

# Open Access through Institutional Repository: Scenario in University Libraries of North East India

*R K Sofia Devi*

*Ch. Ibohal Singh*

## Abstract

*The purpose of the present study is to highlight the prevailing scenario of open access through institutional repository by the university libraries of North East India and to explore the place of institutional repositories in providing open access. The methodology adopted for the study include: personal visit to the libraries concerned, interviewing with the working LIS professionals and using a semi- structured questionnaire as tool for the data collection. Taking into account 20 universities of the region, the study mainly emphasised upon the strategies of the universities towards building such repositories and making available the data resources to enhance accessibility in the open environment. As the major findings of the study show, many of the university libraries in the region are found to initiate strategies to build IRs using DSpace though they face dearth of skilled professionals and keeping archiving policy optional, while ETD and institutional publications are making available in the IRs. The study also suggests that universities in North East India should come forward to support OA movement.*

**Keywords:** Open Access, Institutional Repository, University Libraries, North East India.

## 1. Introduction

This 21<sup>st</sup> century has witnessed various global movements for achieving openness in diverse fields including open source software, open educational resources, research literature, technical standards, open data, etc., Open access as a concept in librarianship has been using by the LIS professionals since the existence of library in the traditional way. In the digital era the concept of Open Access has emerged as a new avatar to make open resources available to the needy scholars in an open environment. Many Open Access Initiatives have been taken up around the world by different academic institutions to enhance accessibility to the scholarly

contents. Universities are the main institutions rendering such facilities to the scholars for different academic, research and intellectual pursuits. There are more than 50 universities in the eight states of North East India comprising of Central, State and Private Universities. It is high time to assess how these universities are taking up initiatives towards this end. The present paper is an attempt in this regard focusing on some basic key issues.

## 2. Open Access

Since recent past, much discussions have taken place in the area of Open Access (OA). Philosophy behind the open access is to bring the public – funded research results in public domain through open access publications or open access data repositories without any restriction. One of the significant benefits of the OA is that library and



information system in smaller institutions or in economically disadvantaged sections around the world can get greater and effective access to such scholarly resources in a better way. In fact, OA initiatives to scholarly literature aims to provide free from budget constrain, access barriers and geographical barriers. The movement got support from many stake holders including scientists, educationists, publishers, research organizations, library organizations due to shrinking budget in journals subscription or R& D budgets. The three declarations commonly known as BBB declarations, i.e. Budapest Open Access Initiatives (BOAI, 2002), Berlin Declarations (2003) and Bethesda Statement on OA (2003), have become the strong philosophical foundations for supporting the ideas and principles of OA. Recently in India also, the Open Access India (OAI), an advocacy group had made a declaration on OA, the Delhi Declaration on Open Access”, on 14<sup>th</sup> February 2018. The declaration had over 120 signatories from India and other countries in global south within first two weeks of pronouncement. The declaration is supported by the Knowledge Societies Division of UNESCO, IFLA RSCAO, Forum for Open Access in SAARC, etc. The declaration also marked the sixteenth anniversary of Budapest Open Access Initiatives (BOAI), which is considered as the starting point in shaping the open access movement (Das,2018).

OA can be achieved through two different modes:

- ❖ Green route: authors self- archive their publications in an institutional repository or data repository.
- ❖ Gold route: authors published their articles in an OA journals.

Green and Gold OA are basically complementary and synergistic. Both Green and Gold OA have their advantage and disadvantage and they have different supporters from the community of OA advocates and activities.

### **3. Open Access and Institutional Repository**

According to Clifford Lynch, Director of the Coalition for Networked Information, defines an institutional repository (IR) as “a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long-term preservation where appropriate, as well as organization and access or distribution” (Lynch, 2003). The term Institutional repository or digital repository or data repository is becoming synonymous since they are dealing with digital content storage, preservation and dissemination to a wider audience for enhancing the teaching, learning and particularly research activities. Typically, it may content research outputs such as journal articles, pre-prints, ETD, e-learning objects, teaching materials, administrative data, etc. Apart from institutional repositories, subject-specific repositories provide access to subject-specific collections of documents. arXiv (Physics repository, PubMed Central, RePEc (Research Papers in Economics), MEDLINE, Librarian’s Digital Library (LDL), OpenMed@NIC, Vidyanidhi, etc are some of the disciplinary repository.

### **4. Some Related Past Studies**

Some of the notable earlier studies include Buehler & Trauernicht’s (2007) study which have provided a description of an academic digital library’s evolution

into an institutional repository, accompanied by both practical and philosophical analyses. Academic libraries can be highly successful in producing an institutional repository by developing relationships with various organizations on campus in addition to the academic programs. Maintaining standards throughout the IR is crucial to future growth in an organized and consistent manner. Philosophical considerations of the role of the IR should be addressed in the beginning stages of the development of the IR for eliminating confusion and duplication of its content with other campus organizations.

Panda (2016) have explored the current status of Indian national level open access ETD repository-Shodhganga. In his study, Tamil Nadu stood the top position followed by Maharashtra in terms of participation and regarding subject wise theses submission highest number of theses was found to be submitted from Management followed by Education and Economics.

Integration of IR and Learning Management Systems (LMS) have been proposed by Skourlas, et al. (2016), in order to support disabled students and students with learning difficulties. Used of web ontology language (OWL) is also proposed for indexing and accessing the various, heterogeneous items stored in the repository.

Roy (2013) highlighted the need for web metric ranking of Institutional digital repositories (IDRs) in India to measure the global visibility and impact of scientific repository include low growth rate as compare to other develop nations, most of the IRs do not follow any policy and there is insufficient number of staffs and full text documents, etc.

Regarding user's perspectives in institutional repositories in India, the most important reason for contribution was found to be preservation of documents for the future. Peer review was very much acceptable as a quality control mechanism. More than half of the respondents (57.84 percent) wanted to provide open access without any barrier for their ideal repository (Sawant, 2012).

Barbaric (2010) had indicated that all the academic librarians in Croatia are aware of the importance of institutional OA repositories. The number of OA repositories in Croatia is very less, but the librarians are making lots of efforts towards the development of new repositories and they are opting for open source software for IR and open access initiative protocol for metadata harvesting compliant.

Kim and Lee (2014) have study on 'Global data repository status and analysis: based on Korea, China and Japan'. They have found that China, Japan, Korea (CJK) is operating 288 repositories (8 percent compared to the world, 42.2 percent compared to Asia). Second, the repositories that provide Japanese, Chinese and Korean contents are 5.57 percent, 4.14 percent and 0.72 percent, respectively. Third, the repository operated by the government is inadequate in Asia.

Ahmed, Alreyaee, and Rahman, (2014), traces the growth and development of online e-theses repositories in Asia within the broader framework of open access. ETD system is growing fast in some Asian countries. However, the number of universities having e-theses repositories is meager considering the large number of quality academic and research institutions across Asian countries.

In another study, Shafi, et al. (2013) aims to provide an overview of open access (OA) repository that have embraced web 2.0 technology. RSS is found to

be in the majority of repositories followed respectively by Social Bookmaking and ATOM syndicate Toll.

Greene (2016) has investigated the impact and techniques for mitigating the effects of web robots on usage statistics collected by Open Access (OA) institutional repositories (IRs).

Barbaric, (2010), Dlamini & Snyman, (2017), have identified the biggest problems and obstacle in establishing an IR being the lack of administration support, funding and the researchers' unawareness of the benefits of OA, especially OA repositories. Lagzian, et al. (2013) have explored the six factors which are regarded as the most important factor for the success of Institutional repositories include "Management", "Services", "Technology", "Self-archive Practices", "People", and "Resources".

### 5. Objectives of the Study

The present study has been taken up with the following objectives:

- ❖ To review past studies so that trends of Open Access can be understood;
- ❖ To survey the university libraries having OA facilities in the region;
- ❖ To understand the strategies taken up by the universities towards building Institutional Repositories as platform for OA;
- ❖ To assess the different data resources available in the repositories; and
- ❖ To chalk out possibilities to enhance accessibility to IRs of the libraries.

### 6. Methods and Techniques

The study has been carried out following some basic methods as given below:

- ❖ Survey of the libraries of the region through personal visit;
- ❖ Interviewing the LIS professionals working in the libraries;
- ❖ Distributing questionnaires to the libraries for collecting data; and
- ❖ Using simple statistical techniques to analyse the data for interpretations.

### 7. Sample and Data Analysis

In North East India having eight states namely Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura, there are a number of universities comprising of centrally owned universities, state run universities and private universities. The number of universities are found to be increased during the recent past particularly the private universities. In this study, 25 questionnaires were distributed to all types of universities in all the eight states of the region. Only 20 duly filled in questionnaires have been received for the study.

Data shows that Assam has the highest number of University i.e., 8 Universities comprising of 2 Central universities, 5 state university and 1 private university. Manipur has 3 Central Universities including one regional campus while Sikkim has 3 universities comprising of 1 central university and 2 private universities. Meghalaya has got 1 central university and 1 private university while Arunachal Pradesh, Nagaland, Mizoram and Tripura have 1 central university each. So, altogether 20 universities have been covered in the study.

## 8. Background of the Universities

In North East India, university education started with the establishment of Gauhati University, Assam in 1948 followed by Dibrugarh University, Assam in 1965, Assam Agricultural University in 1969, NEHU, Shillong in 1973 and so on. Regarding the types of ownership, out of 20 Universities under study, 55% are under central government, 25% from state government and remaining 20% are privately run.

## 9. Building IR in University Libraries: The Strategies

Out of 20 universities under study, 60% have already started to establish IR. It is observed that DSpace is the only software used for building IRs by the libraries 83.33%, but only 16.66% of them have separate staff for building such repository that is NEHU Shillong and Tezpur University, Assam. Of the 12 universities, 75% consider self-archiving policy as “optional”. Concerning “metadata harvester”, OAI-PMH is found to be used in 50% universities, while the rest do not use any such model. Of the 12 Universities, only 50% responded their IRs as “OAI Compliant”. It is also understood that, the IRs of NEHU and Sikkim University are registered to National Digital Library and DOAR respectively.

### 9.1. Data resources in IRs

It is found that among the universities which have already established IR or under the process have commonly covered ETD (75%) followed by Institutional publications (58.33%), conference proceedings and seminar publications with 50% each. These materials constitute the major data resources of the IRs.

## 10. Findings and Discussion

There are different types of universities in North East India comprising of central, state and private universities. Many of them have initiated strategies to build Institutional Repositories to make accessible to the data resources available in the same in open environment. Majority of them are using DSpace as the prominent software for building the same. It is also witnessed that there is dearth of skill professional separate staff to deal with the IRs of almost of the libraries. The self- archiving policy of the IRs of majority of the university libraries of the region is optional and not mandatory. Only OAI-PMH is used as the metadata harvester of the repositories by the libraries. OAI Compliance is evident to be used in case of some universities like, Gauhati, Tezpur, Sikkim, Tripura and NEHU. Only two university libraries are found to registered in National Digital Library of India (NEHU) and DOAR (Sikkim University). Concerning data resources, majority of the universities are found to cover ETDs and their institutional publications in their IRs. Availability of conference proceedings and seminar publications in the repository is also made haft of them. However, it is necessary to have a separate study of the user’s community to assess the usability and effectiveness of these IRs to understand the accessibility of the same in open environment.

## 11. Conclusion

Universities, R&D organisations, higher educational institutions, funders and governments have established more than thousands of repositories around the globe. This provides an important mechanism to ensure that research articles, along with research data and other important research outputs, can be housed, networked, curated, and

sustainably archived, and also ensures that they can be accessed not only by this generation of researchers, but by future generations as well (Joseph, 2013). Some of the universities in north east India also have started to establish IR in their institutions, however they are facing many challenges in proper functioning. Lack of support from the higher authorities, lack of expertise and infrastructure, etc. are the main obstacles. Universities in North East India should come forward to support OA movement and should help to promote used of open access institutional repository as it will enhance the scholarly communication process and helps to reach the global platform without any hindrance.

#### References

1. Berlin Declaration on Open Access. Available at <http://openaccess.mpg.de/> Berlin Declaration. (Accessed on 22/4/18)
2. Bethesda Statement on Open Access Publishing. Released June 20, 2003. Available at <http://legacy.earlham.edu/~peters/fos/bethesda.htm>. (Accessed on 22/4/18)
3. BOAI. Available at [www.budapestopenaccessinitiative.org/initiatives](http://www.budapestopenaccessinitiative.org/initiatives). (Accessed on 22/4/18)
4. BUEHLER, M. A. and Trauernicht, M. S. (2007). From digital library to institutional repository: a brief look at one library's path. OCLC systems and services: International digital library perspectives, 23(4)382-394. Available at doi.: 10.1108/10650750710831529 (Accessed on 22/4/18)
5. DAS, Anup Kumar (2018). Delhi declaration on Open access: an overview. *Annals of Library and Information Studies*. 64(83-84)
6. DLAMINI, Ncamsile Nombulelo and SNYMAN, Maritha (2017). Institutional repositories in Africa: obstacles and challenges. *Library Review*, 66 (6/7) 535-548. Available at <https://doi.org/10.1108/doi.org/10.1108/10650751211262128> (Accessed on 22/4/18)
7. GREENE, Joseph W. (2016). Web robot detection in scholarly Open Access institutional repositories. *Library Hi Tech*, 34 (3)500-520. Available at <https://doi.org/10.1108/LHT-04-2016-0048> (Accessed on 15/4/18).
10. JOSEPH, Heather (2013). The Open Access Movement Grows Up: Taking Stock of a Revolution. *PLoS Biol* 11(10): e1001686. Available at doi: 10.1371/journal.pbio.1001686. (Accessed on 22/4/18)
11. KIM, Suntae and LEE, Wongoo (2014). Global data repository status and analysis: based on Korea, China and Japan. *Library Hi Tech*. 32 (4)706-722. Available at <https://doi.org/10.1108/LHT-06-2014-0064>. (Accessed on 22/4/18)
12. LAGZIAN, F., Abrizah, A. & Wee, M. C. (2013). Critical success factors for Institutional repositories implementation. *The Electronic Library*. 33(2)196-209. Available at doi: 10.1108/EL-04-2013-0058LR-03-2017-0021. (Accessed on 22/4/18)
13. LYNCH, Clifford A. (2003). Institutional repositories: essential infrastructure for scholarship in the digital age. *ARL Bimonthly Report*, Vol. 226, Available at: [www.arl.org/newsltr/226/ir](http://www.arl.org/newsltr/226/ir). (Accessed on 22/4/18)

**Further Reading**

1. AHMED, Aquil, Alreyaee, Sulaiman and Rahman, Azizur(2014).Theses and dissertations in institutional repositories: an Asian perspective. *New Library World*, 115 (9/10) 438-451. Available at <https://doi.org/10.1108/NLW-04-2014-0035>. (Accessed on 22/4/18)
2. PANDA, S. K. (2016).Shodhganga- a national level open access ETD repository of Indian electronic theses: current status and discussions.*LibraryHi Tech News*, 33(1)23-26. Available at [doi.:10.108/LHTN-09-2015-0062](https://doi.org/10.108/LHTN-09-2015-0062)(Accessed on 22/4/18)
3. ROY, B. K. (2013).Global Visibility of Indian Open Access Institutional Digital Repositories. *International Research: Journal of Library & Information Science*, 3(1), 182-194. Available at [www.irjlis.com/wp-content/uploads/2013/07/13\\_IR096.pdf](http://www.irjlis.com/wp-content/uploads/2013/07/13_IR096.pdf). (Accessed on 22/4/18)
4. SAWANT, Sarika (2012). Indian institutional repositories: a study of user's perspective.*Program*, 46(1)92-122. Available at <https://doi.org/10.1108/00330331211204584>. (Accessed on 22/4/18)
5. SHAFI, et al. (2013).Web 2.0 interactivity in Open Access repositories.*The Electronic*, 31(6), 703-712. Available at [doi:10.1108/EL-08-2011-0121](https://doi.org/10.1108/EL-08-2011-0121). (Accessed on 22/4/18)
6. SKOURLAS, C. et al. (2016). Integration of Institutional repositories and e- learning platforms for supporting disabled students in higher education context. *Library Review*, 65(3), 136-159. Available at [doi.:10.1108/LR-08-2015-0088](https://doi.org/10.1108/LR-08-2015-0088).(Accessed on 22/4/18)

7. SUBER, Peter (2012). Open Access. MIT Press Essential Knowledge Series.

**About Authors**

**Ms. R. K. Sofia Devi**, Research Scholar (UGC-SRF) in the Department of Library and Information Science, Manipur University, Canchipur, Imphal.

Email: [rksofia.02@gmail.com](mailto:rksofia.02@gmail.com)

**Dr. Ch. Ibohal Singh**, Assistant Professor (S-3), Department of Library and Information Science, Manipur University, Canchipur, Imphal.

E-mail: [ibohal68@gmail.com](mailto:ibohal68@gmail.com)

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**Note:**

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<http://ir.inflibnet.ac.in/handle/1944/2293>



