# Mapping the Contribution of ETDS to Shodhganga by State Universities in Maharashtra in LIS Research

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## ABSTRACT

The present paper evaluates the contribution of ETDs by State Universities in Maharashtra in India's ETD Database-Shodhganga. Shodhganga is the flagship project of INFLIBNET, Ahmedabad which provides open access to theses and dissertations through the repository. As per the present study there are 12 State Universities in Maharashtra providing degrees in non-technical fields in Arts & Humanities, Science and Commerce. Out of these 12 universities, 11 have signed MoU for Shodhganga and only 08 universities shave contributed 181 ETDs in Library & Information Science in Shodhganga. SavitribaiPhule Pune University (Pune), Dr.BabasahebAmbedkarMarathwada University (Aurangabad) and SNDT University (Mumbai) have contributed highest number of ETDs in the repository. The top five Research Guides are also from the universities of Pune and Auranagabad. English was found to be most preferred language for theses and dissertations and Impact of ICT (21), Information Seeking Behaviour (11) and Library Management (9) were found to be the highly preferred areas of Ph.D research. The researcher has also identified certain discrepancies in the List of ETDs in Shodhganga.

**Keywords:** Electronic theses and dissertations, ETD, State Universities of Maharashtra, Library & Information Science Research, Shodhganga, UGC.

## INTRODUCTION

The development of Information, Communication and Technology (ICT) has changed the way the world used to search, collect and disseminate information. Irrespective of the type of document, ICT facilitates larger distribution of the knowledge content through various means. Grey Literature is one such type of document which contains information about research that has either not been published or has limited publication in non-commercial form. Theses and Dissertations come under the category of grey literature. Thesis and dissertation are one of the most important forms of scholarly communication which contain information and results in untouched areas of research or evolving areas of research. The information contained in the printed Thesis and Dissertations have got very limited or no opportunity of dissemination unless and until the Researcher opts for publishing his Research Work as a Book or Research paper.The Electronic format of Thesis and Dissertations (ETD) came as a boon for the situation.

The University Grants Commission Notification (Minimum Standards & Procedure for Award of M.Phil/Ph.D Degree Regulation, 2019 dated 1st June 2009 mandates submission of electronic version of theses and dissertations by the researchers in universities (an aim to facilitate open access to Indian theses and dissertations to the academic community world-wide) in Shodhganga. Universities that sign Memorandum of Understanding (MOU) with the INFLIBNET Centre and mandate submission of electronic version of their theses and dissertation to Shodhganga may get financial assistance from the UGC for digitizing their back-file of theses. This regulation has made it mandatory for all research workers to submit their theses and dissertations in electronic format.

## WHAT ARE ETDs?

Brigham Young University (BYU) explains the concept as "An ETD is an electronic thesis or dissertation document expressed in a form simultaneously suitable for machine archives and worldwide retrieval. The document is similar to its paper predecessor, but differs in that ETDs provide a technologically advanced

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medium for expression. They may be prepared using nearly any word processor or document preparation system and, if desired, the incorporation of relevant multimedia elements. ETDs eliminate the requirement to submit multiple copies on fifty percent cotton bond paper. Consequently, ETDs consume virtually no library shelf space, and never collect dust. Furthermore, with your approval, they can be available to anyone browsing the World Wide Web."

## THE BENEFITS OF ETD CAN BE LISTED AS FOLLOWS

1) ETD becomes one of the most important forms of document through which the researcher can effectively and creatively present their research work to scholars all over the world through World Wide Web (WWW).
2) Duplication of research can be avoided.
3) ETD helps in increasing citation count of the authors.
4) Instead of only being a textual document, ETDs help the researcher to elaborate and clarify the concepts using colorful images, audio, video, hypertext links etc.
5) Due to the electronic mode in which ETDs are present, they don't occupy any physical space in the libraries.
6) Production of ETDs is much cost effective compared to their print versions.

## INFLIBNET'S SHODHGANGA: AN OVERVIEW

"Shodhganga" is the name coined to denote digital repository of Indian Electronic Theses and Dissertations set-up by the INFLIBNET Centre. The word "Shodh" originates from Sanskrit and stands for research and discovery. The "Ganga" is the holiest, largest and longest of all rivers in Indian subcontinent. The Ganga is the symbol of India's age-long culture and civilisation, everchanging, ever-flowing, ever-loved and revered by its people, and has held India's heart captive and drawn uncounted millions to her banks since the dawn of history. Shodhganga stands for the reservoir of Indian intellectual output stored in a repository hosted and maintained by the INFLIBNET Centre.

The Shodhganga@INFLIBNET is set-up using open source digital repository software called DSpace. The DSpace uses internationally recognized protocols and interoperability standards. Shodhganga provides a platform for research scholars to deposit their Ph.D. theses and make it available to the entire scholarly community in open access. The repository has the ability tocapture, index, store, disseminate and preserve ETDs (Electronic Theses and Dissertations) submitted by the researchers.As on 31stJanuary 2019,438 Universities have signed MoU with Shodhganga and 215255 theses are uploaded. Out of the 438 Universities, 388 are contributing the ETDs at present. ShodhGangotri is the Repository of Research in Progress in India in various universities in variety of subjects. Shodhganga is an extension to ShodhGangotri.

## REVIEW OF LITERATURE

Subbiah (2018) overviewed the contributions made by the Tamil Nadu State Universities of India to Shodhganga and found that 41 Universities from Tamil Nadu were listed by UGC out of which 33 Universities had signed MoU with Shodhganga INFLIBNET. Subbiah also stated that open ETDs play vital role for researchers as they provide information to avoid duplication of research. Jhamb&Samim (2017) studied contribution of theses faculty wise and year wise from different central universities in India and found that there are in total 46 central universities in India as listed in UGC website out of which only 25 are sharing their research outputs to Shodhganga or are the ones which have signed MoU with Shodhganga. Like Subbiah, they also agreed on the point that Open ETD plays an important role in the academic community as it helps in preventing duplication of research work already been done. Panda (2016) examined

the progress and current status of Shodhganga on June 2015 and found that a total of 40,175 theses have been deposited in the repository by 217 universities in India. Jawaharlal Nehru University, New Delhi ranked first by contributing 4570 theses followed by Anna University (2910) and Mahatma Gandhi University (2056). Highest number of theses has been submitted from the state of Tamil Nadu. Panda recommended that besides UGC-recognized universities, other private/deemed universities, IITs, NITs and IISERs should also be welcomed for depositing their research work in Shodhganga for fastest and worldwide dissemination of information. Gupta & Gupta (2014) critically analyzed the Electronic Theses and Dissertation (ETD) repository creation efforts by various institutions in India and whether the guidelines issued for depositing ETDs by various government bodies in India are sufficient to implement the ETD submission nationwide. The study revealed that majority of the Institutions are busy with the government-funded projects of retro-conversion of the PhD theses piled up in their libraries and have not taken sufficient steps for accepting the current ETD and ETD creating facilities for the researchers.Chatha (2016) identified the number of theses/dissertations submitted in the INFLIBNET Shodhganga ETD Repository in Library & Information Science by Indian universities till June 2016 and found that 727 theses/dissertations were submitted in LIS by 61 universities. The analysis of the data also revealed that 50% of the ETDs in Shodhganga in LIS were contributed by Universities from South India. English was found to be the most preferred language of research. Chatha also found that Universities of State of Karnataka topped the ETD submission list with 89 items followed by Aligarh Muslim University with 68 ETDs. Verma (2018) evaluated the LIS research contribution by central universities of India to Shodhganga in form of ETDs and found that out of the 46 central universities listed in UGC website, 27 singed MoU with INFLIBNET to contribute their theses on Shodhganga. Out of this only 07 Central Universities in India are contributing there in Shodhganga repository in LIS subject. Total 131 ETDswere uploaded and Aligarh Muslim University ranked 01 with highest contribution (76) and top six most productive supervisors are also from same universities. Library services (34), Information seeking behavior and user needs (15) and ICT and its application (10) are domination area of research in LIS among uploaded theses.

## SCOPE OF THE STUDY

The scope of the present research is limited to ETD contributions made by the Universities of Maharashtra in Shodhganga ETD Repository. The data is collected from Shodhganga Website (http://shodhganga.inflibnet.ac.in/) till January 2019. As per the information available in UGC website there are 12 State Universities in Maharashtra providing degrees in Non-technical fields like Arts and Humanities, Science & Commerce. Out of these 12 State Universities, 11 of them have signed MoU for Shodhgangawith INFLIBNET Centre, Ahmedabad. Gondwana University has not signed MoU for Shodhganga. All the 11 State Universities are contributing ETDs to Shodhganga. However, University of Mumbai, Rashtrasant Tukadoji Maharaj Nagpur University and YashwantraoChavan Maharashtra Open University have not submitted any ETD on LIS. Remaining 08 Universities have contributed 180 ETDs in Library & Information Science to Shodhganga.

## OBJECTIVES OF THE STUDY

1. To find out the status of ETD contribution of State Universities of Maharashtra in Shodhganga.
2. Mapping the ETD contribution in the field of Library & Information Science by the State Universities of Maharashtra in Shodhganga.
3. To find out the most productive Research Guide in LIS Research based on the ETD contributions in Shodhganga.
4. Ranking of the State Universities of Maharashtra depending upon the ETD contributions made in Shodhganga.
5. To check the language dominance in contributed ETDs.

6.  To identify the research areas in Library & Information Science on which ETDs have been submitted till now in Shodhganga by State Universities of Maharashtra.

## METHODOLOGY

Data for the present research was collected from Shodhganga and analysed using the parameters of University, Language, Research Topic, Keyword and Research Guide. The data was interpreted using tabular format and graphs.

## DATA ANALYSIS & INTERPRETATION

### 1. Status of ETD contribution of State Universities of Maharashtra in Shodhganga

Table-1 shows the ETD contribution of the 12 State Universities of Maharashtra in Shodhganga. The data collected is till 31ˢᵗ January 2019. Out of the 12 Universities, Gondwana University has not signed MoU with INFLIBNET for Shodhganga due to which there is no ETD contribution of the University in the Repository. The remaining 11 universities contributed 22949 ETDs in Shodhganga. SavitribaiPhule Pune University ranked highest by contributing 9702 (42.27%) ETDs in Shodhganga followed by Dr.BabasahebAmbedkarMarathwada University with 5035 (21.9%) ETDs and Shivaji University contributing 3495 (15.22%) ETDs in Shodhganga. The data collected also shows that University of Mumbai which is the oldest State University of Maharashtra and one of the Oldest Universities of India and provides Ph.D in 78 subjects in 04 Faculties of Science & Technology; Humanities; Commerce & Management and Interdisciplinary Studies has contributed only 11 ETDs till date in Shodhganga. The same is the case with Rashtrasant Tukadoji Maharaj Nagpur University which is the second oldest university in Maharashtra and has contributed only 01 ETD in Shodhganga.

The 03 Universities in Pune, Aurangabad and Kolhapur totally share 79.39% of ETD contribution by State Universities of Maharashtra in Shodhganga. Remaining 20.61% ETD contribution is shared among the other 08 State Universities of Maharashtra.

| Sr.No | University | Location | Year of Estd. | MoU Signed for Shodhganga | Total No. of Theses uploaded in Shodhganga | Percentage |
|---|---|---|---|---|---|---|
| 1. | SavitribaiPhule Pune University (SPPU) | Pune | 1949 | 27.4.2011 | 9702 | 42.27% |
| 2. | Dr. BabasahebAmbedkarMarathwada University (BAMU) | Aurangabad | 1958 | 12.8.2013 | 5035 | 21.9% |
| 3. | Shivaji University (Shivaji Univ.) | Kolhapur | 1962 | 26.9.2011 | 3495 | 15.22% |
| 4. | Swami RamanandTeerthMarathwada University (SRTMU) | Nanded | 1995 | 7.8.2013 | 2303 | 10.03% |
| 5. | ShreematiNathibaiDamodarThackersey Women's University (SNDT) | Mumbai | 1916 | 28.8.2012 | 1014 | 4.41% |
| 6. | SantGadge Baba Amravati University (SGBAU) | Amravati | 1983 | 9.10.2012 | 947 | 4.12% |
| 7. | KavayitriBahinabaiChaudhariNorth Maharashtra University(KBCNMU) | Jalgaon | 1991 | 10.4.2014 | 278 | 1.21% |
| 8. | Solapur University (SU) | Solapur | 2004 | 24.3.2015 | 162 | 0.70% |
| 9. | University of Mumbai (MU) | Mumbai | 1857 | 28.1.2015 | 11 | 0.04% |
| 10. | Gondwana University (GU) | Gadchiroli | 2011 | ------------ | ------------ | ----------- |
| 11. | RashtrasantTukadojiMaharaj Nagpur University (RTMNU) | Nagpur | 1923 | 9.6.2017 | 01 | 0.00% |

| 12. | YashwantraoChavan Maharashtra Open University (YCMOU) | Nasik | 1990 | 28.1.2015 | 01 | 0.00% |
|---|---|---|---|---|---|---|
| | **TOTAL** | | | | **22949** | **100%** |

**Table 1: Status of ETD Contribution of State Universities of Maharashtra in Shodhganga**

The current percentage of ETD contribution across the State Universities in Maharashtra seems to be poor. The available data in Shodhganga also shows that Universities are not following the Mandatory rules set up by University Grants Commission (UGC) mandatorily. Else these universities too would have contributed more ETDs in Shodhganga.

## 2) ETD contribution in the field of Library & Information Science(LIS) by State Universities of Maharashtra

| Sr.No. | University | Theses & Dissertations in LIS contributed to Shodhganga | Percentage |
|---|---|---|---|
| 1. | SavitribaiPhule Pune University (SPPU), Pune | 76 | 42% |
| 2. | Dr. BabasahebAmbedkarMarathwada University (BAMU), Aurangabad | 55 | 30.4% |
| 3. | ShreematiNathibaiDamodarThackersey Women's University (SNDT), Mumbai | 14 | 7.7% |
| 4. | Shivaji University (Shivaji Univ.), Kolhapur | 13 | 7.2% |
| 5. | SantGadge Baba Amravati University (SGBAU), Amravati | 13 | 7.2% |
| 6. | Swami RamanandTeerthMarathwada University (SRTMU), Nanded | 06 | 3.3% |
| 7. | KavayitriBahinabaiChaudhariNorth Maharashtra University(KBCNMU), Jalgaon | 03 | 1.7% |
| 8. | Solapur University (SU), Solapur | 01 | 0.5% |
| 9. | University of Mumbai (MU), Mumbai | 00 | 00 |
| 10. | Gondwana University (GU), Gadchiroli | ----------- | --------- |
| 11. | RashtrasantTukadojiMaharaj Nagpur University (RTMNU), Nagpur | 00 | 00 |
| 12. | YashwantraoChavan Maharashtra Open University (YCMOU), Nasik | 00 | 00 |
| | **TOTAL** | **181** | **100%** |

**Table 2: ETD Contribution in LIS by State Universities of Maharashtra in Shodhganga**

Table-2 shows the ETD contribution of State Universities of Maharashtra in the field of Library & Information Science. As stated earlier in the study, out of the 12 State Universities in Maharashtra, Gondwana University has not signed MoU for Shodhganga due to which there is no ETD contribution made by the University in the repository. All the universities are offering Ph.D Program in Library & Information Science. From the 11 universities, SavitribaiPhule Pune University contributes 42% of the total ETD contributions made by the State Universities of Maharashtra by depositing 76 ETDs to the repository. It is followed by Dr.BabasahebAmbedkarMarathwada University contributing 55 ETDs and SNDT Women's University with 14 ETDs. Both Shivaji University and SantGadge Baba Amravati University have contributed 13 ETDs in Shodhganga. State Universities in Nanded, Jalgaon and Solapur contribute 06, 03 and 01 ETD respectively. The data collected from Shodhganga also shows that old Universities like University of Mumbai and RashtrasantTukadojiMaharaj Nagpur University have not contributed a single

ETD till date in Shodhganga. YCMOU which provides Ph.D in Distance Education mode also has no contribution of ETD in LIS in the repository.

### 3) Most productive Research Guide in LIS Research based on the ETD contributions in Shodhganga

Table-3 shows the most productive Ph.D Research Guide in Library & Information Science with respect to the Ph.D Theses submitted to Shodhganga. After analysis it is found that there are totally 47 Research Guides whose supervised Ph.D Theses is contributed in Shodhganga till date. The ranking of Research guides is done from 1 to 12. On the basis of the data collected from Shodhganga, there are three research guides who are associated with more than one university.

| Sr. | Name of the Guide | Name of the University the Research Guide is Associated with respected Theses | No. of Theses | Rank |
|---|---|---|---|---|
| 1. | Dr.N.J.Deshpande | SavitribaiPhule Pune University (13) &Shivaji University (1) | 14 | 1 |
| 2. | Dr.S.K.Patil | SavitribaiPhule Pune University (13) | 13 | 2 |
| 3. | Dr.A.A.Vaishnav | Dr.BabasahebAmbedkarMarathwada University | 10 | 3 |
| 4. | Dr.VaishaliKhaparde | Dr.BabasahebAmbedkarMarathwada University | 9 | 4 |
| 5. | Dr.A.R.D. Prasad | SavitribaiPhule Pune University | 8 | 5 |
| 6. | Dr.S.N.Singh | SavitribaiPhule Pune University | 8 | |
| 7. | Dr.M.B.Konnur | SavitribaiPhule Pune University | 8 | |
| 8. | Dr.ShakuntalaLomte | Dr.BabasahebAmbedkarMarathwada University | 7 | 6 |
| 9. | Dr.ShashankSonawane | Dr.BabasahebAmbedkarMarathwada University(6) &KavayitriBahinabaiChaudhariNorth Maharashtra University(1) | 7 | |
| 10 | Dr.D.K.Veer | Dr.BabasahebAmbedkarMarathwada University(5) & Swami Ramanand Teeth Marathwada University (1) | 6 | 7 |
| 11 | Dr.Harsha Parekh | SNDT Women's University | 6 | |
| 12 | Dr.P.S.G.Kumar | SantGadge Baba Amravati University | 6 | |
| 13 | Dr.S.G.Mahajan | SavitribaiPhule Pune University | 6 | |
| 14 | Dr.S.P.Chavan | Dr.BabasahebAmbedkarMarathwada University | 6 | |
| 15 | Dr.S.R.Ganpule | SavitribaiPhule Pune University | 6 | |
| 16 | Dr.M.R.Riswadkar | SavitribaiPhule Pune University | 5 | 8 |
| 17 | Dr.Rajyalaxmi D. | SantGadge Baba Amravati University | 5 | |
| 18 | Dr.S.M.Mohal | Dr.BabasahebAmbedkarMarathwada University | 5 | |
| 19 | Dr.BharatiSen | SNDT Women's University | 4 | 9 |
| 20 | Dr.B.M.Panage | SavitribaiPhule Pune University | 3 | 10 |
| 21 | Dr.P.V.Konnur | Shivaji University | 3 | |
| 22 | Dr.S.P.Satarkar | Swami Ramanand Teeth Marathwada University | 3 | |
| 23 | Dr.C.R.Karisidappa | Shivaji University | 2 | 11 |
| 24 | Dr.D.D.Patil | Dr.BabasahebAmbedkarMarathwada University | 2 | |
| 25 | Dr.I.K.RavichandraRao | SavitribaiPhule Pune University | 2 | |
| 26 | Dr.R.M.Kumbhar | SavitribaiPhule Pune University | 2 | |
| 27 | Dr.S.K.Savanur | Shivaji University | 2 | |
| 28 | Dr.S.R.Gunjal | Shivaji University | 2 | |
| 29 | Dr.SushmaPowdwal | SNDT Women's University | 2 | |
| 30 | Dr.AnilChikate | KavayitriBahinabaiChaudhariNorth Maharashtra University | 1 | 12 |
| 31 | Dr.DayaDalve | Swami Ramanand Teeth Marathwada University | 1 | |
| 32 | Dr.GovindAdhe | Dr.BabasahebAmbedkarMarathwada University | 1 | |
| 33 | Dr.H.G.Vidhate | Dr.BabasahebAmbedkarMarathwada University | 1 | |

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| 34 | Dr.H.S.Waydande | Shivaji University | 1 | |
|----|-----------------|-------------------|---|--|
| 35 | Dr.M.R.Kherde | SantGadge Baba Amravati University | 1 | |
| 36 | Dr.N.G.Bapat | Dr.BabasahebAmbedkarMarathwada University | 1 | |
| 37 | Dr.N.I.Divatankar | Shivaji University | 1 | |
| 38 | Dr.R.S.Wanare | Dr.BabasahebAmbedkarMarathwada University | 1 | |
| 39 | Dr.S.A.Wadikar | Dr.BabasahebAmbedkarMarathwada University | 1 | |
| 40 | Dr.S.M.Pujar | Shivaji University | 1 | |
| 41 | Dr.ShamkantDeshmukh | KavayitriBahinabaiChaudhariNorth Maharashtra University | 1 | |
| 42 | Dr.ShivshankarGhumre | Dr.BabasahebAmbedkarMarathwada University | 1 | |
| 43 | Dr.Sivani Sengupta | SavitribaiPhule Pune University | 1 | |
| 44 | Dr.UdhavBhosale | SNDT Women's University | 1 | |
| 45 | Dr.V.M.Bhagwatkar | SantGadge Baba Amravati University | 1 | |
| 46 | Dr.VaishaliChoukhande | Swami Ramanand Teeth Marathwada University | 1 | |
| 47 | Prof.B.Anderson | SavitribaiPhule Pune University | 1 | |

**Table 3: Ranking of the Most Productive Ph.D Research Guide in LIS**

Dr.N.J.Deshpande ranks 1 with 14 theses available in Shodhganga under her supervision. Out of these 14 theses, 13 are supervised by Dr.N.J.Deshpande in SavitribaiPhule Pune University and 01 in Shivaji University.Dr.S.K.Patil with 13 Ph.D Theses under his supervision at SavitribaiPhule Pune University is at Rank 2 followed by Dr.A.A.Vasihnav of Dr.BabasahebAmbedkarMarathwada University with 10 theses under her supervision.Dr.VaishaliKhaparde from Dr.BabasahebAmbedkarMarathwada University is at Rank 4 with 09 Ph.D theses under her guidance in the repository. Dr.A.R.D.Prasad, Dr.S.N.Singh&Dr.M.B.Konnur from SavitribaiPhule Pune University with 05 Ph.D Theses under their supervision are at Rank 5. Dr.Lomte and Dr.Sonawane from Dr.B.A.Marathwada University are at Rank 6 with 07 theses under their supervision in Shodhganga. 06 Ph.D Guides namely Dr.D.K.Veer, Dr.Harsha Parekh, Dr.P.S.G.Kumar, Dr.S.G.Mahajan, Dr.S.R.Ganpule and Dr.S.P.Chavan are at Rank 7 with 06 Ph.D theses under their supervision. Dr.M.R.Riswadkar, Dr.Rajyalakshmi&Dr.Mohal from Pune, Amravati and Aurangabad State Universities are at Rank 8 with 05 theses under their supervision being present in the repository collection. Dr.Sen from SNDT Womren's University is at 9th Rank with 04 theses under her guidance. 03 theses each under the supervision of Dr.B.M.Panage, Dr.P.V.Konnur and Dr.S.P.Satarkar are at 10th Rank in the list. Rank 11 of the list of most productive research guides in LIS as per the data available in Shodhganga of the State Universities in Maharashtra, is shared by 07 Ph.D Research Guides followed by 18 Ph.D Research Guides at rank 12 with 01 thesis under their supervision available in Shodhganga under the State Universities of Maharashtra.

**4) Language dominance of the contributed ETDs in LIS in Shodhganga**
Table-4 shows that out of the 181 theses contributed by State Universities of Maharashtra in Library & Information Science, 173 ETDs are in English which is a universal language across the world. This proves that majority of research scholars prove reporting their research works in universal language like English so that they can reach out to vast population. Only 08 theses from Dr.BabasahebAmbedkarMarathwada University are in Marathi which is the State language/ official language of Maharashtra and 01 thesis from SantGadge Baba Amravati University is in Marathi.

| Sr.No. | University | Theses & Dissertations in LIS contributed to Shodhganga | Theses in English | Theses in Marathi (State Language) |
|--------|------------|--------------------------------------------------------|-------------------|------------------------------------|
| 1. | SavitribaiPhule Pune University (SPPU), Pune | 76 | 76 | -------- |
| 2. | Dr. BabasahebAmbedkarMarathwada | 55 | 48 | 07 |

| Sr.No. | University | | | |
|---|---|---|---|---|
| | University (BAMU), Aurangabad | | | |
| 3. | ShreematiNathibaiDamodarThackersey Women's University (SNDT), Mumbai | 14 | 14 | --------- |
| 4. | Shivaji University (Shivaji Univ.), Kolhapur | 13 | 13 | --------- |
| 5. | SantGadge Baba Amravati University (SGBAU), Amravati | 13 | 12 | 01 |
| 6. | Swami RamanandTeerthMarathwada University (SRTMU), Nanded | 06 | 06 | --------- |
| 7. | KavayitriBahinabaiChaudhariNorth Maharashtra University(KBCNMU), Jalgaon | 03 | 03 | --------- |
| 8. | Solapur University (SU), Solapur | 01 | 01 | --------- |
| 9. | University of Mumbai (MU), Mumbai | 00 | --------- | --------- |
| 10. | Gondwana University (GU), Gadchiroli | --------- | --------- | --------- |
| 11. | RashtrasantTukadojiMaharaj Nagpur University (RTMNU), Nagpur | 00 | 00 | --------- |
| 12. | YashwantraoChavan Maharashtra Open University (YCMOU), Nasik | 00 | 00 | --------- |
| | **TOTAL** | **181** | **173** | **08** |

**Table 4: Language dominance in ETDs available in LIS in Shodhganga contributed by StateUniversities of Maharashtra**

## 5) Areas of Research in Library & Information Science

Table-5 presents the areas of research in Library and Information Science and attempts to find out the area in which maximum research work is done in LIS by the State Universities of Maharashtra. It is found that there are varieties of areas in which research is conducted in LIS in the State Universities of Maharashtra but out of the 181 theses/dissertations contributed by the universities in Shodhganga, 21 ETDs belong to Impact of ICT/Internet Usage/Use of Electronic Resources. 11 ETDs studied the Information seeking behavior of library users; 09 ETDs where found to deal with Concepts of Library Management; 08 ETDs analyzed the citations of Ph.D theses submitted in some specific subject; 07 ETDs dealt with Information literacy and Open Access Initiatives; 06 ETDs were found to study concepts related to Cataloging, Public Library Movement, Library & Information Science Education and Bibliometrics; 05 ETDs studied Library Classification, Scientometrics and College Libraries; 04 theses covered the area of Library Networks/ Networking of Libraries; 03 ETDs studied the Design & Development of National Library, Institutional Repositories, ETD Repositories and Assessment of Libraries. Research areas like Evaluation of Indexing & Abstracting Services, Information Retrieval Systems, Digital Library, Information Audit etc. were undertaken for research only twice. 28 Research areas were identified viz. Quick Response Code, Augmented Reality Application, Information as a Commodity, Patent Literature, SWOT Analysis etc. on which only one thesis is available in Shodhganga.

| Sr.No. | Keyword | No. of Theses/ Dissertations |
|---|---|---|
| 1. | Impact of ICT , Internet Usage, Use of electronic resources | 21 |
| 2. | Information Seeking Behaviour | 11 |
| 3. | Library Management, HRD, Library services, Financial Management | 9 |
| 4. | Citation Analysis | 8 |
| 5. | Information Literacy, Open Source Software, Open Source Initiatives | 7 |
| 6. | Cataloguing, AACR2, MARC21,WINISIS,Publication,Distribution, | 6 |

| | | |
|---|---|---|
| | Public Libraries, Library & Information Science Education, Bibliometrics | |
| 7. | Library Classification, Vocabulary, Scientometric study, College Libraries | 5 |
| 8. | Library Network | 4 |
| 9. | Design & Development of National Library, Information Systems, Institutional Repositories, ETD Repositories, Assessment of Libraries | 3 |
| 10. | Design & Development of IRS, Evaluation of Indexing & Abstracting Services, Digital Library, Library Management software, Organization & Dissemination of Knowledge, Library Legislation, Information Audit/Security Audit, Job Satisfaction, Mapping of Periodicals, Evaluation of library Websites | 2 |
| 11. | Quick response code, Augmented reality Application, Mobile base library Services, Integrated Information System, Remote Sensing of Data, Conservation & Preservation of Library Materials, Digitization of Rare Materials, Music Libraries, Organization & Management of Marathi Manuscripts, Subject Headings, Historical Background, Transnational Library Relations, Resource Sharing, Information as a Commodity, Human relations, Use of Journals, Use of GIS, Patent Literature, Library Infrastructure, Library Movement, Library development, Case Study of Library, Radiometric correction, Disaster Management, Library collection evaluation, Continuing Education programs, Change Management, SWOT Analysis | 1 |

**Table 5: Areas of Research in Library & Information Science**

## MAJOR FINDINGS OF THE STUDY

1. There are 12 State Universities of Maharashtra, out of which except Gondwana University rest of the 11 Universities have signed MoU for Shodhganga with INFLIBNET and have contributed 22949 theses and dissertations in Shodhganga. SavitribaiPhule Pune University ranks 1<sup>st</sup> with 9702 ETDs in the repository followed by Dr,BabasahebAmbedkarMarathwada University at 2<sup>nd</sup> Rank with 5035 ETDs and Shivaji University at 3<sup>rd</sup> Rank with 3495 ETDs.

2. All the 11 State Universities of Maharashtra offer Ph.D Program in Library & Information Science. But only 08 Universities have contributed LIS theses and dissertations in Shodhganga. University of Mumbai, RashtrasantTukadojiMaharaj Nagpur University and YashwantraoChavan Maharashtra Open University have not made any theses and dissertation contribution in LIS in Shodhganga. From total 22949 theses and dissertations contributed by the State Universities, 181 theses and dissertations belong to Library & Information Science in Shodhganga.Therefore it can be stated that as per the data collected from Shodhganga till 31<sup>st</sup> January 2019, 0.78% Library & Information Science ETDs are contributed by State Universities of Maharashtra in the repository.

3. SavitribaiPhule Pune University (SPPU) and Dr.BabasahebAmbedkarMarathwada University's being the most productive LIS Departments have the top 05 ranked Ph.D Research Guides in LIS. Dr.N.J.Deshpandeof SPPU, Pune with 14 ETDs has the highest number of theses and dissertations in Shodhganga in LIS in State Universities of Maharashtra and is ranked 1. The 2<sup>nd</sup> and 3<sup>rd</sup> rank are from SPPU and Dr.B.A.Marathwada University respectively.

4. English being the universal language and has the maximum number of readers across the world makes it the most widely used language in theses and dissertations also. Only 08 (4.42%) theses are in Marathi out of the total contribution of 181 ETDs in LIS.

5. Majority of theses and dissertations available in Shodhganga in LIS are on Impact of ICT/ Internet Usage Studies, Information seeking behavior, Library financial management, Information literacy etc.

[37]

## PROBLEMS FACED WHILE COLLECTING DATA FOR THE PRESENT STUDY

1. While collecting data regarding the number of theses uploaded by a particular university in Shodhganga, it was found that regarding Shivaji University, SantGadge Baba Amravati University, S.P.Pune University and SNDT Women's University, same thesis has been uploaded twice or thrice with different URI, no or different Keywords and different date of uploading it on Shodhganga. For example, a thesis titled *'MEDLINE on CD ROM: An analysis of user search behaviour'* of SNDT Women's University is uploaded thrice on 8.6.2017, 28.2.2017 &25.5.2018 with different keywords during each uploaded. Due to this discrepancy the total count of theses is shown as 16 whereas there are only 14 theses of SNDT Women's University in LIS on Shodhganga. This kind of double uploading ultimately increases the number of total ETDs of a University/ Subject/Research Guide. The repository needs to track down such problems and update its data. For the present study each thesis has been counted only once.

2. The Keywords provided to the theses and dissertation are sometimes very vague and do not represent the main area of research of the researcher. For eg. Keyword like Hypotheses, Literature, Salvador etc. do not represent the main topic or area of research. Proper keywords representing the areas of research/main concept of researchshould be provided while uploading the theses. This will help in retrieving the ETD using Keywords.

3. The Guide Name and Researcher Name is not entered by following a particular format due to which in Department the 'Browse by Researcher/ Guide' option, to see the contributions of a single Research Guide, one needs to check a name in different formats. For eg. The Most productive Research Guide Dr.N.J.Deshpande's name is entered as Deshpande, N J; Deshpande, Neela; DeshpandeNeela J and Deshpande, NeelaJayant. One needs to search all the formats to get total count of ETDs contributed by a Guide.

## CONCLUSION

Theses and dissertations have always been the most important type of document for scholarly information which comes under the category of Grey Literature with minimum chances of availability for general public. Due to the uniqueness of content these documents are expected to be stored by the university libraries. The knowledge stored in these documents remains unexplored by researchers worldwide. The Budapest Open Access Initiative in 2002 aggravated the Open Access Movement; ETD Repositories now make it possible for the theses and dissertations to get accessed in form of abstract/ subscription based/ full-text open access. Shodhganga is the biggest online open access ETD Database of INFLIBNET which provides open access to the otherwise grey literature. Although at present there are 215255 theses and dissertations being contributed by various universities but the present paper which presents the scenario of State Universities of Maharashtra also proves that there are various universities who have either not yet signed MoU with INFLIBNET for Shodhganga or who have signed MoU but not contributed a single theses to the repository. State Universities in Mumbai and Nagpur being the oldest institutions must contribute theses and dissertations in Shodhganga which proves to be highly beneficial to put their research output in global map. The university authorities, librarians and repository administrators must take efforts to overcome this gap in awarding Ph.D and submission of theses to Shodhganga which will help in increasing the number of ETDs in the repository.

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