

Open Access Initiatives in India – An Evaluation

A Presentation

By

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Sci-Tech/Engineering Div. Contributed Papers Session

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June 12, 2006

Why Open Access to Indian Research?

- Contribution to a global knowledge base
- Authors lack access to international publishing avenues
- Declining journal subscriptions
- Better dissemination of research locally
- Local journals not indexed by major A & I services such as Web of Science
- OA will provide greater visibility and impact

S&T Departments

- **Dept. of Science and Technology**
- **Dept. of Biotechnology**
- **Dept. of Scientific & Industrial Research**
 - **Council of Scientific & Industrial Research (CSIR)**
- **Dept. of Atomic Energy**
- **Dept. of Space**
- **Dept. of Ocean Development**
- **Department of Agricultural Research & Education**
 - **Indian Council of Agricultural Research (ICAR)**
- **Dept. of Health and Family Welfare**
 - **Indian Council of Medical Research (ICMR)**

Higher Education Structure

- Ministry of Human Resource Development
 - **All educational institutions including universities and technical institutes**
 - **Indian Institutes of Technology**
 - **Indian Institutes of Management**
 - **Indian Institute of Science**

Open Access and Developing Countries

- Chan et al. 2005. The fast track to building research capacity in developing countries. www.scidev.net/ms/openaccess
- Das et al. 2005. Collection development in digital information repositories in India. <http://eprints.rclis.org/archive/00005682>
- Kumari, L. Spring 2005. Global access to Indian research. Indian STM journals online. <http://www.istl.org/05-spring/article3.html>

Outline of study

- **Study Objectives**
- **Scope of Study**
- **Study methodology**
- **Results**
- **Innovative features**
- **Barriers to implementation**
- **Best practices**

Study Objectives

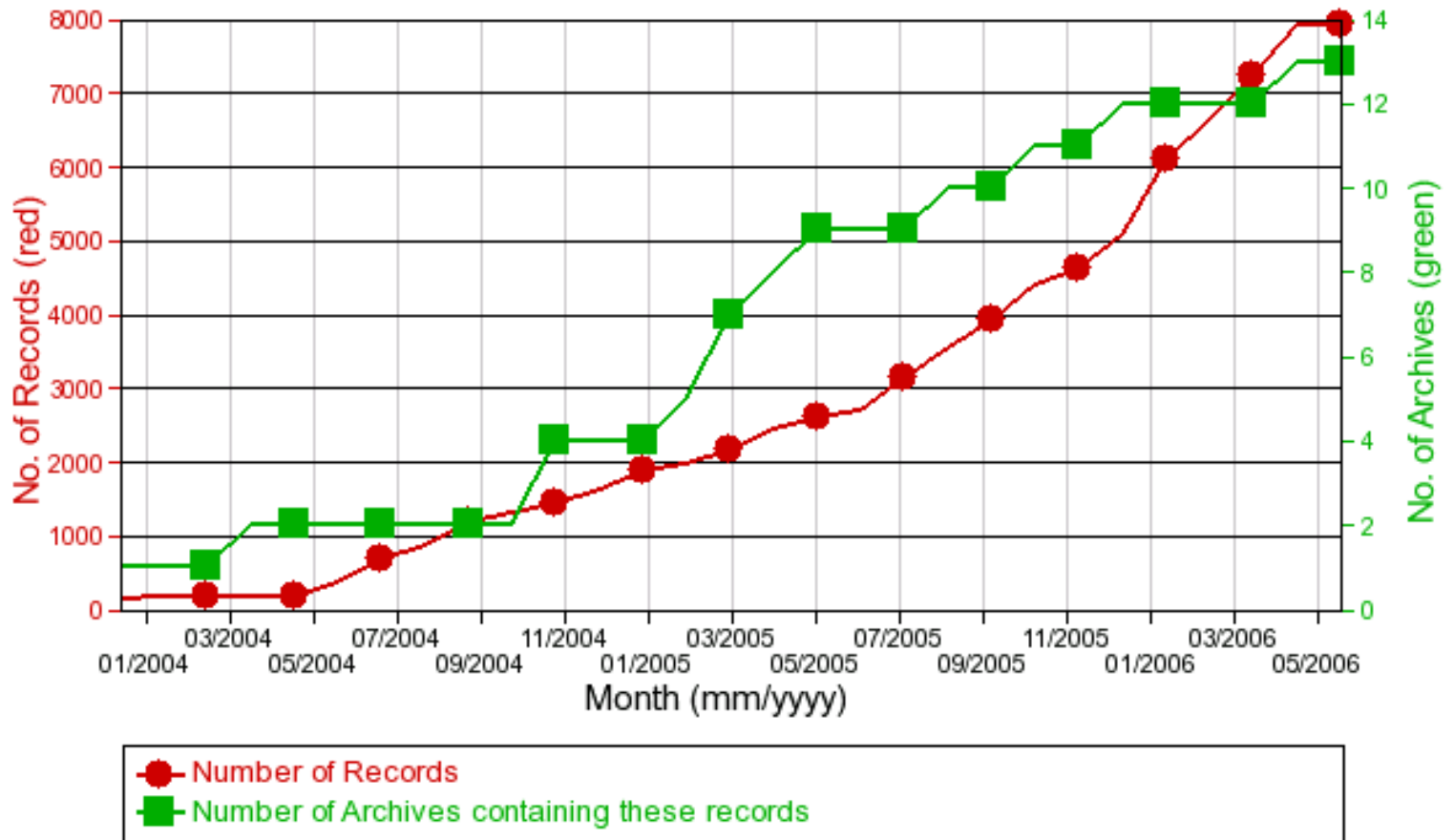
- To study recent developments in open access in India
- To evaluate underlying issues with research repositories
- To understand barriers to implementation
- To provide a list of best practices
- To promote visibility of Indian research

Scope of Study

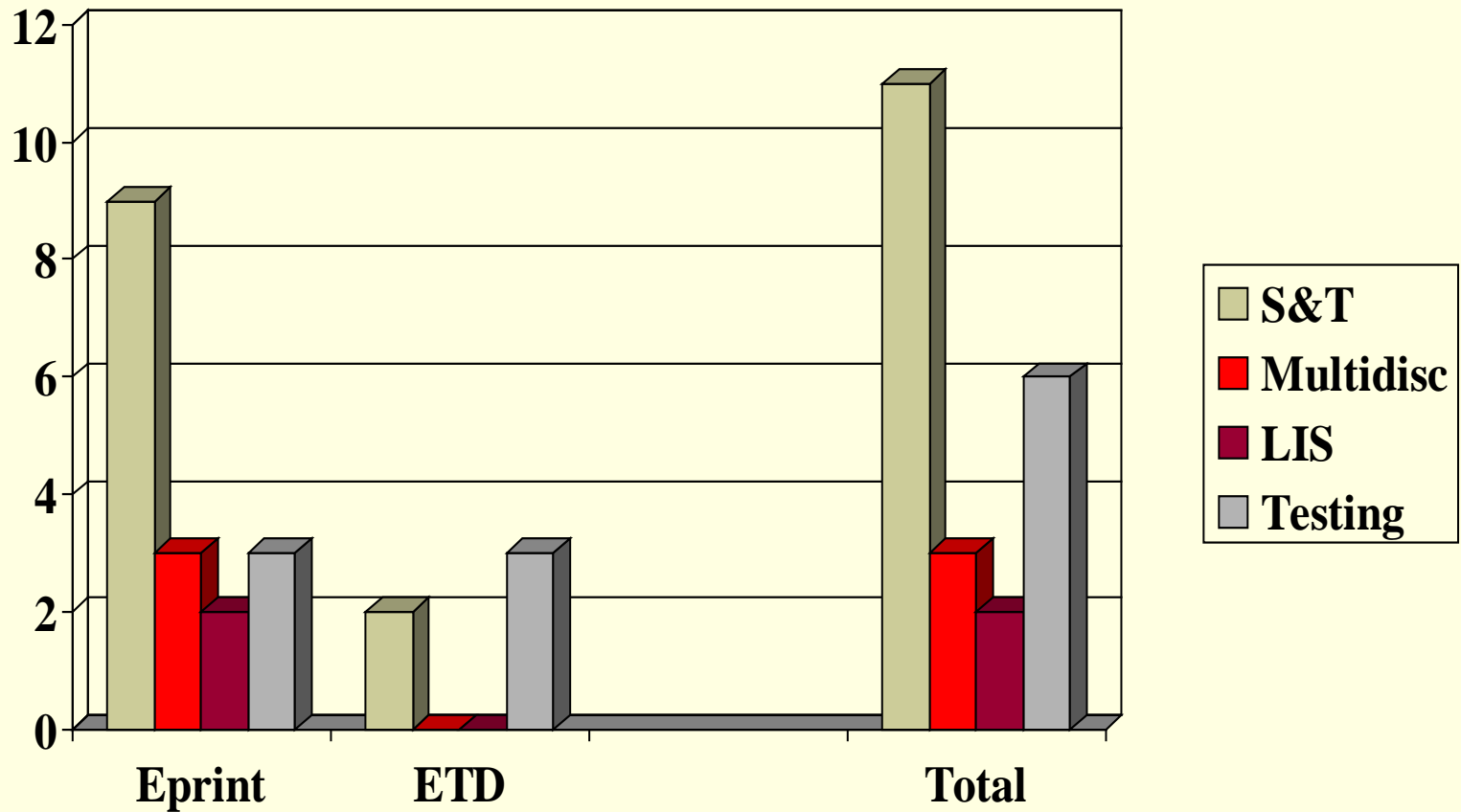
- Repository selection from Registry of Open Access Repositories (ROAR) at University of Southampton
- Online research repositories
 - **E-print archives**
 - **Electronic theses & Dissertations (ETDs)**
 - **E- journals**

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Subject Distribution of Archives



Open Access E-journals

- Generally e-versions of peer-reviewed print journals
- Subscription-based, no author fees
- Published by professional societies, science academies or institutes, by granting agencies such as ICMR and CSIR

E-journal Publishers

- Indian Medlars Centre (38)
- Medknow Publications (30)
- Indian Academy of Sciences (11)
- Indian National Science Academy (4)
- Indian Institute of Science Library (1)
- Indian Statistical Institute (1)
- International Assoc. of Bioinformation (1)
- Calicut Medical Journal (1)

Study Methodology

- Semi-structured interviews
- Site visits, telephone or e-mail on request
- Open-ended questions covered
 - participants' background and expertise
 - institutional background
 - choice of software
 - resource requirements
 - repository policies
 - feedback, promotion & advertising
 - future plans

Participant Information

- Number of participants = 17. Key contacts facilitated by local open access advocates
- Background: librarians, scientists, physician
- Technical expertise: Computer applications, programming, GNU EPrints, DSpace training
- Listserv membership : LIS-forum, OA list and EPrints and DSpace technical lists

Institutional Background

- Research Institutes/Deemed Universities (6)
- Informatics centres (3)
- Universities (2)
- Journal Publishing Centres (4)

Choice of software

- DSpace – easy installation, shell script provided, more flexibility, communities and collections, CNRI handle facility
- GNU Eprints – earlier versions difficult to install, now better support
- Greenstone Digital Library software promoted by UNESCO, (prototype)
- E-journals: proprietary or in-house software

Resources Required

- Staffing: 1-2 full-time staff + student trainees for uploading documents
- Computer and networking infrastructure: high-end server and broadband Internet
- No extra funding, existing library budgets sufficient.
- For e-journals, e-versions through grants or minimal additional funds (3-5%, Medknow)

Eprints Archive Policies

- Submission policies – IISc model site
- Mediated and unmediated deposit, current and retrospective material
- Common Formats: Word, PDF and LaTeX
- Copyright: SHERPA/ROMEO/ NCSI local list
- Collection policies generally understated
- Subject classification: MeSH for OpenMED

ETD Repositories

- Open access to full-text uneven
- Copyright issues, plagiarism, embargo period for publication or patent application
- No downloading allowed
- University Grants Commission regulations and guidelines for ETD preparation, DC metadata, ETD-MS
- Vidyanidhi - National theses repository

E-journals

- E-versions, print is archival format
- Non OAI compliant, except 15 Medknow journals archived on Bioline Eprints archive
- Open access depends on editorial policy
- Online submission by authors for Medknow journals and IAS journal – Pramana
- Publisher owns copyright

Feedback for Users

- Access statistics not available at all sites
- Best site: Librarians' Digital Library for detailed statistics, monthly and cumulative
- E-journals: Medknow article level stats on times viewed, e-mailed, printed and cited, follows Counter Code of Practice. MedIND shows number of visitors on journal website

Feedback from Users

- Positive comments from repository users
- 24/7 access allows sharing information abroad, requests for collaboration
- Suggestions for additional metadata, less cumbersome deposit procedures
- Technical questions, copyright issues
- E-journals – User appreciation for added functionality , requests for cross-searching, online submission

Promoting Repositories

- Top-down and bottom-up methods
- Talks, seminars, workshops, presentations
- E-mails to faculty, talks to library committees
- Enlisting support from top levels of administration
- Showing value to authors

National Centre for Scientific Information Poster

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- Advertising on web and in print journal
- Announcements on listservs
- Google contacted when new journals launched by Medknow
- Medknow gets exposure through Bioline and ALPSP Learned Journals Collection

Future plans for repositories

- Filling repositories, simplifying procedures
- Providing more open access to full-text
- Diversification of content
- Adding value by customization e.g. chemistry plug-ins for molecular content, support for special characters
- Automatic extraction of metadata

Future plans (Continued)

- Expansion through INDEST Consortium
- National level harvester at NCSI
- More ETDs through UGC mandate
- More e-journals in the pipeline, including online only journal from Medknow

Special Features: Customization

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OpenMED, medIND and IndMED



IndMED



Indian Medlars Centre

A Centre jointly setup by **NIC** and **ICMR** to cater to the information needs of medical community of India.

IndMED: A Bibliographic database of Indian biomedical journals

Search  

--**HELP:** Use Boolean Operators in your query.
--**Know** about Full Text **Icons** displayed in references.

OpenMED@NIC: Open Access Archive for Bio-Medical and Allied Sciences.

medIND: Fulltext of 38 Journals Indexed in IndMED.

MetaMED: - A meta-search tool to search IndMED and PubMed with single click.

Union Catalogue: A database containing journal holdings of major medical libraries of India.

Other Links: Other important Services and Resources.

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New Delhi-110 003, India.
Telephone: 91-11-24362359, Fax: 91-11-24362628
medinfo@nic.in

NCL Open Access Initiatives

- Chemoinformatics initiative – single point access to molecular data and information harvested from Internet
- Biodiversity Informatics Portal, Indian biota directory
- Linking database of chemical information from theses to DSpace providing access to original thesis data

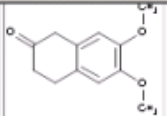
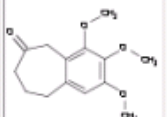
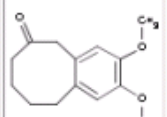
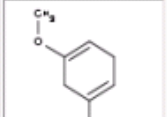
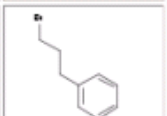
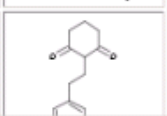
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422	88_1130_158	XXXX	2950, 1700, 1615, 1520, 1460, 1360, 1270, 1120 cm ⁻¹ .	¹ H NMR d 6.73 (s, 1H), 6.70 (s, 1H), 3.90 (s, 3H), 3.87 (s, 3H), 3.65 (s, 2H), 2.90 (t, J = 7.07 Hz, 2H), 2.55 (t, J = 7.07 Hz, 2H), 2.00(m, 2H)	¹³ C NMR d 208.97, 148.12, 147.79, 132.93, 125.48, 113.51, 113.24, 56.21, 55.91, 49.81, 44.05, 32.95, 26.93.	Mass (m/e) 220 (M ⁺), 192 (27), 177 (51), 164 (72), 149 (51), 121 (60), 107(68), 91 (74), 77 (78).	
423	88_1130_159	XXXX	2938, 1706, 1492, 1410, 1120 cm ⁻¹	¹ H NMR d 6.5 (s, 1H), 3.90 (s, 6H), 3.85 (s, 3H), 3.75 (s, 2H), 2.85(t, 2H, J = 7.10 Hz), 2.55 (t, 2H, J = 7.10 Hz), 1.95 (m, 2H).	¹³ C NMR d 209.84, 152.35, 151.58, 141.21, 136.49, 119.88, 108.96, 61.57, 61.05, 56.23, 43.40, 41.47, 33.34, 26.67.	Mass (m/e) 252 (M ⁺), 190 (43), 161 (27), 147 (22), 134 (100), 105 (57), 91 (70), 77 (72).	
424	89_1130_185	XXXX	3040, 2960, 1700, 1620, 1530, 1450, 1230, 1120 cm ⁻¹	¹ H NMR d 6.70 (s, 1H), 6.65(s, 1H), 3.90 (s, 3H), 3.85 (s, 3H), 3.70 (s, 2H), 2.80 (t, J = 6.94 Hz, 2H), 2.35 (t, J = 6.94 Hz, 2H), 1.80 (m, 4H).	¹³ C NMR d 211.76, 148.68, 147.69, 133.13, 125.63, 113.38, 113.15, 56.03, 48.20, 41.12, 32.95, 31.33, 24.71.	Mass (m/e) 234 (100% M ⁺), 206 (63), 191 (54), 175 (68), 165 (46), 151 (24), 131 (24), 121 (44), 107 (37), 91 (49).	
425	152_1130_23	1,5-dimethoxy-1,4-cyclohexadiene (23)	3010, 2960, 1690, 1590, 1440, 1230, 920, 760 cm ⁻¹	¹ H NMR 4.58 (t, J = 3 Hz, 2H), 3.47 (s, 6H), 2.66-2.86 (m, 4H)	** N.A. **	** N.A. **	
426	152_1130_30	3-(3'methoxy phenyl)propyl bromide (30)	2950, 2250, 1600, 1450, 1280, 1170, 1050, 910, 740	¹ H NMR 7.20 (m, 1H), 6.75(m, 3H), 3.80 (s, 3H), 3.40 (t, J = 7.35 Hz, 2H), 2.75 (t, J = 7.35 Hz, 2H), 2.15 (m, 2H)	** N.A. **	** N.A. **	
427	153_1130_26	2-(4'-methoxy-phenyl)ethyl)-1,3-cyclohexanedione (26)	2960, 2230, 1650, 1620, 1520, 1480, 1385, 1260, 1240,	¹ H NMR d 7.15 (d, 2H, J = 9.47 Hz), 6.85 (d, 2H, J = 9.47 Hz), 5.35 (s, 1H), 4.00 (t, 2H, J = 7.37 Hz), 3.80 (s, 3H)	¹³ C NMR d 199.78, 177.88, 158.60, 129.99, 129.61, 114.15, 102.98, 69.29, 55.37,	** N.A. **	

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3.28 PET activation of 183 Page No. 89

Photoirradiation of a mixture of 183 (0.7 g, 2 mmol) and DCN (0.06 g, 0.34 mmol) in CH₃CN:H₂O (4:1) solution followed by purification using pet.ether:EtOAc (80:20) as eluent, as described for 86, gave 0.328 g (70 %) of 185. ← *compound no.*

Data harvested from this for searching..

Yield	60% (0.328 g), colourless solid.
M.P.	85 - 86.5 °C
IR	3040, 2960, 1700, 1620, 1530, 1450, 1230, 1120 cm ⁻¹
¹ H NMR	δ 6.70 (s, 1H), 6.65(s, 1H), 3.90 (s, 3H), 3.85 (s, 3H), 3.70 (s, 2H), 2.80 (t, J = 6.94 Hz, 2H), 2.35 (t, J = 6.94 Hz, 2H), 1.80 (m, 4H).
¹³ C NMR	δ 211.76, 148.68, 147.69, 133.13, 125.63, 113.38, 113.15, 56.03,

8.5 x 11 in

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> BRIEF REPORT Umbilical hernia in adults: day case local anaesthetic repair. Menon VS, Brown TH Year: 2003 Volume: 49 Issue: 2 First Page: 132 [BRIEF] [FULL TEXT] [PDF]	31436	20	284
> REVIEW ARTICLE	29396	117	1144

Barriers to Implementation of Repositories

- Author noncompliance
- Lack of institutional commitment
- Intellectual property issues
- Lack of leadership/infrastructure in universities
- Need for hands-on training

E-journal publishing barriers

- Non OAI compliant journals
- Dependence on Editor or governing body, liable to changes in policy
- Print remains archival format
- Copyright resides with publisher

Best practices

- Show value to authors, show citation value, use repository to prepare publication lists and webpages
- Get support from the top
- Create public opinion for mandating deposits
- Increase training opportunities
- Register with ROAR/OpenDOAR and OAIster

Acknowledgements

I would like to acknowledge with thanks the contributions of Indian colleagues who provided me with much of the information required for this study.

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