Contribution of India to the Directory of Open Access Repositories (OpenDOAR)

Anil Kumar
Research Scholar
Department of Library and Information Science
Punjabi University, Patiala - 147002
E-mail: Neelmittal77@gmail.com

Manpreet Kaur
MLIS Student
Department of Library and Information Science
Punjabi University, Patiala - 147002
E-mail: Mannukhanna46@gmail.com

Abstract - *Open Access Institutional Repositories provide online access to the full text intellectual output of an organisation. Open access repositories are the digital archives of scholarly literature deposited by their authors and it is called self-archiving. These are established and managed to provide universal and free access to information in electronic format to increase and disseminate research output. Indian contribution towards the Open Access Repositories (OpenDOAR), which archives books, theses, journal articles, monographs, patents, learning objects, and unpublished papers since 2005-2019.*

Keywords: OenDOAR, Open Access Repositories (OAR), India, Information and Communications Technology (ICT)

Introduction

Information and Communications Technology (ICT) continues to change the modes of scholarly communication. ICT provides opportunities for scholars to work effectively through widespread access to knowledge resources and its services. Due to information explosion, scholars face many problems and challenges to manage scholarly contents. Now days, Open Access Institutional Repositories provide online access to the full text intellectual output of an organisation.

The growth of institutional repositories is increasing day by day throughout globe. Many organizations and institutions needs to be preserved, organized and disseminated their intellectual output. So, this is one of important reason for establishing an institutional repository in academic libraries. Open access repositories are the digital archives of scholarly literature deposited by their authors and it is called self-archiving. These are established and managed to provide universal and free access to information in electronic format to increase and disseminate research output. (Verma & Shukla, 2015)

There are two routes to open access: (Springer, 2000)

1. Gold Route: This type of open access provided through Journals. Gold OA makes the final version of an article freely and permanently accessible for everyone, immediately after publication. Copyright for the article is retained by the authors and most of the permission

barriers are removed. Gold OA articles can be published either in fully OA journals or hybrid journals.

2. Green Route: This type of open access provided through Institutional Repositories. Green OA, also referred to as self-archiving, is the practice of placing a version of an author's manuscript into a repository, making it freely accessible for everyone.

Review of Literature

Fayaz Lone, Rafiq Rather, & Gh. Jeelani Shah. (2008) study attempts to evaluate the initiatives taken by India to make this intellectual output accessible for all by publishing them in Open Access resources like Open Access journals and archiving them in Open Access archives or repositories. The results revealed that India is continuously contributing in Open Access literature as some of the premier institutions, particularly in the science and technology area, are providing Open Access to their research publications. The position of India in terms of number of journals in the Directory of Open Access Journals (DOAJ) is 7th, well ahead of countries such as China, Australia, and Japan and is sharing 10th position with the Sweden and Spain in Directory of Open Access Repositories (OpenDOAR) in terms of number of repositories in the world. **Sing, KP & Vanita Khanchandani (2015)** Study explores the of Indian contribution to Open Access Scholarly Publishing in Science and Technology indexed in DOAJ. The research highlights the various dimensions related to the open access scholarly communication in S&T such as chronological growth, publisher-wise and subject-wise contributions, etc. Further the study finds that about 2302S&T journals from the top ten countries of the world are available as open access through DOAJ out of them about 312 journals are available as open access. **Mohammad Azim & Nabi Hasan (2018)** The study presents an analysis and explores the Indian repositories who have registered in the OpenDOAR and allows to access and download their data through OpenDOAR platform. The study also highlights the contributing Universities/Institutions and about the different types of software used to create their repositories.

Directory of Open Access Repositories (OpenDOAR)

OpenDOAR launched in 2005, initially developed as collaboration between the University of Nottingham and Lund University, home of the DOAJ. Funding was provided by OSI, JISC, SPARC Europe and CURL. OpenDOAR is the quality-assured global directory of academic open access repositories. It enables the identification, browsing and search for repositories, based on a range of features, such as location, software or type of material held.

Objectives of the study

1. To find the year-wise growth of OA repositories registered at OpenDOAR.
2. To identify the types of repositories registered at OpenDOAR.
3. To assess subject wise all the OA repositories registered at OpenDOAR.
4. To find the most popular software platform used in OA Repositories registered at OpenDOAR.
5. To assess the most commonly used language of content in such repositories registered at OpenDOAR.

Scope of the study

The study is limited to only Indian OARs in the Directory of Open Access Repositories (OpenDOAR), which archives books, theses, journal articles, monographs, patents, learning objects, and unpublished papers.

Methodology

The present study is based on collected data from OpenDOAR as on 31st March, 2020. The collected data were carefully analyzed and investigated on selected parameters viz. year-wise growth, use of IR software's, open access repositories types, content's languages, subject-wise open access repositories.

Data Analysis

Table-1: Year-wise growth of OA repositories

Sr. No.	Year	No. of OARs	Percentage
1.	2005	03	3.26
2.	2006	09	9.78
3.	2007	08	8.70
4.	2008	03	3.26
5.	2009	06	6.52
6.	2010	04	4.37
7.	2011	13	14.13
8.	2012	02	2.17
9.	2013	13	14.13
10.	2014	02	2.17
11.	2015	09	9.78
12.	2016	02	2.17
13.	2017	06	6.52
14.	2018	00	00
15.	2019	05	5.43
16.	2020	07	7.61
	Total	**92**	**100**

Table 1 shows year-wise growth of open access repositories (OARs) in OpenDOAR. The study reveals that there are total 92 OARs from India. The study shows that in year 2011 and 2013, there are a large number of 13 (14.13%) of OARs in both years included in OpenDOAR. In the year 2018, there is no OAR included in OpenDOAR.

Table-2: Types-wise repositories

Sr. No.	Types of OARs	No. of OARs	Percentage
1.	Institutional	78	84.78
2.	Disciplinary	09	9.78
3.	Aggregating	04	4.35
4.	Governmental	01	1.09
	Total	**92**	**100**

Table 2 reveals that majority of 78 (84.78%) of OARs are Institutional and 9 (9.78%) of OARs are Disciplinary, 4 (4.35%) of OARs are Aggregating and 1 (1.09%) of OARs is Governmental.

Table-3: Software-wise repositories

Sr. No.	Software Name	No. of OARs	Percentage
1.	DSpace	50	54.35
2.	EPrints	32	34.77
3	Greenstone	1	1.09
4.	Drupal	1	1.09
5.	Others	08	8.70
	Total	**92**	**100**

Table 3 shows that 50 (54.35%) of OARs use DSpace software, 32 (34.77%) of OARs EPrints software, 1 (1.09%) of OAR Greenstone, 1 (1.09%) of OAR Drupal and 8 (8.70%) of OARs other software.

Table-4: Language-wise repositories

Sr. No.	Language of Content in OAR	No. of OARs	Percentage
1.	English	90	97.83
2.	Hindi	10	10.88
3.	Gujarati	03	3.26
4.	Arabic	02	2.17
5.	Kannada	02	2.17
6.	Malayalam	02	2.17
7.	Marathi	02	2.17
8.	Others	04	4.35

Table 4 reveals that 90 (97.83%) of OARs contain content in English language and 10 (10.88%) of OARs in Hindi language and remains contain contents in other language like Gujarati, Arabic, Kannada, Malayalam, Marathi etc.

Table-5: Subject wise OA repositories at OpenDAOR

Sr. No.	Subject	No. of OARs	Percentage
1.	Multidisciplinary	45	48.91
2.	Health and Medicine	12	13.04
3.	Technology General	12	13.04
4.	Chemistry and Chemical Technology	11	11.96
5.	Mechanical Engineering and Materials	10	10.87
6.	Computer and IT	09	9.78
7.	Biology and Biochemistry	09	9.78
8.	Science General	08	8.70
9.	Physics and Astronomy	08	8.70
10.	Electrical and Electronic Engineering	07	7.61
11.	Agriculture, Food and Veterinary	07	7.61
12.	Library and Information Science	06	6.52
13.	Ecology and Environment	06	6.52
14.	Civil Engineering	05	5.43
15.	Mathematics and Statistics	05	5.43
16.	Earth and Planetary Sciences	04	4.35
17.	Social Sciences General	03	3.26
18.	Management and Planning	03	3.26
19.	Arts and Humanities General	02	2.17

20.	Business and Economics	02	2.17
21.	Psychology	02	2.17
22.	Architecture	01	1.09
23.	Language and Literature	01	1.09
24.	Education	01	1.09
25.	Law and Politics	01	1.09

Table 5 reveals that a large number 45 (48.91%) of OARs are Multidisciplinary, 12 (13.04%) of OARs are related to Health and Medicine and 12 (13.04%) of OARs are related to Technology. Rest of the OARs are related to others subjects Library and Information Science, Chemistry, Computer and IT, Mechanical Engineering etc.

Findings

In year 2011 and 2013, there are a large number of 13 (14.13%) of OARs in both years included in OpenDOAR. A majority of 78 (84.78%) of OARs are Institutional. 50 (54.35%) of OARs use DSpace software. 90 (97.83%) of OARs contain contents in English language. A large number 45 (48.91%) of OARs are Multidisciplinary.

Conclusion

The study concludes that there are 92 repositories from India in OpenDOAR. In 2011 and 2013, a large number of OARs are included in OpenDOAR. Most of OARs are Institutional. Majority of OARs contain contents in English language. DSpace is popular software which is used in majority of OARs. Near about half of OARs are multidisciplinary.

References

1. Fayaz Lone, Rafiq Rather, & Gh. Jeelani Shah. (2008). Indian contribution to open access literature: A case study of DOAJ & OpenDOAR. *Chinese Librarianship: an International Electronic Journal,*26.
   URL: http://www.iclc.us/cliej/cl26fayaz.pdf
2. Mohammad Azim & Nabi Hasan (2018). Reflection of Indian Open Access Repositories in OpenDOAR: A Status Report.   *Conference: 3rd International Conference of Asian Libraries on Building Smart Libraries: Changes, Challenges, Issues, & Strategies* at Central University of Kashmir, Srinagar, 2018.
3. Sing, KP & Vanita Khanchandani (2015). Indian Contribution to Open Access Scholarly Publishing in Science and Technology: A Critical Study of Directory of Open Access Journals(DOAJ). *Library Herald.* 53(3), 268-283
4. Verma, N. K. & Shukla, A. (2015), Evaluating growth and development of open access repositories: a case study of OpenDOAR. *In Proceedings of International Conference on "Knowledge Organisation in Academic Libraries"* (pp. 59-69). LPA, New Delhi & Manipal University, Jaipur
5. Springer (2000), https://www.springer.com/gp/authors-editors/authorandreviewertutorials/open-access/what-is-open-access/10286522

.