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Availability of Electronic Theses and Dissertations (ETDs) of State Universities of Tamil Nadu in INFLIBNET Shodhganga Project: An Analysis

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Abstract

This paper investigates the contributions of Electronic Theses and Dissertations (ETDs) by 16 State Universities of Tamil Nadu in INFLIBNET-Shodhganga project. It is found that 41870 Electronic Theses and Dissertations were uploaded by 16 State Universities. Among these Universities, Anna University, Chennai and University of Madras were contributed highest number of ETDs in this project.The Department of Information and Communication, Anna University and Department of Tamil Studies, Bharathidasan University, Trichy were the top two departments, which contributed more number of theses in the respective domains. Further, the study has analyzed the number of theses uploaded on various disciplines. The result shows that highest number of ETDs was found on "Information and Communication" and "Commerce."

Keywords: Electronic Theses and Dissertations, Shodhganga, INFLIBNET, Universities, ETDs.

Introduction

Information and Communication Technology (ICT) plays a vital role in every human activity. In Library, ICT is also applied for information search, access, process and distribute to the users in a variety of formats. They are variety of resources available in the form of books, e-books, e-journals, databases and Electronic Theses and Dissertations (ETDs) for leaning, teaching and research. These resources are required to organize process and distribute to the users systematically. Electronic theses and dissertations (ETDs) are highly valuable resources for research and development in the academic institutions. In early days, the research reports were not available to access in the public domain. Now, it has been changed because of the application of ICT tools and techniques. Further, the advancement in the ICT has changed the way of organizing, processing and disseminating of information to the end users. The

invention of Open Access is another milestone, which made it easy to access to information in the digital environment. The educational institutions have also started to deposit their content in the digital form called "Institutional Repository (IR) and made it available to the users (Sivakumaren, 2015).

Shodhganga Project: An over view

The UGC Notification (Minimum Standards & Procedure for Award of M.Phil. / Ph.D Degree, Regulation, 2009) dated 1st June 2009 mandates 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 world-wide. As per the Regulation, the responsibility of hosting, maintaining and making the digital repository of Indian Electronic Theses and Dissertation (called "Shodhganga"), accessible to all institutions and universities, is assigned to the INFLIBNET Centre. The main objective of Shodhganga@INFLIBNET Centre is to provide a platform for research students to deposit their Ph.D. theses and make it available to the entire scholarly community in open access.(http://shodhganga.inflibnet.ac.in/). "Shodhganga" is the name coined to denote digital repository of Indian Electronic Theses and Dissertations set-up by the INFLIBNET Centre, Ahamedabad, Gujarat, India. Shodhganga replicates academic structure of each University in terms of Departments/Centres/Colleges each University has to facilitate of ease of navigation. This structure facilitates research scholars from Universities to deposit their theses in the respective Department/Centre/College. The centre is also developing a semantic web-based interface to facilitate subject-based browsing, navigation, search and retrieval of content available in the repository.

Review of Literature

Abdelrahman (2017) investigated the use of the University of Khartoum Institutional Repository (Khartoumspace) by graduate students and to explore their attitudes towards the repository and its contents. The study revealed that electronic theses and dissertations and e-Books are the most frequently used items of the repository's collection. Jeyapragash, Rajkumar and Muthuraj (2016) investigated the research output analysis of electronic theses and dissertations in shodhganga among top 10 Indian Universities. The results show that Aligarh Muslim University has submitted highest number of theses (5319) and 40.4% of theses of top 10 Universities were deposited during 2015. Panda (2016) examined the progress and current status of Shodhganga: reservoir Indian electronic theses and discussed the need and importance of a centrally maintained repository in the current age and the role and challenges of universities, libraries and researchers in development of institutional repositories at university levels. As on 30 June 2015, a total of 40,175 theses have been deposited in the repository by 217 universities. Jawaharlal Nehru University has submitted highest number of theses (4570, 11.37 per cent) followed by Anna University (2910, 7.24 per cent), Mahatma Gandhi University (2056, 5.12%) and Bundelkhand University (1760, 4.38 per cent). Highest number of theses has been submitted from the state of Tamil Nadu. Number of theses and site visitors are gradually increasing (2010-2015)**.** Sivakumaren(2015) analyzed the contributions of top 5 Universities in the study. It is found that School of International Studies , Jawaharlal University(36.40%), Faculty of Information and Communication Engineering (30.82%), School of Chemical   Sciences, Mahatma Gandhi University(22.02%), Maharani Lakshmi Bai Medical College (26.49%) and Department   of   Physics, Cochin University of Science and Technology(26.49%) were

contributed the highest number of Theses in the Shoudhganga Project. The increased complexity and accessibility of technology in everyday life have changed the desire and expectations of library clients which demand remote access to full text resources including theses and dissertations. The convergence of technology, open source initiatives, and developing new world view on intellectual property rights has energized ETDs (Vaishali & Babasaheb, 2014). Alemneh, et al. (2014) viewed that ETDs are generally support students candidature for academic degrees, enriching CVs and adding value to their professional qualifications. It is very important to maintain and promote ETDs in academic libraries where students carry out their research and education. Kumar (2013) conducted a study that describes the knowledge management and ETDs in libraries in Indian perspective. This study highlights the major challenges in creating a digital repository of ETDs for universities or academic institutions. Author suggests solution for the constraints identified for the ETD initiatives and conclude that the library professionals should take up the problems by solving the constraints, based on research in the area of knowledge management in libraries. Sheeja and Cherukodan (2011) examined that "the ETD Project of Cochin University of Science and Technology (CUSAT) and Mahatma Gandhi University (MGU) in India. They found that both institutions have promoted ETDs by organizing workshops, adopting open source software for ETDs, and training library staff. Yoitis (2008) introduced the electronic theses and dissertation (ETD) repository as a subset of local institutional digital repositories .It further discusses issues related to ETD repositories including intellectual property rights, publishers' views of ETDs as prior publications, plagiarism issues, development costs, and long-term preservation issues. It was found that library administrators who implemented ETD repositories at various universities adapted their models to the needs of their institutions and their graduate students. ETD administrators made decisions about implementation models and software and hardware infrastructure in terms of human and technical resource allocation.

Objectives of the Study

1. To study the contributions of Electronic Theses and Dissertations(ETDs) in Shodhganga Project by 16 State Universities of Tamil Nadu, India
2. To analysis the contributions of ETDs by top departments of the Universities and
3. To find out the contributions of ETDs on various disciplines.

Research Methodology

The data for the study were extracted from the Shodhganga Project (https://shodhganga.inflibnet.ac.in/) on 7-2-2020.The data were grouped into three major categories e.g. overall contributions, department level contributions and contributions on various disciplines. The data extracted were exported to Ms-Excel for analysis.

Data Analysis and Results

Electronic Theses and Dissertations (ETDs) of State Universities

Electronic Theses and Dissertations (ETDs) are considered as most important and widely used resources by the faculty members and research scholars in higher educational institutions.

It enables the research scholars to collect information for the research. A lot of research is being done on various fields at national and international levels. But the output of research remained with particular institutions and access to information also is limited. In order to share the research information among the Universities, the Shodhganga Project was initiated by INFLIBNET Centre, Gujarat, India. It enables the Universities to deposit and access to the research reports. In this project, 16 State Universities of Tamil Nadu were participated and deposited their research reports. In this study, contributions of ETDs by 16 State Universities of Tamil Nadu were alone taken and shown in Table 1 and Figure 1.

Table 1
ETDs of State Universities

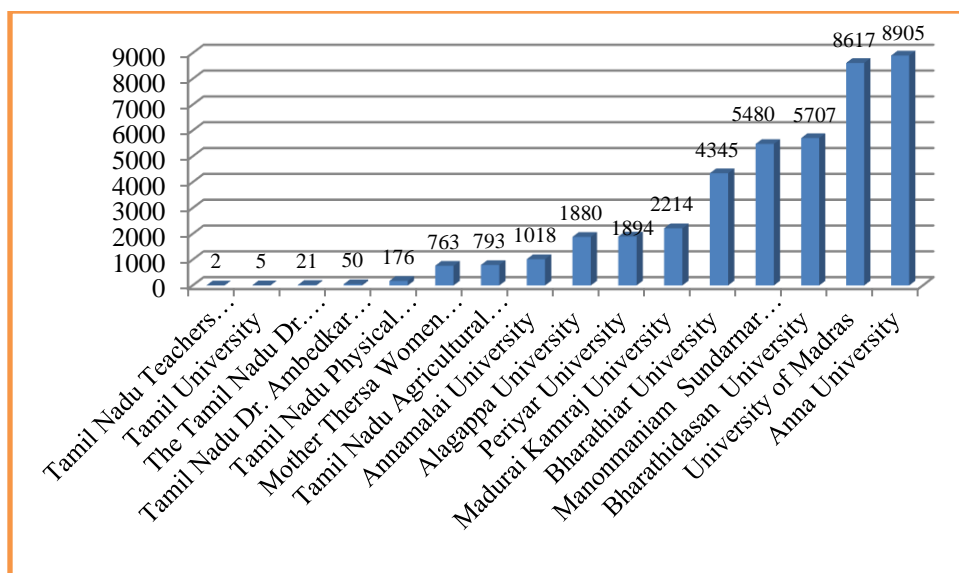| S.No.	Name of the University	ETDs		
		Nos.	%	Rank
1	Alagappa University	1880	4.49	8
2	Anna University	8905	21.27	1
3	Annamalai University	1018	2.43	9
4	Bharathiar University	4345	10.38	5
5	Bharathidasan University	5707	13.63	3
6	Manonmaniam Sundarnar University	5480	13.09	4
7	Madurai Kamaraj University	2214	5.29	6
8	Mother Theresa Women	763	1.82	11
9	Periyar University	1894	4.52	7
10	Tamil Nadu Agricultural University	793	1.89	10
11	Tamil Nadu Dr. Ambedkar Law University	50	0.12	13
12	Tamil Nadu Teachers Education University	2	0.00	16
13	Tamil University	5	0.01	15
14	Tamil Nadu Physical Education and Sports University	176	0.42	12
15	The Tamil Nadu Dr. M.G.R. Medical University	21	0.05	14
16	University of Madras	8617	20.59	2
	Total	**41870**	**100**	

Figure 1. ETDs of State Universities

Among 16 Universities, Anna University,Chennai has contributed the highest number of Theses (8905, 21.27%) in this project and placed in the 1st rank. University of Madras has deposited 8617(20.59%) of Theses and found in the 2nd place. Further, Bharathidasan University has deposited a good number (5707, 13.69%) of Theses and ranked in the 3rd place. Similarly, Manonmaniam Sundarnar University (5480, 13.09%), Bharathiar University (4345, 10.38%) were also contributed considerable number of Theses and placed in 4th and 5th rank respectively. The contributions by Madurai Kamaraj (2214, 5.29%), Periyar University (1894, 4.52%), Alagappa University (1880, 4.49%) and Annamalai University (1018, 2.43%) were found less among 16 Universities. The result show that 2 top ranked Universities were contributed almost 41.85% of Theses, whereas 3 Universities in 3rd, 4th and 5th ranks were contributed 37.09% (15532) of Theses. But, remaining 11 Universities were contributed only 21.06% (8816) of Theses. Hence, it is inferred that 31.25% of Universities are actively participating by means of contributing regularly and remaining 68.75% of Universities are required to increase their contributions in this project.

Electronic Theses and Dissertations (ETDs) by Departments

In this project, it is found that only few Universities are regularly contributing their ETDs. However, some of the departments of the Universities are increasing their contributions by means of uploading more number of the research reports in their domains. The study has analyzed to find out the highest number of Theses deposited by the Top departments of each State Universities. Among 16 Universities, the Department of Information and Communication, Anna University has deposited the highest number of (2787, 39.83%) theses pertaining to this department and placed in the 1st rank.

Table 2
ETDs by Departments

S.No.	University	ETDs			%	Rank
		Nos.	Dept.	Nos.		
1	Alagappa University	1880	Education	318	4.54	8
2	Anna University	8905	Information and Communication	2787	39.83	1
3	Annamalai University	1018	Marine Biology	72	1.03	12
4	Bharathiar University	4345	Commerce	596	8.52	3
5	Bharathidasan University	5707	Tamil Studies	816	11.66	2
6	Manonmaniam Sundarnar University	5480	Commerce	591	8.45	4
7	Madurai Kamaraj University	2214	Commerce	445	6.36	6
8	Mother Thersa Women University	763	Computer Science	179	2.56	9
9	Periyar University	1894	Tamil	319	4.56	7
10	Tamil Nadu Agricultural University	793	Agronomy	100	1.43	11
11	Tamil Nadu Dr. Ambedkar Law University	50	Law	46	0.66	13
12	Tamil Nadu Teachers Education University	2	Research in Education	2	0.03	16
13	Tamil University	5	Environmental and Herbal Science	3	0.04	15
14	Tamil Nadu Physical Education and Sports University	176	Physical Education	131	1.87	10
15	The Tamil Nadu Dr. M.G.R. Medical University	21	Medical	16	0.23	14
16	University of Madras	8617	Commerce	577	8.25	5
	Total	**41870**		**6998**	**100**	

Department of Tamil Studies, Bharathidasan University has deposited second highest number of Theses (816, 11.66%). It is found that the Departments of Commerce, Bharathiar University (596, 8.52%), Manonmaniam Sundarnar University (591, 8.45%) , University of Madras (577, 8.25%) and Madurai Kamaraj University (445, 6.36%) were also deposited a good number of Theses and placed in 3rd, 4th, 5th and 6th rank respectively. The Department of Tamil, Periyar University (319, 4.56%) and Education Department of Alagappa University (318, 4.56%) were contributed a considerable number of Theses and occupied 7th and 8th ranks respectively. It is evident that there is a huge difference in the contributions among the departments e.g. Information and Communication department of Anna University has contributed the highest number of theses (39.83%) by a single department, whereas 60.17% of contributions were contributed by remaining 15 departments of State Universities.

Electronic Theses and Dissertations (ETDs) on various Subjects

Electronic Theses and Dissertations (ETDs) are available on various disciplines in Shodhganga project. It is considered as most preferred resource for research in the educational institutions. The ETDs are available on various subjects in Shodhganga projects. Shodhganga project provides access to the ETDs for the participating Universities on various subjects. They can also download the contents for research and other fair use. The study highlights the number of Theses available on various subjects.

Table 3
ETDs on various Subjects

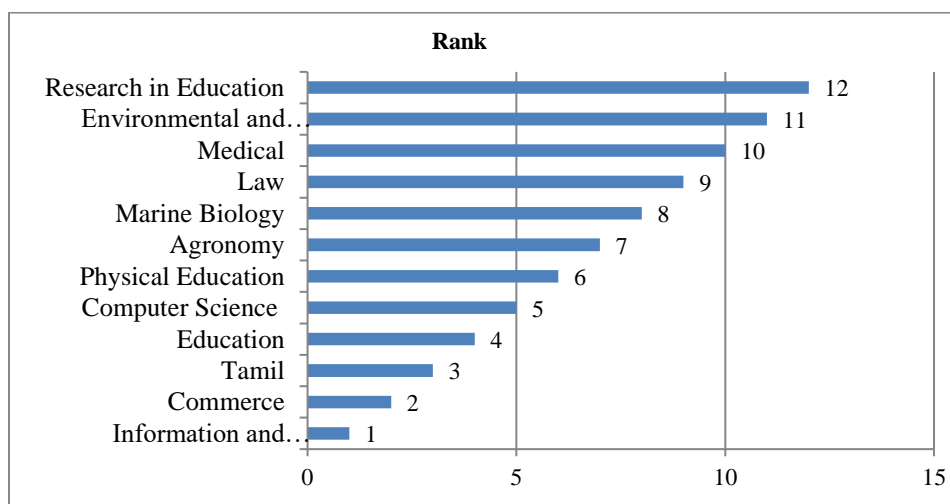| S.No.	Subject	ETDs		
		Nos.	%	Rank
1	Agronomy	100	1.68	7
2	Commerce	1168	19.61	2
3	Computer Science	179	3.00	5
4	Education	318	5.34	4
5	Environmental and Herbal Science	3	0.05	11
6	Information and Communication	2787	46.79	1
7	Law	46	0.77	9
8	Marine Biology	72	1.21	8
9	Medical	16	0.27	10
10	Physical Education	131	2.20	6
11	Research in Education	2	0.03	12
12	Tamil	1135	19.05	3
	Total	**5957**	**100**	

Figure 2.ETDs on various Subjects

The highest contributions of ETDs on various subjects were identified and shown in Table 3 and Figure 2. From the results, it is found that highest number of Theses (2787, 46.79%) were deposited on discipline "Information and Communication". The discipline "Commerce" has been placed in the second highest place with (1168, 19.61%) of theses. A good number of Theses were also deposited on "Tamil" discipline (1135, 19.05%) and placed in 3rd rank. Among 12 disciplines shown in this study, majority of the Theses (85.45%) were found on "Information and Communication", "Commerce" & "Tamil" , 14.55% of the Theses were found on 9 disciplines. Hence, it is inferred that there is a vast gap in the contributions of Theses on various disciplines also.

Conclusion and Recommendations

Today, the users are considered as "Digital Users". The users are required the digital information specifically, online information. The modern libraries have a variety of resources such as e-books, e-journals, databases and ETDs. These resources play a vital role in the academic and R&D institutions. Perhaps, Open Access (OA) platform enables the users to access to the digital information anywhere in the world. The higher educational institutions are also introducing ICT enabled services to support learning, teaching and research. ETD is one of the highly used resources by the research scholars. It helps to access, retrieve and share the information with others. ETD initiatives such as NDLTD, INFLIBNET-Shodhganga will help the researchers to get information for the research. INLIBNET-Shodhganga enables the Universities to deposit/upload their research reports in this project. It also helps other participating Universities to access to the full text for their academic purposes.Based on the results, the following are recommended

1. It is found that only few Universities are actively participating and uploading their research reports in this project. The reasons for less participation and less uploading are unknown. Hence, it is recommended that the Statuary bodies like UGC, AICTE, NCERT and others should encourage the Universities and take suitable measures to increase the quantity.
2. The researchguide/supervisor should ensure that the research reports produced under his/her supervision have been uploaded in the project.
3. The accreditation organization such as NAAC, NBA, and NIRF shall provide some credentials for the actively and regularly uploading theses in this project while assessing the institutions.

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