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# **National Policy framework for building ETDs in India: with Special Reference of UGC Regulations and Open DOAR Institutional Repositories**

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## **Abstract**

*To create awareness about responsible conduct of research, thesis, dissertation, promotion of academic integrity and prevention of misconduct including plagiarism in academic writing among student, faculty, researcher and staff is the main challenge behind higher educational institutions in India. Up to the 2005 theses, dissertations, research papers and rare collection in most of the Indian libraries, are kept in closed access and it is very difficult to the researchers to access them as a reference source for the further study as well as to avoid duplication, to avoid plagiarism to maintain research ethics in the research, but after that in India UGC and Many higher/research education institutions taking lead to develop Institutional repositories (IR) for Collect, Manage, Disseminate, and Preserve scholarly work created by the Teachers and researchers.*

*In this regard, this research paper presents the National Policy framework in India for building ETD repositories i.e UGC Regulations 2005, 2009, 2016 and 2018 as well as present Indian scenario in developing the Institutional Repositories. Total 84 Institutional Repositories in India have been analyzed based on selected study criteria like Type of IR, Present Status of Institutional Repository, software used for repositories, total no of items available in IR, total ETD available in IR, subject wise analysis, language wise analysis, issues and barriers in developing IRs/ETDs in India.*

**Key words:** *National Policy Framework, , Electronic Theses and Dissertations (ETD), India Institutional Repository, Open Access, OpenDOAR.*

## **Introduction:-**

Higher education institutions all over the world are experiencing the necessity of managing their education, research and resources in a more effective way. Open access Institutional Repositories(IR) are the best way through which the institutional outputs will open up to the world, IR helps in maximizing the visibility and impact of these outputs as a result enabling and encouraging interdisciplinary approaches to research. Due to various benefits of institutional repositories, various institutions are developing their own repositories. Up to the

2005 theses collection in most of the Indian libraries, are kept in closed access and it is very difficult to the researchers to access them as a reference source for the further study as well as to avoid duplication in the research. (Sengupta, 2012).

Indian national agencies like University Grants Commission (UGC), Indian Council of Agricultural Research (ICAR), are initiating several steps to promote the ETD culture by providing, policy guidelines, required infrastructure and imparting training to people involved. Organizations like INFLIBNET and others have already created sizeable online database containing metadata and are accessible to everyone. Major projects like Vidyanidhi have demonstrated the need and feasibility of creating ETD databases at the national level. Some of the leading universities and institutions have already taken a plunge and started creating ETD collection. Quite a few subject discipline based self archives have sprung up during the last few years who also cover ETDs. The ETD momentum is fast catching up and one can now see increasing visibility for the Indian academic research. (Kumbar T.S., 2009).

#### **Review of Literature:-**

For the present study research oriented practical papers and University Grants Commissions official circulars/notifications and regulations referred as supporting documents for the present study. Like Sengupta, (2012). Kalbande, (2012). Kumbar T.S.,(2009),Bandra,(2002), Hirwade,(2011), Lihitkar, Shalini (2009), UGC Regulations (2005), UGC Regulations (2009),UGC Regulations (2016),UGC Regulation (2018). All referred papers documents acknowledged in references.

#### **Advantages of ETDs:-**

1. To empower students to convey a richer message through the use of multimedia and hypermedia technologies;
2. To improve graduate education by allowing students to produce electronic documents, use digital libraries and understand issues in publishing;
3. To increase the availability of student research for scholars and preserve it electronically;
4. To lower the cost of submitting and handling theses and dissertations;
5. To empower universities to unlock their information resources; and
6. To advance digital library technology. (Bandra, 2002)

## **Research Methodology**

Total 04 UGC Regulations and 84 Institutional Repositories (IR) was selected and browsed for the present paper. The data related to the institutional repositories have been collected from Opendoar and ROAR website. The data is analyzed based on selected parameters, like Type of IR, Status of Institutional Repository, software used for repositories, total no of items, subject covered, languages and issues and barriers in self archiving approach of researchers in India.

## **Objectives of the study**

- To Study the UGC Regulations
- To find out type of Institutional Repositories,
- To find the present Status of Institutional Repository,
- To find software used for repositories,
- To find out total no of items available in IR,
- To identify subject covered.
- To identify the languages used in IRs.
- To Compile web Directory of Indian IRs.
- To identify issues and barriers in Building IR.
- To identify ETD initiatives in India.

## **Scope of the Present Study:**

The data for the present study was collected exclusively from the “Directory of Open Access Repositories”, popularly known as OpenDOAR (<http://v2.sherpa.ac.uk/opensoar/>) developed by Indian institutions. 85 Indian Open Access Repositories identified in OpenDOAR during the period March 01-31, 2021. Out of 85 total 84 were found fully functioned and 01 IR withdrawn from OpenDOAR Directory. Therefore 84 IRs studied in this paper.

## **National Policy Framework in India**

University Grants Commission has played a vital role in framing national policies for digitization of theses and dissertations in India universities.

## **UGC Regulations 2005**

In 2005, the University Grants Commission of India (UGC) drafted a national policy framework entitled “UGC (Submission of Metadata and Full-text of Doctoral Theses in Electronic Format) Regulations, 2005”. UGC’s Regulatory Framework aims at evolving a mechanism to improve the quality, accessibility and availability of Indian theses and to

implement uniform standards for creating metadata of doctoral theses and a system for collecting and collating this standardized data. (UGC Regulation, 2005)

Regulation proposed two sets of planned actions, such as:

***Creation of Indian National Theses Database (INTED):***

Proposed Indian National Theses Database (INTED) is an online centralized bibliographic database, where online submission of metadata sets of a PhD thesis is made mandatory when the researcher finally submits his/her PhD thesis to the Research Cell of a university. The PhD supervisor verifies and validates the metadata of submitting PhD thesis. The INTED will be freely accessible worldwide and will have simple and advanced search interfaces. Hence, bibliographic control of all recent PhD theses is assured. Although this online database will be accessible free of charge, its CD-ROM version will be made available at a price.

***Submission of PhD Theses in Electronic Form***

The researcher will submit his/her PhD thesis in an appropriate electronic format, alongside hard copies of his/ her thesis. The UGC Regulations also suggest a specific content structure of electronic thesis, which is derived from the best practices of international ETD sites. The submitted electronic copy of the doctoral thesis will be stored in the respected University's ETD repository or institutional repository. The ETD repository or institutional repository should be OAI-PMH compliant, so that metadata harvesting services can collect metadata of each submitted/ awarded doctoral thesis. The administrator of the ETD repository will also check the quality of metadata information.

The university will set up committees to formulate copyright and IPR policies, access policy, plagiarism monitoring policy, and other norms related to ETD repository. The access to ETD database can be allowed any of the following: worldwide open access, campus-only access, temporary restricted access, and mixed access (partially open). The ETD may contain textual data along with images, audio objects, video objects, animation objects, spatial objects and other kind of multimedia objects. The ETD can be navigated non-linearly. Thus, hard copy of a thesis document has less number of functionalities than electronic copy of a thesis. The proposed ETD repositories in universities will be developed using latest versions of IR software and will adopt latest versions of metadata schema to handle the advanced features of ETD. (Hirwade,2011).

### **UGC Regulations 2009**

In 2009, UGC has given one more regulation in context to “Minimum Standards and Procedure for awards of M. Phil / Ph.D.” Under Clause 19, the regulation provides guidelines for creation for Depository with UGC. The Clause 19 is reproduced as it is below.

**Clause 19:-** Following the successful completion of the evaluation process and announcement of the award of M.Phil/Ph.D., the university shall submit a soft copy of the M.Phil / Ph.D. thesis to the UGC within a period of thirty days, for hosting the same in INFLIBNET, accessible to all institutions / universities”.

### **UGC Regulations 2016**

In 2009, UGC has given one more regulation in context to Minimum Standards and Procedure for Award of M.PHIL./PH.D Degrees, Regulations, 2016. Under Clause 13, the regulation provides guidelines for creation for Depository with UGC. The Clause 13 is reproduced as it is below.

#### **Clause 13:**

13.1 Following the successful completion of the evaluation process and before the announcement of the award of the M.Phil./Ph.D. degree(s), the Institution concerned shall submit an electronic copy of the M.Phil. Dissertation /Ph. D. thesis to the INFLIBNET, for hosting the same so as to make it accessible to all Institutions/Colleges.

13.2 Prior to the actual award of the degree, the degree-awarding Institution shall issue a provisional Certificate to the effect that the Degree has been awarded in accordance with the provisions of these UGC Regulations, 2016.

### **UGC Regulation 2018**

In 2018 I UGC has given one latest regulation in context to Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions, Regulations, 2018. The regulation provides guidelines for creation Institutional repository and deposit Ph.D, M.Phil and Master Dissertations to the “*Shodh Ganga e-repository*”. Also this regulation provides guideline regarding Promotion of Academic Integrity and Prevention of Plagiarism in research in higher education in India.

### ***Objectives of Regulation 2018***

1. To create awareness about responsible conduct of research, thesis, dissertation, promotion of academic integrity and prevention of misconduct including plagiarism in academic writing among student, faculty, researcher and staff.
2. To establish institutional mechanism through education and training to facilitate responsible conduct of research, thesis, dissertation, promotion of academic integrity and deterrence from plagiarism.
3. To develop systems to detect plagiarism and to set up mechanisms to prevent plagiarism and punish a student, faculty, researcher or staff of HEI committing the act of plagiarism.

### ***Similarity checks for exclusion from Plagiarism***

1. All quoted work reproduced with all necessary permission and/or attribution.
2. All references, bibliography, table of content, preface and acknowledgements.
3. All generic terms, laws, standard symbols and standards equations.

The research work carried out by the student, faculty, researcher and staff shall be based on original ideas, which shall include abstract, summary, hypothesis, observations, results, conclusions and recommendations only and shall not have any similarities. It shall exclude a common knowledge or coincidental terms, up to fourteen (14) consecutive words.

### ***Levels of Plagiarism***

Plagiarism would be quantified into following levels in ascending order of severity for the purpose of its definition:

1. Level 0: Similarities upto 10% - Minor similarities, no penalty
2. Level 1: Similarities above 10% to 40%
3. Level 2: Similarities above 40% to 60%
4. Level 3: Similarities above 60%

### ***Penalties in case of plagiarism in submission of thesis and dissertations***

Institutional Academic Integrity Panel (IAIP) shall impose penalty considering the severity of the Plagiarism.

1. ***Level 0: Similarities up to 10%*** - Minor Similarities, no penalty.
2. ***Level 1: Similarities above 10% to 40%*** - Such student shall be asked to submit a revised script within a stipulated time period not exceeding 6 months.
3. ***Level 2: Similarities above 40% to 60%*** - Such student shall be debarred from submitting a revised script for a period of one year.

4. **Level 3: Similarities above 60%** -Such student registration for that programme shall be cancelled.

**Data Analysis and Interpretation:-**

**Table No 1 Year wise growth of IRs in India**

Sr.No	Year	No of OARs	Percentage
1	2000-2004	0	0.00
2	2005-2010	34	40.48
3	2011-2015	38	45.24
4	2016-2019	12	14.29
	<b>Total</b>	<b>84</b>	<b>100.00</b>

Table 1 illustrates the growth of Indian open access repositories since 2000. Before 2005 there is no any IR available in India. As per the data analysis and results maximum IRs developed in 2011-2015 i.e 38 (45.24%), followed by 2005-2010 i.e 34 (40.48%) and in 2016-2019 only 12 (14.29%) institutional repository developed by Indian institutions.

**Table No 2 Types of Open Access Repositories in India**

Sr. No	Type of OARs	To No	Percentage
1	Institutional	72	85.71
2	Disciplinary	8	9.52
3	Aggregating	3	3.57
4	Governmental	1	1.19
	<b>Total</b>	<b>84</b>	<b>100.00</b>

Table no 2 highlighted the types of OARs in India and out of total of 84 open access repositories, 72 (85.71%) are institutional , 08 (9.52%) are disciplinary. 03 open access repositories are aggregating and 01 hosted by governmental institution.

**Table No 3 Open Access Repositories in India by Software Type**

Sr.No	Name of Software	Total No of OARs	Percentage
1	Dspace	49	58.33
2	eprints	27	32.14
3	HTML	2	2.38
4	Architexturez	1	1.19
5	CALIBRE	1	1.19
6	Drupal	1	1.19
7	Greenstone	1	1.19
8	Metastudio	1	1.19
9	Nitya	1	1.19
	<b>Total</b>	<b>84</b>	<b>100.00</b>



Table no 3 indicates the nine open source / commercial and in-house software's are used by the host organizations or institutions to create Open Access repositories. 49 (58.33%) open access repositories in India use DSpace, followed by 27 (32.14%) used eprints, 2 institutions used HTML, other institutions used Architexturez, CALIBRE, Drupal, Greenstone, Metastudio and Nitya software respectively.

**Table No 4 Language wise Analysis of Open Access Repositories in India**

Sr.No	Language	No of OARs	Percentage
1	English	84	100.00
2	Hindi	10	11.90
3	Gujarati	3	3.57
4	Arabic	2	2.38
5	Kannada	2	2.38
6	Malayalam	2	2.38
7	Marathi	2	2.38
8	Bengali	1	1.19
9	Farsi	1	1.19
10	Other	2	2.38

English, being an international language, is the most preferred one for the open access repositories in India. However, use of other national languages and, in some cases, even regional languages helps in making an open access repository more popular among the research community of a particular region or country, ensuring maximum utilization of the repository holdings. There are many repositories that use more than one language as an interface. Table 4 shows the detailed representation of languages used in the open access repositories in India. 100% IR used English language, followed by Hindi with 11.90%, Gujrati, Marathi, Bengali, Farsi language also used for developing collection in IRs.

**Table No 5 State Wise analysis of OARs**

Sr.No	State	No of OARs	Percentage
1	Maharashtra	16	19.05
2	Delhi	15	17.86
3	Karnataka	11	13.10
4	Gujarat	7	8.33
5	Kerala	6	7.14
6	Telangana	5	5.95
7	Uttar pradesh	4	4.76
8	Odisha	3	3.57
9	Tamil Nadu	3	3.57
10	Uttarakhand	3	3.57
11	West Bengal	3	3.57

12	Goa	2	2.38
13	Punjab	2	2.38
14	Chandigarh	1	1.19
15	Haryana	1	1.19
16	Jammu and Kashmir	1	1.19
17	Jharkhand	1	1.19
	<b>Total</b>	<b>84</b>	<b>100.00</b>

Table No.5 highlights the state wise development of OARs and it is reveals that Maharashtra on rank first with 16 (19.05%) in developing IRs, followed by Delhi State with 15 (17.86%) on rank two, Karnatka state on third rank with 13.10% and Chandigarh, Haryana, Jammu and Kashmir and Jharkhand sates having only one OARs respectively.

**Table No 6 Open Access Repositories in India by Subject wise**

Sr. No	Name of Subject	No of OARs	Percentage
1	Multidisciplinary	42	50.00
2	Technology	12	14.29
3	Health and Medicine	9	10.71
4	Chemistry and Chemical Technology	9	10.71
5	Computers and IT	8	9.52
6	Physics and Astronomy	8	9.52
7	Mechanical Engineering	7	8.33
8	Science General	7	8.33
9	Biology and Biochemistry	7	8.33
10	Electrical and Electronic Engineering	6	7.14
11	Library and Information Science	6	7.14
12	Agriculture	5	5.95
13	Ecology	5	5.95
14	Mathematics and Statistics	5	5.95
15	Social Sciences	5	5.95
16	Earth Sciences	4	4.76
17	Civil Engineering	3	3.57
18	Management	3	3.57
19	Economics	2	2.38
20	Politics	2	2.38
21	Psychology	2	2.38
22	Architecture	1	1.19
23	Arts and Humanities	1	1.19
24	Geography	1	1.19
25	History	1	1.19
26	Language	1	1.19

27	Education	1	1.19
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Table No. 6 shows the analysis of subjects listed in Institutional Repositories (IRs) in India. 42 (50 %) IRs covers the other interdisciplinary subject's education, computer, IT, Health and Medicine, Business and Economics, science, social-science and Management. 12 (14.29%) institutions posted their institutional repositories on Technology. 9 (10.71%) IRs posted Health and Medicine and Chemistry and Chemical Technology subjects in repositories.

**Table No 7 Total No of Records available in Indian OARs**

Sr.No	Name of Open Access Repository	Total No of Record	Percentage
1	ShodhGanga: A reservoir of Indian theses	220039	22.40
2	KrishiKosh	130760	13.31
3	Indian Academy of Sciences: Publications of Fellows	106351	10.83
4	Open Access Repository of IISc Research Publications	47780	4.86
5	Archives of Indian Labour	42845	4.36
6	NOPR	40470	4.12
7	Digital repository of West Bengal Public Library Network	33905	3.45
8	eGyankosh	31971	3.25
9	DSpace@GIPE	25449	2.59
10	Osmania University Digital Library [OUDL]	24507	2.49
11	Dspace at IIT Bombay	20783	2.12
12	Institutional repository@VSL	18554	1.89
13	Social Science Cyber Library	14782	1.50
14	KRISHI Publications and Data Repository	14301	1.46
15	National Repository of Open Educational Educational Resources	13780	1.40
16	Eprints@CMFRI	12536	1.28
17	University of Mysore - Digital Repository of Research, Innovation and Scholarship (ePrints@UoM)	12372	1.26
18	AMU Repository (Knowledge Repository)	10930	1.11
19	DigitalLibrary@CUSAT	10058	1.02
20	ICRISAT Open Access Repository	9702	0.99
21	IACS Institutional Repository	7941	0.81
22	DRS at National Institute Of Oceanography	7665	0.78
23	Indian Institute of Astrophysics Repository	7071	0.72
24	ethesis@nitr	6879	0.70
25	EPrints@IITD	6776	0.69

26	Eprint@NML	6555	0.67
27	National Aerospace Laboratories Institutional Repository	6094	0.62
28	ePrints@Bangalore University	6043	0.62
29	RRI Digital Repository	5941	0.60
30	DSpace at Vidyanidhi	5482	0.56
31	DSpace@TU	5135	0.52
32	Dyuthi	4325	0.44
33	Research Archive of Indian Institute of Technology Hyderabad	4142	0.42
34	Electronic Theses and Dissertations at Indian Institute of Science	4102	0.42
35	DSpace at IUCAA	3912	0.40
36	RAIITH	3822	0.39
37	E Knowledge Center	3455	0.35
38	Vidya Prasarak Mandal - Thane	3144	0.32
39	ePrints@MoES:Open Access Digital Repository	3118	0.32
40	OpenMED@NIC	2904	0.30
41	Dspace@NITR	2850	0.29
42	IR@CECRI	2582	0.26
43	Mahatma Gandhi University Theses Online	2550	0.26
44	IR@NPL	2425	0.25
45	DIR@IMTECH	1800	0.18
46	DSpace@INFLIBNET	1777	0.18
47	INFLIBNET's Institutional Repository	1777	0.18
48	Dspace @ Vidyasagar University	1427	0.15
49	DSpace at Indian Institute of Geomagnetism	1140	0.12
50	Digital Knowledge Repository of Central Drug Research Institute	1140	0.12
51	Knowledge Repository Open Network	1128	0.11
52	Bhagirathi	1102	0.11
53	Etheses - A Saurashtra University Library Service	1064	0.11
54	NIRT Institutional Repository	962	0.10
55	Institutional Repository of the Anjuman-I-Islam's Kalsekar Technical Campus	940	0.10
56	Institutional Repository of Intectual Contributions of Delhi Technological University	841	0.09
57	DSpace at M S University	834	0.08
58	DSpace at Indian Institute of Management Kozhikode	810	0.08

59	ARIES, Digital Repository	807	0.08
60	Learning Resource Centre: Digital Repository of Chitkara University	780	0.08
61	Open Access to Odia Books	779	0.08
62	Management Development Institute - Open Access Repository	649	0.07
63	Institutional Repository@CSIO	600	0.06
64	National Science Digital Library	579	0.06
65	Librarians' Digital Library	510	0.05
66	ePrints@ATREE	492	0.05
67	E-Repository@IIHR	486	0.05
68	Indian Institute of Petroleum Institutional Repository	481	0.05
69	DSpace@IMSC	365	0.04
70	Digital Repository of Smt. Akkatai Ramgonda Patil Kanya Mahavidyalaya, Ichalkaranji	355	0.04
71	Kautilya Digital Repository at IGIDR	334	0.03
72	WeSchool Digital Repository	241	0.02
73	Eprints@IARI	230	0.02
74	Architexturez South Asia	200	0.02
75	DeepBlue Knowledge Repository@PDP	182	0.02
76	Indian Institute of Management Kozhikode Scholarship Repository	151	0.02
77	DSpace @ GGSIPU	135	0.01
78	Eprints @MDRF	100	0.01
79	OneWorld South Asia Open Archive Initiative	91	0.01
80	Eprints@SBT MKU	89	0.01
81	Bhogawati Mahavidyalaya Institutional Repository	62	0.01
82	dspace @ sdmcet	60	0.01
83	IR@Goa University	Not Mentioned	0.00
84	Indian Institute of Management Kozhikode Digital Library	Not Mentioned	0.00
	<b>Total</b>	<b>982288</b>	<b>100.00</b>

Item included in IR has been shown in Table No. 7. Maximum numbers of items are posted by ShodhGanga: A reservoir of Indian theses (220039), followed by KrishiKosh (130760), Indian Academy of Sciences: Publications of Fellows on third rank with (106351) documents posted in IR. Total **982288** documents available in 84 Indian institutional repositories. Out of 84 IRs, 2 institutional Repositories were not provided the total number of items included in Institutional Repositories.

**Table No 8 ETD initiatives in India**

<b>Sr. No</b>	<b>Name of Open Access Repository</b>	<b>No of ETDs Available</b>	<b>Percentage</b>
1	ShodhGanga: A reservoir of Indian theses	220039	72.071
2	KrishiKosh	25800	8.450
3	Osmania University Digital Library [OUDL]	10575	3.464
4	AMU Repository (Knowledge Repository)	10252	3.358
5	ethesis@nitr	6879	2.253
6	DSpace at Vidyanidhi	5482	1.796
7	DSpace@TU	5068	1.660
8	EPrints@IITD	4887	1.601
9	Electronic Theses and Dissertations at Indian Institute of Science	4102	1.344
10	Dyuthi	2682	0.878
11	Mahatma Gandhi University Theses Online	2550	0.835
12	RAIITH	1183	0.387
13	Research Archive of Indian Institute of Technology Hyderabad	1183	0.387
14	Etheses - A Saurashtra University Library Service	1063	0.348
15	DSpace at M S University	755	0.247
16	Knowledge Repository Open Network	684	0.224
17	Eprints@CMFRI	540	0.177
18	Institutional repository@VSL	365	0.120
19	DSpace@GIPE	343	0.112
20	RRI Digital Repository	241	0.079
21	Digital Knowledge Repository of Central Drug Research Institute	145	0.047
22	Dspace @ Vidyasagar University	128	0.042
23	E-Repository@IIHR	95	0.031
24	Eprints@IARI	47	0.015
25	Eprint@NML	46	0.015
26	IR@CECRI	46	0.015
27	Kautilya Digital Repository at IGIDR	41	0.013
28	Bhogawati Mahavidyalaya Institutional Repository	17	0.006
29	DSpace at Indian Institute of Management Kozhikode	17	0.006
30	Indian Institute of Management Kozhikode Scholarship Repository	17	0.006
31	ARIES, Digital Repository	12	0.004

32	DSpace@IMSC	05	0.002
33	Learning Resource Centre: Digital Repository of Chitkara University	05	0.002
34	Librarians' Digital Library	05	0.002
35	Digital Repository of Smt. Akkatai Ramgonda Patil Kanya Mahavidyalaya, Ichalkaranji	03	0.001
36	IACS Institutional Repository	03	0.001
37	Eprints @MDRF	02	0.001
38	DigitalLibrary@CUSAT	01	0.000
39	<b>46 IRs have 00 ETDs</b>	<b>00</b>	<b>0.000</b>
	<b>Total</b>	<b>305308</b>	<b>100.000</b>

Table No. 8. Shows the ETD initiatives taken by various institutions in India and total e-thesis available in ETDs. Maximum numbers of ETDs are available in ShodhGanga: A reservoir of Indian theses (220039), followed by KrishiKosh (25800), Osmania University Digital Library [OUDL] on third rank with (10575), AMU Repository (Knowledge Repository) on fourth rank with (10252) e-thesis posted in IR. Total **305308** e-theses available in Indian ETDs. Out of 84 IRs, 46 institutional Repositories were not uploaded any e-thesis in Institutional Repositories up to 29<sup>th</sup> March 2019.

**Table No 9 Analysis of Issues and Barriers in Building of IR**

Sr. No	Barriers in Building of IR	Number. of Respondent	%
1	Lack of knowledge or awareness of open access institutional repository	25	39.06
2	Inadequate ICT connectivity and infrastructure	20	31.25
3	Inadequate electricity power supply	7	10.94
4	Inadequate funding	38	59.38
5	Insufficient technological skills	21	32.81
6	Copyright issues	57	89.06
7	Technological obsolescence and deterioration of media	42	65.63
8	Institutional culture and politics	57	89.06
9	Lack of institutional repository policy	18	28.13
10	Problem of long term preservation	53	82.81
11	Unwillingness of Researcher	51	79.69

A Simple Questionnaire was designed in Google form to find out the issues and barriers faced by the organizations in building and maintaining ETD repositories in India. Out of 84 organizations 64 IR builders responded.

In Table no 9 It is observed from the responses that the biggest issue and barriers in developing ETD repository is Copyright and Institutional culture and politics i.e (89.06%). It is followed by Problem of long term preservation is the second important barrier quoted by 82.35% repositories. Third barrier is 'unwillingness of the researchers' to deposit their thesis (79.69%). Funding problem; Lack of necessary infrastructure; are some of the issues in building ETD repositories.

## Conclusion

Institutional Repository is a new technique for e-collection development, managing documents in digital form. By using this repository the institution can offer service like dissemination of information, access to preserve and use information and as well as content submission and organization of information. Libraries and LIS professional should have to take part in Institutional Repositories in developing successful and valuable repositories for their institution in India.

Many ETD repositories have the problem regarding copyright issues and fear of plagiarism, unwillingness of researchers for submission of their thesis and research papers, lack of policy for the long term preservation of the deposited materials, etc. which can be disastrous for ETD policies. Thus people and institutional interest must be constant and effective. UGC Regulations will play a vital role in developing ETD repositories in India in near future by making it mandatory to deposit a soft copy of thesis to its database also now INFLIBNET is taking steps in this direction. It has started developing a complete full text Ph.D thesis Database in India.

## References

- Adetunji JA, Appah HD, Akinlade OO, Bribena EI. (2017). The Nigerian institutional repositories: Opportunities and barriers. *Acad: J. Educ. Res.* 5(10): 298-305. Retrieved from <https://academiapublishing.org/journals/ajer/pdf/2017/Oct/Adetunji%20et%20al.pdf>
- Bandra, S. (2002). Digitization of theses: Possible international collaboration-a discussion paper. Retrieved from: <http://dspace.mona.uwi.edu/bitstream/123456789/349/1/Digitization%20of%20Theses.brief.pdf>
- Directory of Open Access Repositories. Retrieved from <http://v2.sherpa.ac.uk/opensoar/>
- Hirwade, M.A. (2011). *Digitization of Theses and Dissertations: Status Quo India*. In Proceedings of the 14th International Symposium on Electronic Theses and Dissertations, Cape Town, South Africa, 13-17 September 2011. Retrieved from [http://dl.cs.uct.ac.za/conferences/etd2011/papers/etd2011\\_hirwade.pdf](http://dl.cs.uct.ac.za/conferences/etd2011/papers/etd2011_hirwade.pdf)
- Kalbande, Dattatraya Trayambak, "Institutional Repository in Open DOAR: Status Quo India" (2019). *Library Philosophy and Practice* (e-journal). 2562. <https://digitalcommons.unl.edu/libphilprac/2562>



- Kalbande, D.T. (2012). Institutional Repositories in India: An overview. *Online International Interdisciplinary Research Journal*.2(4):194-203. Retrieved from <http://www.oirj.org/oirj/july-aug2012/25.pdf>
- Kumbar, Tukaram S. 2009. Electronic Theses and Dissertations (ETD) Initiatives in India: Identification of Some Indicators of Success. Retrieved from [https://www.researchgate.net/publication/228849354\\_Electronic\\_Theses\\_and\\_Dissertations\\_ETD\\_Initiatives\\_in\\_India\\_Identification\\_of\\_Some\\_Indicators\\_of\\_Success](https://www.researchgate.net/publication/228849354_Electronic_Theses_and_Dissertations_ETD_Initiatives_in_India_Identification_of_Some_Indicators_of_Success)
- Lihitkar, Shalini and Lihitkar, Ramdas. (2009). *Study of major institutional repositories in India.*, 2009 . In 12th International Conference on Electronic Theses and Dissertations, Pittsburgh , USA, 10-13 June 2009. Retrieved from [http://eprints.rclis.org/14234/1/ETD\\_2009\\_IRshaliniIndia.pdf](http://eprints.rclis.org/14234/1/ETD_2009_IRshaliniIndia.pdf)
- Sengupta, S. (2012). *Open Access Repositories: The Asian Scenario With Special Reference To Library & Information Science.* In conference on RLIDE, 104-111 p, Retrieved from <http://eprints.rclis.org/18189/1/Open%20Access%20RepositoriesThe%20Asian%20Scenario%20With%20Special%20Refernce%20to%20Library%20%26%20Information%20Science.pdf>
- University Grants Commission. (2016). Minimum Standards and Procedure for Award of M.PHIL./PH.D Degrees) Regulations, 2016. Retrieved from [https://www.ugc.ac.in/pdfnews/4952604\\_UGC-\(M.PHIL.-PH.D-DEGREES\)-REGULATIONS,-2016.pdf](https://www.ugc.ac.in/pdfnews/4952604_UGC-(M.PHIL.-PH.D-DEGREES)-REGULATIONS,-2016.pdf)
- University Grants Commission. (2007). UGC (Submission of Metadata and Full-text of Doctoral Theses in Electronic Format. Regulations, 2005. Retrieved from [http://www.ugc.ac.in/new\\_initiatives/etd\\_hb.pdf](http://www.ugc.ac.in/new_initiatives/etd_hb.pdf)
- University Grants Commission. (2009). UGC (Minimum Standards and Procedures for Awards of M.Phil/Ph.D.Degree), Regulation, 2009. Retrieved from [www.ugc.ac.in/notices/gazetteenglish.pdf](http://www.ugc.ac.in/notices/gazetteenglish.pdf)
- University Grants Commission. (2018). Letter Reg.: UGC (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulations, 2018. Retrieved from [https://www.ugc.ac.in/pdfnews/7771545\\_academic-integrity-Regulation2018.pdf](https://www.ugc.ac.in/pdfnews/7771545_academic-integrity-Regulation2018.pdf)
- University Grants Commission. (2018). Minimum Standards and Procedure for Award of M.Phil /Ph.D. Degrees.(2nd Amendment) Regulations, 2018. Retrieved from [https://www.ugc.ac.in/pdfnews/1928583\\_UGC-Regulation\\_MPhil-PhD-2ndAmendment.pdf](https://www.ugc.ac.in/pdfnews/1928583_UGC-Regulation_MPhil-PhD-2ndAmendment.pdf)

### Appendix-I Name of the OARs and URL

Sr. No	Name of the Organization	Name of OARs	OARs URL
1	Aligarh Muslim University	AMU Repository (Knowledge Repository)	<a href="http://ir.amu.ac.in/">http://ir.amu.ac.in/</a>
2	Aryabhatta Research Institute of Observational Sciences	ARIES, Digital Repository	<a href="http://210.212.91.105:8080/jspui/">http://210.212.91.105:8080/jspui/</a>
3	ABA-NET	Architexturez South Asia	<a href="http://www.architexturez.net/">http://www.architexturez.net/</a>
4	V.V.Giri National Labour Institute	Archives of Indian Labour	<a href="http://www.indialabourarchives.org/">http://www.indialabourarchives.org/</a>
5	Indian Institute of Technology Roorkee, India	Bhagirathi	<a href="http://bhagirathi.iitr.ac.in/dspace/">http://bhagirathi.iitr.ac.in/dspace/</a>
6	Bhogawati Mahavidyalaya, Kurukali	Bhogawati Mahavidyalaya Institutional Repository	<a href="http://61.1.85.128:8080/xmlui">http://61.1.85.128:8080/xmlui</a>
7	Council of Scientific and Industrial Research, Institute of	DIR@IMTECH	<a href="http://crdd.osdd.net/open/">http://crdd.osdd.net/open/</a>

	Microbial Technology		
8	National Institute Of Oceanography	DRS at National Institute Of Oceanography	<a href="http://drs.nio.org/drs/">http://drs.nio.org/drs/</a>
9	Guru Gobind Singh Indraprastha University	DSpace @ GGSIPU	<a href="http://14.139.60.216:8080/xmlui/">http://14.139.60.216:8080/xmlui/</a>
10	Inter-University Centre for Astronomy and Astrophysics	DSpace at IUCAA	<a href="http://repository.iucaa.in:8080/jspui/">http://repository.iucaa.in:8080/jspui/</a>
11	Indian Institute of Geomagnetism	DSpace at Indian Institute of Geomagnetism	<a href="http://library.iigm.res.in:8080/jspui/">http://library.iigm.res.in:8080/jspui/</a>
12	Indian Institute of Management Kozhikode	DSpace at Indian Institute of Management Kozhikode	<a href="http://dspace.iimk.ac.in/">http://dspace.iimk.ac.in/</a>
13	Maharaja Sayajirao University of Baroda	DSpace at M S University	<a href="http://14.139.121.106:8080/jspui/">http://14.139.121.106:8080/jspui/</a>
14	University of Mysore	DSpace at Vidyanidhi	<a href="http://dspace.vidyanidhi.org.in:8080/dspace/">http://dspace.vidyanidhi.org.in:8080/dspace/</a>
15	Gokhale Institute of Politics and Economics	DSpace@GIPE	<a href="http://dspace.gipe.ac.in/">http://dspace.gipe.ac.in/</a>
16	Institute of Mathematical Sciences	DSpace@IMSC	<a href="http://www.imsc.res.in/xmlui">http://www.imsc.res.in/xmlui</a>
17	Information and Library Network Center	DSpace@INFLIBNET	<a href="http://ir.inflibnet.ac.in/">http://ir.inflibnet.ac.in/</a>
18	Thapar University	DSpace@TU	<a href="http://dspace.thapar.edu:8080/dspace/">http://dspace.thapar.edu:8080/dspace/</a>
19	Pandit Deendayal Petroleum Univeristy	DeepBlue Knowledge Repository@PDPU	<a href="http://spmlib.pdpu.ac.in:8080/xmlui/">http://spmlib.pdpu.ac.in:8080/xmlui/</a>
20	Central Drug Research Institute	Digital Knowledge Repository of Central Drug Research Institute	<a href="http://dkr.cdri.res.in/xmlui/">http://dkr.cdri.res.in/xmlui/</a>
21	Smt. A.R.P. Kanya College, Ichalkaranji	Digital Repository of Smt. Akkatai Ramgonda Patil Kanya Mahavidyalaya, Ichalkaranji	<a href="https://earpkmi.in">https://earpkmi.in</a>
22	West Bengal Public Library Network	Digital repository of West Bengal Public Library Network	<a href="http://dspace.wbpublibnet.gov.in:8080/jspui/">http://dspace.wbpublibnet.gov.in:8080/jspui/</a>
23	Cochin University of Science and Technology	DigitalLibrary@CUSAT	<a href="http://dspace.cusat.ac.in/jspui/">http://dspace.cusat.ac.in/jspui/</a>
24	Vidyasagar University	Dspace @ Vidyasagar University	<a href="http://inet.vidyasagar.ac.in:8080/jspui/">http://inet.vidyasagar.ac.in:8080/jspui/</a>
25	Indian Institue of Technology, Bombay	Dspace at IIT Bombay	<a href="http://dspace.library.iitb.ac.in/jspui/">http://dspace.library.iitb.ac.in/jspui/</a>
26	National Institute of Technology, Rourkela	Dspace@NITR	<a href="http://dspace.nitrkl.ac.in/dspace/">http://dspace.nitrkl.ac.in/dspace/</a>
27	Cochin University of Science & Technology	Dyuthi	<a href="http://dyuthi.cusat.ac.in/">http://dyuthi.cusat.ac.in/</a>
28	Foundation for Democratic Reforms	E Knowledge Center	<a href="http://ekcenter.fdrindia.org/">http://ekcenter.fdrindia.org/</a>
29	Indian Institute of Horticultural Research	E-Repository@IIHR	<a href="http://www.erepo.iihr.ernet.in/">http://www.erepo.iihr.ernet.in/</a>
30	Indian Institute of Technology, Delhi	EPrints@IITD	<a href="http://eprint.iitd.ac.in/dspace/">http://eprint.iitd.ac.in/dspace/</a>
31	Indian Institute of Science	Electronic Theses and Dissertations at Indian Institute of Science	<a href="http://etd.ncsi.iisc.ernet.in/">http://etd.ncsi.iisc.ernet.in/</a>
32	National Metallurgical Laboratory	Eprint@NML	<a href="http://eprints.nmlindia.org/">http://eprints.nmlindia.org/</a>
33	Madras Diabetes Research Foundation	Eprints @MDRF	<a href="http://mdrf-eprints.in/">http://mdrf-eprints.in/</a>
34	Central Marine Fisheries Research Institute	Eprints@CMFRI	<a href="http://eprints.cmfri.org.in/">http://eprints.cmfri.org.in/</a>
35	Indian Agricultural Research Institute	Eprints@IARI	<a href="http://eprints.iari.res.in/">http://eprints.iari.res.in/</a>
36	Madurai Kamaraj University	Eprints@SBT MKU	<a href="http://eprints.bicmku.in/">http://eprints.bicmku.in/</a>
37	Saurashtra University	Etheses - A Saurashtra University Library Service	<a href="http://etheses.saurashtrauniversity.edu/">http://etheses.saurashtrauniversity.edu/</a>
38	Indian Association for the Cultivation of Science	IACS Institutional Repository	<a href="http://arxiv.iacs.res.in:8080/jspui/">http://arxiv.iacs.res.in:8080/jspui/</a>

39	International Crops Research Institute for the Semi Arid Tropics	ICRISAT Open Access Repository	<a href="http://oar.icrisat.org/">http://oar.icrisat.org/</a>
40	Information and Library Network Center	INFLIBNET's Institutional Repository	<a href="http://ir.inflibnet.ac.in/">http://ir.inflibnet.ac.in/</a>
41	CSIR-Central Electrochemical Research Institute	IR@CECRI	<a href="http://cecri.csircentral.net/">http://cecri.csircentral.net/</a>
42	Goa University	IR@Goa University	<a href="http://irgu.unigoa.ac.in/">http://irgu.unigoa.ac.in/</a>
43	CSIR - National Physical Laboratory	IR@NPL	<a href="http://npl.csircentral.net/">http://npl.csircentral.net/</a>
44	Indian Academy of Sciences	Indian Academy of Sciences: Publications of Fellows	<a href="http://repository.ias.ac.in/">http://repository.ias.ac.in/</a>
45	Indian Institute of Astrophysics	Indian Institute of Astrophysics Repository	<a href="http://prints.iap.res.in/">http://prints.iap.res.in/</a>
46	Indian Institute of Management Kozhikode	Indian Institute of Management Kozhikode Digital Library	<a href="http://www.iimk.ac.in/gsd/cgi-bin/library">http://www.iimk.ac.in/gsd/cgi-bin/library</a>
47	Indian Institute of Management Kozhikode	Indian Institute of Management Kozhikode Scholarship Repository	<a href="http://eprints.iimk.ac.in/">http://eprints.iimk.ac.in/</a>
48	Indian Institute of Petroleum, Dehradun	Indian Institute of Petroleum Institutional Repository	<a href="http://library.iip.res.in:8080/dspace">http://library.iip.res.in:8080/dspace</a>
49	Delhi Technological University	Institutional Repository of Intellectual Contributions of Delhi Technological University	<a href="http://www.dspace.dce.edu/">http://www.dspace.dce.edu/</a>
50	Anjuman-I-Islams Kalsekar Technical Campus	Institutional Repository of the Anjuman-I-Islam's Kalsekar Technical Campus	<a href="http://www.aiktcdspace.org:8080/jspui/">http://www.aiktcdspace.org:8080/jspui/</a>
51	CSIR-Central Scientific Instruments Organisation	Institutional Repository@CSIO	<a href="http://csioir.csio.res.in/">http://csioir.csio.res.in/</a>
52	Indian Institute of Management, Ahmedabad	Institutional repository@VSL	<a href="http://vslir.iimahd.ernet.in:8080/xmlui">http://vslir.iimahd.ernet.in:8080/xmlui</a>
53	Indian Council of Agricultural Research	KRISHI Publications and Data Repository	<a href="https://krishi.icar.gov.in/jspui">https://krishi.icar.gov.in/jspui</a>
54	Indira Gandhi Institute of Development Research	Kautilya Digital Repository at IGIDR	<a href="http://oii.igidr.ac.in:8080/jspui">http://oii.igidr.ac.in:8080/jspui</a>
55	University of Kashmir	Knowledge Repository Open Network	<a href="http://dspace.uok.edu.in:8080/jspui/">http://dspace.uok.edu.in:8080/jspui/</a>
56	Indian Council for Agricultural Research	KrishiKosh	<a href="http://krishikosh.egranth.ac.in/">http://krishikosh.egranth.ac.in/</a>
57	Chitkara University Punjab	Learning Resource Centre: Digital Repository of Chitkara University	<a href="http://dspace.chitkara.edu.in/jspui/">http://dspace.chitkara.edu.in/jspui/</a>
58	Indian Statistical Institute, Bangalore Centre	Librarians' Digital Library	<a href="https://drtc.isibang.ac.in/">https://drtc.isibang.ac.in/</a>
59	Mahatma Gandhi University	Mahatma Gandhi University Theses Online	<a href="http://www.mgutheses.org/">http://www.mgutheses.org/</a>
60	Management Development Institute	Management Development Institute - Open Access Repository	<a href="http://dspace.mdi.ac.in/dspace">http://dspace.mdi.ac.in/dspace</a>
61	National Institute for Tuberculosis Research	NIRT Institutional Repository	<a href="http://eprints.nirt.res.in/">http://eprints.nirt.res.in/</a>
62	National Institute of Science Communication and Information Resources	NOPR	<a href="http://nopr.niscair.res.in/">http://nopr.niscair.res.in/</a>
63	Information Centre for Aerospace Science and Technology	National Aerospace Laboratories Institutional Repository	<a href="http://nal-ir.nal.res.in/">http://nal-ir.nal.res.in/</a>
64	Central Institute of Educational Technology, NCERT, New Delhi	National Repository of Open Educational Educational Resources	<a href="http://nroer.gov.in/">http://nroer.gov.in/</a>
65	National Institute of Science Communication and Information Resources	National Science Digital Library	<a href="http://nsdl.niscair.res.in/">http://nsdl.niscair.res.in/</a>
66	OneWorld South Asia	OneWorld South Asia Open Archive Initiative	<a href="http://open.ekduniya.net/">http://open.ekduniya.net/</a>
67	Indian Institute of Science	Open Access Repository of IISc Research Publications	<a href="http://eprints.iisc.ernet.in/">http://eprints.iisc.ernet.in/</a>
68	National Institute of Technology, Rourkela	Open Access to Odia Books	<a href="http://oaob.nitrkl.ac.in/">http://oaob.nitrkl.ac.in/</a>
69	National Informatics Centre	OpenMED@NIC	<a href="http://openmed.nic.in/">http://openmed.nic.in/</a>

70	Osmania University	Osmania University Digital Library [OUDL]	<a href="http://oudl.osmania.ac.in/">http://oudl.osmania.ac.in/</a>
71	Indian Institute of Technology Hyderabad	RAIITH	<a href="http://raiith.iith.ac.in/">http://raiith.iith.ac.in/</a>
72	Raman Research Institute	RRI Digital Repository	<a href="http://dspace.rii.res.in/">http://dspace.rii.res.in/</a>
73	Indian Institute of Technology Hyderabad	Research Archive of Indian Institute of Technology Hyderabad	<a href="http://raiith.iith.ac.in/">http://raiith.iith.ac.in/</a>
74	Information and Library Network Center	ShodhGanga: A reservoir of Indian theses	<a href="http://shodhganga.inflibnet.ac.in/">http://shodhganga.inflibnet.ac.in/</a>
75	Aligarh Muslim University	Social Science Cyber Library	<a href="http://socscybraryamu.ac.in/">http://socscybraryamu.ac.in/</a>
76	University of Mysore, Mysore University Library	University of Mysore - Digital Repository of Research, Innovation and Scholarship (ePrints@UoM)	<a href="http://eprints.uni-mysore.ac.in/">http://eprints.uni-mysore.ac.in/</a>
77	Vidya Prasarak Mandal	Vidya Prasarak Mandal - Thane	<a href="http://dspace.vpmthane.org:8080/jspui/index.jsp">http://dspace.vpmthane.org:8080/jspui/index.jsp</a>
78	Welingkar Institute of Management Development and Research	WeSchool Digital Repository	<a href="http://dspace.welingkar.org:8080/jspui/">http://dspace.welingkar.org:8080/jspui/</a>
79	SDM College Of Engineering and Technology Dharwad	dspace @ sdmcet	<a href="http://210.212.198.149:8080/jspui">http://210.212.198.149:8080/jspui</a>
80	Indira Gandhi National Open University	eGyankosh	<a href="http://www.egyankosh.ac.in/">http://www.egyankosh.ac.in/</a>
81	Ashoka Trust for Research in Ecology and the Environment	ePrints@ATREE	<a href="http://eprints.atree.org/">http://eprints.atree.org/</a>
82	Bangalore University	ePrints@Bangalore University	<a href="http://eprints-bangaloreuniversity.in/">http://eprints-bangaloreuniversity.in/</a>
83	Ministry of Earth Sciences, Government of India	ePrints@MoES:Open Access Digital Repository	<a href="http://moeseprints.incois.gov.in/">http://moeseprints.incois.gov.in/</a>
84	National Institute of Technology, Rourkela	ethesis@nitr	<a href="http://ethesis.nitrkl.ac.in/">http://ethesis.nitrkl.ac.in/</a>