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**Establishing an Institutional Repository:
A UNISA Case Study**

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Abstract

The purpose of the paper is to share and learn about the roles of Academic Libraries with reference to the establishment of the Institutional Repository as a mechanism which can benefit scholars to expose their work, putting the institution at the level where-in its research output can be evaluated and accessed by their peers. The institutional repository provides opportunity for citations, providing an opportunity for the required expose to other web based access tools. It can provide an alternative to the conventional publishing channel. The paper will focus on the practical experience of the UNISA library as a result of the implementation of the Institutional Repository through a pilot project.

UNISA, as an international university with its vision “Towards *the* African University in the service of humanity” has comprehensive and valuable research output by its academics. The institutional repository is a tool which can benefit scholars to expose their work and putting the institution at the level where in its research out can be evaluated and accessed by their peers. The institutional repository provides opportunity for citations, publication which is free, providing an opportunity for the required expose to other web based access tools.

One of UNISA’s strategic objectives is to implement an institutional repository, starting with the pilot project in 2008. This decision has created a positive platform for the library to utilize the skills available to create a repository for the research output for UNISA.

UNISA library has embarked on a pilot project to establish an institutional repository as a vehicle to expose its academic research output in a coherent manner. There are challenges in the process which require further debates on the benefits this platform would bring to both the university and individual academics. There is still a lot of mistrust, resistance and lack of skills from academics. Unless the information is shared, debates and workshops are held on the benefits from putting ones work on the institutional repository, African researchers will continue to aspire to exposure outside Africa. Institutional repositories can provide the platform to electronic journals, with a bigger potential if co-ordinated through the academic institutions to have the African market of researchers more exposed, thus building our own African research output. The benefit of this is to disseminate the research of African academics.

An overview of the role the Library plays in creation and establishing the Institutional repository will be provided. Information will be shared with the colleagues who wish to establish an Institutional Repository, while also providing an opportunity to learn how to utilize the tool to benefit researchers who are challenged, in terms of publishing their work. The academic libraries in higher education are willing to assist in establish a platform through the institutional repository, which is available through any internet.

The paper will conclude by highlighting some solutions to ensure that the research work of academics is exposed to the world. It will also provide an alternative to start providing access for potential articles which can get into the “international journals”. It will tell the UNISA library story.

1. Introduction

The Institutional Repository is defined as “ as a service that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members.” Clifford Lynch (2003). Wikipedia (www.wikipedia.com) defines Institutional Repository as “online locus for collecting and preserving in digital form , the intellectual output of an institution, particularly a research and academic institutions”. In an academic environment this would include theses, dissertations, and journal articles before and after peer review and other digital assets produced by academics Dhiman, A.K. (2002).

Institutional Repository (IR) are universally based on open access principles, is committed to make available literature peer reviewed on the public internet, permitting any user to download, copy distribute and print the material for academic reasons, Wikipedia (www.wikipedia.com).

Institutional Repositories are used by universities as a mechanism to create a single portal for all their research output. It is indicated that scholars are concerned with the timely dissemination of their work to a large audience. Research reuse and referential citation is one of the primary factors in rewarding faculty with tenure and visibility within the university. In Australia, institutional repositories are used as a measuring tool of the universities performance (Hanson,L.:2008).

2. Literature review.

Most literature read indicates that the institutional repository is in most academic institutions housed by the library (Morris, S. 2002). In South Africa the following Institutional Repositories have been established and registered. To date UNISA has only registered the electronic theses and dissertation.

South Africa

- **Council for Scientific and Industrial Research (CSIR)** - <http://www.csir.co.za/>
 1. **CSIR Research Space**
<http://researchspace.csir.co.za/>
- **Durban University of Technology (DUT)** - <http://www.dut.ac.za/>
 1. **DUT IR**
<http://ir.dut.ac.za/>
- **Rhodes University** - <http://www.ru.ac.za/>
 1. **Rhodes eResearch Repository (ReRR)**
<http://eprints.ru.ac.za/>
- **Stellenbosch University** - <http://www.sun.ac.za/>
 1. **Stellenbosch University Institutional Repository**
<http://ir.sun.ac.za/dspace>
- **University of Cape Town** - <http://www.uct.ac.za/>
 1. **UCT Computer Science Research Document Archive (UCT CS Archive)**
<http://pubs.cs.uct.ac.za/>
- **University of Johannesburg (UJ)** - <http://www.uj.ac.za/>
 1. **Electronic Thesis and Dissertation Database**
<http://etd.rau.ac.za/>
 2. **UJDigispace**
<http://ujdigispace.uj.ac.za/>
- **University of Pretoria (UP)** - <http://www.up.ac.za/>
 1. **UPSpace (Institutional Research Repository - University of Pretoria)**
<https://www.up.ac.za/dspace/>
 2. **University of Pretoria Electronic Theses and Dissertations (UPeTD)**
<http://upetd.up.ac.za/UPeTD.htm>
- **University of South Africa (Unisa)** - <http://www.unisa.ac.za/>
 1. **Unisa ETD**
<http://etd.unisa.ac.za/>
- **University of the Western Cape** - <http://www.uwc.ac.za/>
 1. **AHERO (African Higher Education Research Online)**
<http://ahero.uwc.ac.za/>
 2. **UWC Theses and Dissertations**
<http://etd.uwc.ac.za/>

Other international Institutional repositories can be viewed at the following portals:

- OSI's Information Program: <http://www.soros.org/initiatives/information>
- Budapest Open Access Initiative: <http://www.soros.org/openaccess/>
- eIFL Open Access Program: http://www.eifl.net/services/services_open.html
- Directory of Open Access Journals: <http://www.doaj.org/>
- Salvador Declaration on Open Access: The Developing Country Perspective:
<http://www.icml9.org/meetings/openaccess/public/documents/declaration.htm>

Salvador Declaration on Open Access: The Developing Country Perspective



3. Background

When Dr Mbambo-Thata started to work for UNISA in 2006, she committed herself to the development of an Institutional Repository. She did this after realizing that as the new Executive of the library, she could not find a mechanism to know what the full text of UNISA research output was about.

UNISA, during its' three year Institutional Operational Planning process 2008-2011, realizing that it only had a comprehensive platform of database to identify the research output for only accredited articles, committed itself to creating a full text institutional repository. There was no platform for full text research articles which are both accredited and non-accredited from UNISA. The university activities of the research (complete and in progress) were co-coordinated through the research directorate, which publishes only meta data of the accredited articles. The research which is not accredited gets lost or is placed at either a departmental level website or on the "c drive" of the researchers' computer. As an institution of higher learning, there wasn't any department mandated to collate the full text research output for the benefit of the organization. The UNISA library was thus mandated to initiate and establish the institutional repository. It is identified as one of the key strategic areas which needs to be created and operating/functioning

by 2009. The year 2008 was used as the pilot project year. The UNISA Institutional Repository will be referred to as UnisaIR.

The purpose of establishing the UnisaIR.

The purpose of establishing the UnisaIR was to preserve, manage and disseminate locally produced intellectual output and research in electronic format in order to create a coherent view of the UNISA's research output. The preservation of all UNISA intellectual research output is important to the establishment of UnisaIR, and this can only be achieved if the research work is available in full text electronically. It also provides a one stop electronic collection of, and access to, the research output of the institution (including the work in process and pre-publication articles and books).

It is also a very good strategic resource to use to assess quality and possibly quality assure the research output of the UNISA.

4. Establishing the UnisaIR

Work on the pilot project started at the beginning of 2008, the library management had approved the support for the pilot project at the beginning of 2007. A number of concerns had to be discussed, like who may submit at UnisaIR? All registered UNISA researchers, academics and masters and doctorate students. The scope should focus on intellectual and research output. It definitely excludes learning material and personal information and events.

Criteria for submission for UnisaIR

- Long term preservation of the work
- If the work is part of a series, then the whole series needs to be submitted
- The contents should comply with the South African Bill of Human Rights
- The work must be:
 1. Produced, submitted and sponsored or donated to UNISA
 2. Scholarly and research oriented:
 - Pre-prints
Articles submitted to publishers for journal or book publication
 - Post-prints
Articles as accepted by publisher - facsimile of published version
 - Grey literature

Working papers, theses, dissertations, etc.

Work in progress should clearly be marked as such, and when the work is completed the project manager should be provided with the latest version to update records.

3. Preferably in a digital format
4. Copyright clearance letter either from the publisher or author

Contents which will not be accepted at UnisaIR

- Material of controversial nature
- Discriminatory works
- Administrative/personal/commercial and temporary learning material
- Description standards applied at UnisaIR

The UnisaIR complies with the international standards, using the Dublin core metadata set. The works is OAI MHP compliant and is full text searchable.

The benefit for the UNISA researchers for putting their work in the UnisaIR

1. Increase visibility and prestige of researchers
2. Increased usage
3. Number of Citations
4. Unrestricted access to the university knowledge base nationally and internationally
5. Exposure of new researchers to be peer reviewed.
6. Availability on other metadata harvesters, including Google scholar
7. UnisaIR will be registered with IR Registries
8. Links to other web pages (departmental

Get an off site page of the pilot and insert here!!

Several other steps which needed to be established before the actual production site could be established. The other phases included:

Phase one

The development of UnisaIR policy.

The library consulted extensively with the legal office for guidance on the legal framework within which it could develop the UnisaIR policy. This was necessitated by the need to align the IR policy to the Research Policy, which already existed.

The draft policy was circulated to stakeholders within the institution, including “informal champions” (who were enthusiastic but supporters of the idea) to assist in bringing the different dynamics which the policy had to address. Thereafter, it was tabled at the UnisaIR Advisory Committee for further deliberations. The Advisory Committee advised that the draft policy be tabled at the Senate Research Committee for discussion. The policy also served before the Senate Library Committee. After this round it is hoped that the policy can then go through the normal channels of UNISA policy approval, by which time all stakeholders would have had an input.

The outlined recommendations for the policy included:

- Definitions of concepts-
- The scope- a clear boundary of what was required to be in the repository. Purpose- the objective for establishing the repository
- Open source principle- the open source principle is understood by many researchers, but when it comes to submitting their own work it becomes a challenge, thus the library has to be very clear on the principle it will apply.
- Submissions- clarity in the policy who may submit and the process to follow when submitting
- Copyright and intellectual property principles to be included in the policy–
 1. UnisaIR subjects itself to the Copyright Act No 98 of 1978
 2. Copyright permission for all items must be submitted in advance for the work to be put on the UnisaIR
 3. The submitter warranting that the submission does not infringe on anyone’s copyright

4. UnisaIR uses the sherpa guidelines to accept published/unpublished works www.sherpa.ac.uk.
5. UnisaIR explicitly states that it is not liable for any infringements on third party copyright
6. Unisa would have to be explicit in the policy if it would apply:
 - Open access only within the institution
 - DATAD - only open to contributing institutions
 - Open access to everyone
 - “Open archive compliant” - or not
 - To ensure collaboration with other institutions the metadata (*bibliographic information*) should comply with standards

Phase two

During phase two a needs assessment was conducted using a questionnaire to stakeholders. The type of questions asked in the questionnaire guided the expected outcome for the selection of software and the purpose for the IR at UNISA. DSpace was the preferred software for the UnisaIR. The consultant from the University of Pretoria also supported the identified software, as there were many other universities in South Africa using it. There were also other software options which are also Open Archives Initiative (OAI) compliant, e.g. E-Prints, and Fedora.

The library IR team identified respected accredited researchers who were willing to contribute their work for the pilot project. The library collaborated with the ICT for support. ICT plays a key role as they implement the software and customization of the production site. It is therefore crucial that they are part of the process.

Phase three:

ICT assisted in assigning an address for the pilot UnisaIR site. The temporary site was <http://umkn-lab004:8080/dspace/>. When the permanent production site begins in January 2009, the address will change. The creation of an e-mail address for communication on the pilot project formed part of this phase.

Phase four

The process involved training of the submitters/contributors. The working group was trained by the consultant from the University of Pretoria. Furthermore other stakeholders, who were to be play key role were exposed to the training towards submission by UnisaIR acting pilot manager, Ms A. van der Westhuizen.

Phase five

During the month of June 2008, UnisaIR went through the process of evaluating the testing site. The testing outcome was essential in that it provided an initial platform of how the production site will eventually look. This phase, provided the confirmation for ICT to go ahead to order the hardware; make more commitment towards the software support, and customization.

Phase six

The library UnisaIR team embarked on a process of demonstration to stakeholders the pilot site. The first presentation was done to the library staff, to bring them on board on the progress made

thus far. Then the advisory board and general academics and researchers were also demonstrated to. There was generally a positive reception with a lot of input towards modifying the customized site.

5. Challenges:

There were a number of challenges which were faced by the working group. I will try to identify them briefly to highlight that this was not an easy process. Some of the challenges were:

- Lack of UnisaIR policy - Since the university did not have an approved policy, it became clear that there was no mechanism to encourage contributions to submit.
- Establishing a shared vision - This stage was critical as there were a number of initiatives being started, and UnisaIR had to create a shared vision for the community.
- Content collection – a major component of what was contributed was in print format than digital. This meant the library had to scan submissions
- Copyright and Intellectual property – the implications for the submitters and for the institution
- Delay in copy right clearance – Some of the contributions required copyright clearance which took a while , and delayed submission.

6. Opportunities:

- Marketing UnisaIR

The marketing of the institutional repository to academics and researchers is an opportunity which will inform of them that making their work available through the open source creates a big exposure and credibility opportunity. The fact that Open Access repositories can hold digital duplicates of published articles and make them freely available is an opportunity to expose the work wider. Subject to copyright, authors can deposit copies of their finished articles in repositories alongside their publication in normal journals (www.sherpa.ac.uk).

- Linking to departmental websites

The library is involved in a drive to inform and provide demonstration to faculties, indicating the benefits to both department and institution. It became clear that the academics are more concerned about what they have submitted to the publishers, the payments and copyright issues. The library will need to drive a strong team to advocate the submission to the UnisaIR, supported by the Unisa IR policy.

- Publishing houses

Publishers are becoming increasingly aware that the prices of journals may make librarians to cancel subscriptions, especially if the material is available free.

It is very interesting that publishers now use the Institutional repositories as their initial site to identify potential scholars to contribute to their journals. In this way, the approach provides an opportunity for those young researchers who are not known, and get exposure through the institutional repositories. The new identified opportunity is that researchers who are aspiring to be accepted by 'international' publishers, have the opportunity to expose their work locally through the UnisaIR, Morris,S. (2007).

The publishing houses have realised that this is a parallel, not a competition:

The process stipulated below can all feed into the development of an IR.

Article submission

Peer review

Revision

Acceptance

Editing

Journal publication, which is the ultimate phase every researcher is aspiring towards.

- The African Scholarly work

The scholars in Africa need to recognize that Institutional Repository as one of the platforms they can use to expose their work. Peer review is essential for researchers to build their reputation, and have a possibility of being identified by publishers. The horizon is broadened by IR, than trying to market your work on your own. African scholars face the same dilemma in trying to expose their research output peer reviewed and accepted by 'international publishers'. This is an opportunity which requires a consolidated effort from our universities to invest in institutional repositories, Bicknese.D. (2003-2004); LaFleur, L and Nathan Rupp (2005).

7 Lessons learnt

It has become clear during the process that there is a need for a local full text research platform, where in all researchers, known and emerging scholars who would want their work evaluated and peer reviewed. Academics are becoming increasingly aware that publishing in a reputable journal is not the only option to introduce new work and provide opportunities to be discovered.

The issue of communicating can not b emphasized enough. Projects get abandoned because of the lack of communication and shared vision. The library has learnt that there is always a need to communicate with colleagues and debate issues until a common understanding is reached.

Team work and support is crucial for the survival of any project. The UnisaIR team is acknowledged for all the hard work, difficult trying times for achieving the pilot project on time, to provide an opportunity for the production site to begin in September 2008

8. Conclusion

The pilot project has created a positive platform to introduce a full text research output for UNISA academics. It has began a journey of creating synergies within the institution, where in grey literature, accredited and non accredited journals get the opportunity to be cited and referred to by scholars globally. The database created by the Research Directorate will be complemented by the availability of the full text.

At the beginning of 2009, Unisa library will launch a production site which will be able to put the university on the global registry for IR, thus providing potential employees, publishers and current employees (academics) to be proud of their research output.

The library management and especially the UnisaIR team has been very privileged to be involved in this exciting period which has created a historical milestone UNISA.

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