Current Status of Open Access Institutional Repository: A Case Study in Universiti Teknologi Mara (UiTM)

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ABSTRACT

The aim of the study is to explore the current status of open access and issues related to it in an academic library in Malaysia. The study investigates the current status and highlight issues of open access that being practiced in Perpustakaan Tun Abdul Razak (PTAR1) Universiti Teknologi MARA (UiTM). The study adopts qualitative approach to collect the data. The findings indicated that UiTM Institutional Repository has been launched in 2010 and uses EPrints software to centralise, collect, preserve and comply to open access concept of accessing collection of scholarly materials that showcases the research output of UiTM communities. It contains conference and seminar presentations, reports, Entrepreneurship (ETR) working paper from MEDEC, journals, newspapers, grey literature such as the theses and dissertations. All the materials are in the text formats that constraint to PDF file format only. The study shows that UiTM Institutional Repository has the digital preservation policy whereby this policy comprises of the bitstream copying, migration, standards, preservation metadata, copyright and plagiarism. Thus, by this study, academic institutions may consider to widely promote their institutional repositories and supporting the open access movement in Malaysia. Therefore, this study is significant for libraries as well as students and academic staff to work together in order to exploit the libraries' resources for an effective academic work.

Keywords: *Open access, Institutional repository, Academic library, Current status*

1. INTRODUCTION

Open access is a new trend which is being practiced and used in many areas in the world. Open access was only developed several years after the arrival of the Internet. Furthermore, this is the simplest way where public may access the journals or databases in full content freely. Along with the advancement of technology, the dissemination of research discoveries and scholarly knowledge become widen. Public only need to have access to computers, the Internet and the literacy skills in order for them to take advantage of this freely available knowledge. Until recently, the best way to disseminate research paper is by publishing it in a paper journal which was then distributed to subscribers, members or libraries [1]. However, there were limitations to the distribution in terms of the costs to printing and distributing each additional copy of a journal issue. With open access, it is now possible to place a single copy of an article on the World Wide Web for anyone, anywhere to download [2].

The most influential definition of open access to this day is the one that was defined by the Budapest Open Access Initiative in 2002. It defined open access as free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal or technical barriers other than those inseparable from gaining access to the internet itself [3].

Currently, open access is an international movement whose objective is to make sure that the results of scientific research, financed with public funds, become accessible to the world via the Internet without any barriers or restrictions. The activism of the open access movement and Open Archives Initiative (OAI) has increased during the past three years. The objective of OAI is to promote greater visibility and dissemination of data throughout the world.

Open access was designed to break the hold of commercial publishers on the intellectual output of universities and research institutions, rather than giving published research to private companies, universities would publish their research finding themselves on freely available, public domain web sites. Libraries play a significant role on this open access movement as open access is a way for them to freedom of the burden in buying the texts and materials published and libraries greatly welcomed the open access [4].

One of the open access strategy is the self-archiving whereby it may be the personal web page of the author, a

subject or discipline-based repository or an institutional repository. The role of institutional repository is basically to collect, preserve and disseminate the host institution's research outputs. The research outputs could include electronic copies of pre-prints as well as post-prints articles, conference and working papers, committee papers, teaching materials, thesis and dissertations, monographs, multimedia, student project and so forth [5]. In addition, by showcasing their faculty's research output, institutional open archives can bring prestige to both staff and institution [6].

An institutional repository is a recognition that the intellectual life and scholarship of our universities will increasingly be represented, documented and shared in digital form and that a primary responsibility of our universities is to exercise stewardship over these riches, both to make them available and to preserve them [7]. Hence, institutional repositories are important because they facilitate greater access to the research outputs from universities, polytechnics, research institutes, other institutions and individuals [8].

2. OBJECTIVES

The purpose of the study was to identify the current status of open access institutional repository practices in UiTM. These include the repository, scope and coverage, metadata standards and interoperability, risks and challenges as well as the future plan of the institutional repository. Besides that, the study also sought to identify the issues and problems of open access institutional repository in UiTM. This covered the technical infrastructure, finance and administration, self-archiving concept and preservation policy.

3. METHODOLOGY

Interview was chosen as the research instruments in data gathering. Librarians from the System Management and IT Unit have been interviewed in order to gain the overall pictures of the current trends and issues related. The interview was done in two sessions. First is the face to face interview and the second is the telephone interview. The interview questionnaires are designed to answer the research questions pertaining to the current status of UiTM Institutional Repository. In addition, the interview assists in collecting the data on the issues and problems that occur. Although the interview was structured in the sense that a list of issues that were central to the research questions was drawn up prior to conducting the interviews, it was reflexive because the interviewer was free to formulate the interview questions as dictated by the circumstances.

4. RESULTS

4.1 Background of the UiTM Institutional Repository

UiTM Institutional Repository (IR) is a digital collection of the university's intellectual or research output. The IR centralise, collect, preserve and comply to open access concept of accessing collection of scholarly materials that showcases the research output of UiTM communities. It was found that the IR was officially launched in 2010. According to the library, before the IR was launched, UiTM had pre-launch the pilot test in 2006. It can be analysed that UiTM took about 4 years to launch the IR. An assessment survey also was conducted before the IR implementation. UiTM considered that the needs of pilot test and the assessment survey is fundamental in order to ensure that the IR project is success. Both processes also were helpful in the IR implementation.

The initiative in implementing IR in the organisation was derived from the institutional policy itself, PTAR library and the requests made by the academics and the researchers. The study had revealed that they are some difficulties involved in establishing the IR. The organisation has to confront with the lack of detailed institutional policy regarding the IR and lack of skills pertaining to human resource.

4.2 Scope and Coverage

It was found that the IR contains grey literature such as the theses and dissertations. Besides that, it also contains conference and seminar presentations. Other materials that can be found in the IR are the research reports, Entrepreneurship (ETR) working paper from MEDEC, journals, newspapers and so forth. All the materials are in the text formats that constraint to PDF file format only. The IR encompasses the file conversion policy and the preferred file format also in PDF. For the document level, it can be seen in Table 1.

Table 1: Materials' Document Level

Materials	Metadata	Full text*
Theses and dissertations	Yes	First 24 pages
Research reports	Yes	First 24 pages
Conference paper, seminar presentations and journals, newspapers, etc.	Yes	Yes

* As agreed by the owner/author

Table 1 shows that all materials have the metadata descriptions and full text. However, for theses, dissertations and research reports, the full text are limit to the first 24 pages.

4.3 Metadata Standards and Interoperability

In terms of metadata standards and interoperability, UiTM Institutional Repository uses unqualified Dublin Core (DC) for metadata creation. Cooperation between the OAI and the Dublin Core Metadata Initiative has led to a common xml schema for unqualified DC. The fifteen elements DC has over the past several years evolved as a *de facto* standard for simple cross-discipline metadata and is thus the appropriate choice for a common metadata set.

As mentioned before, only the administrators from PTAR library is permitted to deposit the files in the repository whereby the academics or researchers do not have the authority in depositing their items to the repository by themselves. Therefore, the library specifies metadata for the IR contents is created by the repository administrators itself. Furthermore, UiTM Institutional Repository is compliance with The Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH). It is a low-barrier mechanism for repository interoperability. The IR is currently uses the OAI-PMH Version 2.0.

4.4 Risks and Challenges

It was identified that PTAR library is confront with the risks and challenges in setting up and maintaining the IR. They claimed that the risks and challenges are:

a) Lack of expertise in maintaining the customisation of the IR
b) No source code
c) Lack of expertise in pearl language
d) Lack of support from the faculty or academics centre for acquisition of materials

4.5 Future Plan

From the interview, the researcher found that PTAR library was planning to increase the number of items or documents deposit to the IR. PTAR library is concern in giving the awareness to the faculty and academics centre on the IR. When the faculty and academics centre are aware, the academics and researchers will somehow being expose to the existence of the IR. This will lead to a good future of the IR and the institutional itself. Therefore, the institutional community will all be aware with the concept of open access introduced by PTAR library.

Besides that, PTAR library looking forward on customising the EPrints accordance with the current requirements of the users whereby the library aim to be more emphasises on the friendly usage. With a user friendly IR, it will increase the number of users to fully utilised the IR. Another future plan the library would like to have is the expertise on EPrints whereby these expertises are required for handling the language code.

4.6 Hardware and Software

The IR software that adapted by UiTM Institutional Repository is EPrints. There are some features compliance with EPrints that made this software was chosen by the library. The features included are the software is open source, user friendly and ease of installation and maintenance.

The software have been updated since its installation and the software that preferred by the library is EPrints 3. PTAR library also stated that the previous existing hardware and network resources are adequate and suitable for the IR implementation. In term of the security purposes, PTAR library are backing up their repository files and the file format for the backup purpose are TIFF and PDF.

4.7 IR Accessibility

It was identified that the number of eligible contributors which included the academics and researchers are above 1,000. The study found that only the administrators from PTAR library are permitted to deposit the files in the repository. The academics or researchers do not have the authority in depositing their publications to the repository by themselves. The administrators will analyse what items from the academics or researchers that eligible to be deposited before uploaded the items to the repository.

There are no registered eligible content contributors for the IR and PTAR library considered it to be their future plan. The library stated that they satisfied with the rate of document submission and population of the IR as the IR was just launched in 2010. Furthermore, there are IR usage statistics that being maintained by UiTM Institutional Repository. IR usage statistics are the abstract and full text that being downloaded by the users. However, for the monitoring of the hits statistics, it is not being maintained as the library confront with the problem of lack of experts in customising the language code.

4.8 Budget and Cost Consideration

The overall budget of the UiTM Institutional Repository was not revealed. However, the library mentioned that additional funding is required to improve the IR services. Until the study being constructed, the cost

incurred in establishing the IR was considered as moderate. The existing ICT infrastructure helped lowering the cost incurred. Besides that, PTAR library reveals that there are budget being earmark for the sustenance of the IR project. Again, the amount of the budget was not defined.

4.9 Human Resource

The number of persons that initially involved in the IR project was described as following:

Table 2: Number of Staff Involved in the IR Project

Description	Number of staff
Head of Department	1
Head of Division	1
Digital Collection Development Division	5
Institutional Repository Division	4
Total	**11**

Referring to Table 2, there are 11 staff that initially involved in the IR project. These numbers included the Head of System and Information Technology Management Department as well as the Head of Division. 5 staff are from the Digital Collection Development Division and another 4 staff are from the Institutional Repository Division.

PTAR library declares that they are satisfied with the available human resource for the IR. Staff from Digital Collection Development Division are responsible in maintaining and handling the IR from time to time. However, the positions of the IR administrators are not well defined. Furthermore, there are no collaboration of staff between the IR and the institutional computer centre. Special training was highlighted as needed by the library for metadata creation, content addition and so forth.

4.10 Self-archiving

UiTM Institutional Repository only allows the institutional members in submitting the items to be deposited in the IR. The document submitting to be deposited is voluntary rather than mandatory. It is because the IR was just launched and the stabilisation is still in the analysis level. Only the IR administrators is verified to deposit the materials and the library mentioned that perhaps soon they will make it mandatory whereby the academics and researchers can deposit their items to the IR by themselves.

PTAR library identified that the most important inhibitors or bottlenecks for the self-archiving is that it is not declared as mandatory by the management. If self-archiving is mandatory and academics as well as researchers can deposit the items to the IR by themselves, the IR can be well developed. In terms of the retention period for the documents that being submitted, there is no such policy in UiTM Institutional Repository.

4.11 Preservation Policy

From the interview, it was found that UiTM Institutional Repository has the digital preservation policy. The policy comprises of the bitstream copying, migration, standards, preservation metadata, copyright and plagiarism. The IR allows the items in the repository to be withdrawn. In withdrawing the items, they will be removed from the public view.

5. CONCLUSION

The study has shown the current status of open access institutional repository in UiTM and revealed the issues and problems associated to the open access institutional repository. It was found that the objective of the study has been achieved. Hence, the following conclusions are drawn:

1. UiTM Institutional Repository supports the open archive movement in Malaysia

2. UiTM Institutional Repository contents are accessible to the users

3. UiTM Institutional Repository have the IR policy that should be revised to be aligned with the self-archiving concept

4. UiTM Institutional Repository do not confront finance and administration issues as a big challenge for them in developing the open access archives

6. RECOMMENDATIONS

Based on the findings, several recommendations are offered as a guide to UiTM for their institutional repository.

1. Enhancing the Self-archiving

There is a need for UiTM Institutional Repository in defining their self-archiving concept. As at the moment, the repository only allows the IR administrators to deposit the

materials to the IR. This finding is contradicted with Rankin (2005) who noted that the value of the repository depends on the number of authors contributing [9]. Thus, self-archiving by authors (academics/researchers) should be promoted and seminars, workshops and tutorials should be conducted to make authors more inclined to open access, which will mobalise the scholarly content [10].

2. Marketing and Promoting the Institutional Repository

Library professionals have to play a key role in making the academics and researchers aware of the benefits of open access institutional repository. Many researchers simply remain unaware of the concept of open access or if they heard of it, they remain largely ignorant of its implications. Over one-third of researchers are not familiar in any way with the possibility of self-archiving their work [11]. It is found that UiTM Institutional Repository has been promoted in the PTAR Portal. However, this is not enough as the library also can make use of the UiTM website whereby they can for instant advertise the existence of UiTM Institutional Repository at the main page. This will increase the awareness of the institution's community to the repository. The other way to market and promote the repository is by producing sort of handouts, brochures or pamphlets about UiTM Institutional Repository. The library should be more creative to ensure that their product reach the users.

3. Increasing the Users' Awareness on the Institutional Repository

The users' awareness is important for the IR to success. It is useless if the technology and information is there but it is not utilise by the users. Promotion and the advocacy of the IR need to be undertaken to highlight the motivations for using the IR and reassure faculty who may be worried about the deterrents [12]. As discussed previously, the library may advertise the existence of UiTM Institutional Repository at the main page of the UiTM website. Besides that, they can distribute handouts, brochures or pamphlets about UiTM Institutional Repository to ensure that all the users are aware to the IR and the conditions of use.

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