University of Nebraska - Lincoln DigitalCommons@University of Nebraska - Lincoln

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

Spring 3-1-2019

Growth and Development of Institutional Repository: A literature review

ABHILASHA PRIYADARSHANI abhilasha.priyadarshani@gmail.com

Follow this and additional works at: https://digitalcommons.unl.edu/libphilprac
Part of the <u>Library and Information Science Commons</u>

PRIYADARSHANI, ABHILASHA, "Growth and Development of Institutional Repository: A literature review" (2019). *Library Philosophy and Practice (e-journal*). 2453. https://digitalcommons.unl.edu/libphilprac/2453

Growth and Development of Institutional Repository: A literature review

Abhilasha Priyadarshani

Research Scholar
Department of Library & Information Science
Banaras Hindu University
Mail: abhilasha.priyadarshani@gmail.com

Keywords: Institutional Repository (IR), Open access repository (OER), Indian Institute of technology (IIT), Institutions of National Importance in India.

Abstract: This study has been conducted to review the literature on Institutional Repository. The study mainly focuses on the growth and development of IR around the world. This paper will explain how the IR started in different countries and what is the current status of institutional repositories?

In research work, literature review is one of the most important tasks. With the help of a literature review, we can evaluate the earlier effort and work done in the related area or subject. Literature review gives us a general idea of the research topic and helps get a better understanding of the same.

This literature review will provide a clear insight of the origin and the consequential development of the field of Institutional Repository. There is not much written about institutional repository in India. It has been hardly two decades that the term was defined properly. Within the limitation of time and available resources, the researcher has made an attempt to justify the work.

Crow was the first to define IR as Institutional repositories--digital collections capturing and preserving the intellectual output of a single or multi-university community. He provides a compelling response to two strategic issues facing academic institutions (crow.2002). He further explains the role of library professionals in making different polices for managing the content and choosing the metadata schema and deciding authors' limitations, copyright agreements, and

guidelines for documents submission and initiate workshops and training programs to educate them about the usage of software and marketing the term "institutional repository".

Crow also defines three essential characteristics of Institutional Repository: institutional definition, scholarly content (cumulative and perpetual), and interoperability and open access.

And at the same time in India (2002), Indian Institute of Science, Bangalore established the First Institutional repository, named ePrint@IISc. They used eprint software to create their Institutional Repository. IISc. (Indian Institute of Science) provides the access of IR to everyone but the submission is restricted only to the members of the institutions.

In 2003, Lynch explained the development of IR which emerged as the new and convenient step for every institutes & university to store, preserve, and use scholarly outputs. Since 2002, people started recognizing IR as an area of study and they started writing about it. This was the time when big universities of the U.S. like MIT and the University of California launched their IR systems (Kennan and Wilson, 2006).

Several studies have already been conducted in the area of Institutional Repository. development Many papers, articles, survey reports highlight the of Institutional Repository developing several developed in and countries. Hayes defines a digital repository as a repository that stores all the digital content for easy retrieval and reuse. He further adds that it is very common to use an Institutional repository for research purpose.

In 2003, R. Yeates defined Institutional Repository as a collaborative effort of institutes to archive and exploit their scholarly output.

Asian countries started to work on Institutional Repositories around 2 decades before but the situation of a few Asian countries is quite satisfactory. Some of the authors have started to write about the growth & development of Institutional repositories in different countries of Asia.

Several other authors have highlighted the repository development of few Asian countries like China (Fang & Zhu, 2006). The other researcher Mukarami& Adachi (2006) described the repository movement in Japan whereas another expert Matsuura (2008) concluded that Japan has been placed as the fourth biggest

contributor in the world as per the total number of institutional repositories (OpenDOAR, 2012). Another study by Lee (2008) showed the growth and development of institutional repository systems in Japanese and Korean universities.

Sheau-Hwang Chang (2003) performed one of the earliest useful studies on IR. He considered IR as a new way of handling scholarly works created in digital forms by patrons of universities and colleges. In this paper, he talked about XML based metadata infrastructure, the role of the library, open archive management information system & Open access.

Lynne Horwoodet. al (2004) studied about open archive initiative and protocols for metadata harvesting. He discussed several things regarding Librarians' role in the building and maintenance of IR. He states, "Librarians are increasingly working with academic colleagues to provide online content for research, learning, and teaching. Providing an access to digital content is an essential prerequisite for institutions establishing and offering flexible online learning delivery". He had discussed cost. recommendations, peer reviews, mediation, the promotion, advocacy & metadata etc. In a traditional library management system, the library professionals have certain ways to acquire, store and disseminate the information. But according to recent trends, the professionals need to change the way they manage the information. Earlier they needed to manage only the documented information, but now they will have to manage the electronic forms of information too. The role of library is expanding day by day. Earlier, they were only responsible to collect & disseminate the information, but now they are participating in information creation too.

Libraries are getting funds to digitize the documentary information so that it can be widely accessible. Providing access to digital content is an essential prerequisite for institutions establishing and offering flexible online learning delivery.

In a case study by Graham, Skaggs, and Stevens (2005), it was discussed that a big library is not required to use web-based technology and digital information and to develop an institutional repository. Medium and small size libraries, if they are well equipped, can use web-based technology and create their repository. They have discussed the benefits of developing IR. There are many benefits of developing a repository projects for academic libraries. With the help of advance technology and machines, libraries can serve move services to their client.

This case study examines how a shared state-wide repository project impacted one medium-sized academic library and how it helped open up lines of communications and form a new relationship with a department that, in the past, had little or no contact with the university library.

In the year 2005, Suzie Allard started working on Institutional Repository's literature and identified the role of librarians in developing repositories. In that study, reference and user education were highlighted as the main functions of librarians. There is one more similar study by Charles W. in the same year. He explains the possible roles of Reference Librarians in Repositories. He also explains the relation between IRs and open access. Open access and Institutional repositories are two different terms to be identified with different functionalities. An institute can develop a repository to provide open access to all to their repositories.

This point can lead to some differences of perception between librarians and some open access advocates about IR support requirements and operational costs. Open access advocates may focus on technical support costs of IRs, while librarians may also be concerned with additional costs, such as staff and user training and support, IR advocacy and promotion, metadata creation and maintenance (including depositing items for busy faculty), and long-term digital preservation. Role of the reference librarian in IR is further discussed by Holly Phillips Richard Carr Janis Teal (2005) in taking initiatives for developing IR, administration, policy making, education & metadata review, etc. He added some future roles for reference librarians too.

In the view of the study by Lynch, when an institute develops an IR, it showcases all the scholarly output and intellectual life in digital format.

Emily Dill and Kristi L. Palmer (2005) described ideas behind the consideration for implementation of IR like what we should have in our minds when we choose a platform, what skills are required for implementing an IR, an idea about hardware, software & installation, how to identify the people and leaders. They further explained the test of IR, IR interface, metadata, organizational methods, lead by example, promotion & promotional ideas etc. There is some common and specific motivation behind establishing an IR and these motivations are more or less the same for every institution, which is to create, store and spread the scholarly output of the institution.

In the year 2006, Mary Westell had used some inputs indicators to evaluate IRs. These indicators are basically related to the financial model, digitization issues, planning, and execution related problems, interoperability etc. This study is important today also and can be helpful in evaluating IRs of any kind.

In 2007, Ki Tat Lam and his team studied the repository of Hong Kong University of Science & Technology. He explained every stage of IR, from Planning of developing an IR till publicizing that IR to the global level. They also explained minute things related to IR to their article. And in the same year, Morag Greig and team focused their study on charting the growth & development of open access and IR of Scotland. They had a different parameter for that like the software of developing Repository, author, content acquisition, copyright issues, policy decisions: sustainability, support, and purpose, Impact of the university statement, funders open access policies, Usage statistics, Future developments, & Maintaining momentum.

Meanwhile in India as well there were some writers who were interested in writing about IRs and one of them was Ashalatha and team who worked on ISRO HQ Institutional Repository and explored ways to develop and execute ideas. He also discussed the traditional library functionalities and their limitations. And this study suggested to promote IRs to overcome the space problems and to facilitate better service. One more study by John C. Kelly supported the same, and discussed that with the limited financial and technological resources, IRs can be built by the parent organization.

Ghosh (2008) reported that Indian Institute of Technology, Mumbai created the first electronic thesis and dissertation repository. He examines various ETD repositories and the story of their development to know the possibility of creating one national repository of India. IISC Bangalore was the first institute to develop an IR in India. Das *et al.* (2007) focused their study on policy making, different strategic dimensions, and analyzed some of existing repositories of that time like Vidyanidhi. On 25th July 2003, the Department of Library and Information Science, University of Mysore initiated a project to develop an institutional repository called Vidyanidhi.), Shodhganga@ INFLIBNET. It is a repository that facilitates users to deposit their thesis for open access. And they concluded that in India, ETD repositories are at a developing stage. There should be some policies for developing IRs. One more study by Vijay Kumar agreed on the same point that government's lack awareness of IRs was the main reason behind the slow initiatives of IRs in Indian universities.

Mohmmad Nazim& Maya Devi (2008) discussed open access and institutional repository as well. They explained that open access will not give much burden on your library budget but it will have a very high impact on information handling. Somehow, it is cost effective too. It can be an alternative to the traditional subscription-based publishing model, made possible by new digital technologies and networked communications. By open access movement, we can have access to scholarly output throughout the world. It is almost free of cost or there will be some nominal charge for it. Open access facilitates minimal restrictions on users and uses. It can enhance the global visibility of the scholarly output of the institutes.

In the year 2008, 37 IR registered on Open DOAR& ROAR. And one of the studies by Khan B. examined the status of IR. He collected data from the Depository of Open Access Repository (OpenDOAR) and Registry of open access repository (ROAR). There were some limitations of data collection. Only humanities and social Sc. Repositories were taken for study. He further explained the functioning of IR System. He believed that it is very important to know system functioning for better understanding of the system.

Gordon Dunsire (2008) focused his study on interoperability of institutional repository. He wrote about OAIPMH (Open archive initiative for metadata harvesting), which allows barrier mechanism for repository interoperability. He found from his research that the efficiency and effectiveness of any information retrieval service requires coherency and consistency in its metadata. Aggregator services potentially face two distinct but related categories of variation in harvested metadata: structure and content".

Francis Jayakanth (2008) wrote about first profession software to create Institutional Repository (Eprint). It is used for making repository worldwide. During that time, there were very fewer numbers of software. And there was no ideal software for the institutional repository. Amongst those limited no. of software, Eprint was one of the best software to create and maintain the repository. Manual is very easy, so a layman can also installed the software. And if you feel stuck at anytime while installing the software, there is a technical support team to help you round the clock. IIScBangalore used Eprint to create India's first interoperable open access repository.

There was a time when IRs were gaining popularity and some more writers were drawn towards this topic and they started thinking about usage statistics and how to evaluate the uses of IRs. Hee Kim &Yog Ho Kim in the year 2008, did usability

study. They studied the Korean digital repository. That study was based on literature review. First they decided some categories to make an evaluation framework to calculate the usability of an IRs. His evaluation framework was made of four categories: 1) satisfaction of the users, 2) supportiveness of the members of the IRs, 3) uses of the IRs, 4) effectiveness of IRs on users.

Duo conducted the study in two phases. In the first phase, they created a group and decided some criteria to make an evaluation framework to calculate the collection and their uses. In the second phase, they made a team and did a focused interview. Usability is a multidimensional construct that can be examined from various perspectives . Previously Booth suggested that usability has four aspects: usefulness, effectiveness, learnability and attitude.

Institutional Repository and Open access are terms that are frequently used together. Elisavet Chantavaridou in the year 2009 studied the influence of open access on Institutional repository and vice versa. Earlier, library professionals were only focusing on digitizing gray literature so that it can be made accessible online. They could not make a bold move of publishing articles & peer reviewed literature because they did not know whether authors would allow their work for open access. Slowly, but steadily, Institutional repositories started being developed and maintained world-wide. And this was the time when a few authors were putting in efforts to study and compare IRs systems of different countries. Chen and Hsiang (2009) studied different IRs of the UK, the USA, European countries and Asian countries. And in comparison to other continents, Asia has less numbers of IRs because Asian countries are relatively late in implementing IRs. When we see Repositories of Asian countries, it is revealed that most of them are not facilitated for open access. If we research more, we would know that the statics are very poor for Asian countries' IRs. If we exclude China, which has centralized IRs for 300 universities, then the total no. of Asian countries that share repositories is only 4 - 10% of the world's.

Abrizah (2010) and team have done detailed study of open access repositories of Asian Universities. This study gives a brief report on the OARs of Asian Universities. It contains every characteristic like, what type of repository, what content they have, subject of the repository, Language of the documents, technical, operational and policy related issues. According to this research data, the total no. of Repositories in Asian countries is 191 and Japan is at the top, followed by India and Taiwan.

But again when we compare Asian country's IRs to the other IRs of the world, we found out that out of 191 Asian IRs, only 48 are listed in the top 400 RWWR. It means only 12 % of the total Asian IRs are visible world-wide. Out of these 48 institutions, 29 are among the Asian Top 200 universities. However, only 14 of these 29 universities were ranked top 100 in the RWWR. This study also proves that Asian Universities are not actively participating in open access movement. The study suggests that Asian countries need to reconsider their policies so that their web performance increases and the quality of the IRs improve. This study is very useful in showcasing the current trends of Asian Universities.

OpenDOAR report 2010 advocated executing the IRs because it had the potential to improve knowledge sharing and scholarly communication. Developed countries are adopting more as compared to developing countries.

Rowena Cullen and Brenda Chawner (2010) have studied IRs of New Zealand. Their study explains the factors that are affecting the implementation, and what, according to the Library managers who established the IRs, and the members of the community, is most important thing for the success of IRs. The study raised some basic questions including why the institutes of New Zealand were establishing IRs. What will libraries do to popularize IRs? What will be the researcher's attitude towards IRs? How libraries will motivate people to submit their work in IRs?

Linde et al. (2011) analyzed the accessibility of refereed conference articles on the web and found out, that IRs are a very important source for their visibility. Overall, 17 percent of the studied conference papers were uploaded into IRs, next 13 percent were archived on the authors' websites or web sites of their institutions. The authors highlighted the role of IRs built on higher education institutions.

RashmiRekha Gohain (2011) has worked on Institutional repository of universities and research institution of India. Her research was based on primary and secondary, both kinds of data. She had taken data from Institutional websites, ROAR and OpenDOAR. After checking all the links of repositories, she found that 79 IRs of different universities and institutions were actively working and they would facilitate open access. Her research reveals that DSpace and EPrints were dominating as the leading software for repository development in India. She suggested that in developing countries like India, where infrastructure is not so good and because of financial problems, most people go for open access software as it is almost free of cost and has a low maintenance cost. They should establish IRs for better visibility of scholarly output of the institution.

Roy and his team had done an analytical study of IRs in India. Institutional digital repositories are widespread in universities and academic institutions. Most of the libraries in India are facing common problems of low budget, continuously increasing the cost of information handling, adaptation of advanced technology, never-ending patrons' expectations etc. In this scenario, it is very difficult to overcome the problems and fulfill the users' demand. IRs can be the solution to many of the above mentioned problems. But establishing IRs is not sufficient. We have to be prepared for all the consequences as well, like we need manpower to establish and maintaining IRs, technical expertise, metadata standards, copyright issues etc.

But still, IRs is not a very popular area of study in India. Now, authors are evaluating every aspect of Institutional Repositories. Manjunatha K &Thandavamoorthy in the year 2011, have done a user study to know the attitude of users towards a new mode of scholarly publishing that is IR. This study categorizes users of IR in three parts: Faculty, Research Scholar and PG students. For the study, they have taken institutions of Science & Technology, medicine, arts, humanities, and social science. The data shows the in comparison to humanities and social sciences students, medicine and S&T students are more aware and have interest in contributing to IRs. However, the humanities and S. Sc. Students were less aware but interested in open access repository movement.

SarikaSawant is one of the most renowned authors who has worked on different perspective of IRs like women studies on IRC, open access & IRs, IR system and features, the effect of IRs on scholarly communication etc. She defined IR as an archive which stores Intellectual output in the digital format created by members of the institutes for giving free and wide accessibility to users. In her research, she shows that Science & Technology Institutes are more adoptive in comparison to arts and humanities Institutes. In maximum libraries, IRs were developed by Library Science Professionals. And she suggested to the library community to take forward step to learn more technology and to have a positive attitude towards new changes.

M. Krishnamurthy & T.D. Kemparaju (2011) studied 20 institutional repositories (IRs) in use in Indian universities and research institutes. According to them, an IR is a natural extension of an academic institution's role as a generator of primary research. IRs are a practical, cost-effective, and strategic means for universities to build partnerships with their faculty to advance scholarly communication. IRs are

built on growing faculty practices of posting research output online, often on personal websites, but also on institutional websites or in disciplinary repositories, suggesting an increasing desire for expanded exposure of, and access to, their work. Furthermore, IRs allow universities to offer secure digital hosting and archiving services combined with more effective web dissemination, while the universities can benefit from the enhanced visibility of their research outputs and the prestige that this confers. The emerging economies among the developing countries are not far behind in building up the necessary information structure, essential for sustainable economic development. These emerging countries, however, have limitations in terms of bridging the digital divide within their societies, due to the co-existence of marginalized and privileged communities. IRs expand access to research, facilitate control over the research output of universities and institutions of national importance, and provide a sustainable management system for digital content.

Nazim and Mukharjee (2011) have done a study of the IRs of Asian countries. This study was a quantitative study. They believe that due to ICT advancement, some new options of scholarly publishing has emerged and one of them is open access model. Now the use of ICTs is very common and there are some good open source software available, so most of the institution are developing IRs. IRs now have become an important new player in the field of academic information management and publishing.

The development and growth of IRs arose in response to the major changes in scholarly communication. The new form of scholarship - that is born digital - constitutes an important source for present and future research and teaching. It was the time when universities were cutting library budgets and the prices of scholarly journals were increasing day by day. So it became a necessity to develop a new way to overcome all these problems. With the invention of www, things were changing, www became a very easy and cost-effective way to publish and distribute information in a digital form. IRs benefit scholars by providing free access to all scholarly works which are published or likely to be published in near future. It reduces the 'backlog' by bringing timely access and increasing visibility through a freely accessible Web.

SarikaSawant (2012) studied institutional repositories on women's studies in India & Canada. He had taken data from ROAR and found that in India, out of 22 IR only 3 IR containing documents on women studies and in Canada out of 32 IR, 22 IR contained documents on women studies. She further explained that in India, some policy should be there for making IRs. She mentioned that NKC has already

recommended to develop some repositories in which research reports (funded by Gov.) should be deposited, but there is no implementation yet. It may be possible that due to lack of awareness about IRs and there benefits, policymakers are ignoring this. And in her research, she found that subject-specific repositories on women's studies were not available in India.

Syed Sajjad Ahmed &Saleh Al-Baridi, (2012) studied the development of IR in the Arabian Gulf Region. The lack of information on OA and IR in the Arabian Gulf Region, plus the current interest of the King Fahd University of Petroleum & Minerals University (KFUPM) stakeholders in establishing an IR led to the development of this study. This study contributed to the already scarce literature in the area of OA and IR fields in the Arabian Gulf Region.

SarikaSawant (2012) studied various issues regarding management of Institutional repositories developed in India. She identified 16 functional repositories and some of these were subject specific repositories & some were not registered in any directory. The study mainly focused on identifying people, the source of fund allocation, policies, activities, issues concerning intellectual property right and contributors of IR.

Kenning Arlitsch Patrick S. O'Brien, (2012) studied why IRs are very less visible in Google scholar. It may be because repositories mostly used Dublin core for identifying their metadata and the bibliographic fields of Dublin core are insufficient for academic papers. And Google Scholar basically mange the academic papers so it is less indexed in Google Scholar. Institutional and disciplinary repositories were taken for the study. Authors have conducted three pilot projects and two surveys to prove the above hypothesis and recommended metadata schema for IRs to improve the visibility in Google scholar.

Roy and his team had studied approximately 80 IRs of India. They believe open access is growing as a social movement. The have studied the current state of open access IDR in India. They evaluated the repositories by their content, software choices, the subject of repositories, statistics of records, the language of the information contained, problems in running the repositories and policy-making issues etc. This paper also highlighted the position of Indian IRs in the world ranking. This study suggested some of the strategies to improve the global ranking of IRs of India.

Another similar study was done by Md. Anwarul Islam &Rowshon Akter (2013) in Bangladesh. The study was focused on IRs of Bangladesh and the rise of open

access movement in developing countries. The study highlights that the most important problem at the universities of Bangladesh is lack of awareness on information handling e.g. they were stuck between the information storage and dissemination. Dekeyser (2012) said that open access is not only giving a platform to read the research output, but also facilitating a place to showcase the institutional research output across the globe. According to a report by CIA (2012), the most important reason behind lower visibility of the research outcome of universities of Bangladesh is the limited awareness of scholarly communication among the library professionals. Bangladesh does not stand alone with these problems, although it is one of the least developed and most populous nations in South Asia with a literacy rate of 47.9%

In the year 2013, Tao Zhang and his team had done a usability study of research repository (HABRI). This study was start with an aim to develop a platform for promoting and assisting research on human and animal relationship. Usually research repositories are extended form of digital libraries, which is meant for self-archiving and facilitating in house publishing. The study concluded that there were some usability issues, when it comes to deposit the documents in repository. The workflow should be improved and there should be clear instruction for entire process. It is expected that the findings from this study and the evaluation methodology can be extended to the development and evaluation of similar research repository systems.

Anabel Bonilla-Calero, (2013) suggested some of the good practices for smooth functioning of repositories. There were three parts of recommendation one for the user point of view, one for the author point of view and another for the reviewer. From the user point of view the repository should be easily accessible, timely updated, proper review of documents to check the quality of the information contained, easy to use and satisfy the user need. From the Author point of view some recommendations are given for policies, copyright issues and authentications. From the point of view of reviewer it is very important to give proper metadata information.

Bo-Christer Björk (2013), tried to make understand about the open access subject repository and their development. arXiv was the first Subject repositories based on internet. With the invent of www, Open access subject repositories are developed which facilitate quick publishing of scientific papers at almost no cost.

Repository in scholarly communication. He believes that all professional who ever a concern with academics has a clear focus to improve the scholarly communication. He visualizes the institutional repository as a path or a gateway to made scholarly communication more visible and accessible. He discussed various aspects of IR, such as what all materials IR contains, why the growth in the numbers of the repository is slow? Why researchers are less interested in submitting their research output in IR? What is the central purpose of establishing IR?

Hanief Bhat Mohammad, (2014) explore and compare various types of documents available in various institutional repositories in India. Every institute has their own policy for establishing, maintaining, and depositing document in the repository. Total 21Institutional repositories were taken for study and total 70,965 documents were available in 21 institutional repositories. Almost each repository had books chapters, articles, conference papers, annual report, data sets, newspaper clipping, audio video resources etc.

Suntae Kim Wongoo Lee, (2014) with the increasing numbers of universities and research center, a trend of building research data repository started. These research data repositories have facilitating the permanent access to the data sets from the researchers. The purpose of the study is to create a database to collect data set from the digital libraries across the globe. There were 7 criteria for analysis viz. repository operational status, the language of the repository content, subject area, repository content, and repository software. The scope of this study was repositories of China, Japan, and Korea.

Teja Koler-Povh Matjaz Mikos Goran Turk, (2014) for an academic institution scholarly communication is one of the most important activity and scholarly publications are integral part of scholarly communication. He had categories scholarly communication in three basic activities: informal networking, initial publicly dissemination of information and formal publication. He examined the institutional repository (IR) named DRUGG (Digital Repository of the

University of Ljubljana and he had discussed the benefits and flaws of digital repository as a form of scholarly communication.

Institutional Repositories were first developed as an online solution for collecting, preserving, and disseminating the scholarship of universities, colleges, and other research institutions.

From this literature review we can divide the whole literature on IR in two parts. The first part (From 2002 to 2009) of literature shows the initial phase and development of IR. The second part (from 2010 to 2017) explain the extension services and discuss IR as an establish area of study. The keywords and issues discussed with IR are as follows:

2002- 2009	IR definitions, content, promotion, archives, IR for academic/
	university libraries, electronic publishing, knowledge management,
	reference services, collection management, experience and
	challenges in developing IR, digital preservation, digital storage,
	success factors, policy for IR, library system, infrastructure, system
	software, open system, extensible markup language, Open access,
	open access repository, information retrieval, metadata, information
	facilities, software, usability of IR, user interface, implementations
	of IR, etc.
2010- 2017	Ranking Web of World Repositories, trends and development of IR
	in India, Growth of IR, Types of IR, scholarly publishing, self-
	archiving, content depositing in IR, Management of IR, study of
	user's perspective, indexing ratio of IR, usability evaluation of IR,
	good practice which can improve the functioning of an IR, usage
	statics, subject repositories, IR consortium, open source software,

References:

Raym Crow, (2002): The Case for Institutional Repositories: A SPARC Position Paper, *ARL Bimonthly Report* 223 August 2002

Sheau-Hwang Chang, (2003), "Institutional repositories: the library's new role", OCLC Systems & Services: International digital

library perspectives, Vol. 19 Iss 3 pp. 77 - 79

Permanent link to this document:

http://dx.doi.org/10.1108/10650750310733199

Lynne Horwood Shirley Sullivan Eve Young Jane Garner, (2004), "OAI compliant institutional repositories and the role of library

staff", Library Management, Vol. 25 Iss 4/5 pp. 170 - 176

Permanent link to this document:

http://dx.doi.org/10.1108/01435120410533756

John-Bauer Graham Bethany Latham Skaggs Kimberly Weatherford Stevens, (2005), "Digitizing a gap: a

state-wide institutional repository project", Reference Services Review, Vol. 33 Iss 3 pp. 337 - 345

Permanent link to this document:

http://dx.doi.org/10.1108/00907320510611366

Suzie Allard Thura R. Mack Melanie Feltner-Reichert, (2005), "The librarian's role in institutional

repositories", Reference Services Review, Vol. 33 Iss 3 pp. 325 - 336

Permanent link to this document:

http://dx.doi.org/10.1108/00907320510611357

Charles W. Bailey Jr, (2005),"The role of reference librarians in institutional repositories", Reference

Services Review, Vol. 33 Iss 3 pp. 259 - 267

Permanent link to this document:

http://dx.doi.org/10.1108/00907320510611294

Shirley W. Leung, (2005), "International Conference on Developing Digital Institutional

Repositories: Experiences and

Challenges", Library Hi Tech News, Vol. 22 Iss 2 pp. 14 - 15

Permanent link to this document:

http://dx.doi.org/10.1108/07419050510593335

Holly Phillips Richard Carr Janis Teal, (2005), "Leading roles for reference librarians in institutional

repositories", Reference Services Review, Vol. 33 Iss 3 pp. 301 - 311

Permanent link to this document:

http://dx.doi.org/10.1108/00907320510611339

Emily Dill Kristi L. Palmer, (2005), "What's the Big IDeA? Considerations for Implementing an Institutional Repository", Library Hi

Tech News, Vol. 22 Iss 6 pp. 11 - 14

Permanent link to this document:

http://dx.doi.org/10.1108/07419050510620235

Helen Hockx-Yu, (2006), "Digital preservation in the context of institutional repositories", Program, Vol. 40

Iss 3 pp. 232 - 243

Permanent link to this document:

http://dx.doi.org/10.1108/00330330610681312

Susanne Dobratz Frank Scholze, (2006), "DINI institutional repository certification and beyond", Library Hi

Tech, Vol. 24 Iss 4 pp. 583 - 594

Permanent link to this document:

http://dx.doi.org/10.1108/07378830610715446

Mary Westell, (2006), "Institutional repositories: proposed indicators of success", Library Hi Tech, Vol. 24 Iss 2 pp. 211 - 226

Permanent link to this document:

http://dx.doi.org/10.1108/07378830610669583

Ki-Tat Lam Diana L.H. Chan, (2007), "Building an institutional repository: sharing experiences at the HKUST

Library", OCLC Systems & Services: International digital library perspectives, Vol. 23 Iss 3 pp. 310 - 323

Permanent link to this document:

http://dx.doi.org/10.1108/10650750710776440

Suzanne Cohen Deborah Schmidle, (2007),"Creating a multipurpose digital institutional repository", OCLC

Systems & Services: International digital library perspectives, Vol. 23 Iss 3 pp. 287 - 296 Permanent link to this document:

http://dx.doi.org/10.1108/10650750710776422

Morag Greig William J. Nixon, (2007), "On the road to Enlighten-ment", OCLC Systems & Services:

International digital library perspectives, Vol. 23 Iss 3 pp. 297 - 309

Permanent link to this document:

http://dx.doi.org/10.1108/10650750710776431

Sverre Magnus Elvenes Joki, (2007), "PEPIA: a Norwegian collaborative effort for institutional repositories",

OCLC Systems & Services: International digital library perspectives, Vol. 23 Iss 2 pp. 204 - 209 Permanent link to this document:

http://dx.doi.org/10.1108/10650750710748504

Bruce Hulse Joan F. Cheverie Claire T. Dygert, (2007), "ALADIN Research Commons: a consortial

institutional repository", OCLC Systems & Services: International digital library perspectives, Vol. 23 Iss 2

pp. 158 - 169

Permanent link to this document:

http://dx.doi.org/10.1108/10650750710748469

Ashalatha Laxminarsaiah Iqbalahmad U. Rajgoli, (2007), "Building institutional repository: an overview",

OCLC Systems & Services: International digital library perspectives, Vol. 23 Iss 3 pp. 278 - 286 Permanent link to this document:

http://dx.doi.org/10.1108/10650750710776413

Caroline Drury, (2007), "Building institutional repository infrastructure in regional Australia", OCLC Systems

& Services: International digital library perspectives, Vol. 23 Iss 4 pp. 395 - 402 Permanent link to this document:

http://dx.doi.org/10.1108/10650750710831538

Mary E. Piorun Lisa A. Palmer Jim Comes, (2007), "Challenges and lessons learned: moving from image

database to institutional repository", OCLC Systems & Services: International digital library perspectives,

Vol. 23 Iss 2 pp. 148 - 157

Permanent link to this document:

http://dx.doi.org/10.1108/10650750710748450

John C. Kelly, (2007), "Creating an institutional repository at a challenged institution", OCLC Systems &

Services: International digital library perspectives, Vol. 23 Iss 2 pp. 142 - 147

Permanent link to this document:

http://dx.doi.org/10.1108/10650750710748441

Simon J. Bevan, (2007), "Developing an institutional repository: Cranfield QUEprints – a case study", OCLC

Systems & Services: International digital library perspectives, Vol. 23 Iss 2 pp. 170 - 182 Permanent link to this document:

http://dx.doi.org/10.1108/10650750710748478

Fereshteh Afshari Richard Jones, (2007), "Developing an integrated institutional repository at Imperial

College London", Program, Vol. 41 Iss 4 pp. 338 - 352

Permanent link to this document:

http://dx.doi.org/10.1108/00330330710831567

Marie Wise Lisa Spiro Geneva Henry Sidney Byrd, (2007),"Expanding roles for the institutional repository",

OCLC Systems & Services: International digital library perspectives, Vol. 23 Iss 2 pp. 216 - 223 Permanent link to this document:

http://dx.doi.org/10.1108/10650750710748522

Marianne A. Buehler Marcia S. Trauernicht, (2007), "From digital library to institutional repository: a brief

look at one library's path", OCLC Systems & Services: International digital library perspectives, Vol. 23 Iss 4

pp. 382 - 394

Permanent link to this document:

http://dx.doi.org/10.1108/10650750710831529

Chris Awre Alma Swan, (2007), "Linking repositories", OCLC Systems & Services: International digital

library perspectives, Vol. 23 Iss 4 pp. 372 - 381

Permanent link to this document:

http://dx.doi.org/10.1108/10650750710831510

Alan Burk Muhammad Al-Digeil Dominic Forest Jennifer Whitney, (2007), "New possibilities for metadata

creation in an institutional repository context", OCLC Systems & Services: International digital library

perspectives, Vol. 23 Iss 4 pp. 403 - 410

Permanent link to this document:

http://dx.doi.org/10.1108/10650750710831547

Paul Royster, (2007), "The institutional repository at the University of Nebraska-Lincoln", OCLC Systems &

Services: International digital library perspectives, Vol. 23 Iss 2 pp. 183 - 189

Permanent link to this document:

http://dx.doi.org/10.1108/10650750710748487

Gayatri Doctor, (2008), "Capturing intellectual capital with an institutional repository at a business school in India", Library Hi Tech, Vol. 26 Iss 1 pp. 110 - 125 Permanent link to this document:

http://dx.doi.org/10.1108/07378830810857843

Bairam Khan Amit Kumar Das (2008): An Assessment on Present Situation of Institutional DigitalRepositories in India: A Study, 6th Convention PLANNER - 2008, Nagaland University, Nagaland, November 06-07, 2008 © INFLIBNET Centre, Ahmedabad

Gordon Dunsire, (2008), "Collecting metadata from institutional repositories", OCLC Systems & Services: International digital library perspectives, Vol. 24 Iss 1 pp. 51 - 58 Permanent link to this document:

http://dx.doi.org/10.1108/10650750810847251

Nazim Mohammad and Devi Maya (2008): open access journal and institutional repository: practical need and present trends in India, Annals of library and Information Studies, Vol. 15, March 2008, pp 27 - 34.

Francis Jayakanth Filbert Minj Usha Silva Sandhya Jagirdar, (2008), "ePrints@IISc: India's first and fastest growing institutional repository", OCLC Systems & Services: International digital library perspectives, Vol. 24 Iss 1 pp. 59 - 70

Permanent link to this document:

http://dx.doi.org/10.1108/10650750810847260

Ulrich Herb Matthias Müller, (2008), "The long and winding road", OCLC Systems & Services: International

digital library perspectives, Vol. 24 Iss 1 pp. 22 - 29

Permanent link to this document:

http://dx.doi.org/10.1108/10650750810847215

Hyun Hee Kim Yong Ho Kim, (2008), "Usability study of digital institutional repositories", The Electronic

Library, Vol. 26 Iss 6 pp. 863 - 881

Permanent link to this document:

http://dx.doi.org/10.1108/02640470810921637

Wani, Zahid Ashraf; Gul, Sumeer; & Rah, Javeed Ahmad. (2009). Open access repositories: A global perspective with an emphasis on Asia. Chinese Librarianship: an International Electronic Journal, 27. URL: http://www.iclc.us/cliej/cl27WGR.pdf

Kgomotso H. Moahi (2009): Institutional Repositories: towards harnessing knowledge for African development, First International Conference on African Digital Libraries and Archives (ICADLA-1), 1st to 3rd July 2009.

Elisavet Chantavaridou, (2009), "Open access and institutional repositories in Greece: progress so far", OCLC Systems & Services: International digital library perspectives, Vol. 25 Iss 1 pp. 47 – 59. Permanent link to this document:

http://dx.doi.org/10.1108/10650750910931922

Paul D. Allison and J. Scott Long Source: American Sociological Review, Vol. 55, No. 4 (Aug., 1990), pp. 469-478 Published by: American Sociological Association Stable URL: http://www.jstor.org/stable/2095801

A. Abrizah, A. Noorhidawati and K. Kiran (2010): Global visibility of Asian universities' Open Access institutional repositories, *Malaysian Journal of Library & Information Science*, Vol.15, no.3, Dec 2010: 53-73

Rowena Cullen Brenda Chawner, (2010), "Institutional repositories: assessing their value to the academic community", Performance Measurement and Metrics, Vol. 11 Iss 2 pp. 131 - 147 Permanent link to this document:

http://dx.doi.org/10.1108/14678041011064052

Shu Liu Yongli Zhou, (2011),"Developing an institutional repository using DigiTool", The Electronic Library, Vol. 29 Iss 5 pp. 589 - 608
Permanent link to this document:

http://dx.doi.org/10.1108/02640471111177044

Sarika Sawant, (2011), "Institutional repositories in India: a preliminary study ", Library Hi Tech News, Vol. 28 Iss 10 pp. 6 - 10

Permanent link to this document:

http://dx.doi.org/10.1108/07419051111202646

M. Krishnamurthy T.D. Kemparaju, (2011), "Institutional repositories in Indian universities and research institutes", Program, Vol. 45 Iss 2 pp. 185 - 198 Permanent link to this document:

http://dx.doi.org/10.1108/00330331111129723

Manjunatha K1* and K. Thandavamoorthy (2011): A study on researchers' attitude towards depositing in institutional repositories of universities in Karnataka (India), International Journal of Library and Information Science Vol. 3(6), pp. 107-115, June 2011 Available online http://www.academicjournals.org/ijlis

Nazim, Mohammad and Mukherjee, Bhaskar, "Status of Institutional Repositories in Asian Countries: A Quantitative Study" (2011). Library Philosophy and Practice (e-journal). Paper 652. http://digitalcommons.unl.edu/libphilprac/652

Rashmi Rekha Gohain (2011): Current trend and development of institutional repository of India, International Journal of Information Research, Vol.1 No.1

Bijan Kumar Roy, Biswas S.C. & Mukhopadhyay P. S (2011): An Analytical Study of Institutional Digital Repositories in India, Library Philosophy and Practice 2011

ISSN 1522-0222. Link for this document:

http://unllib.unl.edu/LPP/

Sarika Sawant, (2012),"A study of institutional repositories on women's studies in India and Canada", Library Hi Tech News, Vol. 29 Iss 9 pp. 10 - 19

Permanent link to this document:

http://dx.doi.org/10.1108/07419051211294446

Syed Sajjad Ahmed Saleh Al-Baridi, (2012),"An overview of institutional repository developments in the Arabian Gulf Region", OCLC Systems & Services: International digital library perspectives, Vol. 28 Iss 2 pp. 79 - 89

Permanent link to this document:

http://dx.doi.org/10.1108/10650751211236613

Hinnant, C., Stvilia, B., Wu, S., Worrall, A., Burnett, G., Burnett, K., Kazmer, M., & Marty, P. (2012). Author team diversity and the impact of scientific publications: Evidence from physics research at a national science lab. *Library & Information Science Research*, *34*(4), 249-257. http://dx.doi.org/10.1016/j.lisr.2012.03.001

Sarika Sawant, (2012), "Management of Indian institutional repositories", OCLC Systems & Services:

International digital library perspectives, Vol. 28 Iss 3 pp. 130 - 143

Permanent link to this document:

http://dx.doi.org/10.1108/10650751211262128

Sarika Sawant, (2012), "Indian institutional repositories: a study of user's perspective", Program, Vol. 46 Iss 1 pp. 92 - 122

Permanent link to this document:

http://dx.doi.org/10.1108/00330331211204584

Kenning Arlitsch Patrick S. O'Brien, (2012), "Invisible institutional repositories", Library Hi Tech, Vol. 30 Iss 1 pp. 60 - 81

Permanent link to this document:

http://dx.doi.org/10.1108/07378831211213210

Anabel Bonilla-Calero, (2013), "Good practice in an institutional repository service: case study of Strathprints", Library Review, Vol. 62 Iss 6/7 pp. 429 - 436

Permanent link to this document:

http://dx.doi.org/10.1108/LR-01-2013-0002

Lauren Fralinger Jonathan Bull, (2013), "Measuring the international usage of US institutional repositories", OCLC Systems & Services: International digital library perspectives, Vol. 29 Iss 3 pp. 134 - 150

Permanent link to this document:

http://dx.doi.org/10.1108/OCLC-10-2012-0039

Islam Md. Anwarul and Akter Rowshon (2013): Institutional Repositories and Open Access Initiatives in Bangladesh: A New Paradigm of Scholarly

Communication, *Liber Quarterly Volume 23 Issue 1 2013* Vol. 23, 3–24 | ISSN: 1435-5205 | e-ISSN: 2213-056X

Tao Zhang , Deborah J. Maron & Christopher C. Charles (2013) Usability Evaluation of a Research Repository and Collaboration

Web Site, Journal of Web Librarianship, 7:1, 58-82, DOI: 10.1080/19322909.2013.739041

Biaco Alayon Stephen Santillan Nemiz Elvi Lustracion Superio Daryl Garvilles de la Peña Jesserylle Gadot Pacino Luisa, (2013),"The development of an institutional repository at the Aquaculture Department of the Southeast Asian Fisheries Development Center, Philippines", Program: electronic library and information systems, Vol. 47 Iss 4 pp. 384 - 398 Permanent link to this document:

http://dx.doi.org/10.1108/PROG-09-2012-0052

Hanief Bhat Mohammad, (2014), "Exploring research data in Indian institutional repositories", Program: electronic library and information systems, Vol. 48 Iss 2 pp. 206 - 216 Permanent link to this document:

http://dx.doi.org/10.1108/PROG-07-2012-0036

Suntae Kim Wongoo Lee , (2014), "Global data repository status and analysis: based on Korea, China and Japan", Library Hi Tech, Vol. 32 Iss 4 pp. 706 - 722 Permanent link to this document:

http://dx.doi.org/10.1108/LHT-06-2014-0064

Teja Koler-Povh Matjaž Mikoš Goran Turk, (2014),"Institutional repository as an important part of scholarly communication", Library Hi Tech, Vol. 32 Iss 3 pp. 423 - 434 Permanent link to this document:

http://dx.doi.org/10.1108/LHT-10-2013-0146

Michelle Armstrong , (2014), "Institutional repository management models that support faculty research dissemination", OCLC Systems & Services, Vol. 30 Iss 1 pp. 43 - 51 Permanent link to this document:

http://dx.doi.org/10.1108/OCLC-07-2013-0028

Sterman, Leila. (2014) "Institutional Repositories: An Analysis of Trends and a Proposed Collaborative Future" College & Undergraduate Libraries Vol. 21, Iss. 3-4, 2014 http://doi.dx.org/10.1080/10691316.2014.943919

Ahsan Ullah Muhammad Rafiq , (2014), "Pakistan research repository: a showcase of theses and dissertations", Library Hi Tech News, Vol. 31 Iss 4 pp. 17 - 20 Permanent link to this document:

http://dx.doi.org/10.1108/LHTN-01-2014-0003

Aquil Ahmed Sulaiman Alreyaee Azizur Rahman , (2014),"Theses and dissertations in institutional repositories: an Asian perspective", New Library World, Vol. 115 Iss 9/10 pp. 438 – 451. Permanent link to this document: http://dx.doi.org/10.1108/NLW-04-2014-0035

Subhash Khode* and Sunil Singh Chandel (2015), DESIDOC Journal of Library & Information Technology, Vol. 35, No. 1, January 2015, pp. 30-40 DOI: 10.14429/djlit.35.1.7897

Miquel Termens Mireia Ribera Anita Locher, (2015), "An analysis of file format control in institutional repositories", Library Hi Tech, Vol. 33 Iss 2 pp. 162 - 174 Permanent link to this document:

http://dx.doi.org/10.1108/LHT-10-2014-0098

Kelly Riddle, (2015), "Creating policies for library publishing in an institutional repository", OCLC Systems & Services: International digital library perspectives, Vol. 31 Iss 2 pp. 59 - 68 Permanent link to this document:

http://dx.doi.org/10.1108/OCLC-02-2014-0007

Rob Kitchin Sandra Collins Dermot Frost, (2015), "Funding models for Open Access digital data repositories", Online Information Review, Vol. 39 Iss 5 pp. 664 - 681 Permanent link to this document:

http://dx.doi.org/10.1108/OIR-01-2015-0031

A Abrizah Mohd Hilmi Norliya Ahmad Kassim , (2015), "Resource-sharing through an interinstitutional repository", The Electronic Library, Vol. 33 Iss 4 pp. 730 - 748 Permanent link to this document:

http://dx.doi.org/10.1108/EL-02-2014-0040

Rebecca Mary Marsh, (2015),"The role of institutional repositories in developing the communication of scholarly research", OCLC Systems & Services: International digital library perspectives, Vol. 31 Iss 4 pp. 163 - 195

Permanent link to this document:

http://dx.doi.org/10.1108/OCLC-04-2014-0022

H. Hayes, Digital Repositories: Briefing Paper for Higher Education, 2005. Available at: www.jisc.ac.uk/ uploaded documents/HE_repositories_briefing_paper_2005.pdf. nw?1/fm?docpdf/rpsv/cw/mcb/03055728/v33n2/s7/p96

R. Yeates, Institutional repositories, VINE: The Journal of Information and Knowledge Management Systems [online] 33(2) (2003) 96–100. Available at:http://hermia.emeraldinsight.com/vl?2362407/cl?82/ (accessed 20 Sept 2008)

C.A. Lynch, Institutional repositories: essential infrastructure for scholarship in the digitalage, Mitchel, Anne M. and Brian E. Surratt. Cataloging and organizing digital resources: a how-to-do-it manual for libraries. London: Facet Publishing, 2005.

Lynne Horwood Shirley Sullivan Eve Young Jane Garner, (2004),"OAI compliant institutional repositories and the role of library staff", Library Management, Vol. 25 Iss 4/5 pp. 170 - 176
Permanent link to this document: http://dx.doi.org/10.1108/01435120410533756

Alexander, M. L., & Gautam, J. N. (2006). Institutional Repositories for Scholarly Communication: Indian Initiatives. *Serials: The Journal for the Serials Community*, 19(3), 195-201.

Ahmed, A. and Al Reyaee, S. (2014), "Coping the budget pressure: possibility of adopting open source solutions in Saudi libraries: a review", *e-Library Science Research Journal*, Vol. 2 No. 3, available at: www.lsrj.in/UploadedArticles/175.pdf

Dekeyser, R. (2012). Scientific research and information in developing countries: Necessity, threats and opportunities. Retrieved November 29, 2012, from http://www.kaowarsom.be/test/guidelines/Teks_RD-EN.

Cullen, R., & Chawner, B. (2009). Institutional repositories and the role of academic libraries in scholarly communication. from http://researcharchive.vuw.ac.nz/bitstream/handle/10063/866/conferece%20paper.

CIA, (The) World factbook (2012). *Bangladesh*. Retrieved November 29, 2012, from https://www.cia.gov/library/publications/the-world-factbook/geos/bg.html

Chen, K. and Hsiang, J. 2009. The unique approach to institutional repository: Practice of National Taiwan University. *The Electronic Library*, Vol. 27, no. 2: 204-221.

OpenDOAR. 2010. The directory of open access repositories: OpenDOAR. Available at: http://www.opendoar.org

Linde, P., Erikson, J., Kullman, L., Fathli, M., Karlsson, K., Sikstro"m, M., Sko"ld, Y. and Toang, I. (2011), "Accessibility and self-archiving of conference articles: a study on a selection of Swedish institutional repositories", Information Services & Use, Vol. 31 Nos 3/4, pp. 259-269.

Anuradha, K. T. (2005). Design and development of institutional repositories: A case study. *The International Information & Library Review*, 37(3), 169-178.