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# Towards successful implementation of an Institutional Repository in a cross-border environment

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## **Towards successful implementation of an Institutional Repository in a cross-border environment**

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### **Abstract**

Globally, institutions are increasingly using Institutional Repositories (IR) to manage their digital resources more effectively. An IR collects, showcases, archives, and preserves the intellectual and scholarly output of an institution. There are many available platforms including Open Source, Proprietary and Custom-built platforms (Sharif 2013; Jain et al. n.d).

The focus of this paper is the implementation of Institutional Repository (Digital Commons), a proprietary hosted institutional repository platform by Bepress. Digital Commons is a suite of tools and services that enable institutions to manage, display, and publish on the web in a highly visible online showcase. It has professional-grade publishing tools with a peer-review workflow so that institutions can publish their journals, books, and conference proceedings. Digital Commons is well indexed in Google, Google Scholar and other search engines and offers the option of either open global access or restricted access. It has an additional SelectedWorks module that allows individual faculty and scholars of an institution to develop profiles and populate them with their scholarly works.

As well as evaluating the Digital Commons platform; this paper addresses the challenges of cross-border implementation and suggests guidelines for institutions implementing the system. The common implementation challenges include the time required to get clearance from copyright holders; publishers who have ceased operating; helping authors understand why the institution should have their works showcased without monetary benefits; and additional workload on staff.

## **Introduction/Literature review**

A digital repository, also known as institutional repository, is defined by Foster and Gibbons (2005) as an electronic system that captures, preserves, and provides access to the digital work products of a community. As a free platform for knowledge sharing among academicians around the globe, IR is understood to be a digital archive of the intellectual output of university members that is accessible to users within and beyond the university (Pornima et. al, 2006). IR is also described by Crow (2002a) as a digital collection that captures and preserves the intellectual output of either a single university or multiple institutions. Poynder (2005) summed up the literature, stating that it is a repository for a university's research output that aims to increase access to this intellectual work and enhance its impact.

IR is increasingly embraced within academic institutions because it benefits all of the members of the academic community: the faculty and researchers, the students and the library. Overall, the institution benefits from IR as it provides organizational support for researchers wishing to easily disseminate their output; showcases the relevance of an institution's research to national development; increases the institution's visibility, status and reputation and provides infrastructure for the proper management of the research output of all members of the institution. The library benefits through the opportunity to re-assert its importance in the institution in the face of declining user dependence on libraries for simple access to information; its new role in information creation and distribution; and staff members' increased ICT related knowledge.

## **Research objectives**

This paper seeks to share best practices learned from the implementation of the Aga Khan University (AKU) Institutional Repository. It makes a unique contribution as it focuses on cross-border implementation, an area that has not been well captured in literature. AKU IR is implemented across the institution's 8 campuses in 5 countries: UK, Pakistan, Kenya, Uganda, and Tanzania. Therefore, the principles shared in this paper are applicable in both developed and developing countries' contexts, and the information is easily generalizable.

## **Research methods**

The research method employed is a case study of AKU IR conducted using a participatory research approach. The case study presents a detailed discussion of the implementation of the Aga Khan University IR focusing on implementation challenges and lessons learnt for successful implementation. The authors were participants in the implementation of this IR, and this paper represents their analysis and summary.

## **Findings / Discussion**

IR platforms are available in many forms, including open source, proprietary and custom-built. AKU chose to implement a proprietary hosted institutional repository platform, Digital Commons (DC), by Bepress. AKU's IR is referred to as eCommons@aku and is accessible at <http://ecommons.aku.edu/>. The platform collects and gives global access to AKU-wide research output and other publications including conference papers, book chapters, in digital form from a dedicated website. The institution is now in the second phase of implementation that involves implementation of 'SelectedWorks' pages. This is a Bepress module that allows authors/researchers to have personal webpages highlighting their professional and research profile with links to their major publications (Sharif, 2013).

AKU's choice of Digital Commons was based on the platform's management, display, and publication on the web in a highly visible online showcase that is well indexed by Google, Google Scholar and other search engines; ease of customization to suit the institution's preferences; an intuitive and easy to use interface; a secure and robust hosted service; an open global access option model; the availability of professional-grade publishing tools and peer-review workflow that allows the institution to publish journals, books, and conference proceedings. Using this platform, AKU has since published the Journal of Asian Midwives (JAM) - <http://ecommons.aku.edu/jam/>. Other features that made this platform appealing were the provision of a SelectedWorks module for individual author's profiles - [http://ecommons.aku.edu/sw\\_gallery.html](http://ecommons.aku.edu/sw_gallery.html) and its interoperability function that ensures that research output across participating institutions is discoverable by facilitating searches across repositories through the Digital Commons network. Bepress Digital Commons Network brings together more than 1.1 million works (peer-reviewed journal articles, book chapters, dissertations, working papers, conference proceedings, and other original scholarly work) from more than 360 institutions worldwide - <http://network.bepress.com/>. SPARC (2002) notes that the interoperability and Open Access features of an IR platform tend to be strong

motivators as they increase awareness and access to an institution's research. A major benefit of Bepress system is its intuitive structure that makes it easy to use and navigate.

In line with researchers' findings, AKU has received immense benefits from implementation of the platform. It will help address the unevenness in availability of researchers' output globally, in spite of several world class universities, Africa only accounts for 2% of the research output of the world (Christian 2008). The institutional benefits include managing and showcasing the institution's intellectual output; raising AKU's scholarly ranking and profile; increasing global visibility of authors resulting in increased citation. In addition researchers have the benefit of an open-access web publishing platform for e-journals, conference papers, and e-books; students have the benefit of access to theses and dissertations; and funders and donors are able to assess the research output (SPARC 2002; Oliveira 2011). The Selected Works module provides authors with personalised monthly reports on the viewing and downloading of their work.

Despite these benefits to the institutions, there are challenges related to the implementation of institution repositories. IRs are still relatively new in developing countries. Aga Khan University launched its repository in 2013 and several institutions in Kenya have established or are in the initial stage of establishing Institutional Repositories. Strathmore University, International Livestock Research institute (ILRI), and Kenya Agricultural Research Institute (KARI) are already live on the Internet (Otando 2010).

IRs are yet to come up with clear guiding principles and best practices on how the institutions are to handle the challenges that arise. It has been our experience that there are constant challenges which greatly affect the population of metadata in the repositories. One of the major challenges has been to convince faculty to take advantage of the institution repository. This has not gone well with the faculty, perhaps because they are preoccupied by other work related duties which limits their time available to populate their work in the repository. Another major challenge is disentangling copyright permissions. Understandably, faculties are often unaware of whether or not they have retained the rights to their own work, and therefore, whether they can post an article in an institutional repository. Depending on the agreement that they signed when the article was accepted for publication, they may be allowed to deposit the final, published version of the article: they may be restricted to the deposit of the author's version, pre-copyediting, and final publication; and in some cases, no deposit is allowable without first getting permission from the rights holder (Giesecke, 2011).

In general, copyright law determines how a person can deal with a written work such as a journal article or a research paper. Generally, a copyright holder has the exclusive right to authorize the copying, recopying or distribution of the written work. In other words, she/he has the right to determine whether the work shall be available in a closed or open access format (Christian, 2011). However, many publishers require that authors sign over some or all of their rights as a condition of publication. Some of the issues identified by existing literature as being responsible for the slow uptake of institutional repositories in Africa include lack of knowledge or awareness of the nature and benefits of institutional repositories, poor information and communication technology, inadequate advocacy for open access repositories, poor or inadequate funding, and copyright and intellectual property rights (Christian 2011).

Based on the experience at AKU, the implementation of the IR cross-border faced a myriad of challenges including those already identified in the literature. For example, the copyright challenges ranged from those presented by authors: some had left the institution and it was difficult to contact them, some had lost or misplaced the pre-print version of articles; to those presented by publishers: high fees for permissions, an embargo period, or publishers who have ceased operation such as East Africa Medical Journal (EAMJ). There is no consistent expectation of publishers when they are the rights holder, some may allow deposit to an IR under particular conditions, while some allow no deposit under any conditions.

In addition to the copyright challenges, there were other challenges that arose directly from the faculty members. Some authors were not interested in participating without monetary benefit, and there was no institutional policy on IR to refute this. Among the AKU campuses, there are great inequalities in internet access, extent of use, knowledge of search strategies, and social support.

There were additional challenges for the library. There is a significant financial implication for the library's budget; the Bepress license is USD 28,000 annually. Library staff had uneven technical skills, and time was needed for training. As there is no national body for coordinating IRs in any of the countries where AKU is operating, the library staff were not able to benefit from networking with colleagues.

From the experience of developing and implementing the AKU Institutional Repository, we suggest the following approaches to the challenges that arise in a multi-campus or cross-border situation:

1. Explicit and clearly documented coordination and collaboration structure across campuses so that no campus lags behind. AKU carries out global skills training to persons involved in implementation of the system so that staff skills are at the same level across all campuses of AKU.
2. Cost sharing among campuses – AKU benefits from acquiring one package for all the institutions which also reduces the cost of training and support.
3. A high level of management in order to support the impact on budget, training and additional workload. It may be necessary to either redistribute tasks or employ more staff
4. A well-thought out training and promotion strategy to explain to researchers and authors the importance of IRs and the benefits to them of participating.

The AKU Library has played the lead role in the implementation of the IR. This relieves faculty and researchers from the time commitment and the technical expertise necessary to deposit their work on the repository. It also places the Library at the centre of the information activity of the University, and creates opportunities for library staff to be an essential component of the research activity of the university community.

From our successful implementation, we have also learnt that promoting the platform as well as training users and library staff on essential technical skills is critical. AKU Library staff members are now in the process of designing IR courses which will be included in the Information Literacy (IL) courses. The outcome of this teaching will be a level of competence for users as they navigate through the platform and do searches both within the repository and across Bepress repositories. There is also a need for authors to be trained on their publication and copy rights so that they understand the implications of copyright agreements that they sign, and whether there are limitations on their pre/post prints that can be included in an Institutional Repository.

Additional training is needed for library staff in both technical skills and an understanding of copyright so that they are able to assist researchers who wish to make their work available

through the IR. This includes an understanding of the plagiarism that is a concern for some faculty members.

Promotion of the IR platform has been carried out through AKU's global mailing lists, campus specific trainings, and flyers. Given the varying cultures of different campuses, it has been important that the AKU global training courses be customized to suit varying contexts and trainees' needs. Since the system gives monthly reports on downloads per series, it has been very useful to share these reports with specific departments and authors whose articles have received highest downloads in a month, this will increase usage of the platform both by those searching for information and by those who are in a position to deposit their work. Training users to create RSS feeds on their series of interest will further increase articles' download as users will receive alerts whenever new articles are added.

## **Conclusion**

This study recommends that institutions consider implementing IRs in order to gain from the many advantages that these platforms bring to a given institution. Libraries play a key role in the implementation of these projects and Mapulanga (2012) notes the need to train librarians on ICT skills for successful implementation of such projects. There is need for adequate budgetary allocation for smooth implementation and running of IR systems. Institutions should also develop and implement policies on digitization and copyright clearance. Top management support is paramount for successful implementation as there is often a need for staffing changes or redistribution of roles and potentially the need to hire more staff to cater for the increased workload that comes with the initiative.

Training programmes for both staff and contributors should be clearly established. It has been AKU's experience that this training is best included in libraries' Information Literacy training courses. Mechanisms for acknowledging researchers should be put in place.

As the library and information science community gains experience in the implementation and management of IRs, it is essential that librarians evaluate and publish their experiences so that a shared body of knowledge is developed.

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