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Implementing Institutional Repository (IR) system in a multi- campus international university: Nuts and bolts

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Abstract:

The Aga Khan University (AKU) is serving through eleven campuses spread across eight countries in three continents. It has a network of eleven libraries, although small in size, in five developing countries in three regions (South Asia, East Africa, and Europe). The university has recently implemented an Institutional Repository (IR) system to show-case the intellectual and scholarly output of the university. The selection of this system was done after a thorough study of available platforms, and in line with AKU vision and mission. The stakeholders were involved in decision making. After a careful evaluation of the teams involved, Digital Commons was selected as the AKU's IR. Digital Commons is a suite of tools and services that enable institutions to manage, display, and publish scholarship to the web in a highly visible online showcase. Besides having all features of a traditional IR, it also offers professional-grade publishing tools with a peer-review workflow. So the institutions can publish their journals, books, conference proceedings and other stuff using this platform. It also has an additional module through which the individual faculty and scholars of an institution can develop their profiles and populate them with their scholarly works.

The purpose of this paper is to share our experience of implementing IR in our various campuses, from selection of the product to its marketing. A lot of steps were involved in implementing and populating the works. Information architecture, page setup, layout, branding, building communities, campuses and departments, content recruitment, policy making, copyright issues, measuring success were among the major milestones.

This paper also reports some technical, technological, and content related issues that were faced during the implementation process. Some issues were known and expected but some

were out of the mind. Some were manageable while some were beyond the control. Investigating copyright and acquiring copyright permissions from publishers and/or authors have been among the big challenges. Acquisition of content was also a test for AKU libraries' teams.

With the implementation of this system, the AKU faculty was satisfied with the performance of the system and they were happy to see themselves globally visible in the field of research.

In future, Aga Khan University is going to encourage graduate and undergraduate students to submit their research work online. The workflow will manage these research works from submission to publish on this platform. AKU is also planning to subscribe to an additional module of this system that will host faculty/researchers profile pages.

Keyword:

Institutional repositories; Digital libraries; Scholarly communication; Pakistan; Aga Khan University; Developing countries

Introduction

Aga Khan University

Chartered by Government of Pakistan in 1983, Aga Khan University (AKU) is a private, autonomous university that promotes human welfare through research, teaching and community service. Based on the principles of quality, access, impact and relevance, the University has campuses and academic programs in Afghanistan, East Africa, Egypt, Pakistan, Syria and the United Kingdom. Its facilities include teaching hospitals, Nursing Schools and Medical Colleges, Institutes for Educational Development, an Examination Board and an Institute for the Study of Muslim Civilisations. Faculties of Arts and Sciences in Karachi, Pakistan and in Arusha, Tanzania are in the planning phase.

Research at AKU

The Aga Khan University strives for relevance and quality in developing its programmes of service, education and research. In order to provide a framework of reference to guide the nature of research undertaken by faculty towards meaningful discovery, assessment and application of knowledge for society, the University has adopted for the Faculty of Health Sciences, the overarching theme of Social and Economic Determinants of Health. Inevitably the thematic consideration will require multiple disciplines to be engaged in the understanding and solution of questions that are worthy of the effort, time and resources for research. Over the coming years, AKU will continue to devote much of its energy to the development and fostering of internationally competitive quality research, focusing on local challenges which have global relevance. AKU faculty contributed a significant number of research articles, books, book chapters in professional literature in the field of medical and education.

Research support by AKU Libraries

To support AKU mission “AKU is committed to the development of human capacities through the discovery and dissemination of knowledge, and application through service”, AKU has developed a network of nine libraries in five countries spread over three continents, that are committed to providing the University community access to comprehensive, multi-disciplinary,

information resources, in print and digital formats, in support of its research, teaching and learning activities.

One of recent development was implementation of AKU Institutional Repository (IR), which provides digital archive offering access to the research, scholarly output and publications of the Aga Khan University.

What is an IR?

An institutional repository is an online archive for collecting, preserving, and disseminating digital copies of the intellectual output of an institution, particularly a research institution. Digital repositories are developing rapidly as a key element of research cyberinfrastructure. Even when research institutions are grappling with difficult budget decisions in the current economic environment, they need to have a strategy for providing repository services.

Purpose of an IR

The following are major purposes of an IR:

- To manage and show-case institutional information assets (articles, theses, publications, etc.) under one interface
- To facilitates world-wide readership leading to an increase in the profile and prestige of the institution
- To provide a platform to the faculty and researchers for open-access web publishing (e-journals and e-books, ETDs, etc.)
- To demonstrate to funding bodies the breadth and depth of output from the institution

IR Systems (Options)

There are several types of IR systems available. One can choose according to its requirements and budgetary provisions. Some important are as follows:

Open Source Solutions

- **DSpace** – by MIT & HP Labs

DSpace is the software of choice for academic, non-profit, and commercial organizations building open digital repositories. It is free and easy to install "out of the box" and completely customizable to fit the needs of any organization. DSpace preserves and enables easy and open access to all types of digital content including text, images, moving images, mpegs and data sets. And with an ever-growing community of developers, committed to continuously expanding and improving the software, each DSpace installation benefits from the next.

- **Eprints** – by University of Southampton, UK

It is a free and open-source software package for building open access repositories that are compliant with the Open Archives Initiative Protocol for Metadata Harvesting. It shares many of the features commonly seen in document management systems, but is primarily used for institutional repositories and scientific journals. EPrints has been developed at the University of Southampton School of Electronics and Computer Science and released under a GPL license.

- **Fedora** – by Cornell University & University of Virginia

Fedora (or Flexible Extensible Digital Object Repository Architecture) is a digital asset management (DAM) architecture upon which institutional repositories, digital archives, and digital library systems might be built. Fedora is the underlying architecture for a digital repository, and is not a complete management, indexing, discovery, and delivery application. [http://en.wikipedia.org/wiki/Fedora Commons](http://en.wikipedia.org/wiki/Fedora_Commons)

Proprietary Solutions

- **Digital Commons** – by bepress

Digital Commons is a hosted institutional repository platform. This hosted service is licensed by the bepress also known as Berkeley Electronic Press. It is used by associations, consortia, universities, colleges and public libraries to preserve and showcase their scholarly output.

- **CONTENTdm** – by DiMeMa, Inc.

CONTENTdm is a commercially available digital asset management system (DAM) primarily used by libraries and archives. CONTENTdm software supports the upload, description, management and access of digital collections.

Other Options

- Out sourcing

Some organizations prefer to award a contract to a local/international software house to provide them the platform and pay them whatever they mutually agreed on.

- In-house development

There is a tendency to get it developed by their own IT team. They had a free hand to customize it according to their needs, but they have to compromise on some standards.

AKU opted for proprietary solution, Digital Commons as AKU IR platform

Planning for AKU-IR

- Conceptualization – In a meeting of URC

The idea of establishing the Institutional Repository was floated by the University Librarian in a meeting of University Research Committee in September 2012. This idea was much appreciated by the committee.

- Brainstorming – at AKU Library heads meeting at Nairobi, Kenya – Oct 2012

After the URC meeting, there was an annual meeting of AKU library heads at Nairobi, Kenya in October 2012. The AKU University Librarian and Systems Librarian shared this idea with AKU library heads and started brain storming on that.

- Discussions – with different stake holders i.e. Dean Research, CIO, Public Affairs:

The formal discussion was started with the relevant stake holders like, Dean of Research, Public Affairs Department, Heads of different committees, Chief Information Officer, etc.

- Committees & teams

After taking the stake holder on-board, the committees and teams were constituted, and they started working on establishing IR.

- Product evaluations & selection

The Product Selection Committee was responsible to evaluate different products keeping in view the institutional functional requirements and within budgetary provisions. This committee recommended Digital Commons as a platform for AKU IR.

- Singing of contract

After selection of the product the concerned department at AKU started price negotiations with the vendor. This took two month and the deal was finalized in November 2012. A contract was sent to AKU legal department for vetting. Once it was approved, the contract was signed with Bepress, CA-based Company.

System Specs (DC)

Following are major specifications of Digital Commons:

Model

- On the cloud (SaaS-based solution)

Coverage (services include)

- Software, hardware, customization, implementation, infrastructure, training, hosting, offsite backups, technical support, software upgrades, publishing 5 free online journals

Access model

- Open Access
- Capable to restrict access, fully or partially

Metadata standards

- Dublin Core
- OAI-PMH
- XML Schema

Multi-lingual support

- Supports Unicode metadata and full-text objects i.e. CJK and right-to-left scripts

Peer review management tool

- Provides a professional-grade editorial management system for peer review process for journals, conference proceedings and electronic theses and dissertations (ETDs).

Implementation at AKU

Project implementation was done in timely manner. First kick-off online meeting between Systems Librarian and the vendor was held in 1st week of January 2012. It was agreed in this meeting that the vendor will provide a mock-up site till the end of March 2012. The AKU library took the relevant department on-board for branding/look & feel. One month time was fixed to finalize the site. So vendor was recommended on 30th of March to make some adjustments in the site. The vendor made necessary modifications and handed over the site to the library. The library, in consultation with IT department, made the site live in 1st week of June 2012 and started populating the research work. AKU libraries from Pakistan, East Africa and London uploaded 2,700 articles after getting copyright clearance till end of June 2013. So the site was opened as a 'Quiet Launch' on 30th June 2013. AKU IR site <http://ecommons.aku.edu> was available to public from this day with its own branding 'eCommons@AKU'. Libraries kept on populating the site and it was launched officially on 20th February, 2014. It was interesting to note that from site live (quiet launch) to official launch, more than 105,300 articles were downloaded worldwide.

IR Organization

Following is the organization of the IR. Some of the

Formats: Text (searchable PDF), images, audio, video, datasets

Genres: Researchers' scholarship or creative work, undergrad research, gray literature, digital books, conference material

Publication types:

- Campuses, Faculties, Department (having articles, post prints, presentations, technical reports, etc.)
- Books (includes books authored/edited by AKU faculty)
- Book Chapters (includes book chapters authored/edited by AKU faculty)
- AKU Publications (includes Annual Reports, Newsletters, Alumni Magazines, etc.)
- Electronic Theses and Dissertations (ETDs)

In near future, the following publications types will be available:

- Journals (Peer review)
- Events (Conferences, meetings, etc.)
- Faculty/Researcher Profile
- AKU Special projects

AKU IR- content recruitment

Since the research work was not available from a single platform, we decided to gather the metadata with full text work. We planned to start uploading from AKU-Pakistan, as a seed collection. According to that plan, AKU-Faculty of Health Science library Pakistan identified some 400 articles that were published in local journals in current five years. The copyright permissions were taken from the publishers of Journal of Pakistan Medical Association (JPMA), Journal of College of Physicians and Surgeons Pakistan (JCPSP) and Journal of Ayub Medical College (JAMC). After getting the permission, these 400 articles were uploaded and were made available for general public. Then we uploaded 2000+ articles (published in local and foreign journals in current 5 years) metadata and full-text articles by the end of June 2013, where copyright permissions were available.

Copyright check

Getting copyright permission is really difficult and time taking task. To check the publishers' copyright policy, we used SherpaRomeo (<http://www.sherpa.ac.uk/romeo>) as a benchmark. Keeping in view these policies, we started uploading the articles that were published in GREEN journals. Then we moved forward towards BLUE and YELLOW journals. The following table shows the publisher copyright policies and self-archiving:



<http://www.sherpa.ac.uk/romeo>

RoMEO Colour	Archiving policy
Green	Can archive pre-print <i>and</i> post-print or publisher's version/PDF
Blue	Can archive post-print (ie final draft post-refereeing) or publisher's version/PDF
Yellow	Can archive pre-print (ie pre-refereeing)
White	Archiving not formally supported

On the other hand, we uploaded full text books and book chapters, where we got permission from the copyright holder(s).

Copyright Licenses

A Creative Commons (CC) license is one of several public copyright licenses that enable the free distribution of an otherwise copyrighted work. A CC license is used when an author wants to give people the right to share, use and build upon a work that they have created. Below is the table that describes the copyright licenses under Creative Commons:



<http://creativecommons.org>

Copyright licenses	Can someone use it commercially?	Can someone create new versions of it?
Attribution 		
Share Alike  		Yup, AND they must license the new work under a Share Alike license.
No Derivatives  		
Non-Commercial  		Yup, AND the new work must be non-commercial, but it can be under any non-commercial license.
Non-Commercial Share Alike   		Yup, AND they must license the new work under a Non-Commercial Share Alike license.
Non-Commercial No Derivatives   		

eCommons@AKU : Challenges

The following are some of the major challenges that were faced during the implementation to official launch:

- Copyright clearance issues

- Some publishers give the permission for internal use only
- Some sells copyrights @ \$50-300/article approx, like Sage/Wiley/InformaWorld
- Faculty left AKU, contacts not available for copyright
- Pre-print are not available with faculty/department
- Archival of some journals/newspapers is not available in AKU libraries
- Metadata harvesting – data not available in required format
- Staffing (additional tasks are given to current library staff)

Following is the screenshot of live site of AKU- IR.

THE AGA KHAN UNIVERSITY

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AKU Institutional Repository

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Enter search terms:

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Aga Khan University
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 SAFARI (AKU Libraries' Catalogue)

About eCommons

eCommons@AKU is a digital archive offering access to the research, scholarly output and publications of the Aga Khan University. The objective is to preserve, promote and provide access to the University's research and publications under one umbrella, in full text wherever possible. eCommons@AKU is administered by the Aga Khan University Libraries.

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References/Sources

- Aga Khan University (2009), IR concept paper.
- Aga Khan University website <http://www.aku.edu>
- Aga Khan University Institutional Repository website <http://ecommons.aku.edu>
- Association of Research Libraries (2009). The Research Library's role in digital repository services: final report of the ARL digital repository issues task force.
- Bepress (2011). Next steps: your repository from set-up to launch. Digital Commons Reference Material and User Guides. Paper 51.
<http://digitalcommons.bepress.com/reference/51>
- Daly, Rebecca & Michael K. Organ (2009). Research online: Digital Commons as a publishing platform at the University of Wollongong, Australia. *Serials Review*, 36 (3), 149-153.
- Li, Yuan and Billings, Marilyn S (2011). Strategies for Developing an Institutional Repository: A Case Study of ScholarWorks@ Umass Amherst. *Library and Librarians' Publication*. Paper 69.
- Morris, Sammie L. (2011). Digital Commons: FSU's institutional repository (IR). *Special Collections and Archives*. Paper 1.
- Organ, M and Mandl, H (2007). Outsourcing open access: Digital Commons at the University of Wollongong, Australia. *OCLC Systems & Services*, 23 (4), 353-362.
- Creative Commons. <http://creativecommons.org>
- Sherpa Romeo. <http://www.sherpa.ac.uk/romeo>