

Institutional Repositories: A Gem for UNISWA

Dickson Yumba
University of Zambia Library
E-mail: dickson.yumba@unza.zm

Abstract

The use of ICTs has brought about a paradigm shift in academic and commercial publishing industry. In last twenty years or so we have increasingly witnessed a shift from hard copy to electronic/digital publishing. Among many new methods is the concept of Institutional Repository (IR). This paper seeks to highlight the meaning of, and strategic benefits that can accrue with the establishment of IR for University of Swaziland and other institutions that are considering setting up IR. The paper stresses the importance of IR towards developing African scholarship and takes an interdisciplinary approach, the main component of which is library and information services. It is found that IR increases the visibility of African scholarship on the global scale which to is kept to a very minimum due to publishing inabilities and other related problems and also brings to light the intellectual output of a university which can be used as a basis for sourcing funds. It is hoped that this paper will influence positive thinking towards IR thereby encouraging scholars and researcher to participate in building IR in their organizations. The paper adds to the body of knowledge about IR in general.

Introduction

The permeation and application of Information Communication Technology (ICT) into every sector of human endeavour is restructuring hitherto the traditional ways of doing things. ICT has had a profound impact on scholarly publishing. Until very recently research results produced by researchers and their parent institutions were mainly distributed through academic and commercial publishers. The intellectual output from one institution is scattered to different publishers and then to library collections. The ever increasing prices for journals limit what libraries can afford and in turn affect research capabilities of the parent institution. The application of ICT and the Internet in particular is affording new ways of scholarly publishing. One such concept in this regard is the development of Institutional Repositories (IR).

The purpose of this write-up is to augment other avenues the Library is using to inform the UNISWA community and stakeholders in Swaziland and beyond about IR and related initiatives with a view to allow informed decisions to be made about participation. We realise that lack of awareness is a major obstacle to the new practices regarding the use of ICT. The intention of this paper is not to provide the technical nitty-gritty of setting up IR, but to focus on the strategic benefits of IR to the institution, the academia and the country at large.

According to the UNISWA's strategic plan (University of Swaziland, 2000, p.11); the University's mission statements are as follows:

1. Provision of regular academic programmes at undergraduate and postgraduate levels;
2. Creation of continuing education opportunities for the inculcation of demand-driven knowledge and skills, as well as positive attitudes towards life-long learning;

3. Creation and preservation of knowledge through research, consultancy and technology development;
4. Dissemination of innovations for the betterment of quality of life of the people of Swaziland and beyond;
5. Involvement in relevant commercial ventures; and
6. Creation of an enabling environment for efficient provision and utilisation of the resources of the University.

The University Library mission statement states that "... the Library is to efficiently provide services and access to quality academic information resources, irrespective of format and location, to staff, students, researchers and administrative functions of the University" (Report of the Vice Chancellor, 2008, p.78).

The role of UNISWA is further alluded to in the University Act, objects and functions, section 5 (1b) of 1972 which states that: "To assist in the preservation, transmission and increase of knowledge and in the stimulation of the intellectual life and cultural development of Swaziland" (University of Swaziland, 2008 p.265).

Objectives number 3 and 4 of the University, the mission statement of the Library and the University Act statement outlined above by inference would all support the establishment of an Institutional Repository.

UNISWA's activities and programmes reflect its efforts to meet the above objectives. The creation, management, Access and dissemination of information and knowledge play a crucial role for the University to achieve its objectives.

Access to and Dissemination of Research Results in Africa

Research in universities and other institutions in Africa is profoundly affected by limited access to quality scholarly information and research infrastructure. The ever increasing cost of scholarly literature militates against research activities. Over the years many university libraries in Africa have been faced with the peril of dwindling budgets year after year which translate to cut down on the number of book purchases and journal subscriptions. On the other hand Visibility of African scholarship on the global scale is kept to a very minimum due to publishing inabilities and other related problems. The Bethesda Statement on Open Access Publishing in affirming the need to publish research widely states thus "...research is an interdependent process whereby each experiment is informed by the results of others. The scientists who perform research and the professional societies that represent them have a great interest in ensuring that research results are disseminated as immediately, broadly and effectively as possible" (Bethesda Statement, 2003). Many researchers would like to publish their research findings in reputable and well circulated journals and the reality is that such journals are published in the Developed countries. There is a perceived marginalisation of Africa's effort in publishing in these journals. Contribution and access to the wealth of global scholarly and scientific literature is crucial to research activities within a university and indeed a country as whole.

Institutional Repositories (IR) and Open Archives Initiative (OAI)

IR is a new way of collecting, disseminating and preserving the intellectual output of an institution in digital format and making the information freely available and accessible on the

Internet. Ware (2004, p115) notes that there is no neutral ground when defining IR. He includes the following:

- is a web based database of scholarly material;
- is institutionally defined as opposed to subject-based;
- cumulative and perpetual;
- open and interoperable (ie. Using OAI compliant software) ; and
- thus collects, stores and disseminates.

Institutional repository has increasingly attracted attention from the academia and researchers. It is not surprising that its development has largely taken place in universities and research institutions. However, this does not limit IR to these institutions only, it may be adopted by many other organisations that desire to preserve and share their intellectual output globally. Discussions and literature on IR has increased tremendously since its emergence in 2002.

IR has its roots in the OAI. OAI movement seeks to develop and promote a technological framework and interoperable standards for enhancing better sharing and retrieval of digital scholarly documents archived in servers scattered worldwide (OAI website, 2008). OAI is closely related with the Open Access (OA) publishing movement. The first major international statement on OA was the Budapest Open Access Initiative (BOAI) in February 2002 (BOAI, 2002) which reads “By open access to this literature, we mean its 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, ... 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. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.” The Scholarly Publishing and Academic Resource Coalition (SPARC) states that “Giving all interested readers access will accelerate research, enrich education, share learning among rich and poor nations, and, ultimately, enhance return on investment in research” (SPARC-Europe, 2002).

Institutional Repositories: Premises

The fundamental reasoning on which Institutional Repositories are advocated is based on the Open Access Movement and Open Access Initiative. These movements seek to promote immediate, free and unrestricted global online access to digital scholarly literature. The current model of scholarly literature publishing and communication presents a restrictive pattern of access. The rising journal prices and diminishing budgets for libraries act as a barrier to accessing scholarly literature for many universities and research institutions. For example UNISWA Library cut down the number of journal subscriptions from 657 to 320 in 1999 (UNISWA Library Committee, 1999). Access to a variety of scholarly literature vital for research was lost as a result. The price phenomenon has a double edged sword effect in that subscription cancellation act to reduce audience further to a particular publication.

Open Access Initiative advocates that authors who wish to publish their works in printed journals should negotiate with publishers to retain the rights to submit their research finding into IR of their affiliate institutions. This initially met resistance from publishing monopolies because it was viewed to impact on their profits. Currently some publishers do allow authors to place their works on open access while some do not. Others while allowing put restrictions, for example, trying to limit use by the author’s own institution. Authors who are

unable to obtain such rights can choose to publish elsewhere. The good news is that there is an increasing number of major publishers (including Nature and Science, the American Psychological Association etc.) that are relaxing their restrictions and are embracing the open access compliant policy (Chan and Kirsop: 2002). According to Securing a Hybrid Environment for Research Preservation and Access (SHERPA, 2008) 56% of surveyed publishers allow postprint archiving, and 67% allow preprint, postprint, or both. A preprint is a digital draft of a scholarly or research paper that has not yet been published in a peer-reviewed journal. A postprint is a digital draft of a research journal article after it has been peer reviewed. Postprints may sometimes be the same as the published version; depending on the publisher. This means the authors may publish their works simultaneously in their parent institution IR and the print journal or subsequently depending on the agreement.

The above point brings the concern for copyright to the fore. In traditional journal publishing paradigm authors gave away copyrights to their works to publishers with no monetary remuneration. With digital publishing and the increasing popularity of IR authors are becoming more aware of their rights and professional need to distribute their research more widely than if they were to remain with the publishers alone. With the publishers, access to one's research is restricted to individuals and institutions that subscribe to a particular journal. Whereas if the work is also deposited in an IR access is unrestricted to whoever is able to get internet connectivity.

Developments in information technology and other related technologies in recent times have made IR possible. It has become possible to capture, store, manipulate, transmit and access large quantities of information instantaneously from and to virtually anywhere in the world. Already there are over a dozen software available via open access license, meaning they are available for free and can be freely modified, upgraded and redistributed (Open Society Institute, 2004). We are also witnessing decreasing trend in the cost of information technologies. As a result the challenge of building an IR becomes more affordable particularly for universities and research centres in Developing countries.

It is worth mentioning, though it may seem insignificant, that some researches which result into scholarly literature are publicly funded. On moral grounds access to such materials need not be restricted to those who can afford high cost of subscription. They should rather be freely and widely distributed (The 93rd Indian Science Congress, 2006).

The trend toward establishing IRs is gaining ground and is disaggregating the functions of scholarly publishing, particularly journal publishing. We are witnessing a reform that cannot be avoided in this area.

The Content of Institutional Repositories

In general there is no hard and fast rule on what materials might go into an Institutional Repository. It all depends on what a particular institution decides to capture and openly disseminate. However, in keeping with the origin principles of IR (in case of a university) the content is the intellectual product created by faculty, research staff and students. SPARC Europe (2002) includes the following:

- Pre-prints of articles or research reports submitted for publication
- The text of journal articles accepted for publication
- Revised texts of published work with comments from academic readers
- Conference papers

- Teaching materials
- Student projects
- Doctoral thesis and dissertations
- Datasets results from research projects
- Committee papers
- Computer software
- Work of arts
- Photographs and video recordings

Benefits of Institutional Repositories

There are many benefits that accrue with the setting up of an IR for universities and other research institutions. They include the following:

- a) It enables wider dissemination (visibility) of an author's work which in turn increases their profile on worldwide bases. A further boon to this is increased access to one's work which can benefit career prospects.
- b) Research for a particular country becomes more accessible to global researchers and this can easily open doors for collaboration with other researchers and funding agencies.

Closely related to the above benefit is that there is unrestricted access to all with internet connectivity. This is unlike the current paradigm of journal publishing where only individuals and those that are affiliated to institution that subscribe to a particular journal will have access to its contents. People without affiliation and cannot afford to subscribe to all important journals in their field, find it difficult to identify and find research information.

Studies have revealed that there is increased impact of research that is freely accessible online. For example open access articles are cited 25 – 250% more than non-open access articles from the same journal (Hajjem & others, 2005).

The cost to high priced journals constitutes a barrier to research information. As more and more scholarly publications become accessible through open access the world is witnessing removal of cost barriers.

Scholars in Developing countries generally faced with financial constraints are able to retrieve research results from developed countries through open access resources. On the other hand scholars from Developing countries can contribute to global knowledge base by depositing their works on IRs of their affiliate institutions. There is a general perception that there is biased marginalisation of authors from Developing countries in submission and acceptance of research results in the current scholarly publishing set up (Yumba, 1997).

IR can serve as a meaningful indicator and a marketing tool for a university's academic quality (Drake, 2004). If properly harnessed, it can be used as a basis for sourcing funds. Academic quality of a university cannot be hidden from the glaring light of globalization of national issues.

Why set up an Institutional Repository at UNISWA?

The setting up an IR at UNISWA does not merely arise from apprehensiveness of being left behind in the milieu of unprecedented development and use of ICT. The desire arises from the strategic significance that accrues with the setting up of IR to the academia, institution and the country as outlined above.

If UNISWA is going to demonstrate its capabilities and academic quality, it becomes necessary to take stock of its intellectual output created by its researchers that remain scattered in many journals, technical reports and other documents some of which are not even accessible to UNISWA community.

The concept of open access (free access and wider dissemination to scholarly publications) is being extending to other areas. Gosh and Das write; “such as making the courseware developed by institutions available for the benefit of others”(Gosh, 2007, p231). The Institute of Distance Education (IDE) can take advantage and deposit the courseware – study notes, presentation, assignments etc. on UNISWA IR which can be accessed by distance education students.

Apart from research results distributed through normal scholarly publishing, UNISWA houses vital treasures (administrative, artistic, cultural, historical, papers presented in local and international conferences, project and research reports, including community service project reports) generally unknown and inaccessible to academic staff, researcher, students and the public because they remain as grey literature. Management and organisation of such documents and records to make them visible are compromised or are simply not there because they are scattered in different departments and units of the University. If nothing is done to organise these information resources to make them visible what has been done and what is envisaged to be done can be lost to present and future generations. IR can manage, preserve and maintain these assets in digital formats.

It is important to note that there may be documents and records which the University might restrict access to authorised users particularly those which pertain to administrative issues.

UNISWA may be churning out vast volume of vital information and data through its faculties, departments and units listed below:

- Academic Development Centre (ADC)
- Central administration
- Centre for Community Services (CCS)
- Consultancy Training Centre (CTC)
- Faculties
- Health Information Counseling Centre (HICC)
- Information & Communication Technology Computer Centre (ICTCC)
- Institute for Distance Education (IDE)
- Library
- Swaziland Institute for Research in Traditional Medicine, Medicinal and Indigenous Food Plants
- University Planning Centre (UPC)
- UNISWA Foundation (UF)
- UNISWA Research Centre (URC)

The figures of UNISWA's intellectual output in the table below were gleaned from the Vice Chancellor's report 2007-2008. The number could be more than what was reported because some authors and researchers might not have reported their works.

Type of publication	Number
Conference & workshop papers	136
Publication in journals	92
Completed research	67
Consultancy reports	16
Books	2
Total	313

The Role of the UNISWA Library

The question that may arise in some quarters is why should the Library take a leading role in the establishment an IR? By taking the leading role in planning and establishing the repository Librarians are fulfilling their traditional role of managing and organising information resources through collecting, describing, preserving and providing tools to access and retrieve desired pieces of information and data. Since the advent of the first library, librarians have always had the stewardship responsibility. By the above statement the librarians do not by any means claim total expertise with IR. They realise that building an IR needs professional collaboration because of its many facets. Lecturers, ICT staff and other professionals are equally important if robust IR is going to be achieved. Over the years they have gained understanding of each other's work which can enhance collaboration.

Conclusion

Institutional Repositories have a great potential value not only in distributing scholarly publications but also in supporting research and teaching in the university. Research output can be distributed widely affording UNISWA an opportunity to become visible globally. Publishing in elite journals is highly competitive, perceived marginalization of research results from developing countries is done away with IR. On the other hand the price barrier to highly priced journals is being knocked down as more universities and research institutions have either implemented or are considering implementing IR. Opportunities are great, but to ensure that IR at UNISWA will fulfill a valuable function in supporting research, scholarly publishing and teaching consultation and collaborative partnership building are required by all the stakeholders.

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