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The challenges of advocating for open access through institutional repository building: experiences from Makerere uniVersity, Uganda

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Abstract:

This paper was perceived as a result of the slow response in populating an institutional repository at Makerere University, launched in 2006 under the umbrella name "Uganda Scholarly Digital Library (USDL)". Having heard of the adage that goes "build it and they will come", the calamities of being disappointed by waiting to see the repository growing at the researchers will were avoided. In response to this, awareness campaigns were launched, efforts to sensitise and collect content at unit and individual level were undertaken, and publicity done alongside the regular information literacy sessions conducted by Makerere University Library. To-date, the publications archived in USDL are less than 1,000 items. Given that USDL was initiated to ease accessibility to publications that were difficult to come by, open access was advocated for. However, there are challenges experienced so far and these include the status of institutional copyright policies, absence of tools to enforce or implement mandatory archiving, and the submission of electronic theses and dissertations, varying publisher copyright policies; difficulties in obtaining author versions of publications, doubts about the quality of open access research, plagiarism fears, and technical limitations.

1.0 Introduction:

Makerere University Library, here after referred to as MakLib was founded in 1940. It is the oldest and largest academic library in Uganda, with over 400,000 volumes of monographs and 82,000 volumes of bound serials. MakLib serves about 35,000 students and about 2,000 academic staff and researchers. By 2004, MakLib had made initial contacts with digitisation projects (under collaborative linkages with Tufts University; the University of Tennessee, Knoxville and the University of Bergen) and was eagerly waiting to implement a digital proposal (the Uganda Scholarly Digital Library project - USDL) that had been on paper for about two years. In that proposal, it had been noted that Makerere University was heavily

involved in research that is essential for training, further research and development, but due to its scattered nature, it was not easily accessible. The biggest portion of this research was either provided as print Thesis and Dissertations (T&D) shelved in MakLib or disseminated as proceedings of workshops, conferences, working/technical papers and consultancy reports that most times ended up in the researchers' office shelves that are hardly accessible by the public. This category of documents is what Stanger & McGregor (2007:139) consider to be of limited availability and therefore ready targets for inclusion in an institutional repository (IR). According to Crow (2002:4), institutional repositories are one of the ways through which academic institutions capture and preserve the intellectual output of their faculty, students and staff, and this is what was ideal for the USDL project to take off. The rest of the research at Makerere University was either published in journals or books; a category of research that can also be made more visible through open access using the 'Green' route, (also known as self-archiving), a process through which an author deposits an article in an open online repository (Ware, 2008:144). Open access is the idea of providing unrestricted online access to scholarly literature, so that anyone can make use of it without having to pay for a subscription, site licence or per-article fee (Ware, 2008:143).

Out of the two categories of publications mentioned above, the T&D in MakLib was physically available for conversion into digital format and archiving in the IR, but the author's consent had to be sought because ownership of copyright was not stated in these documents. By then, Makerere University's alumni register was still in its initial stages and could not be used as the source of information for getting in touch with the thesis authors. MakLib resolved to start off by soliciting for any of the available publications from Makerere University staff, since these were within the institution and could be easily contacted. It was also agreed that sensitization and collection of the publications from the researchers would be done at the same time, and those collected would be digitized and temporarily stored on a centrally located computer. There were some scanners that had been acquired under different projects and it was seen feasible to try implementing USDL at pilot level. The planning process started with an implementation team of 6 librarians and 3 lecturers from the sciencebased Faculties/Schools/Institutes (here after referred to as units) targeted under the pilot phase. USDL introductory circulars were sent out to all the selected science units, awareness campaigns were launched, efforts to sensitise and collect content at unit and individual level were undertaken, and publicity done alongside the regular information literacy sessions conducted by MakLib. The software discussions had already been resolved during the proposal writing stages, with DSpace as the solution although there was no installation as yet. The USDL project was developed in collaboration with the University of Bergen Library that already had a DSpace installation running. The University of Bergen Library provided the necessary guidance and initial technical assistance as far as DSpace was concerned, and since there was no installation at Makerere for the USDL pilot, they offered to host it in Norway. A test server with a DSpace installation was setup at the University of Bergen for the USDL pilot project and the USDL implementation team given administrative and submission rights to learn how to use the system remotely. However, since most of the trial documents were scan results, the files were bulky, and with the limited bandwidth at Makerere University, uploading the files on the server in Norway did not work out smoothly. The alternative of acquiring a server and hosting the project locally at Makerere University to minimise the bandwidth issues was recommended. By 2006, DSpace had been installed on a small server in MakLib, with technical assistance from the IT department at Makerere University. The USDL team continued collecting and uploading content in DSpace. Launching the project was then considered as an opportunity to publicize USDL to the whole university community, so this was scheduled for June 2006, with vigorous sensitization and publicity. All the units at Makerere were later incorporated into the project after the launching, and this is when it was recognised as the official IR of Makerere University.

1.1 Electronic Resources and USDL:

At proposal level, USDL was visualised as a local database that would serve as an electronic resource for research information within Uganda. At the launch, librarians from the Consortium of Uganda University Libraries (CUUL) were invited to attend because after successfully functioning as an IR for Makerere University research, USDL would later incorporate CUUL institutions, since it is focused on collecting Ugandan research literature. This was set as a long-term goal towards addressing the research information vacuum created during the serials crisis period. Like many academic institutions worldwide, Makerere University's budget for serial publications was heavily affected by the "serials crisis" in the 20th Century. By the year 2000, subscriptions to print journals that were the main source of current research literature at Makerere University had almost been scrapped off the institutions budget due to the high expenses. This conforms to Okunoye and Karsten's (2003:360) findings where organizations in sub-Saharan Africa had to reduce the number of subscribed journals, owing to poor funding and the rising cost of journals. University suffered a research literature vacuum for sometime. Fortunately, by 2001 the institution was involved in a pilot phase of access to online journals under the Programme for the Enhancement of Research Information (PERI) run by the International Network for the Availability of Scientific Publications (INASP). Around the same time, the institution also benefited from the World Health Organisation (WHO) and the Food and Agriculture Organisation (FAO) subsidised journal projects to developing countries, i.e. HINARI (Health InterNetwork Access to Research Initiative) and AGORA (Access to Global Online Research in Agriculture). After the INASP pilot phase, access to online journals were later supported by Sida/SAREC, with subscriptions to about 20,000 full-text online journal titles accessed country-wide by academic and research institutions in Uganda. Other free online journal databases were identified and added onto the list. Access to the electronic journals calmed the situation at Makerere University, but did not kill the need for an online database of local scientific research. Given the fact that a number of researchers publish in journals owned by database owners that are still not affordable at Makerere University, even with external funding (e.g. Springer), it was deemed necessary to recollect such findings by advocating for self-archiving Makerere University researchers' publications in the IR. This would in the long-run avail research findings that respond to the needs of the local community other than just featuring in prestigious journals with minimal impact on the local environment. Okunoye and Karsten's study (2003:360), reveal more about availing the findings of studies conducted in sub-Saharan Africa to scientists elsewhere more than to researchers in sub-Saharan Africa just because most researchers endeavour to publish with internationally recognised journals. However, as pointed out by Kingsley (2008:215), researchers in the third world, practitioners such as teachers, nurses, doctors, medical and scientific lawyers and accountants who work in fields that benefit from research but are usually not in a workplace that subscribes to the relevant journals are the major benefactors of having materials available as open access. These would fruitfully benefit from the IR resources provided with no restrictions. The birth of an IR at Makerere University was therefore in response to creating a centrally accessible digital database of the scattered research output and collectively gathering the published works of Makerere University's authors into one online location for easy access and institutional visibility. Crow (2002:6) explains how institutional repositories serve as meaningful indicators of an institutions academic quality. He further points out that much as the intellectual output and value of an institution's intellectual property is diffused through thousands of scholarly journals, an IR provides an avenue of concentrating the intellectual product created by a university's researchers, making it easier to demonstrate its scientific, social and financial value.

2.0 Methodology:

The process of recollecting the scattered research publications at Makerere University was done in two ways: by randomly approaching researchers in different units and soliciting for publications to archive in USDL (as explained above); and surveying Makerere University's websites for lists of research publications. The lists were then used as a point of reference for collecting the publications for inclusion in USDL. The results of the website survey revealed the following: A total of 14 units (out of the 29 academic units that have active websites linked on Makerere University's intranet) were identified with a web-page for research and publications. This was viewed as one of the units' endeavours to make their publications known to the rest of the world. These include Mathematics Department, Institute of Environment and Nature Conservation, Faculty of Veterinary Medicine, Department of Community Health and Development Centre (CHDC), Faculty of Computing and Information Technology (CIT), East African School of Library and Information Science (EASLIS), Makerere Institute of Social Research (MISR), Faculty of Economics and Management (FEMA), The College of Health Sciences (former Faculty of Medicine), East African Institute of Higher Education Studies and Development (EAIHESD) Department of Mass Communication, Faculty of Social Sciences, School of Public Health, and the Human Rights Department (HURIPEC). The types of publications listed on these websites were categorised as journal articles, conference papers, books and book chapters, reports and working papers, thesis, projects, and abstracts. The list of publications on the HURIPEC website was however, not categorised in any of the above headings and is therefore not included in the statistics provided in the table below. Analysis of these lists revealed the following: The journal articles constituted the biggest proportion (54%) of publications in totals (i.e. 1,437 articles out of the 2,658 total records as shown in the table below) and these required contacting both the author and the publisher to confirm the availability of a pre/post-print for self-archiving in USDL. Except for the books and book chapters (243 in total), the rest of the publications were considered grey literature (unpublished work) that only needed the authors consent. The total number of journal title publishers whose self-archiving policies had to be ascertained was 502. Although some of these journal publishers were already providing open access to their publications, all of them were lined up for contacting (either through the Sherpa site (http://www.sherpa.ac.uk/romeo.php) or directly with the editors) to be sure of archiving the collection in USDL. In the process of establishing each publisher's selfarchiving policies, a goal was set to find out how many of the publishers listed were from the African continent. This activity is still on-going and may be revealed published later.

Publications on Makerere University's unit websites by April 2009 was as follows:

Unit	Journal	Conference	Books/Book	Reports/Working	Thesis	Projects	Abstracts	Totals	Journal
0	Articles	Papers	Chapters	Papers	1110010	110,000	11000111000	100015	Titles
Veterinary	216	43	22	2	12	20	8	323	84
Medicine	843	4	28	10	1	-	-	886	198
Public Health	113	12	11	16	2	-	5	159	47
CHDC	31	27	42	92	35	52	61	340	26
CIT	28	23	56	7	-	-	-	114	12
EAIHESD	28	2	17	4	-	-	-	51	25
EASLIS	38	43	8	-	-	-	-	89	21
Environment	51	11	5	-	-	-	-	67	35
Mathematics	41	-	6	-	42	-	-	89	22
MISR	41	-	47	94	-	-	-	182	28
FEMA	-	10	-	24	300	-	-	334	-
Mass Comm.	7	-	1	6	1	-	-	15	4
Social Sciences	-	-	-	-	-	9	-	9	-
Totals	1,437	175	243	255	393	81	74	2,658	502

The process of contacting the researchers per unit for these publications is still on-going, with the help of MakLib Faculty Librarians. The main sensitization methods used at Makerere University are seminars coordinated at unit level and the circulation of elaborative brochures distributed during the seminar sessions and also sent via e-mail communication to all researchers. The brochure introduces the IR to the researchers, with the importance of providing open access for visibility emphasized. The need to deposit a pre-print or post-print according to the self-archiving policies of various publishers is pointed out, with guidelines on how to submit publications in the IR provided. MakLib, through all the possible communication avenues tries its level best to convince researchers to realize the benefit of making their scholarship freely available through institutional repositories, but like many repository managers, the final process of obtaining publications to archive, takes ages after numerous reminders. This is in corroboration with Cervone's comment that, "at some institutions progress in developing these repositories has taken longer than expected, while at others, even though the repository is in production, institution-wide interest remains low" (2008:148). According to Kingsley (2008:204), repositories have been promoted as a way to achieve open access, amongst other possible uses, but to date, particularly in institutional repositories; deposit of material has been slow. Out of the 1,319 repositories registered in ROAR (http://roar.eprints.org), about 781 (59%) have less than 1,000 records (statistical count done by author in April 2009). On the African continent, only 23 repositories from 8 countries where visible, with South Africa registering the highest number of repositories (15), while the rest have only 1-2 repositories per country. The total number of records in repositories on the African continent ranges between 200 and 7,000 (with South Africa registering the highest records) on the ROAR site and between 200 and 62,000 (with Egypt registering the highest records) on the openDOAR (http://www.opendoar.org) site. Some repositories are registered in ROAR and openDOAR, but with no statistics reflected. The variation in statistics on the ROAR and openDOAR sites was not ascertained. On a general note, however, Kingsley (2008:206) acknowledges that the low participation rate in institutional repositories is reflected worldwide.

3.0 Initiatives towards making Makerere University's research known online:

The following are some of the ways Makerere University has made its research known to the rest of the world using the Internet:

Unit websites with publications pages: There are 14 unit/departmental websites, with a publications/research page listing the names of researchers who have published within their units, the type of publication, where and when it was published. These lists provide an idea of what has been published, but do not directly link to the published article as would be expected on a "Home page open access" site (Willinsky, 2006:211). A researcher interested in utilizing any of the publications listed on unit/departmental websites would have to contact the author and request for the article (i.e. where the author has a soft or hard copy of the article) or visit the listed publisher site and retrieve the article (if it is not restricted).

Journal table of contents listed on unit websites: Makerere University Institute of Social Research (MISR) lists the table of contents of its print journals on its website. This is again a means of making the articles in the print journal known to the rest of the world, probably to attract subscribers for the various journal issues. The institute however, needs to consider listing its print journals in an online abstract database like AJOL for enhanced visibility.

Coordination of research database: A database of research at Makerere University (RMACS) was initiated by the School of Graduate Studies (SGS) to coordinate and keep track of the kinds of graduate research being done in the institution. It is still an abstract database with publication details that refer any researcher to the source of the articles.

Makerere University's research in DATAD: Makerere University contributes content to the Database of African Theses and Dissertations (DATAD), a project initiated in 2001 and coordinated by the Association of African Universities (AAU). DATAD (http://www.aau.org/datad/database/qufind.php) provides online access (on a membership basis) to the abstracts of T&D done in Africa. If DATAD was providing open access, part of Makerere University's research output (the thesis and dissertations done at Masters and PhD level) would be visible to the rest of the world.

Makerere University's publications in AJOL: Makerere University has four of its journals accessed through the African Journals On-Line (AJOL, http://www.ajol.org) database. These include: African Health Sciences (published by the College of Health Sciences, former Faculty of Medicine), Makerere Journal of Higher Education (published by the former Department of Higher Education, now an institute), African Crop Science Journal (published by the African Crop Science Society, with an editorial secretariat at the Department of Crop Science, Faculty of Agriculture), Eastern Africa Journal of Rural Development (jointly published by the Ugandan Agricultural Economics Association and the Department of Agricultural Economics and Agribusiness, Faculty of Agriculture). AJOL is offering more online visibility for Makerere University authors publishing in these journals although access is only limited to the abstracts. One out of the four journals (African Health Sciences) provides open access. but through other databases (http://www.atyponlink.com/MMS/loi/afhs and http://www.bioline.org.br/hs) and is also listed in the Directory of Open Access Journals (DOAJ) and PubMed.

Makerere University's open access journals: Makerere University has two open access journals, namely, The International Journal of Computing and ICT Research, published by the academics themselves on a unit website (Faculty of Computing and Information Technology -FCIT) and Africa Journal of Animal and Biomedical Science (jointly published by the Faculty of Veterinary Medicine, Makerere University; Uganda Veterinary Association; and the International Network on Animal and Biomedical Science and Technology for Africa, INABSTA), a free journal that requires users to register before accessing the full-text. According to Willinsky (2006:214), these journals fall under the "Subsidized open access" category where subsidies are secured either from university departments, scholarly societies, government agencies or foundations for publishing. The journal of computing and ICT research on the other hand is also provided in print, so it also falls under the "Dual-mode open access" category (Willinsky, 2006:215), where some funds are secured through subscriptions to the print version. Otherwise, researchers interested in utilizing articles from these journal online sites freely download them without having to seek for any permission or pay any subscription. Initiatives need to be taken to have these journals listed in both AJOL and DOAJ for enhanced visibility. Rowlands and Nicholas (2005:31) further explain the options through which open access is provided as follows: Open access journals use a funding model in which researchers are able to read, download, copy, distribute and print articles and other materials free of charge from the Internet. Open access publishers sometimes meet their costs by charging authors (usually through the author's funding body or employer), for the publishing services they provide. In other cases, open access journals are run by researchers themselves and the publishing costs absorbed by their employers."

As noted above, there are some open access initiatives at Makerere University, especially for the journal collection, although this is still on a limited scale. For other publications, the authors at Makerere University who want others to read their publications on the Internet either provide a link to the full-text under their profiles on unit websites or provide a copy for dissemination through USDL (for those that are aware about this service). USDL was particularly setup to promote access and visibility to local research in Uganda. Open access was therefore the ideal publishing means because it plays a significant role in expanding access to research results and in advancing knowledge and scientific progress. It also provides an avenue for local research to gain international impact (Giglia & Vignocchi, 2007:3). In providing open access, authors aim at maximizing the free availability of their research output, being widely read and cited. However, due to unresolved policy issues, USDL is providing both open and closed access to its publications.

According to Green & Gutmann (2007:42), the creation of institutional repositories is an important and valuable development for university-based researchers, who now increasingly have mechanisms for preserving and sharing the results of their work, both inside their institutions and with the larger scientific world. Expanding access to research done within Makerere University (and Uganda at large) so that the immediate society benefits from the relevant research findings kept in scattered locations was the initial driving force that led to the development of USDL. Other objectives, like documenting the institutions research for online visibility and creating a secondary source of journal information pertinent to the institution were to be achieved along the way. However, gathering the supposedly scattered research from individual authors has turned out to be a nightmare due to a number of factors as enumerated among the challenges being faced in building an IR below.

4.0 The challenges and proposed way forward:

4.1 Varying publisher copyright models and policies:

There are quite a number of copyright models in use by journal publishers that it is difficult for repository administrators to collectively obtain permission to archive published articles. Permission has to be sought from individual publishers, with different approaches and given that researchers publish with a diverse number of publishers, this requires a great deal of time to achieve. It is also noted that where publishers permit self-archiving of articles, they limit it to using the author's version of the article, which may be difficult to retrieve from the researcher or may have variations from the published version. At Makerere University, a number of the policy agreement documents between the institution and the authors/publishers are still awaiting approval and so not much has been done as far as soliciting for self-archiving rights directly from publishers.

4.2 Institutional copyright policies for T&D:

Digitising student works is one of the effective ways to begin populating an IR (Piorun & Palmer, 2008:223). However, the absence of authoritative copyright statements in the T&D in MakLib, (deposited there before the Intellectual Property Management Policy (IPMP) of 2008) limits the direct conversion of this collection into digital for archiving in USDL. T&D are part of the collection of items archived in USDL, specifically included to promote access and preserve a digital copy because there is normally only one print copy provided for use in MakLib. The recently approved Makerere University IPMP (2008:10) stipulates that the intellectual property unit shall analyse reports from researchers on intellectual assets/property to determine ownership. The policy requires that a copy of any Intellectual Asset/Property produced by staff and students be deposited at MakLib and the Intellectual Property unit (2008:13). In the past, however, the depositing of documents was done before copyright

analysis, so the print thesis and dissertations currently in MakLib do not bear the expected copyright statement. As a digitisation remedy, permission is sought from individual authors before a print thesis is included in USDL. Besides the lecturers and researchers working with Makerere University, the rest of the authors are not easy to come by to provide permission to archive a copy of their thesis in USDL. Initiatives are being taken to sensitise the current students so that consent to archive a copy of their theses in USDL is obtained before they leave the institution. It is also planned that a permission and institutional agreement form will in future be signed by graduate students as they submit their final theses to the School of Graduate Studies to simplify the process of selecting theses for inclusion in USDL.

4.3 Policy on the submission of Electronic Theses and Dissertations (ETD's):

All T&D at Makerere University have been submitted only in print form to MakLib. Recently, soft copies of abstracts have been submitted to the School of Graduate Studies. The policy requiring students to submit electronic versions of theses to MakLib is being proposed. This means that direct submission of ETD's into USDL may be feasible in the near future to reduce on the tedious digitisation process involved when handling print documents. It is worth noting that most masters and PhD theses are big documents and digitising them creates a bulky file that could be minimised if a soft copy was provided. Bandwidth is an issue at Makerere University and therefore any efforts done to optimise it are highly appreciated. Besides the outcome of bulky files, the whole digitization process is long and arduous (Stanger & McGregor, 2007:139), involving unbinding the thesis, scanning it page-by-page and re-binding the thesis to its original state. Stanger and McGregor mention "robatic scanners" that would minimise all the tedious processes, but these are not affordable at Makerere University, so MakLib uses only small flat-bed single sheet scanners that take long to complete a single task.

4.4 Voluntary archiving of research in institutional repositories:

Archiving of research in USDL is a voluntary venture where researchers deposit only after the advantages of publishing in institutional repositories are clearly stated and they have been convinced that it is worthwhile having a digital copy of their research archived by the institution. This has partially contributed to the slow rate of populating content in USDL. MakLib advocates for improving the research and publications culture in the institution, (one of the strategic objectives in Makerere University's Research and Innovations policy, March 13th 2008) through the IR sensitisation sessions. Although some researchers conduct research at individual level and initiatives, a good percentage of the publications disseminated in conferences are supported by the institution, sometimes at unit level (as provided for in the Research and Innovations policy, 2008:6). More enforcing policies or policy guidelines are required especially those related to funded research to enable mandatory depositing of such publications in the IR for local utilization. As noted by Ware (2008:147) research funders have recently started to introduce policies requesting or requiring researchers funded by them to deposit published articles resulting from the funded research in open archives. There is a mixture of reasons for this but essentially the funders appear to have accepted the argument that they will get greater value from their investments in research the more widely the results are disseminated. These policies are increasingly becoming mandatory, because experience shows that when deposit is voluntary, the proportion of authors choosing to self-archive is small (around 4-15%). Surveys of authors, by contrast, have shown that around 95% say they will deposit if required to do so by an employer or funder. Such policies need to be enforced at Makerere University where a good proportion of the research done is funded in some way.

4.5 Author's version of the published article:

Most times when collecting published articles from researchers at Makerere University, they make reference to the publisher's site for a download or a printed version of the publisher's copy is provided for archiving in the IR, yet most publishers recommend self-archiving the author's version of the article and acknowledging the source, i.e. inclusion of a URL linking to the official version on the publisher's website (Ware, 2008:145). It is therefore not easy to obtain the authors version of a published article except for a few cases where the publication is still current. It might be worth investigating further to establish whether researchers normally maintain a copy of their articles after publishing or they have a negative feeling about having different versions available (Courtois & Turtle, 2008:164) or pre-published versions as portrayed in Rowlands and Nicholas' (2005:41) findings: "I have real problems with the archiving and distribution of pre-published versions because sometimes the results are somewhat different from the final version."

4.6 **Duplication of research:**

Some researchers do not see the need to deposit their work into an IR because they feel the publisher's site is sufficient. However, restricted access in most publisher sites limits full-text downloads which can alternatively be obtained from the open access repositories. Kingsley (2008:212) emphasizes that the person searching for information does not necessarily have to visit a specific institutional web page, but can use a search engine such as Google or OAIster and find the paper, almost without knowing they have found their goal through a repository. More sensitization sessions are recommended for researchers at Makerere University to overcome this negative feeling because even after publishing in some of the most prestigious journals, the authors may fail to obtain full-text access locally especially when the journal is not subscribed to and the article is required as a reference by the lecturer in class. The only alternative when no copy is deposited in USDL is to purchase the article through document delivery services, an extra cost to the institution.

4.7 Quality of open access research and plagiarism fears:

Some researchers fear to deposit in the IR because they are either not sure of the security measures against plagiarism or any content validation through peer-review processes. They would have loved to have plagiarism software installed for use and subject administrators (lecturers) at unit level to control the quality of information being deposited into USDL. Opinions to attain this option were sought during the launching of USDL, however, the suggestions provided were so mixed that consensus could not be reached. A top-down administrative policy was left as the option to resolve this issue. Test-plagiarism software is currently being used and this may help reduce the fears of research being misused. It is however, worth noting that the fears expressed by these researchers are not in isolation. As much as authors believe that the literature in an open access world would be much more accessible to everyone and that budgetary pressures on libraries would be ameliorated, the downside is that they believe the quality of articles would diminish (Rowlands and Nicholas, 2005:32).

4.8 Technical and staff challenges:

Running two demanding projects within MakLib at the same time (library automation and digitisation), with most of MakLib staff assigned to the automation project meant that very few staff (6 librarians, on part-time basis) were devoted to ensuring that USDL activities were handled in the beginning. The situation however improved in the later years, with the involvement of MakLib Faculty Librarians. Technical staff limitations (especially programmers in MakLib) have lead to the utilization of most software in their default settings

with no further enhancements that would locally be possible with the availability of Information Technology specialists.

5.0 Recommendations and solutions:

Kingsley (2008:213) recommends mandating depositing in repositories as one of the ways that may enforce increase in use of these archives. Makerere University needs a mandatory policy that requires all student T&D to be submitted in both hard and electronic copy, with submission guidelines into the IR.

MakLib, working together with the academic units producing scholarly journals and willing to provide open access to the content through institutional repositories would go a long way in promoting the availability of African research literature online. Exemplary actions taken by Harvard's Faculty of Arts and Sciences where it granted the University nonexclusive rights to preserve and make accessible its scholarly journal articles through the University's IR (Medeiros, 2008:137) are worth emulating. To this effect, MakLib therefore needs to seek permission to preserve and make accessible scholarly articles published by university units managing journal publications.

In order to improve on the level of archiving the institutions research output, there is need for additional mandatory policy or implementation guidelines and procedures (as provided for in the Research and Innovations policy, 2008:11) that clearly spell out how researchers should deposit reports to MakLib. The provisional statement in the research and innovations policy that "all research reports shall be deposited with the University Library and the National Library at the researchers cost" on its own may not be enough to drive researchers into actually depositing the reports. For instance, the provision of permission forms/agreements signed by the authors granting MakLib permission to digitize, preserve and disseminate the research reports electronically and options to deposit unpublished work with provisions for a grace period to allow publication within a defined period may go a long way in uplifting the existing policy.

6.0 Conclusion:

Makerere University Library will not give up on achieving the IR goals that it has set. Following Alma Swan's advise during her concluding speech in the Berlin5 conference (Giglia & Vignocchi, 2007:4), MakLib will utilise all the lobbying and counter lobbying initiatives possible until it wins.

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