Current Status of Chinese Open Access Institutional Repositories: A Case Study

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Abstract

The present study mainly focuses on the current status of Chinese Open Access InstitutionalRepositories: A Case Study.The present study attempts to determine the current status of open access institutional repositories in China based on the four key constraints, i.e. number of IRs, types, subjects and contents and software used. To fulfil the specified objectives, the Open access institutional repositories in China were identified by selecting the database of Directory of Open Access Repositories (Open DOAR) and the data were collected analysed for the necessaryinformation. The study highlights the current status of open access institutional repositories in China and its contribution to a global knowledge base.

Keywords: Institutional repository, Open source software, Content, Subject, Chinese Open Access Institutional Repositories

Introduction

Institutional repositories constitute a central part of present day digital libraries allowing global access to scholarly output and provide an opportunity for future research enhancement and long term preservation of information (Ahmedet.al, 2014). Institutional repositories (IRs) are 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 for its community (Lynch, 2003). In the 21st century there is competition among organizations' to make their organization research output visible to the world of learning. There is no such differences between organization it may

be small in size or it may be big they are constantly trying to preserve their research output in digital form. China is one of the most developing countries, which gives more focus on higher education and allotted very good amount of budget to its higher education.

Review of Literature

Ahmed et.al. (2014) examined the open access e-theses and dissertations of Asian countries in broader prospects. The authors reported that ETD repositories are addressing this problem by making institutional knowledge available online and thus it gets visibility at global level. Asian countries are beginning to embrace the idea of digitizing, archiving and making their theses and dissertations available online. The study also highlighted that more than half of all IRs listed in the directory of OpenDOAR contains ETDs. ETD system is growing fast in some Asian countries. Sarika Sawant (2012) conducted a survey on Indian institutional repositories: a study of user's perspective. The author has expressed that, users are one of the vital factors of the long-term survival of IRs. Further, she has added that there is a need for cooperative efforts among academics, library professionals and the user community to lower the barriers for the implementation and management of IRs in India. In a study, Sarika Swant (2012) reported that there are no subject specific repositories available on women's studies either in India or in Canada. Whereas, Krishnamurthy & Kemparaju (2011) reviewed 20 institutional repositories of Indian universities and research institutes. The authors observed that most of the collections have unique contents. Abrizah& Others (2010) examined the current state of open access repositories of Asian universities.Study highlights that out of the 191 Asian organizational institutional repositories identified but, only 48 are listed in the Top 400 RWWR. This indicates that only 12% of Asian institutional repositories are visible because they have incorporate good practices in their web publication as extracted from the quantitative webometrics indicators used by the ranking. Further, it discovered that some of the top ranked universities in Asia are not actively contributing to the open access movement. The authors have suggested that if the web performance of an institutional repository of a research institution is below the expected position, the university authorities should reworkon their web policy to increase the visibility of their institute research output globally. Kiran and Chia (2009) emphasises that the adoption of institutional repositories in Malaysia is rather low, even in the

country's top four research-intensive universities. Zhong (2009) carried out study by collecting data from the Registry of Open Access Repositories (ROAR) and found only 27 Chinese institutional repositories, listed separately under China mainland (15), Hong Kong (3), and Taiwan (16). He contributed the small number to lack of awareness among potential contributors and lack of government policies on institutional repository implementation.

Objectives of the study

The objectives of this study are to locate the present status of Chinese open access institutional repositories in the following aspects:

- To explore the total number of IRs
- To identify the subjects and content covered by Chinese IRs.
- To find outdiverse software used by Chinese IRs
- To identify the various types of IRs.

Methodology

To justify above given objectives, researchers have selected Open DOAR (http://www.opendoar.org) database for collecting of information to find out current status of Chinese open access Institutional repositories: A case study from various dimension. Open DOAR provides accurate information about global open access repositories. Open DOAR is maintained by SHERPA services, based at the Centre for Research Communication at the University of Nottingham. It is primarily a service to enhance and support the academic and research activities of the community. In this study Chinese institutional repositories were identified and thoroughly analyzed for the necessary information. Secondary data was collected for the study. At the time (11th June,2016) of data collection, there were 39 institutional repositories in China. There might be some more institutional repositories in china, but because they are not yet registered under Open DOAR, they are not included in the present study.

Results and discussions

Table.1: Distribution of Open Access IRs by Types of Organizations

Table.1 shows that the number and percentage of total number of open access institutional repositories available in China. Out of 39 open access institutional repositories, Research institute 25(64.10%), University 11(28.21%) followed by Research library 3(7.69%). The findings indicate that research institutions are more concern about promoting their institute's scholarly communications through open access institutional repositories followed by universities and research library.

Table.2: Types of Open Access IRs

Types of IRs	No	%
Operational	36	92.31
Aggregating	1	2.56
Broken	2	5.13
Total	39	100.00

Table.2 shows that the number and percentage of types of open access institutional repositories. By type of distribution of open access institutional repositories we found operational repositories 36(92.31%) followed bybroken 2(5.13%) and aggregating 1(2.56%). It is clear from the above table. 2 types of open access institutional repositories that out of 39 open access IRs 36 repositories are operational.

Table.3: Records by Type of Organizations

Name of Organization	No. of Records	%
Research Institute	4432370	88.17
Research Library	38982	0.78
University	555904	11.06

Name of IR	No. of IRs	%
Research Institute	25	64.10
Research Library	3	7.69
University	11	28.21
Total	39	100.00
Total	5027256	100.00

Table.3 shows that the number and percentage of records available in Chinese open access repositories, there are total 5027256(100%) records available in all the repositories by types of Organizations. Table.3 clearly shows that Research institute 4432370(88.17%) followed by University 555904(11.06%) and Research Library38982(0.78%). It is found that research institutes are key player for contributing their scholarly communications contents to open access institutional repositories for making it global visibility. It is also found that Chinese scientific institutions are more aware about open access and they have contributed good amount of contents in their institution open access repositories.

Table.4: Records by Type of Open Access IRs

Type of IR	No. of Records	%
Aggregating	4211132	83.77
Broken	40228	0.80
Operational	775896	15.43
Total	5027256	100.00

Table.4 shows that the number and percentage of records by types of open access institutional repositories are 5027256(100%). From the above table.4 it is clear that records available in types of open access institution repositories are Aggregating4211132(83.77%) followed by Operational (15.43%) and Broken40228(0.80%). It is observed that records by types of open access IRs that aggregating repositories added more number of records.

Table.5: Software wise distribution of Open Access IRs

Software	No. of IRs	%
DSpace	35	89.74
Cspace	1	2.56
VuFind	1	2.56
Other	2	5.13
Total	39	100

As analysis shows that the number and percentage of software used by Chinese open access institutional repositories. Table.5 shows extensively used software is DSpace 35(89.74%). It was followed by others (not named) 2(5.13%), CSpace 1(2.56%) and VuFind 1(2.56%). It is clear

from the above table.5 DSpace software is used widely by the Chinese open access repositories. In earlier many studies also claim that DSpace is the software which is used widely throughout the world-wide.

Table.6: IRs by Language

Language	No. of IRs	%
Chinese	9	23.08
English	3	7.69
Chinese-English	24	61.54
English-Chinese	3	7.69
Total	39	100.00

Table.6 shows number and percentage of language of the interface of the open access institutional repositories. It is clear that the interface of open access institutional repositories have been built in mainly two languages to provide easy access to users. However, Chinese-English 24(61.54%) is the most prominent language of their respective language. On the other hand Chinese 9(23.08%) followed by English 3(7.69%) and English-Chinese 3(7.69%). Over all 39 open access institutional repositories 24(61.54%) were in Chinese-English language. It further, shows that users of Chinese open access institutional repositories prefer both the languages Chinese as well as English.

Table.6: Disciplinary coverage of Open Access IRs

Subject	No. of IRs	%
Fine Arts	1	0.78
Generalities	6	4.65
Geography & History	7	5.43
Language	1	0.78
Multidisciplinary	14	10.85
Natural Sciences	45	34.88
Philosophy & psychology	2	1.55
Social Science	1	0.78
Technology (Applied Sciences)	52	40.31
Total	129	100.00

Table.6 shows that the number and percentage of subject coverage of open access institutional repositories. We have identified 09 broad subject categories which are shown in table.6. There are many scientific institutions which hold only technology and natural science subjects in their repositories. On the other hand multidisciplinary hold all the subjects in their open access repositories. As table.6 indicates, the most prominent unique subject under which most of the record was archived technology (applied sciences) 52(40.31%)followed by natural sciences 45(34.88%). Whereas, number of open access institutional repositories in technology (applied sciences) and natural science are quite high than other disciplines. It is clear that scientific literature exponential growth and usage shows high performance than others respective fields. The findings indicate that natural sciences and applied sciences subjects have majority in the disciplinary coverage of Chinese open access institutional repositories and followed by other subjects respectively.

Table.7:Content wise distribution of Open Access IRs

Types of Content	No. of IRs	%
Articles	37	20.67
Books	17	9.50
Conferences	28	15.64
Datasets	2	1.12
Learning Objects	2	1.12
Multimedia	6	3.35
Patents	21	11.73
References	12	6.70
Special	3	1.68
Theses	33	18.44
Unpublished work	18	10.06
Total	179	100.00

Table.7 shows that the number and percentage of types of content stored in open access institutional repositories. We observed from the above table.7 more focus is given to the archiving of articles. Further, it is clear that within types of contents 37(20.67%) articles followed by theses 33(18.44%) and conferences 28(15.64%). On the other hand patents 21(11.73%) followed by unpublished work 18(10.06%) and books 17(9.50%). The findings of content wise distribution of open access IRs show Articles, Theses, conferences and patents are more deposited contents.

Findings and Discussion

From the above study of 39Chinese Open Access institutional repositories, major key findings are given below:

- It was observed that Chinese Academy of Sciences (CAS)was major contributor 25(64.10%) in Chinese open access IRs then others.
- By type of distribution of open access IRswere operational repositories 36(92.31%) followed by broken 2(5.13%) and aggregating 1(2.56%).
- 5027256(100%) records were available in Chinese open access repositories. It is clear that research institutions contributed 4432370(88.17%) records alone in comparison to others.
- DSpace 35(89.74%) was widely used software in Chinese open access IRs. It is also observed from the earlier studies that DSpace software is the most leading institutional repositories software globally.
- It is evident that the interfaces of open access institutional repositories have been built in mainly two languages to provide easy access to users. However, Chinese-English 24(61.54%) is the most prominent language of their respective IRs.
- In this study we have perceived 09 broad subject categories which are shown in table.6. There are many scientific institutions which hold only technology and natural science subjects in their repositories. On the other hand multidisciplinary hold all the subjects in their open access IRs.
- We saw from the above study more focus is given to the archiving of articles than other forms.

Conclusions

The present study reviewed current status of Chinese open access institutional repositories. The analysis of open access IRs shows that there is a need for creating awareness within the community for extensive contribution of content to the IRs. Zhong (2009) suggested that in developing countries like China, first universities should initiate green drive OA deposit by constructing IRs. The author also emphasises upon creating common awareness of the concept and advantagesof OA and IR is significant that there is still a lot of work to be done to promote OA and IR in China.

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