertations in Shodhganga: A Study with Special Reference to Anna University, Tamil Nadu

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Abstract

This study explores the contribution of Anna University, Tamil Nadu, to the INFLIBNET Shodhganga repository, focusing on the role of electronic theses and dissertations (ETDs) in promoting open access to research. It analyzes the number, subject-wise distribution, and growth trends of ETDs while examining their impact on academic and research activities. Using quantitative data analysis and qualitative feedback, the study highlights significant contributions from Anna University, alongside challenges such as awareness gaps and technical barriers. Recommendations include enhancing visibility, usability, and collaboration with INFLIBNET. The research underscores the importance of improving digital infrastructure and institutional policies to encourage further growth in ETD submissions and academic collaboration.

Keywords: Electronic theses, ETDs, Theses, Shodhganga, Anna University, Digital Repository Etc...

1. Introduction

Electronic Theses and Dissertations (ETDs) serve as a rich and unique source of academic research, providing valuable insights into various fields of study. Shodhganga, a digital repository maintained by the INFLIBNET Centre, was established to archive and provides open access to Indian theses and dissertations, addressing critical issues such as duplication of research and limited visibility of academic output. The repository facilitates the submission, storage, and dissemination of ETDs, promoting transparency and accessibility in Indian research.

Anna University, Tamil Nadu, a premier institution in engineering, technology, and allied fields, has been a significant contributor to Shodhganga. The University's participation aligns with the UGC's directive to ensure open access and preservation of scholarly work. Analyzing the ETDs submitted to Shodhganga from Anna University offers insights into the research trends, areas of focus, and the overall impact of the repository in enhancing academic visibility.

This study examines the role of Shodhganga in preserving and disseminating ETDs, with a special focus on Anna University, Tamil Nadu. It evaluates the volume, accessibility, and research trends of the submitted theses, highlighting the repository's significance in fostering quality research and aiding the global academic community.

1.1 Shodhganga Overview

Shodhganga is a national digital repository for Electronic Theses and Dissertations (ETDs), hosted and managed by the INFLIBNET Centre. The name combines "Shodh" (Sanskrit for research) and "Ganga" (India's sacred river), symbolizing a vast and continuous flow of knowledge. The platform provides open access to theses and dissertations submitted by researchers from universities across India.

Mandated by the UGC Minimum Standard and Procedures for the Award of M. Phil./Ph. D. Degree Regulations, 2009 (Amended in 2016), Shodhganga aims to improve research visibility, eliminate

duplication, and enhance the overall quality of academic work. Researchers deposit electronic versions of their theses, enabling global access and long-term preservation.

Developed using DSpace, an open-source repository software, Shodhganga adheres to international standards like OAI-PMH and Dublin Core metadata schema, ensuring interoperability and efficient metadata harvesting. The repository replicates the academic structure of participating universities, allowing seamless navigation and search based on institutions, departments, or subjects.

Shodhganga fosters transparency and accessibility in research, helping researchers and institutions collaborate and share knowledge globally. It plays a pivotal role in raising the standards of Indian research and preserving the intellectual heritage of the nation.

Availability of ETDs in Shodhganga Repository till 31.12.2024

S. No.	Particular	No. of items	Percentage %
1.	Theses	582970	97.45
2.	Synopses	15087	2.52
3.	MRPs (Major-Minor Research Projects)	27	0.004
4.	PDFs(Post Doctorate fellowships)	83	0.013
5.	Fellowship Report	5	0.0008
	Total	598172	100 %

1.2 Overview of Anna University:

Anna University, located in Chennai, Tamil Nadu, is a prominent state University established in 1978. It offers undergraduate, postgraduate, and doctoral programs in various fields, particularly in Engineering, Technology, Applied Sciences, Management and Architecture. The university has played a significant role in shaping technical education and research in Tamil Nadu and India. Anna University is well-known for its strong academic reputation and high standards of teaching and research.

On 9th April 2013, Anna University, Chennai, under the University Co-Ordinator of Dr. G. Krishnamoorthy, signed a Memorandum of Understanding (MOU) for participation in the Shodhganga repository. As a state university in Tamil Nadu, Anna University's involvement with Shodhganga has played a significant role in promoting open-access research. The collaboration allows the university's electronic theses and dissertations (ETDs) to be deposited in Shodhganga, making them accessible to a global academic community. This initiative ensures that Anna University's research output is shared, preserved, and disseminated effectively, contributing to the enhancement of academic visibility and collaboration.

Literature Review:

Ashwini Latte, A. (2024) provides a detailed analysis of Electronic Theses and Dissertations (ETDs) submitted by central universities in Delhi and Uttar Pradesh to the Shodhganga repository. The study effectively highlights key trends, including a strong preference for English (78.81%), diverse academic contributions from disciplines such as Chemistry, Hindi, and Social Sciences, and a peak in submissions between 2010 and 2019. The continued scholarly engagement, evidenced by 6,785 theses from 2020 to 2023, further reinforces the growing research culture. The research underscores the critical role of platforms like Shodhganga in fostering open access, academic collaboration, and knowledge preservation. By contextualizing these findings within the broader landscape of higher education, the study offers valuable insights into the digital transformation of doctoral research and its global impact.

Sivakumaren, K. S., Bharanidharan, S., and Rajkumar, T. (2024) examined the Electronic Theses and Dissertations (ETDs) of central universities archived in the INFLIBNET Shodhganga repository. Their study analyzed ETDs deposited by the top ten central universities, revealing a total of 39,392

submissions across various disciplines. Aligarh Muslim University contributed the highest number of theses (9,488; 24.09%), followed by Jawaharlal Nehru University (5,446; 13.83%). At the department level, the School of International Studies at Jawaharlal Nehru University had the most ETDs (1,283; 23.56%). The study also found that 83.18% of ETDs were written in English. The authors emphasize the need for accreditation bodies like NBA, NAAC, and NIRF to consider institutional research output when assessing universities for accreditation and rankings, as publications play a crucial role in academic evaluation.

2. Objectives

The primary aim of the study is to investigate Anna University's contributions to the Shodhganga ETDs database. To achieve this, the following points are identified:

1. To examine the contributions made by the top 10 universities in India to electronic theses and dissertations (ETDs).
2. Analyzing the contributions of Electronic Theses and Dissertations (ETDs) by top 10 universities in Tamil Nadu.
3. To evaluate the year-wise growth of submissions from Anna University to Shodhganga.
4. To examine department-wise submissions of Electronic Theses and Dissertations (ETDs) from Anna University.
5. To assess the language predominance in the ETDs contributed by Anna University researchers.
6. To analyze the growth trends of Electronic Theses and Dissertations (ETDs)

3. Methodology

This study was entirely online and web-based. The observation methods were used to achieve the study's objectives and collect the necessary data. Data was collected from the Shodhganga repository (<https://shodhganga.inflibnet.ac.in/>) on January 2025. Focus on analyzing the Electronic Theses and Dissertations, with a special emphasis on Anna University, Tamil Nadu. The data collected was categorized into key areas, such as overall contributions, department-wise contributions, and language trends in the submitted ETDs.

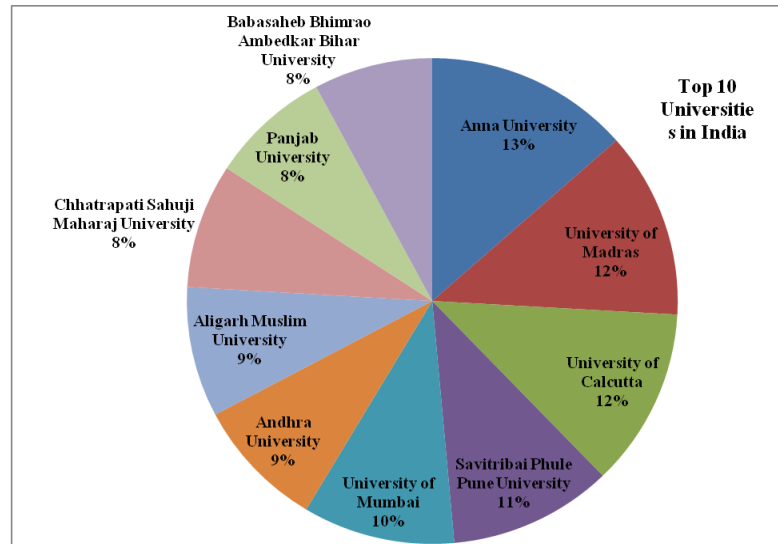
4. Data Analysis and Results

5.1 Contributions of ETDs by the Top 10 Universities in India

ETDs are crucial for academic research and knowledge dissemination. Following data presents the contributions of ETDs by the top 10 universities in India, ranked based on the number of items submitted.

Sl. No.	University	No. of Theses	Percentage	Rank
1.	Anna University	16634	13.49 %	1
2.	University of Madras	15268	12.39 %	2
3.	University of Calcutta	14649	11.89 %	3
4.	Savitribai Phule Pune University	13294	10.79 %	4
5.	University of Mumbai	12345	10.02 %	5
6.	Andhra University	10692	8.68 %	6
7.	Aligarh Muslim University	10674	8.66 %	7
8.	Chhatrapati Sahuji Maharaj University	10221	8.3 %	8
9.	Panjab University	9800	7.95 %	9
10.	Babasaheb Bhimrao Ambedkar Bihar University	9653	7.83 %	10
	Total	123230	100 %	

Table-1

**Figuer- 1**

The top 10 universities in India have contributed 123,230 Electronic Theses and Dissertations (ETDs) to Shodhganga, showcasing a significant concentration of research output among a few institutions out of 819 universities nationwide. Anna University (13.50%), University of Madras (12.39%), and University of Calcutta (11.89%) lead the rankings, reflecting strong research activity in Tamil Nadu and West Bengal. Maharashtra's major institutions, Savitribai Phule Pune University (10.79%) and University of Mumbai (10.02%), also demonstrate robust academic contributions. Meanwhile, Andhra University (8.68%), Aligarh Muslim University (8.66%), and Chhatrapati Sahuji Maharaj University (8.29%) highlight active research participation from South and North India, with Panjab University (7.95%) and Babasaheb Bhimrao Ambedkar Bihar University (7.83%) representing Punjab and Bihar, respectively. The high concentration of ETDs in these universities suggests that many of the remaining 809 institutions are either underrepresented or have yet to fully integrate with Shodhganga due to digital infrastructure limitations or institutional policies.

5. 2. Contributions of ETDs by the Top 10 State Universities in Tamil Nadu

S. No.	University	No. of Theses	Percentage	Rank
1.	Anna University	16634	22.35	1
2.	University of Madras	15268	20.52	2
3.	Bharathidasan University	8300	11.15	3
4.	Bharathiyar University	8152	10.95	4
5.	Manonmaniam Sundaranar University	7653	10.28	5
6.	Madurai Kamaraj University	6019	8.09	6
7.	Annamalai University	3405	4.58	7
8.	Periyar University	3405	4.58	8
9.	Alagappa University	2687	3.61	9
10.	Tamil Nadu Agricultural University	1424	1.91	10
		74419	100 %	

Table-2

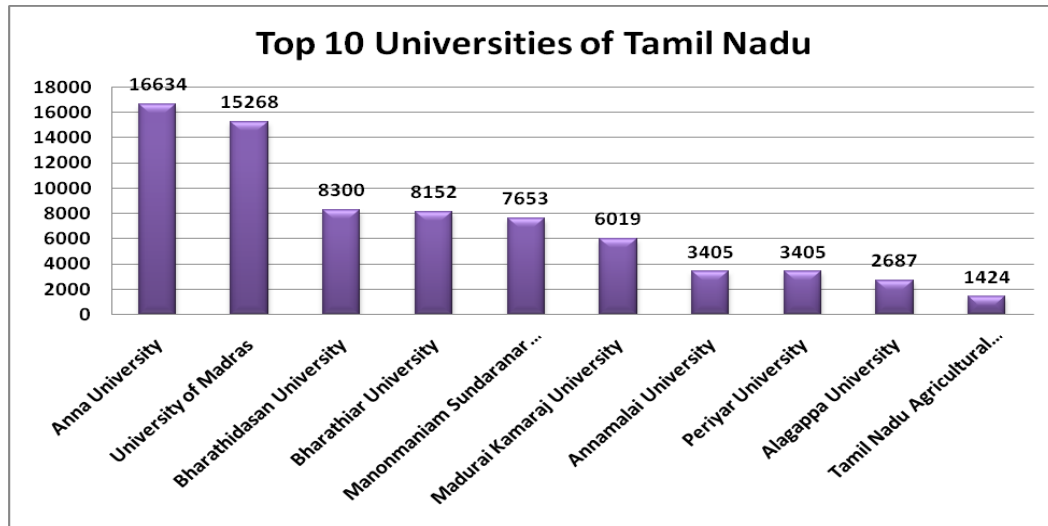


Figure : 2

Anna University leads the ranking with 16,634 items, contributing 22.35% of the total, followed closely by the University of Madras with 15,268 items (20.52%). Bharathidasan University and Bharathiyar University secure the third and fourth positions with 8,300 (11.15%) and 8,152 (10.95%) items, respectively, while Manonmaniam Sundaranar University ranks fifth with 7,653 items (10.28%). Together, the top five universities account for more than 75% of the total contributions, highlighting their strong academic and research engagement. Madurai Kamaraj University follows with 6,019 items (8.09%), while Annamalai University and Periyar University contribute 3,405 items each (4.58%). Alagappa University ranks ninth with 2,687 items (3.61%), and Tamil Nadu Agricultural University stands at the bottom with 1,424 items (1.91%). The data indicates that Anna University and the University of Madras dominate in academic contributions, whereas universities ranked lower need to enhance their participation to bridge the gap.

5.3. Years-Wise Contributions of ETDs from Anna University

S.No	Year	No. of Theses	Percentage %
1.	2024	996	8.47 %
2.	2023	1053	8.96 %
3.	2022	1681	14.30 %
4.	2021	1288	10.96 %
5.	2020	1583	13.47 %
6.	2019	1220	10.38 %
7.	2018	1426	12.13 %
8.	2017	1447	12.31 %
9.	2016	912	7.762 %
10.	2015	143	1.21 %
Total		11749	100%

Table-5.3

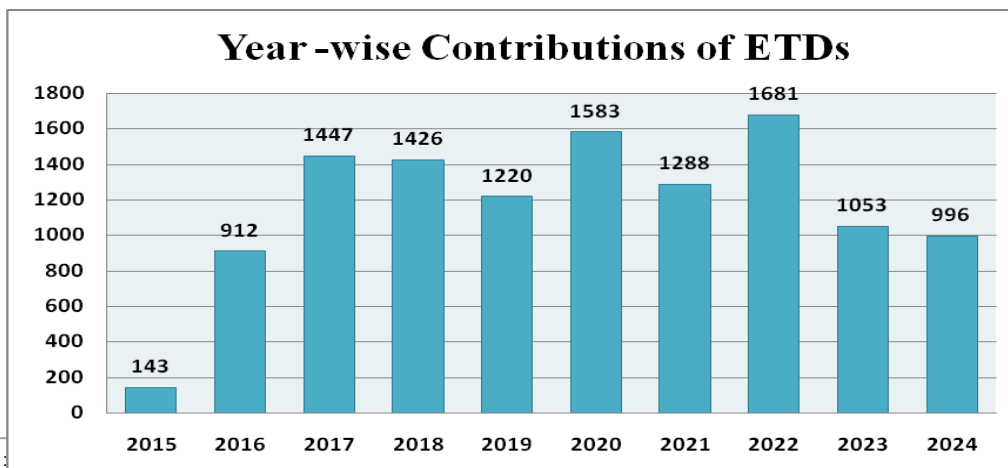


Figure : 5.3

The analysis of Electronic Theses and Dissertations (ETDs) Contributions from 2015 to 2024 shows a steady rise in research contributions, with a peak in 2022 (1,681 theses, 14.30%), reflecting the increasing adoption of Shodhganga by universities. The initial years, especially 2015 (143 theses, 1.21%), saw minimal Contributions, likely due to limited awareness and integration of digital repositories. The period from 2017 to 2022 witnessed consistent high submissions, averaging around 1,500 theses per year, demonstrating strong research activity. The COVID-19 pandemic (2020-2021) caused slight fluctuations, yet submissions remained significant, indicating the resilience of research scholars. However, the decline in 2023 (1,053 theses, 8.96%) and 2024 (996 theses, 8.47%) suggests a slowdown, possibly due to policy changes, funding challenges, or delays in thesis approvals. While the overall trend shows progress, the recent drop highlights the need for enhanced institutional policies, improved research funding, and greater awareness about digital thesis submissions. Encouraging universities to actively contribute will ensure sustained growth, accessibility, and visibility of Indian research output.

5.4. Department-wise submissions of Electronic Theses and Dissertations

Sl. No.	Department	No. of Theses	Percentage %
1.	Faculty of Information and Communication Engineering	6031	36.26
2.	Faculty of Science and Humanities	3085	18.55
3.	Faculty of Mechanical Engineering	2764	16.62
4.	Faculty of Electrical Engineering	1366	8.21
5.	Faculty of Civil Engineering	980	5.89
6.	Faculty of Technology	965	5.80
7.	Faculty of Electrical and Electronics Engineering	624	3.75
8.	Faculty of Management Studies	486	2.92
9.	Department of Mechanical Engineering	212	1.27
10.	Department of Civil Engineering	59	0.35
11.	Faculty of Architecture and Planning	46	0.28
12.	Department of Electronics and Communication Engineering	8	0.05
13.	Department of Biotechnology	3	0.02
14.	Department of Physics	2	0.01
15.	Department of Chemical Engineering	1	0.01
16.	Department of Chemistry	1	0.01
17.	Department of Computer Science and Engineering	1	0.01
18.	Department of English		0.00
	Total	16634	100%

Table-5.4

The data reveals significant disparities in the contributions of various departments of Anna University to the Shodhganga repository. The Faculty of Information and Communication Engineering leads with 6,031 ETDs, making up 36.26% of the total submissions, followed by the Faculty of Science and Humanities (3,085 ETDs, 18.55%). Engineering faculties like Mechanical and Electrical Engineering also contribute notably, but smaller departments, such as English and Biotechnology, show minimal or no contributions. This highlights the need for increased research engagement and open-access participation across all disciplines, especially in humanities and specialized fields.

5.5 Languages- wise submissions of Electronic Theses and Dissertations

S. No.	Language	Theses	Percentage%
1.	English	14497	87.16 %
2.	English US	730	4.39 %
3.	Hindi	1	0.01 %
4.	Sanskrit	1	0.01 %
5.	Others	1405	8.44 %
	Total	16634	100 %

Table-5.5

The language distribution of 16,634 theses in the Shodhganga repository reveals a strong preference for English as the primary medium of academic research, with 87.15% of the theses (14,497) written in English. This aligns with the global trend of English as the dominant language in academic publishing. A smaller portion, 4.38% (730 theses), is written in American English, indicating a subtle influence of international academic norms. Very few theses, only 0.006% each, are submitted in Hindi and Sanskrit, reflecting the limited use of regional languages in higher academic research. Additionally, the 8.44% of theses categorized under "Others" suggests a variety of regional languages or specialized academic languages are used.

5.6 Growth Rate (CAGR) Analysis:

To analyze the growth trends of Electronic Theses and Dissertations (ETDs) from Anna University between 2015 and 2024, we can calculate the Compound Annual Growth Rate (CAGR), which measures the mean annual growth rate of ETD submissions over the period.

Formula for CAGR

$$CAGR = \frac{\text{Ending Value}}{\text{Beginning Value}}^{\frac{1}{n}} - 1$$

Where:

- Ending Value = Number of theses in the final year (2024)
- Beginning Value = Number of theses in the first year (2015)
- n = Number of years between the two data points (2024 - 2015 = 9 years)

Given:

- Ending Value (2024) = 996
- Beginning Value (2015) = 143
- n = 9 years
- CAGR :24.07%

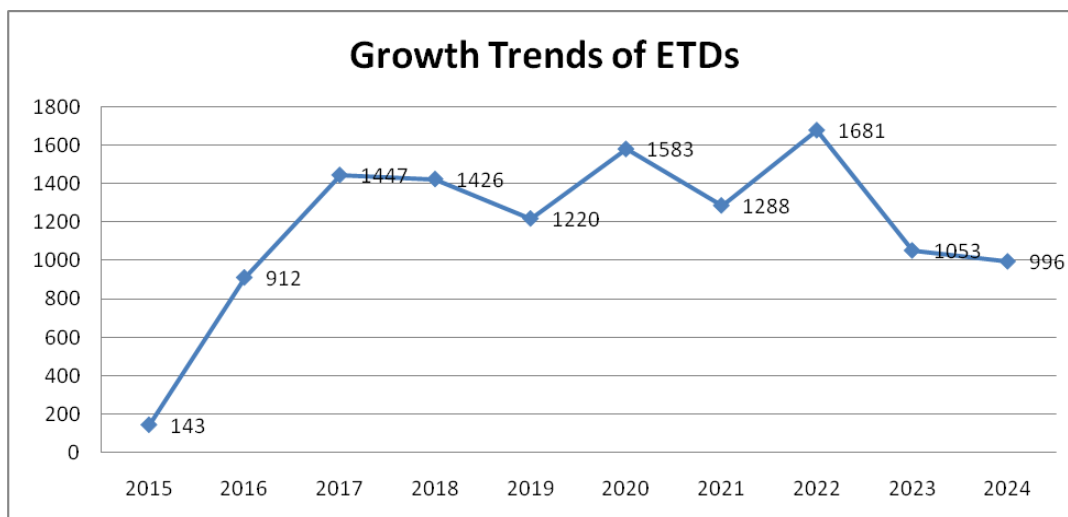


Table-5.6

The growth trends of Electronic Theses and Dissertations (ETDs) from Anna University, spanning 2015 to 2024, reveal a generally positive trajectory with some notable fluctuations. Initially, in 2015, submissions were minimal (143 theses), marking a slow start, but there was a significant increase in 2016 (912 theses). This marked the beginning of steady growth, with submissions averaging between 1,400 and 1,500 theses per year from 2017 to 2019, reflecting increasing research activity. The peak year was 2022, with 1,681 submissions, highlighting an enhanced adoption of Shodhganga. However, 2023 and 2024 saw a decline in contributions, possibly due to policy changes or procedural delays, signaling a potential slowdown. Despite this, the overall growth of ETD submissions at Anna University showcases a positive trend, underscoring the importance of digital repositories in advancing academic research.

6. Conclusion

The analysis of Electronic Theses and Dissertations (ETDs) contributions highlights the significant role of leading universities in India, particularly Anna University, in advancing academic research through digital repositories like Shodhganga. The data reveals a high concentration of research output among a few institutions, with Anna University leading both at the national and state levels. While there has been steady growth in ETD submissions over the years, the recent decline in 2023 and 2024 calls for strategic interventions to sustain research contributions.

Department-wise contributions indicate that engineering and science disciplines dominate, while humanities and specialized fields need more engagement. Additionally, English overwhelmingly remains the preferred language for thesis submissions, reflecting global academic trends, but there is scope to promote research in regional languages.

To ensure continued growth and wider participation, institutions must enhance digital infrastructure, provide research incentives, and streamline the submission process. Encouraging underrepresented universities and departments to actively contribute to ETD repositories will strengthen India's research ecosystem and improve accessibility to scholarly work.

Reference

1. Ashwini Latte, A. (2024). Exploring the landscape of electronic theses and dissertations: Insights from central universities in Delhi and Uttar Pradesh on Shodhganga. *International Journal of Research in Library Science*, 10(1), 59-70. <https://doi.org/10.26761/IJRLS.10.1.2024.1732>
2. Sivakumaren, K. S., Bharanidharan, S., & Rajkumar, T. (2024). Metric analysis on electronic theses and dissertations of central universities, India in INFLIBNET Shodhganga repository. *Journal of Indian Library Association*, 60(3), 1-10. Retrieved from <https://journal.ilaindia.net/index.php/lib/article/view/348/144>

3. Chauhan, M. I. (2021). Availability of Electronic Theses and Dissertations (ETDs) of State Universities of Gujarat in INFLIBNET Shodhganga Project: A Study. International Journal of Research Culture Society, 5(10), DOIs:10.2017/IJRCS.2456.6683/202110015
4. Saloi, A. (2021). Contribution of Electronic Theses and Dissertations (ETDs) by the Central Universities of Northeast India to the Shodhganga Project of INFLIBNET: An Evaluative Study. Library Philosophy and Practice (e-journal), 4825. Retrieved from <https://digitalcommons.unl.edu/libphilprac/4825>
5. Muthurasu, C. (2020). Electronic theses and dissertations (ETDs) at Shodhganga with special reference to Alagappa University, Karaikudi, India. Library Philosophy and Practice (e-journal), 3716. Retrieved from <https://digitalcommons.unl.edu/libphilprac>
6. Chatha, H. S. (2016). Role of Indian LIS institutions in Shodhganga ETD repositories: A study. International Research Journal of Management Sociology & Humanities, 7(7). <https://doi.org/10.32804/IRJMSH>
7. INFLIBNET Centre Shodhganga : <https://shodhganga.inflibnet.ac.in/jspui/>
8. Anna University :<https://www.annauniv.edu/> technologies into systematic review practices, ensuring informed, ethical, and effective adoption

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