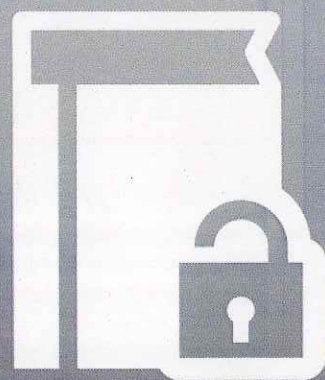


PANORAMA OF OPEN ACCESS

PROGRESS, PRACTICES & PROSPECTS



Editors
Ashis Biswas
Mayuri Das Biswas

PANORAMA OF OPEN ACCESS

Progress, Practices and Prospects

Editors

Dr. Ashis Biswas
Mayuri Das Biswas



Ess Ess Publications
New Delhi

PANORAMA OF OPEN ACCESS
Progress, Practices and Prospects

Copyright © by Editors

All rights reserved. No part of this book may be reproduced in any form or by any electronic or mechanical means including information storage and retrieval systems without permission in writing from the publisher, except by a reviewer, who may quote brief passages in a review.

While extensive effort has gone into ensuring the reliability of information appearing in this book, the publisher makes no warranty, express or implied on the accuracy or reliability of the information, and does not assume and hereby disclaims any liability to any person for any loss or damage caused by error or omissions in this publication.

ISBN : 978-93-92594-36-6

Price : Rs. 1600/-

First Published 2022

Published by:
Ess Ess Publications
4831/24, Ansari Road,
Darya Ganj,
New Delhi-110 002.
INDIA
Phones: 23260807, 41563444
Fax: 41563334
E-mail: info@essessreference.com
www.essessreference.com

Cover Design by *Patch Creative Unit*

Printed and bound in India

Contents

Foreword

Preface

List of Contributors

PART 1: OPEN ACCESS: AN OVERVIEW

- 1 Open Access: Ushering in New Dimension to Information Services 3
Dr. Ashis Biswas
Dr. Khushpreet Singh Brar
Dr. Jyoti Bhabal
- 2 Leveraging the Open Access Over Traditional Journals: Making Open Choice 24
Dr. Sudip Ranjan Hatua

PART 2: MEASURING QUALITY OF OPEN ACCESS SCHOLARLY COMMUNICATION

- 3 Improving Research Impact with Publications in Open Access Journals 47
Dr. Soumitra Sarkar
Dr. Tanmay De Sarkar
- 4 How Green is My Valley? Measuring Open Access Friendliness of Indian Institutes of Technology (IITs) through Data Carpentry 67
Dr. Parthasarathi Mukhopadhyay
- 5 A Qualitative Analysis of Open Access Scholarly Publishing in Asian Countries 90
Dr. P.K Suresh Kumar
- 6 Applications of Machine Learning Techniques to Predict the Trend of Quality of Open Access Journals in DOAJ: An Experimental Study 101
Dr. Swarnali Chatterjee
Dr. Rajesh Das

PART 3: OPEN ACCESS PUBLISHING MODELS AND MARKET

- 7 Open Access Publishing Models: A Conceptual Approach 119
Maya Deori
Dr. Manoj Kumar Verma

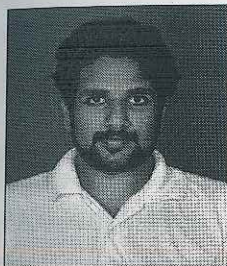
- 8 Impact of Open Access Journals in Publishing Market: A Study 128
Dr. Avijit Chakrabarti
Dr. Biplab Chakrabarti
- PART 4: OPEN ACCESS INITIATIVES**
- 9 Initiatives and Implementation of Open Access by DST and DBT Government Organizations in India 147
Dr. D. D. LAL
- 10 A Comparative Analysis of Open Government Data Initiatives in SAARC Countries 158
Dr. Ashis Biswas
- PART 5: OPEN ACCESS PUBLISHING SYSTEM AND TECHNICAL DEVELOPMENTS**
- 11 Trends of Open Access Publishing in India 181
Dr. Swapna Banerjee
Gulam Jilani
- 12 Open Peer Review Promoting Transparency and Integrity in Scholarly OA Publishing: A Review 196
Monali Mitra Paladhi
Prabir Kumar Das
- 13 AMBRA: An Open Source Platform for Publishing Scholarly Articles 214
Abhijith.B
Dr. K.G. Sudhier
- PART 6: COPYRIGHT ISSUES OF OPEN ACCESS**
- 14 Research Visibility in Scopus Indexed Journals of LIS and their Copyright Policies: An Empirical Study 229
Dr. Nivedita Bhattacharyya Sahu
- PART 7: INFORMATION LITERACY THROUGH OPEN ACCESS AND ROLE OF LIBRARY AND INFORMATION CENTRES**
- 15 Information Literacy for Rural Communities vis-a-vis Open Access to Information: Designing a Panchayat-based e-Governance Model for Rural Bengal 245
Mayuri Das Biswas
- 16 From Universe of Knowledge to Universal Knowledge: A Linked Open Data Approach for Library and Information Centres 263
Dr. Susmita Chakraborty
Rajarshi Das

Contents

17	Role of LIS Professionals in Promoting the Usage of Open Access: A Case Study	276
	M. Lokendro Singh	

Index

List of Contributors



Mr. Abhijith B is a research scholar at Department of Library and Information Science in Central University of Tamil Nadu. His research areas of interest are Altmetrics, Semantic web and Ontology.



Dr. Swapna Banerjee (orcid ID: <https://orcid.org/0000-0001-7043-9658>) is a Professor in the Department of Library & Information Science at the University of Calcutta. She is the acting Dean of the Faculty Council of Education, Journalism and Library Science of the University of Calcutta with more than 20 years of teaching experience. She has authored 10 books, 60 articles in National and International journals. She was nominated for the International Visitor Leadership Programme, funded by the United States, Department of State, and toured USA in June-July 2010. She attended the 13th IFLA conference in Singapore, and also the IFLA conference in Wroclaw in 2017. She has also chaired many sessions in SIS conference, SACITIL conference, and other national and international conferences, and has also given her thoughts as invited speakers in many conferences.

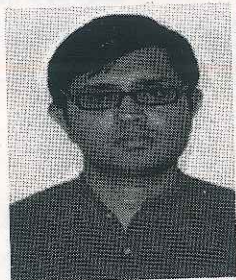


Dr. Jyoti Bhalal is working as Asst. Professor at SHPT School of Library Science, SNDT Women's University, Mumbai for the last 21 years. She received the 'Teacher Fellowship Award' under UGC Faculty Improvement Programme from June 2011- June 2013. She has presented as well as published 19 papers at the national and international levels. She has completed two minor research projects. Her subject specialization is in Book Classification, Library Management, Library and Community, Citation Management, Library Services to Children.

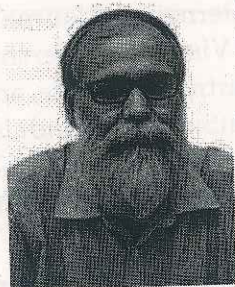
(xvi)



Dr. Nivedita Bhattacharyya Sahu a gold medalist at both BLISc and MLISc levels has more than 11 years of teaching experience. She is presently the Assistant Professor in Vidyasagar University, Midnapore. She has authored a book and published many research articles in reputed National and International journals. She has also delivered Invited lectures on a number of occasions in State, National and International level conferences and has a good number of papers presented in conferences. She has been the Principal Investigator in two projects funded by the University Grants Commission (UGC) and Indian Council of Social Science Research (ICSSR). Her domains of interest mainly are Reference sources and services, Information products and services and Community Information Services.



Dr. Avijit Chakrabarti has more than 17 years of experience in different libraries. He is presently working as Librarian in Maharaja Srischandra College, Kolkata. He has published 28 Articles and 3 Book chapters. He has been privileged to receive "Friends of the British Library Scholarship" a travel grant from UGC for attending 5th QQML at Rome University, Italy. A former General Secretary of the West Bengal College Librarians' Association from 2015 to 2018 he worked as joint editor of "College Libraries" a UGC enlisted peer-reviewed journal from 2015 to 2019. He has been resource person in several workshop organised for librarians. He is also an Academic Counsellor of IGNOU & NSOU.



Dr. Biplab Chakrabarti Professor Department of Library and Information Science and the Joint Coordinator, Centre for Studies in Book Publishing, University of Calcutta has more than 30 years of teaching experience. He was the editor of Calcutta University Journal of Information Studies and the former Library Secretary, The Asiatic Society, Kolkata. He has authored and edited many books and has several articles in national and international journals to his credit. He has delivered more than 40 invited talks in various academic gatherings. He has also completed a Major Research Project under UPE Scheme of the UGC. His research interests are in the areas like Community Information Services, Bibliometrics, LIS Education etc.



Dr. Arun Kumar Chakraborty is the Librarian in Bose Institute, Kolkata with profound experiences in library administration. He was the former Director General, RRRLF, DG, National Library and Addl. MD, NML He was a Fulbright Scholar Virginia Tech. and National Institute of Health, USA (2005-2006) and IFLA Standing Committee Member. He is the recipient of "ILA-Kaula Best Librarian Award" by India Library Association in 2012 He has been serving as Guest Faculty in Kalyani University, Jadavpur University, University

alist at both BLISc and
ing experience. She is
yasagar University,
lished many research
ournals. She has also
ions in State, National
ood number of papers
n two projects funded
ncil of Social Science
ources and services,
Services.

experience in different
Maharaja Srischandra
nd 3 Book chapters. He
f the British Library
ling 5th QQML at Rome
y of the West Bengal
018 he worked as joint
peer-reviewed journal
orkshop organised for
J.

ment of Library and
, Centre for Studies in
more than 30 years of
tta University Journal
Secretary, The Asiatic
many books and has
ournals to his credit. He
in various academic
arch Project under UPE
mmunity Information

ian in Bose Institute,
Administration. He was
National Library and
r Virginia Tech. and
) and IFLA Standing
-Kaula Best Librarian
He has been serving as
University, University

List of Contributors

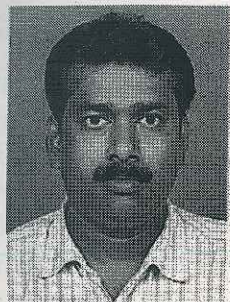
of Calcutta and Rabindra Bharati University. He has more than 60 published articles and several book chapters to his credit. Besides he has authored and edited many books. He has delivered more than 100 invited talks and presided over several national and international conferences and seminars.



Dr. Susmita Chakraborty (ORCID ID : <https://orcid.org/0000-0002-5254-8655>) is HoD and Professor in the Department of Library and Information Science, University of Calcutta. She is the Secretary, Standing Committee, Section on Education & Training, International Federation of Library Associations & Institutions (IFLA-SET) and also the Editor of IFLA SET Bulletin. She was Commonwealth Fellow and a visiting Academician in University College London, United Kingdom in 2015. She was awarded with Bonnie Hilditch International Librarian Award (San Diego, USA, 2013), Momentum Press Award (Boston, USA, 2014) and SLA Rising Star Award (Vancouver, Canada, 2015).



Dr. Swarnali Chatterjee is presently working as Librarian at Bengal Music college, Kolkata. Her area of interest includes Applications in IT in Library and Information Science field, Library Classification and Cataloguing, Information Retrieval System, Folksonomy and Taxonomy, Library Management.



Mr. Prabir Kumar Das Scientific Assistant, Documentation & Information Science Division of Indian Statistical Institute, Kolkata has more than 20 years of professional experience. He has many published and communicated papers in the national and international conferences, seminars and journals. His research interests are in Bibliometrics, Scientometrics, Research Collaboration, Scientific Productivity, Open access & scholarly communications, etc



Mr. Rajarshi Das is a Librarian at Banwarilal Bhalotia College, Asansol. He has done his MPhil in Library and Information Science from University of Calcutta. He is presently pursuing PhD in Digital Humanities from Indian Institute of Technology, Jodhpur.



Dr Rajesh Das is presently working as Assistant Professor at the Department of Library and Information Science, The University of Burdwan, Burdwan. His area of interest includes: Open source software, Digital Library, Discovery system, Semantic web, Linked Open Data, web database applications, Linux server administration and networking, Data science and machine learning models.



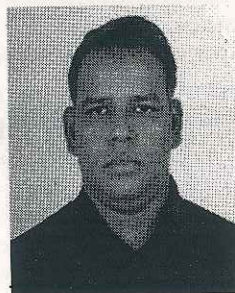
Dr. Tanmay De Sarkar is an Assistant University Librarian, University of Calcutta and a visiting lecturer for the Department of Library and Information Science, University of Calcutta. He is a Gold Medalist and has authored many research articles in international peer-reviewed journals indexed in both Scopus and Web of Science. At present his Scopus h-index is 3. His research areas include library networking, e-resource management and web-based applications.



Ms. Maya Deori is presently pursuing Ph.D. programme in the Department of Library and Information Science at Mizoram University. She has published two papers in Scopus Indexed journals and also presented two papers in national seminars. Her research interest areas are Sentiment analysis, metric studies, and open access evaluation.



Dr. Sudip Ranjan Hatua, Associate Professor and HOD, Dept. of Library & Information Science, and Editor, RBU Journal of Library and Information Science, Rabindra Bharati University has more than 15 years of teaching experience. He has more than 60 publications including articles in peer reviewed journals and book chapters. He has also authored 7 books. His research interests are in Application of ICT in Library, Library Automation and Networking, Database Design & Web based Searching System, Information Retrieval System etc.



Mr. Gulam Jilani (ORCID ID: <https://orcid.org/0000-0003-2226-638X>) started his career at IIM Lucknow Noida Campus as a trainee. Presently he is working as an Assistant Librarian since 2016 at Indian Maritime University Kolkata Campus. He has more than 10 years of experience in various institutions. He is pursuing PhD under University of Calcutta.

tant Professor at the
ce, The University of
cludes: Open source
semantic web, Linked
erver administration
ning models.

Librarian, University
tment of Library and
s a Gold Medalist and
tional peer-reviewed
cience. At present his
library networking, e-
ons.

D. programme in the
Science at Mizoram
opus Indexed journals
minars. Her research
udies, and open access

r and HOD, Dept. of
Journal of Library and
sity has more than 15
than 60 publications
book chapters. He has
e in Application of ICT
g, Database Design &
rieval System etc.

(0000-0003-2226-638X)
s as a trainee. Presently
16 at Indian Maritime
10 years of experience
under University of

List of Contributors

(xix)



Dr. P.K Suresh Kumar (ORCID-ID: <https://orcid.org/0000-0003-2127-5233>) Assistant Librarian in the Kerala University Library, Thiruvananthapuram has 25 years of experience. He is an Academic Counsellor of IGNOU and a part-time faculty member of the School of Distance Education and Centre for Adult and Continuing Education, University of Kerala. He has been awarded IASLIC-Ranganathan Award 2014. He has published 52 research papers and edited three books. He is the Editor of *Sameeksha* and *Journal of Information Science & Technology (KJIST)*. At present he is the General Secretary of Kerala Library Association (KLA).



Dr. D D Lal is working as Head & Chief Librarian at "National Brain Research Centre (Deemed University), Manesar, Gurgaon, Haryana since 2000 and as "DeLCON National Coordinator" for the DBT's Electronic Library Consortium for Biotechnology (DeLCON Consortium) since 2009. He has more than 20 publications to his credit. He has participated and involved in many National and International conferences. His areas of specialization are Library Networking, Library Consortium and Digital Library.



Dr. Parthasarathi Mukhopadhyay (ORCID ID: <https://orcid.org/0000-0003-0717-9413>) is a Professor in Library and Information Science and former Head, Department of Library and Information Science, Kalyani University. Prof. Mukhopadhyay, a recipient of Best Young LIS Teacher award (IASLIC), is an open source enthusiast and worked as a developer and promoter of many open source projects. He has more than 100 papers in journals and conference volumes, and five books in his beeline. His recent book on Interoperability and Retrieval is published by UNESCO, Paris. Prof. Mukhopadhyay acted as a metadata consultant for the project NDL (National Digital Library) hosted by IIT, Kharagpur. He is presently a member of the Advisory Committee for National Virtual Library Project of Ministry of Culture, Govt. of India.



Mrs. Monali Mitra Paladhi Deputy Librarian, Documentation & Information Science Division of Indian Statistical Institute, Kolkata has more than 21 years of professional experience. Earlier served the University of Burdwan and British Council as Deputy Librarian and Manager Operations, Library and Information Services, East India, respectively. She has also worked in the British Library Patna, College of Agricultural Banking, Reserve Bank of India, Pune and FITT, IIT Delhi. She has published and communicated papers in national and international conferences. Her research interests are in information literacy, Online information retrieval, E-information resources, Open access & scholarly communications, etc.

Initiatives and Implementation of Open Access by DST and DBT Government Organizations in India

Dr. D. D. LAI

*Chief Librarian & Head of NBRC Library, National Brain Research Centre (Deemed University),
Department of Biotechnology (DBT), Ministry of Science & Technology, Govt. of India.*

ABSTRACT

Open Access (OA) directs librarians with responsibilities to advise patrons about effective use of OA resources. This paper reinforces many of the concepts being discussed regarding OA initiatives in the DST and DBT. This work highlights existing OA policies in India and provides an overview of DST and DBT archiving and OA policies. It also highlights the strategies needed to implement these policies in the Institutions of DST and DBT. It provides a unique overview of national awareness and implementations of OA in 26 DST and 18 DBT Institutions. Moreover, it describes institutional OA mandates in these institutions as a national strategy to introduce and implement them. An overview is provided about the repository infrastructure currently in DST and DBT Institutions, including institutional and disciplinary repositories, national repository networks and national OA information portals and support networks.

The purpose of this study is to examine scholarly impact which is critical to DBT and DBST Institutions in their aspiration to create, disseminate and apply knowledge. However, scholarly impact is an elusive concept. The author will provide actionable recommendations for DST and DBT administrators, researchers and educators on how to enhance impact. The author conducted a general review of the literature and offered a multidimensional and multi-stakeholder model of scholarly impact to guide future actions aimed at enhancing scholarly impact.

The author provides an innovative way of conceptualizing scholarly impact. The conceptual analysis results in actionable recommendations for DST and DBT researchers and educators to enhance impact of their research works.

Keywords : DST and DBT, Digital Library, Open Access, Research impact, Institutional Repository, OpenDOAR, ScienceCentral

1. INTRODUCTION

Establishing institutional repositories (IR) is one example of institutional activities to promote Open Access (OA) to their academic work. These are digital compilations of intellectual commodities created by professors, staff, and students at a university, and made available to end users both in and out of institution. The IRs can contain conference papers, seminar presentations, research reports, pre-prints and post-prints of journal

articles, dissertations, working papers, thesis and other intellectual documents. Digital repositories are emerging speedily as a key element of research cyber infrastructure. (Ghosh & Das, 2006)

These resources encompass all collected resources in all media, particularly contributions from home institutional published and unpublished resources, and are accessible to end users both inside and beyond the institution. By 2003, there was a tremendous growth in the OA research archives in the world in accordance to OA movement.

There was need for listing registry of such repositories in order to make them visible to the world of academicians and researchers. A repository registry is a web based metadata catalogue that points to repositories. There were numerous listings of repositories and OA archives, but there was no single complete list which recorded all the available repositories. A more structured information service, classifying and explaining the repositories, was also required. Academicians and researchers, for example, wanted to know the scope and comprehensiveness of the information they found, as well as the qualities that made it easier to utilize. Repositories are required to be categorized with clear information on subject coverage, their collection, the content and preservation policies etc.

While the idea of OA publishing is not new and has been around for little while, it is only recently that individuals have realized its significance. Increased and simple web utilization, as well as backing from the government organizations, educational and research institutions, and certain other funding agencies, have been credited with the surprising shift in opinions. Hundreds of famous academic and research institutions from more than thirty countries marked the week in their own special way, highlighting their commitment to the promotion of knowledge by making academic research findings available online for free and quickly.

2. THE IMPORTANCE OF OA IN INDIA

In India, OA to academic literature is not really a novel concept. India has a thriving scientific community, with scientists working in a variety of sectors. India also produces a large number of engineers and scientists. India's Science and Technology, one would think, are in safe hands. The reality, on the other hand, is rather diverse. (UNESCO, 2013)

The majority of Indian libraries are unable to afford to subscribe to vital periodicals those scholars and scientists rely on. This is a significant hindrance to knowledge acquisition, and it has a negative impact on scholars' own scholarly output. The low visibility of Indian research is another result of exorbitant membership rates.

Academics in the region work hard to publish their work in prestigious publications that only a handful of their peers can read. This results in a lack of citations for Indian academics' work, a lack of dissemination of their research findings, and, as a result, a lack of knowledge of scientific achievements in the country. As a result, Indian scientists face

two issues: access and visibility. Some of these drawbacks can be greatly minimized if OA is fully implemented both inside and outside the country.

3. INITIATIVES OF OA IN INDIA

Though a lack of knowledge may be a concern for Indian scientists and researchers, a number of Indian organizations, journals and publishers have taken steps to open available research content. India has been a contributor to The Directory of Open Access Journals (DOAJ) since 2003. The Medlars Centre of India had made history by gathering together with all India's biomedical literature on one platform. IndMed was first published bibliographic database in the year 1998 and includes abstracts across over 70 publications.

The INSA (Indian National Science Academy) as well as the ICA (Indian Academy of Sciences) are renowned institutions that have significant publication programmes and make their papers and articles freely available. Bioline International is a no-profit partnership between Canada's University of Toronto Libraries, and Brazil's Reference Center for Environmental Information, and the United Kingdom's Bioline.

On its main site, Bioline delivers access to fourteen Indian publications, as well as collect these publications to the Bioline-Prints Archive. The ePrints@IISC is a e-repository that collects, archives, and distributes the research of the Bangalore's scientific community from the famed Indian Institute of Science.

Over Four Thousand OA English language publications are now included on Open J-Gate platform, a free database of OA journals. India's contributions to an OA programme include Medknow publications, the pioneering OA journal publication, and NIT, Rourkela. These missions do not function in separation, but rather as portion of a greater national strength and movement to promote OA in India.

The ICAR started a large OA project in the year 2012-13. ICAR had established an OA strategy that needs its associate institutes all over the country to make their study and technical publications, catalogues, books, case studies, lecture notes, workshop proceedings, and other digital objects open to the public. While these institutes will maintain their own OA repositories, the ICAR was initiating a central collector to distribute the "one-stop access" to all of the agriculture knowledge and council's scientific zones.

Main repositories, such as ICAR's, which are made up of a network of repositories, considerably improve accessibility, assist in realizing the prospective of OA, and encourage the major fundamental aim of the OA package in India. While emerging strategies and networking at organization level is serious, forming the conception of OA at the government policy level is equally critical. OA programmes would stop functioning in silos and then become part of a cohesive, proactive national movement to improve information flow if there was a national aim and strategic plan in place.

4. OA IN INDIA IN RELATION TO GLOBAL TRENDS

Thanks to free software like the Open Journal System (OJS) and free peer-review as

a long-standing tradition. Over 8,500 titles from around the world are now listed in the Directory of Open Access Journals (DOAJ), with the majority of them charging no author fees. These OA channels offer crucial options for information dissemination while also saving libraries a lot of money.

Many universities in North America and the Europe have created repositories, either on their own or as part of a consortium, and a growing number of higher educational organizations in the global south have accomplished the same. Most educational universities have also established publication platform, like OJS and other open source gateways, to permit faculty and teachers to indulge in OA publications as well as other forms of emerging technology and digital scholarship.

The Obama government announced in 2013 that all openly funded research would be available freely within a year of publication. In the United Kingdom, research councils have recently begun to make publicly financed research open to anyone. From January 2014, the European Commission is anticipated to follow suit. Stakeholders in India must critically assess the relevance of these ideas to the Indian context, as well as their potential benefits.

The CSIR, DAE, ISRO, DRDO, and ICRO organizations are among the many higher educational organizations (including universities and deemed universities) and high-level research institutions in India that are now discussing and engaging with OA. Sh. Subbiah Arunachalam, an information consultant has been crucial in raising awareness of the OA discussions among these significant organizations. Yet, there is no strong policy on OA at the national or institutional levels.

At the same time, certain prominent organizations, such as the Indian Academy of Sciences (IAS), have taken the lead in making their publications OA, while the IISc - Indian Institute of Science has one of the nation's most substantial institutional archives. Over 350 OA publications are presently published by diverse institutions across India, with the majority of them focusing on science and medicine. Humanities and social sciences are underrepresented. Fewer than 100 of India's almost 600 higher education institutions have an IR in place, but more are in the planning stages.

5. DST AND DBT OA POLICY FOR THEIR FUNDED RESEARCH ORGANIZATIONS

The Ministry of Science and Technology constituted two departments such as DST (Department of Science and Technology) and DBT (Department of Biotechnology). The DST and DBT have a vital role in supporting basic, change of location, and applied research project by building applicable infrastructure, providing cash to individual scientists, establishments, and start-ups, and the other essentials. As a result of researcher's square measure, the most effective to judge is to where publish their articles. DST and DBT recognize researchers to get publish them and add journals of their selection. The DST and DBT anticipate that those who receive money will publish their findings in peer-reviewed journals of high quality. When assessing future funding options, the DST and DBT affirm

the inherent merit of the publications, not the name of the journal for which an author's research is published, should be considered. The Journal Impact Factor (IF) should not be used as a substitute measure for individual's research paper effectiveness, to judge an independent researchers and scientist's performance, or to make judgments regarding hiring, promotion, or funding, as per the DST and DBT. The DST and DBT feel that the most effective method to ensure that the research it finances may be accessible, read, and developed upon is to maximize the circulation of these papers by offering free internet access and placing them in an IR. Making all information publicly accessible is very simple in the electronic context of information generation and distribution. Moreover, having free, open, and electronic access to scientific investigation will guarantee that cutting-edge research which is promptly incorporated into higher education curriculum, raising the country's scientific and technical education standards. As a result, a more diverse research culture will emerge. (DBT, Govt of India, 2014)

5.1. Existing DST and DBT Institutions

Table 1. DST Institutions

Sl. No.	Place/City	Name of Institutions
1	Nainital	ARIES - Aryabhata Research Institute of Observational-Sciences
2	Pune	ARI - Agharkar Research Institute
3	Lucknow	BSIP - Birbal Sahni Institute of Palaeobotany
4	Kolkata	BI - Bose Institute
5	Bangalore	CNSMS - Centre for Nano & Soft Matter Sciences
6	Bangalore	IIAP - Indian Institute of Astrophysics
7	Mohali	INST - Institute of Nano-Science & Technology
8	Hyderabad	IARCPNM - International Advanced Research Centre for Powder Metallurgy & New Materials
9	Mumbai	IIGM - Indian Institute of Geomagnetism
10	Kolkata	IACS - Indian Association for the Cultivation of Science
11	Bangalore	JNCASR - Jawaharlal Nehru Centre for Advanced Scientific Research
12	Gandhinagar	NIF - National Innovation Foundation
13	Bangalore	RRI - Raman Research Institute
14	Kolkata	SNBNCBS - S.N. Bose National Centre for Basic Sciences
15	Kerala	SCTIMST - Sree Chitra Tirunal Institute for Medical Sciences and Technology
16	New Delhi	TIFAC - Technology Information, Forecasting and Assessment Council
17	Guwahati	IASST - The Institute of Advanced Study in Science & Technology
18	New Delhi	VP - Vigyan Prasar
19	Dehradun	WIHG - Wadia Institute of Himalayan Geology
20	Lucknow	NAS - National Academy of Sciences India,
21	Kolkata	ISCA - Indian Science Congress Association

which an author's
r (IF) should not be
ness, to judge an
gments regarding
T feel that the most
ossible, read, and
ering free internet
sible is very simple
Moreover, having
e that cutting-edge
culum, raising the
re diverse research

sciences

r Powder Metallurgy &

ic Research

ces and Technology

ment Council

nology

22	New Delhi	INAE - Indian National Science Academy
23	Bangalore	IAS - Indian Academy of Sciences
24	New Delhi	DST - Department of Science and Technology
25	New Delhi	SERB - Science and Engineering Research Board
26	New Delhi	INAE - Indian National Academy of Engineering

Table 2. DBT Institutions

Sl.	Place/City	Name of Institutions
1	Faridabad	RCB - Regional Centre for Biotechnology
2	Faridabad	THSTI - Transnational Health Science & Technology Institute
3	Mohali	NABI - National Agri-Food Biotechnology Institute
4	Mohali	CIAB - Centre of Innovative & Applied Bioprocessing
5	New Delhi	BIRAC - Biotechnology Industry Research Assistance Programme
6	Hyderabad	CDFD - Centre for DNA Fingerprinting and Diagnostics
7	New Delhi	DBT - Department of Biotechnology
8	New Delhi	ICGEB - International Centre for Genetics and Engineering Biotechnology
9	Bhubaneswar	ILS - Institute of Life Sciences
10	Imphal	IBSD - Institute of Bioresources and Sustainable Development
11	Manesar	NBRC - National Brain Research Centre
12	Kalyani, Kolkata	NIBMG - National Institute of Biomedical Genomics
13	New Delhi	NIPGR - National Institute of Plant Genome Research
14	Hyderabad	NIAB - National Institute of Animal Biotechnology
15	New Delhi	NII - National Institute of Immunology
16	Pune	NCCS - National Centre for Cell Science
17	Thiruvananthapuram	RGCB - Rajiv Gandhi Centre for Biotechnology
18	Bangalore	InStem - Institute for Stem Cell Science and Regenerative Medicine

(DST, Ministry of Science & Technology, 2020)

5.2. Institutional Repository (IR)

To accomplish the cognitive approach, each institution is allowed to improve its own compatible IR of OA for research articles and review publications in peer-reviewed journals. To collect the complete text and metadata of these papers, the MST (Ministry of Science & Technology) had established a Central Repository System. (www.sciencecentral.in).

- Institutions obtaining DST and DBT core grants will have to setup IR.
- IR should be linked with the central harvester system.
- Institutions those who have not yet setup an IR should be compelled to do so as soon as practicable.

- It is recommended that all other institutions have an IR, and there will be assistance available for this purpose.

Researchers from organizations those do not have currently their IR, may submit their scholarly publications to the central repositories of the DST and DBT.

5.3. Methods of online repository

Some of the important issues of online repository are:

5.3.1. What to be deposited?

The final recognized documents and manuscripts (after refereeing, correction, and other steps) resulting from research initiatives that are wholly or substantially supported by DST or DBT, or that were carried-out applying infrastructure formed with their provision, shall be deposited. This comprises both requested and author-initiated review publications for those who received DBT or DST money during that time period. The paper's full text, metadata, and additional resources should all be uploaded. The grant number should be included in the acknowledgement at the conclusion of the complete text.

Papers arising from money received beginning in the financial year 2012-13 essentially be deposited. Authors are urged and recommended to deposit articles from previous publications, irrespective if they are unrelated to current DST or DBT-funded research. Regardless of funding source, organizations are encouraged to use such repositories as primary repositories for any publications resulting from their research work.

5.3.2. Where to be deposited?

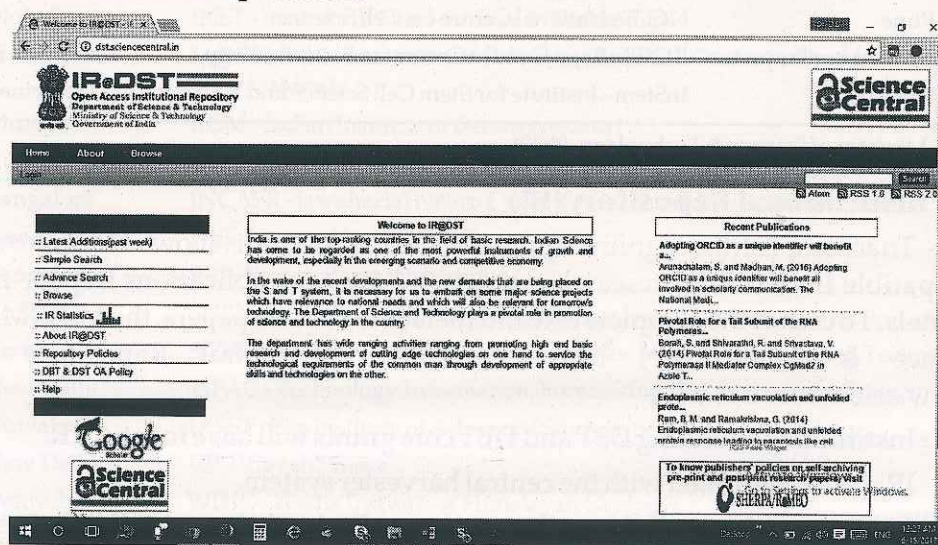


Fig. 1. Institutional Repository of DST
(Source : ScienceCentral)

will be assistance

IR, may submit
DBT.

correction, and
initially supported
armed with their
initiated review
time period. The
added. The grant
of the complete

al year 2012-13
osit articles from
or DBT-funded
aged to use such
m their research

The documents and manuscript should be filed in the grantee's IR. If the organizations do not yet have its own IR, the documents and papers should be deposited in the DST and DBT central repositories system (<http://dbt.sciencecentral.in> and <http://dst.sciencecentral.in>, respectively) as described in the segment "Institutional Repository."

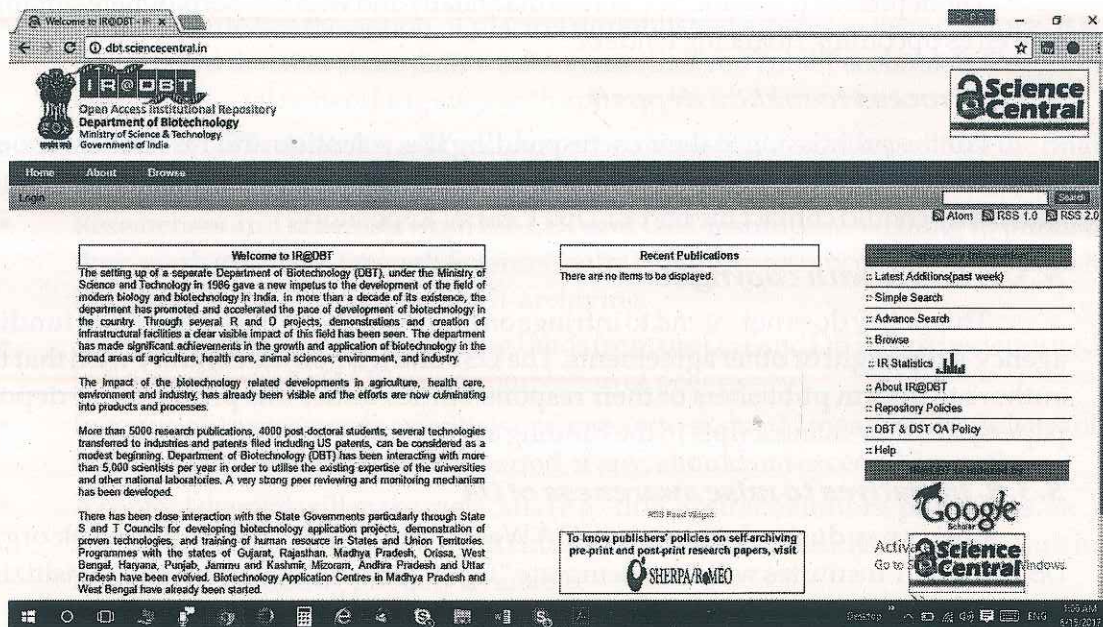


Fig. 2. Institutional Repository of DBT
(Source: ScienceCentral)

5.3.3. When publications to be deposited?

Deposits of publications should be made within two weeks of the journal's approval, preferably earlier. The policy's resolution is to increase public information of the study, and performing so quickly is in the researchers' premium interests. If journal and publication demands on prohibition, the content should be deposited, and the IR will publish the articles / paper(s) once the embargo time has passed. Science, Technology, and Medicine (STM) disciplines should be embargoed for no more than 6 months, whereas Arts, Humanities, and Social Sciences should be embargoed for 12 months.

5.3.4. Who will deposit?

Individual researchers and scientists and/or Institutions who have received the direct funds or other benefits / infrastructures from the DST or DBT, as well as researchers and scientists working at DST or DBT-funded autonomous organizations who advantage indirectly or directly from its infrastructure and core funding provided by these organizations, are covered by this policy.

The documents can be deposited by the principle investigator (PI), a person

approved by the PI, or anybody permitted by the head of institutions where the research works is completed. The PI and the head of the institutions are accountable for guaranteeing that the article gets deposited on time.

5.3.5. Documents depositing is mandatory in a repository

The deposited ID should be referred in annually and whole reports (where suitable), as well as upcoming financing tenders.

5.3.6. Process to make a deposit

For the submission to their corresponding IRs, scientists and researchers should follow their institutional standards. Researchers who do not have access to an IR at their university should contact the DST or DBT Central Repository.

5.3.7. Issues with copyright

This policy does not intend to infringe on the researcher's, institution's, or funding agency's copyright or other agreements. The DST and DBT on the contrary wish that the authors to inform publishers of their responsibilities under this procedure to deposit papers/articles/manuscripts in the funding agency's IR or central depository.

5.3.8. Initiatives to raise awareness of OA

Every year, during International OA Week (<http://www.openaccessweek.org/>), DST and DBT institutes will commemorate "Open Access Day" by hosting sensitizing lectures, programmes, and workshops, as well as launching new OA activities.

6. CONCLUSION

The DBT independent institutes and DST-aided institutions are defined as getting "core funding." This category includes any organization that receives an annual grant to meet the wage, infrastructural, and research needs of its employees. A central harvester is a website like www.csircentral.net, which was created by CSIR-URDIP. It also includes connections to IRs built up by a number of the CSIR laboratories. The CSIR-URDIP has dedicated to organize training sessions for (a) the employees from DST and DBT labs who will be setting-up IR-institutional repositories, and (b) the scientists who will be changing their minds about OA.

Funding agencies urge institutions to seek intellectual property protection for research and development achievements. In addition, certain research institutions affiliated with the CSIR, ICAR, and other organizations must adhere to their respective councils'/societies' IP policies.

- The DST and DBT institutions must setup an OA repository.
- For one stop access to all published articles, these institutions have set up a central harvester that harvests all metadata and full-text from their OA repositories.
- Each IR's metadata and other information are covered by copyright with the DST

where the research
accountable for

s (where suitable),

researchers should
ess to an IR at their

tion's, or funding
rary wish that the
cedure to deposit
pository.

ccessweek.org/),
osting sensitizing
activities.

defined as getting
an annual grant to
central harvester
IP. It also includes
CSIR-URDIP has
and DBT labs who
o will be changing

ty protection for
arch institutions
o their respective

ve set up a central
positories.

ght with the DST

and DBT and may be used, re-used or shared for academic and research purposes. Written permission is required for commercial and other reuse.

- All scholarly publications, books, monographs, conference proceedings, reports, bulletins, newsletters, pamphlets, brochures, project summaries, speeches, and other grey material stored by the institutes will become publicly accessible.
- Each institute has the option of placing unpublished articles in its repository. It is encouraged that they share their works on sites like YouTube, Facebook®, Google+, and other social networking sites with appropriate disclaimers.
- All DST & DBT researchers should deposit in the institute's OA repository the final author versions (preprints and post prints) of papers accepted for publication.
- Researchers and scientists from the DST and DBT institutions wishing to publish their work in OAIRs through ScienceCentral Platform are encouraged to publish through publishers who allow self-archiving.
- Scholarly literature produced using funds from the DST and DBT must be deposited in ScienceCentral's OAIR upon completion of peer review.
- In copyright agreements, scientists and researchers should mention OA policies of DST and DBT, and the embargo period, if any, should not exceed 12 months.
- A content deposit will make metadata (e.g., title, abstract, authors, publishers, etc.) free to the public and as soon as an embargo period of 12 months does not result in the content becoming publicly available.

REFERENCES

- Das, A. K. (2017, 517). Research Blog - Centre for Studies in Science Policy. Retrieved from National Workshop on Strengthening Open Access (OA) Initiatives in India - 23rd June - NBRC, Manesar, Gurgaon, India: <http://cssp-jnu.blogspot.com/2017/05/national-workshop-on-strengthening-open.html>
- DBT, Govt of India. (2014, 12 152). DBT and DST Open Access Policy - Policy on open access to DBT and DST funded research. Retrieved from DBT and DST Open Access Policy - Policy on open access to DBT and DST funded research: https://dst.gov.in/sites/default/files/APPROVED%20OPEN%20ACCESS%20POLICY-DBT%26DST%2812.12.2014%29_1.pdf
- DST, Ministry of Science & Technology. (2020, 4 24). Autonomous S&T Institutions. Retrieved from Autonomous S&T Institutions: <https://dst.gov.in/autonomous-st-institution-encyclopedia.com>. (n.d.). Retrieved from LIBRARY ASSOCIATIONS AND CONSORTIA: <https://www.encyclopedia.com/media/encyclopedias-almanacs-transcripts-and-maps/library-associations-and-consortia>
- Ghosh, S. B., & Das, A. K. (2006). Open access and institutional repositories - a developing. ORLD LIBRARY AND INFORMATION CONGRESS: 72ND IFLA GENERAL CONFERENCE AND COUNCIL (pp. 1-21). Seoul: IFLA.
- Sharma, J., & Mishra, S. (2015). Concepts of Openness and Open Access. In J. Sharma, & S. Mishra, Concepts of Openness and Open Access (pp. 1-70). Paris: United Nations Educational, Scientific and Cultural Organization.
- UNESCO. (2013). Opening up by Closing the Circle: Strengthening Open Access in India. National Conference during Open Access Week 2013 (pp. 1-5). New Delhi: UNESCO. Retrieved from Opening up by Closing the Circle: About OpenDOAR. <https://www.jisc.ac.uk> (accessed Aug 2018).

Initiatives and Implementation of Open Access by DST and DBT ...

- Directory of Open Access Repositories (OpenDOAR) Press Release. September 15, 2006. www.sherpa.ac (accessed Aug. 2018).
- Directory of Open Access Repositories. <http://www.aughty.org> (accessed Aug 2018).
- Heather, L. M. (2015). Felicity Dykas and Kristen Gallant. "OpenDOAR Repositories and Metadata practice". *D-Lib Magazine*. <http://www.dlib.org> (accessed June 2017).
- Hubbard, B. (2017). "OpenDOAR: The directory of Open Access Repositories." <http://www.univac> (accessed 2017).
- Release of OpenDOAR Listings. January 27, 2006. www.opendoar.org (accessed June 2017).
- Jainab, A.N. (2010). "Open access repositories and journals for visibility: implications for malaysian libraries". *malaysian journal of Library and Information science*. 2010. (accessed 2017).
- Janakiraman, A. Open access repositories through E-prints: A practical approach at MSSRF library. In B. Rameshbabu (Ed.), *Libraries in the changing dimensions of digital technology*, Festschrift in honor of Prof. D. Chandran (Vol. II, p. 589). Delhi: B.P. publishing corporations.
- Jones, R. (2014). "What is behind the OpenDOAR?" 2014. <https://www.doria.fi> (accessed July 2017).
- Lihitkar, S. (2013). Open access E-print archives. In *Libraries in the changing dimensions of Digital technology*. Delhi: B.R. publishing House. 609.
- Nashipudi, M & Ravi, B. (2014). "Indian research going global: A study on the status of Open Access Publishing." *International journal of Information Research*. June 2014. <http://www.spoars.org> (accessed 2017).
- OpenDOAR. <https://en.wikipedia.org> (accessed June 2017).
- "OpenDOAR: Directory of Open Access Repositories." 2010. www.lib.vt.edu.
- OpenDOAR: Directory of Open Access Repositories. <http://www.lib.vt.edu> (accessed June 2017).
- Release of OpenDOAR listing. January 2006. www.opendoar.org.
- Wani, Z., A., Gul, S. & Rah, J. A. (). Open Access Repositories: A global perspective, with an emphasis on Asia. Vol. 29. pdf.
- Mavodza, J. (2013). A review of the open access concept in the UAE. *New Library World*, 259-266.
- Krishnamurthy, M. (2008), "Open access, open source and digital libraries - a current trend in university libraries around the world". *Program Electronic Library and Information Systems*, 42(1), 48-55. <https://opensource.com/resources/whatopen-source>
- Bailey, C.W. (2006). Open Access and Libraries. <http://www.digital-scholarship.com/cwb/OALibraries2.pdf>

THE BOOK

Open Access which is free and unrestricted access to research outputs for anyone, anywhere has emerged to be a sine-qua-non for meeting information needs in the present era. A comprehensive and coherent approach to the concept of open access, its foundation and prevailing status has been accentuated in this book. It establishes open access as an effective instrument towards dissemination of information in the digital age. Besides a companion to researchers, scholars and students from LIS as well as ranging across disciplines, this book is an important read which anticipates answering queries relevant to open access publishing and implementation process through evidence based instances.

THE EDITORS



Ashis Biswas, (orcid.org/0000-0002-6120-9073) *MLIS, M.Phil., Ph.D.* is currently working as Librarian, Victoria Institution (College), Kolkata and is also associated with IGNOU as an Academic Counsellor since 2007. He is the Joint Editor of 'College Libraries (WBCLA)' (a UGC Care listed journal) and Joint Secretary of West Bengal College Librarians' Association (WBCLA). He is a life member of BLA, IASLIC and Indian Science Congress Association. He has authored a book and several book chapters and research papers in peer reviewed journals and conference proceedings and delivered five invited lectures as resource person in national level webinars. His areas of interest are in Open Access, Green Library, Community Information Service, Management of Library and Information Centres and LIS Education.

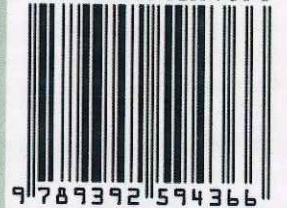


Mayuri Das Biswas, *MA, MLIS, M.Phil.* is currently Head Librarian, J.D. Birla Institute, Kolkata and has more than 15 years of professional experience in various academic institutions. She has also served IGNOU as Academic Counsellor. She has a number of publications including book chapter, articles in peer reviewed journals and conference proceedings to her credit. Presently, she is pursuing Ph.D. from University of Calcutta. She is also a member, Serial Division, IASLIC. Her research areas of interest include Open Access, Research Data Management, Library & Information Management and Services.

Ess Ess Publications

4831/24, Ansari Road, Darya Ganj, New Delhi-110 002
Phones : 41563444, 23260807 Fax 011-41563334
E-mail : info@essessreference.com
www.essessreference.com

ISBN: 978-93-92594-36-6



Rs. 1600/-