LOOKING AT INSTITUTIONAL REPOSITORIES IN
MALAYSIAN PUBLIC UNIVERSITIES

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ABSTRACT

University libraries are developing and maintaining institutional repositories as a means of managing and disseminating digital materials. In most instances, these materials are created by the staff of the university and institutional repositories serve to disseminate information on the academic activities of the university community. There is a move amongst universities worldwide to develop and maintain their own institutional repositories. The size of the collection may range from hundreds to thousands and universities in Malaysia are showing signs of interest in this area. Numerous Malaysian public universities are slowly but surely developing institutional repositories either in isolation or collectively as a consortium. This paper presents the status of institutional repositories which are hosted by Malaysian public university libraries. As at 28 October 2008, the Registry of Open Access Repositories lists seven Malaysian institutional repositories and only four of them are from university libraries. This number is extremely small when compared to the existence of 20 public universities throughout Malaysia. Findings indicate that the other libraries are at various stages of developing their institutional repositories. Some are at the initial stage of designing and developing their repositories whilst others are enriching the contents of their repositories.

Keywords: Institutional repositories; Open access; University libraries; Web publishing; Malaysia

INTRODUCTION

Crow (2002) aptly defines institutional repositories as "digital collections that capture and preserve the intellectual output of university communities". Similarly, Johnson (2002) defines a digital institutional repository (IR) as "any collection of digital material hosted, owned or controlled, or disseminated by a college or university, irrespective of purpose or provenance". He went a step further by

referring to an IR as "a digital archive of the intellectual product created by the faculty, research staff, and students of an institution; accessible to end users both within and outside of the institution, with few if any barriers to access." That in essence captures the meaning and objective of any IR. University libraries worldwide are developing and maintaining IRs as a means of managing and disseminating digital materials. In most instances these materials are created by the staff of the university and IRs serve to disseminate information on the academic activities of the university community. There is a conscious move amongst universities worldwide to develop and maintain their own institutional repositories. Crow (2002) attributes this to the "new scholarly publishing paradugm" and the "institutional visibility and prestige". IRs are able to "display full texts for research results" and IR systems are able to "preserve research histories and results" and "is an excellent platform for knowledge preservation and sharing" (Chen, 2008). More often than not, the university library is given the task to maintain the IR with a collection size ranging from hundreds to thousands.

In Malaysia, the network for higher education is expanding. There are 20 public universities, 37 private universities and colleges, 4 overseas university campuses, 21 polytechnics, 37 community colleges and 487 private colleges (New Straits Times, 2008) which are positioned in the various states within the country. Out of the 20 public universities, the Ministry of Higher Education has designated four of these universities as research universities, namely University of Malaya (UM), Universiti Kebangsaan Malaysia (UKM), Universiti Putra Malaysia (UPM) and Universiti Sains Malaysia (USM), with the sole aim of accelerating the country's research endeavours and at the same time to placed Malaysian universities within the top 200 of the THE ranking.

Apart from that, all of the Chief Librarians of the 20 public universities together with the Director of the National Library of Malaysia as well as the Chief Librarians from three government linked companies or GLC universities are members of *Persidangan Perpustakaan Universiti dan Negara* (PERPUN) or the Council of University and National Libraries. PERPUN meets once every two months to deliberate on matters of common interest and IRs is of prime importance to the university librarians.

STATUS OF INSTITUTIONAL REPOSITORIES IN MALAYSIA THROUGH REPORTS AND INTERVIEWS

As of June 2008, the Special Interest Group for Systems Librarians of PERPUN reported that there are six university libraries that have either developed or are

developing their IR (Table 1). The seventh IR is from UKM which was not included in PERPUN's report but was included in a registry's website. All these repositories comply to the Open Archive Initiative-Protocol for Metadata Harvesting or OAI-PMH which allows for the sharing of information. Interestingly enough, all four designated research universities have developed their own IRs. When PERPUN's report was presented, Universiti Malaysia Perlis or UniMAP had 0 records in their IR and Universiti Teknologi Malaysia (UTM) had 4,042 records. However, as of 28 October 2008, UTM has doubled their number of records to 8,110. UniMAP has successfully uploaded 1,792 records into their IR and USM has increased from 27 records to 7,767 records, Only UM and Universiti Utara Malaysia (UUM) have shown no significant increase in the number of records. Within their IR, UM has artefacts, articles, conference or workshop papers and images. UUM's IR has articles, conference or workshop papers and thesis. Access to UPM's IR cannot be made since they have temporarily close it.

Table 1: Institutional Repositories of University Libraries in Malaysia
(Source: PERPUN, 2008)

Institution	URL	Application	No. Of Records 5 June 2008	No. Of Records 28 Oct 2008
ePrints@USM	http://eprints.usm.my	EPrints	27	7767
ptsl@ukm Repository	http://eprints.ukm.my	EPrints	-	86
UM Digital Repository	http://eprints.um.edu.my	EPrints	3	58
UniMAP Library Digital Repository	http://dspace.unimap.edu.my	DSpace	0	1792
Universiti Teknologi Malaysia Institutional Repository	http://eprints.utm.my	EPrints	4042	8110
UUM IRepository	http://eprints.uum.edu.my/	EPrints	1570	1792
UPM	unable to access	EPrints	204	-

The other university libraries are at various stages of developing their IRs. Universiti Tenaga Malaysia (UNITEN) is developing their IR using DSpace and they are now organising road shows to promote their IR as well as formulate policies on IR and digitising their materials. The Open University of Malaysia (OUM) is developing their IR whilst Universiti Malaysia Pahang (UMP) is drawing out plans for the development of an IR which they hope to launch in 2009. They are currently using their in-house system for their publications which is not open access. Universiti Malaysia Sarawak (UNIMAS) will also be using DSpace for their IR which will go live at the end of 2008 or early 2009. They have successfully digitised 300 thesis which will be uploaded to their IR. The other information sources that will be included in their IR are conference papers, university's publications, journal articles and other related publications. Their technical staff are currently undergoing training. Universiti Malaysia Sabah (UMS) plans to develop their own IR and is currently digitising their thesis collection.

Apart from that, there are university libraries which are actively uploading their thesis, dissertation, newspaper cuttings and similar publications but since they do not comply to the OAI-PMH standards, these are not reported in this paper. For example, the library of Universiti Pendidikan Sultan Idris (UPSI) has a new intranet indexing system which allows one to access newspaper cuttings, conference proceedings and journal articles from UPSI The disadvantage of such a system is that one does not get access to the full-text of the items since it is only an indexing system.

STATUS OF INSTITUTIONAL REPOSITORIES IN MALAYSIA THROUGH WEB REGISTRIES AND DIRECTORIES

Two organisations are actively gathering data and providing information about the various institutional repository initiatives worldwide. The Registry of Open Access Repositories (ROAR) has 1,195 repositories listed and admission for inclusion is through recommendations. The Directory of Open Access Repositories (DOAR) has 1,270 repositories. ROAR lists seven IRs, four of which are from the university libraries namely UM, UTM, UKM and UUM (Table 2). The first two are from the Faculty of Computer Science and Technology, University of Malaya and it should be noted that the University of Malaya Library is a collaborator in these IR initiatives. The fourth one is from a centre at Universiti Kebangsaan Malaysia (UKM). It is evident from the information gathered by ROAR that the number of IRs in Malaysia are steadily increasing.

Table 2: Malaysian IRs listed in Registry of Open Access Repositories
(Source: Registry of Open Access Repositories, 2008)

Repository
Malaysian Indexing and Abstracting System (MyAIS)   Running Fedora, based in Malaysia and is registered as Research Cross-Institutional   Registered on 12 September 2007   Cumulative deposits: 2929 total
MyManuskrip/Manuskrip Melayu   Running Greenstone, based in Malaysia and is registered as Research Cross-Institutional   Registered on 2008-10-08   No successful harvest yet.
PTSL UKM Repository   Running EPrints, based in Malaysia and is registered as Research Institutional or Departmental   Registered on 6 September 2007   Cumulative deposits: 67 total
Social Sciences Research Network   Running Other softwares (various), based in Malaysia and is registered as Research Institutional or Departmental   Registered on 1 June 2008   No successful harvest yet.   One-stop social sciences research portal.   100% freely accessible full text.
UM Digital Repository   Running EPrints, based in Malaysia and is registered as Research Institutional or Departmental   Registered on 2 May 2008   Cumulative deposits: 55 total   100% freely accessible full text.
Universiti Teknologi Malaysia Institutional Repository (UTM-IR)   Running EPrints, based in Malaysia and is registered as e-Journal/Publication   Registered on 26 January 2007,   Cumulative deposits: 4929 total   This institutional repository hosts all kinds of university publications and documents such as thesis, dissertations, research reports, conference proceedings, pre- and post-print journal articles, book chapters, monographs, lecture materials, learning objects, and more.   100% freely accessible full text.
Universiti Utara Malaysia UUM IRepository   Running EPrints, based in Malaysia and is registered as Research Institutional or Departmental   Registered on 22 August 2008.   No successful harvest yet.   The UUM I-Repository contains the full text publications, like journal articles, conference papers, research reports and dissertations from staff and higher degree students of the university. The full text of publications is made freely available where possible.   75% freely accessible full text.

Similarly, DOAR compiles data about IR initiatives in Malaysia (Table 3). Although the data is not as current as the ones provided by ROAR, DOAR managed to gather information about four Malaysian IRs of which three are from the university libraries and one is from the Faculty of Computer Science and Technology, University of Malaya. All four as listed in ROAR's website.

Table 3: Malaysian IRs listed in Directory of Open Access Repositories
(Source: Directory of Open Access Repositories, 2008)

Institutional Repository
MyManuskrip: Digital Library of Malay Manuscripts (Pustaka Digital Manuskrip Melayu) Organisation: Faculty of Computer Science and Information Technology, University of Malaya (UM) Description: Provides access to the manuscript content and manuscript research from Malaysia. Interface in English and developed using Greenstone. Contents: 50 items as at 22 September 2008. Subject: Multidisciplinary; History and Archaeology; Library and Information Science
PTSL UKM Repository Organisation: Perpustakaan UKM, Universiti Kebangsaan Malaysia (UKM) Description: Provides access to the research output of the institution. Interface in English and developed using Eprints. Contents: 17 items as at 14 May 2008. Articles, conference papers Subject: Multidisciplinary
UM Digital Repository Organisation: University of Malaya (UM) Description: Provides access to the outputs of the institution, Interface in English and developed using Eprints. Contents: 30 items as at 30 April 2008. Conference papers, multimedia. Subject: Multidisciplinary
Universiti Teknologi Malaysia Institutional Repository (UTM Institutional Repository) Organisation: UTM Library (Perpustakaan Sultanah Zanariah), Universiti Teknologi Malaysia (UTM), Description: Provides acccess to the intellectual or research output of academic staff and postgraduate students (both past and present) of Universiti Teknologi Malaysia. Interface in English and Malay. Contents: 3,579 items as at 27 June 2008. Articles, conference papers, theses, unpublished, books. Subject: Multidisciplinary

The Ranking Web of World Repositories ranks repositories with the aim of supporting "Open Access initiatives and therefore the free access to scientific publications in an electronic form and to other academic material. The web

indicators are used here to measure the global visibility and impact of the scientific repositories" (CCHS-CISC, 2008). They use ROAR and DOAR to identify open access repositories but they discard repositories which are journal portals, non-scientific or archival in nature. They then proceed to query these repositories using the four largest search engine namely, Google, Yahoo, Live Search and Exalead. Ranking is calculated from results based on visibility (50%), size (20%), rich files (15%) and scholar (15%). For 2008, UTM's IR has been placed in position 82 out of 300 places. This is indeed a clear indication that UTM has done it correctly and should now be in a position to assist other university libraries to perform just as well if not better.

CONCLUSION

Malaysian public university libraries have taken over the responsibility of developing, managing and maintaining their institution's IR. The presence of IRs would greatly help to enhance the visibility of research as well as publications emanating from these research to the masses. Institutional repositories is an excellent avenue for universities to showcase their research findings and publications and all academic institutions must move towards their development. The traditional mode of scholarly publishing is seen by many as being too slow and is unable to keep up with STM research output. The Web has a wider audience which allows for greater visibility of publications and this has resulted in an increase in the citation counts. Hajjem et al. (2005) found out that there is an increase from 50% to 250% in terms of times cited open access publications.

The library is seen by many as being the most appropriate organisation within a university setting to take the reins of IR. Libraries have always played a vital role in the information cycle and it is a natural progression for the library to manage as well as maintain an IR. Crow is of the opinion that "establishing an institutional repository program indicates that a library seeks to move beyond a custodial role to contribute actively to the evolution of scholarly communication" and that "institutional repository programs promise libraries an extraordinary level of visibility within the university".

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