Community Engagement in Indian Open Access Repositories: A Deposit Activity Profile

Mohammad Hanief Bhat
Islamia College of Science & Commerce, Srinagar
India
mhanief30@yahoo.co.in

ABSTRACT: During the past decade, the open access is gaining momentum in India. As a result, a number of Open Access (OA) repositories are coming up in different institutions. The present study is an attempt to ascertain the success of these repositories by way of community engagement. Greater the community engagement, greater the deposit activity of the repository will be. The deposit profiles are automatically generated from OAI (Open Archives Initiative) harvesting information. The results suggest that only a few repositories are active and the rest being mostly static including the largest repository of IISc (Indian Institute of Science).

I. Introduction

The importance of access to world's research information for the development of a strong economy and vibrant research capability is widely acknowledged. Yet financial barriers limit access by developing countries to research information they need. Equally true is the fact that the unique research carried out in developing countries, which represent 80% of the world's population, is largely invisible to the international science community due to the former's economic constraints. Open access to world's publicly funded research literature provides equal opportunities for communication of all research information, eliminating financial barriers (National Open Access, 2006).

India, being a major developing country, is spearheading open access movement in the developing countries since last decade by establishing a number of OA repositories (Das, Sen & Dutta, 2007). India stands at number twelve in the repository tally at world level with 39 (November, 2008) OA repositories registered in Registry of Open Access Repositories (ROAR).

A number of studies regarding the Indian OA repositories have been undertaken by authors like Das, Sen & Dutta (2005); Das, Sen & Dutta (2007); Madhan, Rao & Awasthi (2006); Fernandez (2006); Patel, Vijaykumar & Murthy (2005); Doctor (2007); Jayakanth, Minj, Silva, & Jagirdar (2008); Sutradhar (2006), covering various
issues. However, no effort has been made so far to judge the success of these repositories. The most common way to measure the relative success of repositories is to compare the gross number of items that they hold (Carr & Brody, 2007). Thomas & McDonald (2007) used actual number of contributors and their actual number of deposits in judging the success of repository. According to Carr & Brody (2007), however, the key to a successful repository is sustained deposits and the key to sustained deposits is community engagement. They applied deposit activity to the measurement of the success of a repository and found that smaller repositories are more active than the larger ones. Thus more deposit activities in a repository imply more community engagement and the resultant success of a repository.

The present study endeavours to measure the success of Indian digital repositories by deposit activity criteria.

II. Objective

The objective of the present study is to ascertain the community engagement in Open Access repositories of India through an analysis of the deposit activity in a one year period.

III. Scope

The scope of the study is limited to the deposit activity of 18 Indian OA repositories from November, 2007 to October, 2008.

IV. Methodology

ROAR provides automatic deposit activity of the repositories by taking data from Celestial, an OAI-PMH (Open Archives Initiative Protocol for Metadata Harvesting) compliant harvesting proxy. ROAR lists one year deposit activity under three categories: 1) 1-9, 2) 10-99, and 3) 100+ deposits, indicating "weak", "healthy" and "batch imports" respectively. The registry identified 39 repositories in India (as on 31-10-2008), out of which only 20 are registered in Celestial. Two repositories "Institutional repository at MDI"[1] and "Kautilya@igidr"[2] were launched in April and March 2008 respectively. Hence one year deposit activity is not available. The information regarding the 18 OA repositories is collected, tabulated and analysed to reveal findings in accordance with the study objective.

V. Findings and Discussion

The highest number of days of activity, 182, is for "OpenMED@NIC"[3], which has a collection of 2,274 documents. Out of the 182 days, 171 are with "1-9 deposits" and 11days with "10-99 deposits". There are no "100+ deposits" during the year. This implies that deposit activity is between "weak" and "healthy" ranges with no "batch imports" during the preceding year.
The second most active repository is "DSpace@IIA"[4] (which has 3,060 documents) with 100 days of "1-9 deposits" and 34 days of "10-99 deposits" but without any "batch imports" during the year.

The third most active repository is "NAL-IR"[5] (which has 2,879 documents) with 97 days of "1-9 deposits". However, there are no "10-99" or "100+ deposits" in the repository during the year, implying that deposits are in the weak range with no "batch imports". "Catalysis Database@NCCR"[6] stands at number four in the deposit activity list with 1,197 documents. Its total days of deposit activity are 94, out of which 91 days are "1-9 deposits" and 3 days of "10-99 deposits" and without any "100+ deposits".

The next two repositories are "DSpace@NITR"[7] and "Raman Research Institute"[8] digital repository with 91 and 64 days of "1-9 deposits," respectively.

For the three repositories "Librarians Digital Library"[9], "DSpace at National Chemical Laboratory, Pune"[10] and "OneWorld South Asian Open Archive Initiative"[11], there have been no documents added during the past year.

The days of deposit activity for all other repositories are in the range of 1-34 days (Table 1).

As the number of working days in India is roughly 250, it is evident from the data that only two repositories have more than one hundred days of active deposits and a few others more than fifty days of deposits. Three repositories are without any activity. All other repositories have less than 35 days of activity. The figures of openMED@NIC are encouraging as it is the most active repository, although most of the deposit activity days are in the weak category.
Table 1: Deposit activity of Indian OA repositories

<table>
<thead>
<tr>
<th>No.</th>
<th>Name of Repository</th>
<th>Total Collection</th>
<th>1-9 deposits (days)</th>
<th>10-99 deposits (days)</th>
<th>100+ deposits (days)</th>
<th>Total days of activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DSpace at INFLIBNET</td>
<td>505</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>DSpace at ICFAI Business School (IBS), Ahmedabad</td>
<td>206</td>
<td>12</td>
<td>-</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td>3</td>
<td>DSpace@IIL: Indian Institute of Astrophysics</td>
<td>3,060</td>
<td>100</td>
<td>34</td>
<td>-</td>
<td>134</td>
</tr>
<tr>
<td>4</td>
<td>DU Eprint Archive (Delhi University)</td>
<td>170</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Eprints@IIT Delhi</td>
<td>2,143</td>
<td>3</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>6</td>
<td>ETD@IISC (Indian Institute of Science)</td>
<td>314</td>
<td>27</td>
<td>-</td>
<td>-</td>
<td>27</td>
</tr>
<tr>
<td>7</td>
<td>DSpace@IIMK: Indian Institute of Management, Kozikode</td>
<td>475</td>
<td>10</td>
<td>4</td>
<td>-</td>
<td>14</td>
</tr>
<tr>
<td>8</td>
<td>eprints@IISc, Bangalore</td>
<td>7,635</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Librarians Digital Library</td>
<td>188</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10</td>
<td>NAL-IR (National Aerospace Laboratory)</td>
<td>2,879</td>
<td>97</td>
<td>-</td>
<td>-</td>
<td>97</td>
</tr>
<tr>
<td>11</td>
<td>DSpace@NCAOR: National Centre for Antartic Research</td>
<td>514</td>
<td>2</td>
<td>-</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>Catalysis Database-National Centre for Catalysis Research</td>
<td>1,197</td>
<td>91</td>
<td>3</td>
<td>-</td>
<td>94</td>
</tr>
<tr>
<td>13</td>
<td>DSpace at National Chemical Laboratory Pune</td>
<td>357</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>14</td>
<td>DRS@NIO: National Institute of Oceanography</td>
<td>1,434</td>
<td>27</td>
<td>4</td>
<td>3</td>
<td>34</td>
</tr>
<tr>
<td>15</td>
<td>DSpace@NITR: National Institute of Technology, Rourkela</td>
<td>668</td>
<td>87</td>
<td>4</td>
<td>-</td>
<td>91</td>
</tr>
<tr>
<td>16</td>
<td>One World South Asian Initiative</td>
<td>808</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>17</td>
<td>Open MED@NIC</td>
<td>2,274</td>
<td>171</td>
<td>11</td>
<td>-</td>
<td>182</td>
</tr>
<tr>
<td>18</td>
<td>Raman Research Institute digital repository</td>
<td>3,514</td>
<td>53</td>
<td>11</td>
<td>-</td>
<td>64</td>
</tr>
</tbody>
</table>

Table 2 displays India's top ten OA repositories as per their collection. And Table 3 lists India's top ten OA repositories as per their days of activity. The eprints@IIISc, Bangalore, the largest repository in the study ranks no. 1 in Table 2 but does not make an entry in the top ten repository list arranged as per deposit activity in Table 3. Similarly, two more repositories "Eprints@IIT, Delhi" and "OneWorld South Asian Open Archive Initiative" rank no. 6 and no. 9 respectively in Table 2 but fail to show up in Table 3. On the other hand, the three repositories "ETD@IISC", "DSpace@IIMK, Kozikode" and "DSpace at ICFAI Business School (IBS), Ahmedabad" make their entry at no. 8, 9, and 10 respectively in Table 3 but do not appear anyway in Table 2.
VI. Conclusion

The study findings suggest that some small repositories are more active compared to some larger repositories. The "eprints@IISC, Bangalore" has only two days of deposit activity, implying less community involvement. On the other hand, "openMED@NIC", despite being relatively small in size, is the most active Indian repository, although there is no batch import. If the deposit activity of the smaller repositories continues to outpace that of the larger ones, they will grow faster than the latter, as suggested by Carr and Brody. It could be concluded that most of the repositories in India are not active with less or no community engagement.

Notes:

[1] MDI stands for "Management Development Institute" in Gurgaon, India. The URL address of the "Institutional repository at MDI" is: http://dspace.mdi.ac.in
[2] "igidr" stands for "Indira Gandhi Institute of Development Research" in Mumbai, India. The URL address of "Kautilya@igidr" is: http://oii.igidr.ac.in:8888/dspace/index.jsp
[3] NIC stands for "National Informatics Centre" in New Delhi, Indian. The URL address of "OpenMED@NIC" is: http://openmed.nic.in
[4] IIA stands for "Indian Institute of Astrophysics" in Bangalore, India. The URL address of "DSpace@IIA" is: http://prints.iiap.res.in
[5] NAL stands for "National Aerospace Laboratory" in Bangalore, India. The URL address of NAL-IR is: http://nal-ir.nal.res.in
[6] NCCR stands for "National Centre for Catalysis Research" in Madras, India. The URL address of "Catalysis Database@NCCR" is: http://203.199.213.48
[7] NITR stands for "National Institute of Technology" in Rourkela, India. The URL address of "DSpace@NITR" is: http://dspace.nitrkl.ac.in/dspace
[8] Raman Research Institute is in Bangalore, India. The URL address of its digital repository is: http://dspace.rrri.res.in
[9] "Librarians Digital Library" is sponsored by Documentation Research & Training Centre of Indian Statistical Institute in Bangalore, India. Its URL address is: https://drtc.isibang.ac.in
[10] "National Chemical Laboratory" is in Pune, India. The URL address of "DSpace at National Chemical Laboratory, Pune" is: http://dspace.ncl.res.in/dspace/index.jsp

References


**Author:**

Mohammad Hanief Bhat is a Senior Librarian at Islamia College of Science & Commerce, Srinagar, India. His email contact info is: mhanief30@yahoo.co.in

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