Contribution of Electronic Theses and Dissertations' (ETDs) by the Universities of Andhra Pradesh to the Shodhganga Project of INFLIBNET: A Study

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Abstract

Researchers can communicate their study findings stated in their doctoral theses with the whole academic community through the platform provided by Shodhganga.

Present study is focused on ETDs submission made by various universities in Andhra Pradesh (i.e State, central, deemed, private) in Shodhganga project. One of the main objectives of the research is to present the ETD's scenario in Andhra Pradesh's universities. In this study observation method was used to collect the data which is completely web based. Data analysis was done using the Excel programme. This report highlights the contributions made to Shodhganga from May to July 2023 from various universities of Andhra Pradesh. The data accumulated was divided into several important areas, such as total contributions, types of universities, top five departments contributing to the top five universities, language-wise contributions, and the universities in Andhra Pradesh with the highest contribution. Finally, it can be concluded that, total 20 universities of Andhra Pradesh contribute their theses 23,923, and among the total 22,860 ETDs are in English language is made by the researchers.

Keywords: Central Universities, Deemed Universities, Electronic Theses and Dissertations (ETD), INFLIBNET, Private Universities, Shodhganga, State universities, Universities - Andhra Pradesh

1. Introduction

Electronic Theses and Dissertations (ETDs) are the most comprehensive and distinctive sources of information for research work. Constantly, they act as the soul sources of information for researchers. These are some of the most significant academic documents with the fewest possibility of being made public. The information and contents of these records, however, remain unexplored because they are not easily accessible.

The ETD can be defined as Electronic versions of traditional theses and dissertations that describe student study and scholarship and can be distributed to a worldwide public in electronic format. In addition to ensuring easy access and storage of Indian doctoral theses, the online accessibility of electronic theses through centrally managed digital repositories would also contribute to improving the quality of research.

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This would solve the severe issue of research duplication. At the regional and national levels, many educational institutions have made an effort to let researchers know about ongoing research so they can submit their findings. Some important ETD initiatives worth mentioning here are Vidyanidhi, CSIR exploration, DELNET (Developing Library Network), and Indian National Theses Database @ INFLIBNET, i.e, Shodhganga is one of them.

According to the UGC notification (Minimum standards & Procedure for Award of M.Phil. / Ph.D degree, Regulation, 2016) dated 5th May 2016, researchers in universities are required to submit electronic versions of their theses and dissertations in order to facilitate open access to Indian theses and dissertations (known as "Shodhganga"), accessible to all institutions and universities, is assigned to the INFLIBNET centre.

1.1 An outline of Shodhganga

The archive of Indian intellectual output known as Shodhganga is hosted and kept up by the INFLIBNET Centre. Research scientists can post their doctoral theses on the Shodhganga portal, which then makes them open access for the entire scholarly community. To make navigation easier, Shodhganga mimics the academic structure of each university. University research scientists can more easily deposit their theses in the appropriate Department, Center, or College thanks to this arrangement. (https:// shodhganga.inflibnet.ac.in/). It was created using the OAI-PMH compliant open source programme DSpace. It gathers, saves, indexes, shares, and maintains the enormous body of knowledge maintained by Indian Universities. Previous initiatives in this manner include the Mysore University's Vidyanidhi Project, for instance. It provided good service but struggled from a lack of updating. It could continue to be updated owing to the participation of UGC and INFLIBNET. Current status of Shodhganga is 739 Universities across India have signed MoU with INFLIBNET for contribution of their theses in Shodhganga. Till 31st July 2023, 739 universities have uploaded more than 4,78,118 theses, and the universities of Andhra Pradesh (including state, central, private, deemed) contribute 23, 923 theses.

2. Review of literature

Panda(2016) analyzed the development and present state of Shodhganga, an Indian electrical technology reservoir. In this analysis, the author discovered that as of June 30th, 217 universities had deposited a total of 40,175 theses in the repository. According to the study's findings, Jawaharlal Nehru University (JNU) submitted the most theses (4570, or 11.37%). Sivakumaren, K.S. (2015). The electronic theses and dissertations from Indian universities in the Shodhganga project were examined for this study. According to the study's findings, 201 universities have deposited more than 3200 theses across a range of subjects. The top five institutions supplied 3145 theses to the repository out of all the universities combined. The collection of Electronic Theses and Dissertations (ETDs) from State universities in Gujarat has been examined by Saritadas and Vanantry Chowhn (2019). According to the study's findings, state universities contributed a total of 12, 890 ETDs, or 6.53% of all contributions (1,97,502), over the study period. Verma & Sengupta (2019) conducted research on the contributions of ETDs made by state institutions in Maharashtra to the open access

repository of Shodganga by INFLIBNET. It was discovered that only 8 universities out of the 12 signed an MOU for Shodhganga, while only 11 signed one. Finally, it can be said that the universities that provided the most ETDs to the repository were Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, Savitribai Phule University, Pune, and SNDT University, Mumbai. Ankita Solai (2021) examined how the central universities of Northeast India contributed electronic theses and dissertations to the Shodhganga Project. Only a few key institutions in Northeast India were found to be actively collaborating and uploading their ETDs to the INFLIBNET Shodhganga repository.

3. Objectives

The primary goals of this research are to examine the contributions of ETDs made by Andhra Pradesh universities to the INFLIBNET Shodhganga project. The precise goals are as follows:

- 1. Find out how many universities in Andhra Pradesh have signed an MOU (Memorandum of Understanding) with the INFLIBNET for Shodhganga project.
- 2. Ranking of Andhra Pradesh's universities based on Shodhganga's ETD contribution.
- 3. To assess the language vise contribution of theses in Andhra Pradesh universities to the Shodhganga project of INFLIBNET. To identify the most productive universities in Andhra Pradesh with reference to the number of ETDs contribution in Shodhganga.
- 4. To analysis the contribution of ETD's by top five universities in Shodhganga project.
- 5. Examine to the theses submitted by the top five departments at the top five universities.

4. Methodology

The methodology used in this study was entirely web-based. An observational method was used to meet the study's aims and collect the necessary data.

Method of observation: Observation is the process of acquiring data through observing behaviour, events, or physical traits in their natural surroundings. Observation can be either overt or covert. There are two kinds of observations: quantitative observations and qualitative observations. Quantitative observations are based on measurements or guesses that produce meaningful numerical outcomes. Qualitative observations produce descriptive rather than numerical results.

This study was related to quantitative research. The data were gathered from the Shodhganga repository (https://shodhganga.inflibnet.ac.in/) by observing the process from May 2nd to July 31st, 2023. Data collected in Andhra Pradesh was classified into four major groups. i.e State universities, Central Universities, deemed universities and private universities. There are 41 universities in total in Andhra Pradesh, with 28 state universities, three central universities, four deemed institutions, and six private universities. Only 14 universities out of 28 state universities, 1 central university, 4 deemed universities, and 3 private universities have signed an MOU with the Shodhganaga project. Collected Data were analysed like overall contributions

their theses, department wise contributions, language wise contributions, top five departments of top universities contribution, and most productivity of universities in Andhra Pradesh.

5. Data Interpretation and Analysis

5.1 Universities of Andhra Pradesh

Table 1 shows all of the universities in Andhra Pradesh, along with their establishment year, as per UGC website, and also year of MOU with shodhganga, specialization of the university.

S.No	Name of the state Universities	YoE	MoU Signed	Year of	Specialization
			with	MoU	
			Shodhganga		
1.	Aadikavi Nannaya University	2006	Yes	2019	General
2.	Acharya N.G.Ranga University	1964	No		Agricultural
3.	Acharya Nagarjuna university	1976	Yes		General
4.	Andhra Kesari University	2022	N0	-	General
5.	Andhra Pradesh Fisheries University	2008			Fisheries
6.	Andhra University	1926	Yes	2016	General
7.	Cluster University	1980			General
8.	Damodaram Sanvayya Natioanl law university	2008	No		Legal
9.	Dr. Abdul Haq Urdu University	2016	No	-	General and Urdu
10.	Dr. B.R. Ambedkar University	2008	No	-	General
11.	Dr. N.T.R University of Health Sciences				Health care
12.	Dr. Y.S.R Architecture & Fine Arts University	2020			Architecture
13.	Dr. Y.S.R Horticulture University	2011			Horticulture
14.	Dravidian University	1997	Yes	2015	Dravidian
					languages
15.	Jawaharlal Nehru Technological university, Anantapur	2008	Yes		Technology
16.	Jawaharlal Nehru Technological university, Kakinada	1946	Yes	2012	Technology
17.	Jawaharlal Nehru technology university, vijayanagarm	2022			tehcnology
18.	Krishna university	2008	Yes	2020	General
19.	Rajiv Gandhi University of Knowledge &				
	Technologies	2007			technology
20.	Rayalaseemauniversity	2008	Yes	2020	General

Table 1: Universities of Andhra pradesh

21.	Sri Krishnadevaraya university	1981	Yes	2010	General
22.	Sri Padmavathi Mahila visvavidyalayam	1983	Yes	2012	(Women's
					only)General
23.	Sri Venkateswara institute of medical sciences	1993	Yes	2019	Medical
24.	Sri Venkateswara Vedic university	2006	No		Vedic studies
25.	Sri Venkateswara Veterinary University	2005	No		Veterinary school
26.	Sri Venkateswarauniversity	1954	Yes	2010	General
27.	Vikramsimhapuri University	2008	Yes	2022	General
28.	Yogi Vemana university	2006	Yes	2021	General
	Central Uni	versities			

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	ochtiai omversities								
29.	Central university of Andhra Pradesh	2018	No		General				
30.	Central Tribal University of Andhra Pradesh	2019	No		General				
31.	National Sanskrit University	1987	Yes	2021	Sanskrit				

Deemed Universities

32.	Gandhi Institute of Technology and Management	1980	Yes	2013	Technology
					Management
33.	Koneru Lakshmaiah Education Foundation	1980	Yes	2014	Technology
34.	Sri Sathyasai institute of Higher learning	1981	Yes	2023	General
35.	Vignana's Foundation for Science,				
	Technology & Research	1997	Yes	2018	Technology

Private Universities

36	Krea Univaersity	2018	Yes	2022	Liberal Education
37	SRM University	2017	Yes	2022	Science, technology and liberal arts
38	VIT-AP University	2017	Yes	2021	
39	Saveetha Amaravathi University	2017	No		Technology management
40	Centurian University of Technology & Management	2022	No		Science and technology, para medical, agriculture, media film and liberal arts
41	BEST Innovation University	2019	No		Science and Technology

Table 1 & Figure 1 shows that out of 28 state universities, 14 universities have signed MoU with Shodhganga. Out of 3 central universities only one university has signed MoU with Shodhganga, out of 6 private universities, 3 universities signed MoU with Shodhganga and 4 deemed universities signed MoU with Shodhganga.

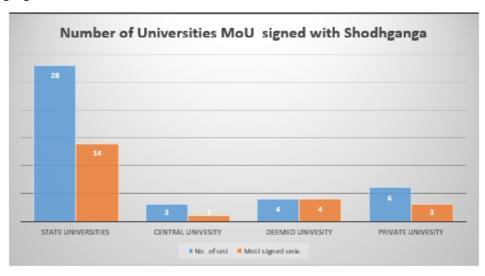


Figure 1: MoU signed with Shodhganga@INFLIBNET

5.2 Contribution of ETD's by the Universities of Andhra Pradesh

Table 2 shows that Out of the 41 universities 20 universities have contributed the ETD's to Shodhganga. It is arranged in descending order.

S.No	Name of the University	ETD's Contributions	%	Rank
1.	Andhra University	9186	38.40%	1
2.	Sri Venkateswarauniversity	5381	22.49%	2
3.	Sri Krishnadevaraya university	3444	14.40%	3
4.	Acharya Nagarjuna university	2058	8.60%	4
5.	Jawaharlal Nehru Technological university Anantapur	1203	5.03%	5
6.	Gandhi Institute of Technology and Management	824	3.45%	6
7.	Koneru Lakshmaiah Education Foundation	709	2.96%	7
8.	Jawaharlal Nehru Technological university, Kakinada	310	1.30%	8
9.	Sri PadmavathiMahilavisvavidyalayam	237	0.99%	9
10.	Vignana's Foundation for Science, Technology & Research	177	0.74%	10
11.	Yogi Vemana university	86	0.36%	11

Table 2: Contribution of ETD's by the Universities of Andhra Pradesh

12.	Krishna university	69	0.29%	12
13.	AadikaviNannaya University	55	0.23%	13
14.	Dravidian University	53	0.22%	14
15.	National Sanskrit University	46	0.19%	15
16.	Sri Venkateswara institute of medical sciences	21	0.09%	16
17.	Dr.Y.S.R Horticultural University	24	0.10%	17
18.	Sri Sathya sai institute of Higher learning	24	0.10%	18
19.	VIT-AP University	15	0.06%	19
20.	Krea University	1	0.00%	20
21.	Vikram simhapuri University	0	0	0
22.	SRM University	0	0	0
	Total	23923	100%	

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It is clear, from table 2 that, Twenty (20) universities from Andhra Pradesh (include central, deemed, private) have contributed 23, 923 theses till date in the repository. Andhra University ranks 1st with 9186 (38.40%) while Sri Venkateswara University ranks 2nd with 5381 (22.49%) followed by Sri Krishnadevaraya University ranking 3rd with 3444 (14.40%), Acharya Nagarjuna University ranks 4th with 2058 (8.60%) and Jawaharlal Nehru Technological University, Anantapuram ranks 5th with 1203 (5.03%) in ETDs contributions. It is also found that Vikram simhapuri university (state), SRM University (Private) has not yet submitted any theses to shodhganga.

5.3 Language wise ETD's contribution in universities of Andhra Pradesh

Table 3 represents the language wise distribution of ETD's which is contributed from universities of Andhra Pradesh in various languages like English, Telugu, Hindi, Sanskrit and other languages.

SNo	Name of the University	English	Telugu	Hindi	Sanskrit	Other	languages	Not mentioned	Total
1.	ANU	2038	2	1	2	1		14	2058
2.	AAU	55		-	-	4			55
3.	AU	8580	337	202	53	4		10	9186
4.	Dr.Y.S.R HU	24	-	-	-	-			24
5.	DU	53	-		-	-			53
6.	JNTU, Anantapuam	1199	-	-	-	-		3	1203
7.	JNTU, Kakinada	310	-	-	-	-			310
8.	KU	68	1	-	-	2			69
9.	SKU	3427	5	-	-	-		10	3444

Table 3: Language wise ETD's contribution in universities of Andhra Pradesh

10.	SPMVV	234	3	-	-	-		237
11.	SVIMS	21	-	-	-			21
12.	SVU	4980	69	27	1	279	25	5381
13.	YVU	79	6					86
14.	NSU	46						46
15.	GITAM	820		2			2	824
16.	KLEF	709						709
17.	Sri Sathya sai	24						24
18.	Vignana's	177						177
19.	Krea University	1						1
20.	VIT-AP University	15						15
	Total	22860	423	232	56	286	65	23923

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Table 3 reveals that the majority of the theses 22, 860 have been submitted in English while 423 theses are submitted in Telugu, a regional language of Andhra Pradesh, 232 theses in Hindi, 56 theses in Sanskrit language, 286 theses in other languages and 65 theses in unspecified languages. However, it is observed that most of the research work is carried out in English.

5.4 ETD's Contribution by Top Five universities

The contributions made by top five universities in Shodhganga project were analyzed and is given in figure 3.

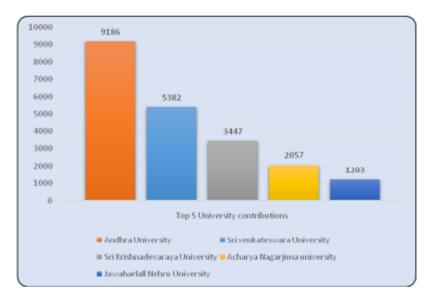


Figure 3: contributions of ETDs by top five universities

5.5 Department wise ETD contributions by the top five universities

5.5.1 Andhra University (AU)

One of the first educational institutions established in Andhra Pradesh was the Andhra University, which was founded in 1926. Dr. Sarvepalli Radhakrihna, former Indian president, served as one of Andhra University's vice chancellors. The university currently offers 313 courses in the disciplines like education, law, pharmacy, science, and business. Table 4 represent the department wise submission of ETD's in Shodhgana project.

S.No.	Name of the Department	ETD contribution	
1	Commerce & Management department	861	33.8%
2	Pharmacy department	599	23.5%
3	Philosophy department	388	15.2%
4	Economics department	350	13.7%
5	Telugu department	348	13.7%
	Total	2546	100.0%

Table 4: Department wise ETD contributions by the Andhra University

Table 4 shows that 2546 ETD's (i.e., 28% of total contributions) is submitted by the top five departments of Andhra university. It is found that Commerce & Management department (33.8%) has the highest ETD's contribution with 861, while department of Telugu (13.7%) has least submission with 348 in the top five departments.

5.5. 2 Sri Venkateswara University (SVU)

In Tiruapti, Sri Venkateswara University was founded in 1954. It's Andhra Pradesh's second-largest university. The university has 52 departments spread throughout its five constituent colleges, including the colleges of arts, sciences, business, management & computer science, pharmacy, and engineering. Table 5 shows the department wise top five submissions of ETD's in Shodhganga.

S.No.	Name of the Department	ETD contribution		
1	Dept of Chemistry	529	25.5%	
2	Dept of Physics	411	19.8%	
3	Dept of Zoology	396	19.1%	
4	Dept of Telugu	384	18.5%	
5	Dept of Commerce	355	17.1%	
	Total	2075	100.0%	

 Table 5: Department wise ETD contributions by the Sri Venkateswara University

Table 5 shows that the 2075 ETD's (ie., 38% of total contributions) are submitted by the top five department of S.V.University while Total of 5381 ETD's are contributed by various departments of SVU. With 861, the department of chemistry had the largest ETD contribution (25.5%), followed by the departments of physics (411, 19.8%), zoology (396, 19.1%), Telugu (384, 18.5%), and commerce (355, 17.1%)

5.5.3 Sri Krishnadevaraya University (SKU)

Sri Krishnadevaraya University was established in the year 1981. The University has various courses such as Arts, Sciences, Engineering & Technology and Pharmacy. Table 6 shows the department wise top five submissions of ETD's in Shodhganga.

S.No.	Name of the Department	ETD contribution		
1	Dept of Chemistry	411	27.9%	
2	Dept of Telugu	344	23.4%	
3	Dept of English literature	245	16.7%	
4	Dept of Maths	239	16.2%	
5	Dept of Commerce	232	15.8%	
	Total	1471	100.00%	

 Table 6: Department wise ETD contributions by the Sri Krishnadevaraya University

It is clear that, table 6 shows that 1471 ETD's (ie., 42% of total contributions) is submitted by the top five departments of SKU. The Total of 3444 ETD's contribution has been made by various SKU departments. It is found that department of Chemistry with 411 submissions (27.9 %%) has highest ETD's contribution, followed by Dept of Telugu 344 (23.4%), Dept of English literature (16.7%), Dept of Mathematics 239 (16.2%) and Dept of Commerce 232 (15.8%).

5.5.4 Acharya Nagarjuna University (ANU)

The Great Buddhist preceptor and philosopher Acharya Nagarjuna founded a university on the banks of River Krishna. It was established in 1976. At present the university offers Arts, Sciences and Engineering & Technology and Pharmacy courses. Top five Department wise contributions of ETD's shows in the Table 7.

S.No.	Name of the Department	ETD contribution	
1	Dept of Bio-Technology	313	28.0%
2	Dept of Chemistry	296	26.5%
3	Dept of Computer science & Eng.	196	17.6%
4	Dept of Commerce & Business mgt	181	16.2%
5	Dept of Physics	130	11.6%
	Total	1116	100.00%

Table 7: Department wise ETD contributions by the Acharya Nagarjuna University

Table 7 shows that the 1116 ETD's (i.e., 54% of total contributions) is submitted by the top five departments of ANU. The Total of 2057 ETD's is contributed by various ANU departments. It is found that department of Bio-Technology with 313 (28.0%) submissions has highest ETD's contribution, followed by Dept of Chemistry 296 (26.5%), Dept of Computer science & Eng.196 (17.6%), Dept of Commerce & Business mgt 181 (16.2%) and Dept of Physics 130 (11.6%).

5.5.5 Jawaharlal Nehru University, Anantapuram (JNTUA)

JNTUA College was established in the year 2008. The university offers Engineering & Technology, Pharmacy and MBA/MCA courses. Table 8 shows that the top five department wise contribution of ETD's to Shodhganga project.

S.No.	Name of the Department	ETD contribution	
1	Dept of Pharmacy	207	27.4%
2	Dept of Mechanical Engineering	168	22.3%
3	Dept of Computer science & Eng.	147	19.5%
4	Dept of Electrical Commn. & eng.	128	17.0%
5	Dept. of Electrical Engineering	105	13.9%
	Total	755	100.0%

 Table 8: Department wise ETD contributions by the Jawaharlal Nehru University, Anantapuram

The top five departments of the JNTUA submitted a total of 755 ETDs, which can be seen in table 8. The biggest ETDs is contributed by the department of pharmacy (207, 27.4%), followed by the departments of mechanical engineering (168, 22.3%), computer science and engineering (147, 19.5%), electrical communication and engineering (128, 17.0%), and electrical engineering (105, 13.9%).

6 Findings of the Research

- 1. The Universities in Andhra Pradesh contributed 23,923 theses to Shodhganga
- 2. Among these universities, Andhra University has deposited highest number of theses to Shodhganga
- 3. There are total of 41 universities in Andhra Pradesh. Where, 28 are state universities, 3 are central universities, 4 are deemed universities and 6 are private universities.
- 4. Out of 28 state universities, only 14 universities have signed MOU with Shodhganga and 13 universities have the ETD contribution.
- 5. Out of 3 central universities only 1 central university has MOU with Shodhganaga project while 4 deemed universities and 3 out of 6 private universities has MOU with Shodhganaga project.

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- 6. Among the total of 23,923 theses, 22,860 thesis are in English, 423 theses in Telugu, 232 theses in Hindi, 56 theses in Sanskrit language, 286 theses in other languages and 65 theses in unspecified languages.
- 7. It is found that, out of total 23,923 ETDs, 21,275 (88%) ETDs are the submitted by the top five universities.

7 Conclusion

Based on the above study, it is concluded that the total contribution of ETDs (i.e., 4, 72,118 contributions from 739 universities) from AP universities are 5%. It is also found that, the well reputed universities such as ANU, DU SPMVV universities contributed very few theses. The results led to the following recommendations:

1. Based on the findings, only a few universities in Andhra Pradesh have been found to be actively collaborating and contributing their ETDs to the Shodhganga repository of INFLIBNET. The majority of universities keep showing little interest in submitting their theses to Shodhganga. Therefore, it is advised that university administrators and library staff should take the initiative to address this situation and contribute them to the Shodhganga project to expand the number of ETDs in the repository.

2. Universities are suggesting mentioning the languages of their research output, while uploading their research content on Shodhganga website.

3. Workshops and training sessions emphasizing the problem of copyright choice of access, etc., should be organized. library science professionals ought to take the chance to learn about ETD repositories.

4. When evaluating the universities, accreditation organizations like NAAC, NBA, and NIRF should provide the credentials for the active and regular participation in contributing their theses to the Shodhganga project.

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