

Institutional repository: access and use by academic staff at Egerton University, Kenya

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Abstract

Purpose – The purpose of this paper is to examine the access and use of the institutional repository (IR) among academic staff at Egerton University.

Design/methodology/approach – The paper provides a description of the building and development of the IR at the Egerton university and describes expected benefits of the repository to the University and relevant stakeholders. A survey was conducted among 84 academic staff with an aim of examining their levels of awareness on the existence of the IR at the Egerton University and assess their access and use. Through a structured questionnaire both quantitative and qualitative data were collected.

Findings – The study revealed that majority of the academic staff at the Egerton University are still not aware of the existence of the IR. Staff also faced challenges in accessing and using the content available. The paper provided suggestions on how best to enhance the access and utilization of the IRs among the academic staff.

Practical implications – From a practical point of view, the paper provides implications on the access and use of IRs by the academic staff. The paper points out some challenges faced by this group of users which other academic institutions may try to solve in their respective contexts.

Originality/value – Findings and discussions provided in the paper will pave way to solving the challenges faced in access and use of IR by the academic staff at the Egerton University.

Keywords Institutional repositories, Digital preservation, Open access, Dspace, Egerton University, Open-source software

Paper type Research paper

1. Introduction

In the last few decades the advancement of Information Communication Technologies (ICT) particularly the internet and the World Wide Web have enhanced the global mediums of communication especially in the scholarly sphere. In the age of electronic publishing and digital content, academic institutions are increasingly realizing the importance of IRs as vital infrastructure for scholarly communication. Such a realization has created new models for disseminating scholarly research. Consequently the creation of new knowledge has redefined the relationship between authors, publishers and academic institutions. Currently open access (OA) has particularly gained momentum in providing access to authentic literature, free of charge. Most of the content available through OA is also free of copyright as well as licensing restrictions. A major advantage of OA content is that it is highly cited compared to that which is not on OA, whereby publication of research in commercial journals, the publishers often limit access rights.

According to Xia (2009) “library publishing is not a new endeavor.” The idea of library involvement in online journal began several years and ever since the idea has been adopted by many academic institutions. As such, academic libraries are making diverse contributions to the development of many types of digital repositories, particularly those housing locally created digital content – including new digital objects or digitized versions of locally held works.

An institutional repository (IR) refers to, “a set of services offered by a university or group of universities to members of its community for the management and dissemination of scholarly materials in digital format created by the institution and its community members (Halder and Chandra, 2012).” Such materials include e-print, technical reports, theses and dissertations, conference proceedings and teaching materials.



According to Genoni *et al.* (2006) takes similar view in reporting that, “the latest trends of Internet based e-research are changing ways that patrons of research communities seek information” and Boufarss (2011) “deposit of material in an IR is sometimes authorized by that institution.” An IR is a means to ensure that published works of scholars are consistently available to the academic community even after increase in subscription fees or budget cuts within libraries.

In a university setting, an IR provides a place for faculty work, student theses and dissertations, e-journals, data sets and so on. Whatever is the particular focus of the university for an IR to be successful it must be filled with scholarly work of enduring value that is searched and cited. IRs therefore are developed to provide scholars with a common platform so that everyone in the institution can contribute scholarly material to provide and promote interdisciplinary research across campus.

While academics still prefer to publish their research in books and journals, they are disseminating their unpublished work more frequently through OA, digital outlets. Academics often present their works in the form of gray literature which is not limited to conference presentations, technical reports, and preprint, data sets, supplements to published work and electronic theses and dissertations. An IR basically monitors and controls scholarly output and serves as an indicator of the scope and extent of the universities research activities.

According to the Directory of Open Access Repositories (DOAR) “data the majority of institutional repositories are built using open-source software.” The most popular IRs software platforms are Dspace, eprints.org, Fedora.

While most academic libraries in developing countries have taken the initiative of developing and maintaining IRs, majority have not made an effort to create awareness among the academic staff or even to other users in the community on the usefulness and potential benefits of the IRs. Little is also known on how the users particularly the academic staff perceive the access and extent of use of the IRs. “Evidence has it that most academic libraries find themselves struggling to make institutional repositories active and vibrant against a lack of interest from faculty and scholars” (Bankier and Perciali, 2008). Evidence has it that most academic libraries particularly in developing countries fail to articulate the special needs of faculties as they plan and develop the IRs. Failure to consistently consider the needs of faculty and scholars during the design phase of IRs leads to low or no usage of IRs. According to Wu (2015) “if the purpose of IRs to preserve and disseminate knowledge is also to encompass the core disciplines in the institution, then IRs must be designed with the unique needs of the scholars in mind.” It should be in the interest of the academic institutions to ensure that mechanisms of quality assurance have been put in place in order to establish local rating standards for research and publications.

IR at Egerton University

The Egerton University is the oldest institution of higher learning in Kenya. As provided by The Universities Act No. 42 of 2012, the University has a mandate in: advancement of knowledge through teaching, scholarly research and scientific investigation and dissemination of the outcomes of the research conducted by the university to the general community. From such mandate, the University Library is required to centrally store, preserve and disseminate the intellectual output generated from various departments of the University to the user community. University Library is required to enhance service provision by digitizing all theses acquired from the graduate school to provide access to students and staff. Therefore this served as one of the main driving force towards creating an IR. The repository would not only enhance visibility of the research output but also avoid duplication of work, enhance citation, readability and encourage self-archiving by both students and staff. As part of this initiative the Egerton University Library

established an IR in July 2013 with an initial support installation of Dspace from national consortium, the Kenya Library & Information Services Consortium in collaboration with EIFL. The main goal of the IR is to capture, record, store, preserve and disseminate the intellectual assets of the Egerton University. Since the year 2013 the University Library has maintained the repository and has currently uploaded 1,500 theses, 20 journal article abstracts and 150 conference proceedings. The Library has made initiative strategies for marketing the repository to the end users through training sessions, distribution of how to use handouts and have consistently consulted with the faculties on how to address the unique informational needs at departmental level.

Objectives of the study

This study was undertaken to realize the following objectives:

- (1) to find out the purpose of accessing the institution repository by the academic staff at the Egerton University;
- (2) to assess the level of access and use of the IR among the academic staff at the Egerton University; and
- (3) to assess the challenges hindering use of the IR among the academic staff at the Egerton University.

2. Review of literature

In an effort to manage educational and research, academic institutions in the developed countries have made efforts to digitize their scholarly output with an aim of providing effective service delivery to users. According to Wu (2015) “the goals of implementing IRs in academic libraries have been discussed by a number of pioneers in the early 21st century.” The commonly acknowledged functions of IRs are long-term preservation, organization and distribution of scholarly content by the institution to its communities. Decades have seen enticements of faculty participation in depositing of content in the IRs. Allen (2005) conducted a survey to compare the attitudes and behaviors of academics from different disciplines towards depositing content in IRs. The study revealed that the number of humanities documents in IRs was currently lower than that from the science and technology disciplines. According to Manjunatha and Thandavamoorthy (2001) “humanities and science oriented disciplines were found to have low level of awareness of IRs but held a positive attitude towards providing free access to scholarly results of the university.”

Benefits of IRs

Some of the main objectives for having an IR are to provide OA to institutional research output by self-archiving it, to create global visibility for an institution’s scholarly research, and to store and preserve other institutional digital assets, including unpublished or otherwise easily lost (gray) literature such as theses, working papers or technical reports.

According to Yeates (2003) some notable benefits of establishing institutional repositories are; “extending the range of knowledge sharing, existing investment in information and content management systems can be leveraged; and more flexible ways of scholarly communication are available.” Other benefits include as follows:

- (1) a showcase for the scholarly output of faculty;
- (2) a relatively inexpensive means for disseminating faculty research results;
- (3) a possible tool to leverage journal prices downward that allows subsidy; and
- (4) promotion of a philosophy of wider communication.

Challenges facing access and use of IRs

Despite the numerous benefits of IRs in academic institutions, one primary challenge is the lack of faculty participation. Without the willing power of the faculty members to contribute their works, the collection may not be sustainable nor encourage growth. Faculty members may be reluctant to self-archiving their scholarly content into the repository for fear of backlash from the publisher, a belief that depositing their work is too time consuming or holds little value. Some may be wary that the system contains gray literature and may not have gone through the process of peer review. This notion may imply that such works may detract from efficacy of their own professional research or writings.

Lynch and Lippincott (2005) indicate that, “several challenges are to be addressed and ultimately overcome in building a large-scale repository,” which are expected to address: data access, economic sustainability, discovery of data, data integrity and scale. The challenges comprise of the following:

The need for top-down and bottom-up support. Far too often this support is difficult to attain. In most cases libraries lack managerial support in establishment of IRs. There is more concern particularly in institutions in developing countries where minimal or no budget is set aside for establishing IRs. Management should think seriously about planning for library services like other projects of the institution. IRs which may easily disintegrate if not properly managed.

Most educational institutions have little or no access to the internet and networks, and bandwidth is limited. Expanding networking would encourage institutions and local journal publishers to build websites and provide content online and in so doing enable users access research materials especially if they were made available free of charge.

To this end, the arrival of fibre optic cables in African countries is very timely. Recently, the first of four undersea fibre optic cables went live, connecting African countries along the East Coast to high-speed broadband internet. The lines touched ground in Kenya, Tanzania, Mozambique and South Africa.

Developing strong ICT policies is not just about improving internet coverage – it also includes supporting institutions to manage intranets, repositories and networking projects. For example, the Kenya Education Network Trust promotes the use of ICT in teaching, learning and research in higher education institutions.

According to Kelly (2015), “policies for library publishing in an IR require monitoring to make sure they are providing the highest quality services for faculty and staff publishing material in the IR.”

Researchers and scholars may sometimes be apprehensive about infringing into publisher’s copyright and they feel they lack awareness of their own intellectual property rights.

Contributors to the IR feel reluctant in providing their bibliographic details of their scholarly output in the absence of incentives more so if they realize they can get incentives from other platforms or publishing houses.

Many universities and research institutions, but not all, have repositories for academic papers. However the growth in usage of these repositories by researchers has been very slow and the number of papers deposited remains small since no real mandate to deposit copies of papers in an IR yet exists.

According to Bamigbola (2014) “the use of IR is jointly determined by level of awareness and attitude.” A study by Christian (2008) and Nwokedi (2011) revealed that the major barriers to the use of IR by the faculty in University of Lagos and University of Jos are lack of awareness or ignorance, fear of plagiarism, constant power failure, copyright issues, server unavailability and lack of time.

3. Methodology

A survey research design was adopted for this study. A structured questionnaire was used to collect quantitative and qualitative data from the academic staff at the Egerton University.

To enhance validity and reliability of the questionnaire, various experts from the field of information science were consulted. IR managers in the university were also requested to review the items in the questionnaire. Respondents for this study were selected using a multi stage sampling technique. In the first instance the study worked on the nine faculties in the university. A sample of 108 academic staff were randomly selected to represent the sample. This figure was purposively selected from departments. The study worked on an appropriate sample using the method by Kathuri and Pals (1993) to get a sample size of 84 academic staff who regularly used the IR as seen in Table I. Through an interview session, the study also involved two ICT personnel and four library staff members who had relevant information about the installation and management of the IR at the Egerton University.

Analysis of data

Structured questionnaires were distributed among the 84 academic staff. In total, 80 questionnaires were filled and returned giving a response rate of 95.2 percent. Data were coded using Microsoft Excel and thereafter analyzed by descriptive statistics. Percentages, frequencies, tabular summaries were used to summarize and present the data.

4. Results and discussions

Level of awareness on the existence of Egerton IR

The study assessed the levels of awareness on the existence of an IR at the Egerton University. This required respondents to state their level of awareness based on ten statements. Table II summarizes the responses.

From Table II, it is a clear indication that majority of the academic staff are aware that an IR exists at the Egerton University. A close examination of Table II indicates that 50 (62.5 percent) respondents were aware of the existence of the IR, with 40 (50 percent) of the respondents

Table I.
Distribution of
the sample size

Faculty	Selected number of academic staff
Faculty of Agriculture	15
Faculty of Arts and Social Sciences	10
Faculty of Commerce	12
Faculty of Education and Community Studies	14
Faculty of Engineering and Technology	7
Faculty of Environment and Resource Development	8
Faculty of Health Sciences	6
Faculty of Science	7
Faculty of Veterinary Medicine and Surgery	5
Total	84

Source: Research data

Table II.
Level of awareness on
the existence of
Egerton institutional
repository

Level of awareness	Responses (%)
I am aware of the existence of my university institutional repository	50 (62.5)
I am not aware of the existence of the institutional repository	20 (25)
I am aware of the meaning of institutional repository	2 (2.5)
I do not know what an institutional repository is	20 (25.5)
I know the purpose of an institutional repository	55 (68)
I am aware of the content of my university institutional repository	40 (50)
I know the benefits of using institutional repository	30 (37)
I do not know the benefits of using an institutional repository	10 (12.5)

indicating that they were aware of the contents of the IR at the university. Manjunatha and Thandavamoorthy (2001) support the view that low level of awareness of IRs held a positive attitude towards providing free access to scholarly content. However 20 (25 percent) said that were not aware of the existence of an IR. In total, 55 (68.5 percent) of the respondents indicated that they knew the purpose of an IR, 30 (37 percent) of the respondents indicated that they knew the benefits of using IRs, while 10 (12.5 percent) indicated that they did not know the benefits of using an IR. Only 2 (2.5 percent) said that they knew how to deposit their scholarly work in the IR. In all, 60 (75 percent) of the respondents indicated that they are able to access thesis through the IR. This shows that the most popular content in the repository was availability of the e-thesis.

Purpose of accessing and use of IR

The study sought to establish the purpose on access and utilization of the IR. Responses were given based on three statements. A summary of the responses is given in Table III.

It was established that majority of the respondents accessed IRs to search information and search for research articles. From Table III, majority 40 (50 percent) of the respondents indicated that the main purpose of accessing and using the repository was to search information, This was further enhanced by 30 (37.5 percent) of the respondents who indicated that they accessed the repository to search for research articles. Therefore cumulatively 70 (87.5 percent) of the respondents acknowledge that they had a purpose to access and use the IR at the university. However only 10 (12.5 percent) of the respondents indicated the purpose they used the IR to submit their scholarly work. Such a finding implies that the academic staff was not aware that they could deposit or self-archive their scholarly works in the IR. According to Xia and Opperman (2010), “due to lack of faculty work, targeting students works such as thesis and essays had enabled some academic institutions adhere to the goals of an IR; to collect, preserve and disseminate the intellectual output of an institution in digital format.”

Challenges encountered in accessing the IR

Here, the study sought to find out the challenges that respondents face in accessing the IR at the Egerton University. Table IV provides a summary of the responses given.

	Responses (%)	
To submit my scholarly works	10 (12.5)	Table III. Purpose of access and utilization of the institutional repository
To search information	40 (50)	
To search for research articles	30 (37.5)	
Total	80 (100)	

Challenge faced	Responses (%)	
Lack of awareness of the institutional repository	20 (25)	Table IV. Challenges encountered in use of institutional repository
Power supply surges	10 (12.5)	
Fear of plagiarism	50 (62.5)	
Fear of not being able to publish	60 (75)	
Lack of policy	65 (81.2)	
Lack of time	20 (25)	
Copyright issues	70 (87.5)	
Slow internet	20 (25)	

The study sought to find out the challenges that the academic staff face in the access and use of the IR. A summary of the responses is given in Table IV.

An examination of Table IV shows that 20 (25 percent) respondents indicated that a lack of awareness of the IR was a challenge on access and use of the repository. In all, 10 (12.5 percent) indicated that power supply surges was a major challenge that hindered access and the use of the repository. Fear of plagiarism was also given as a challenge which affected access and use of the repository with a 50 (62.5 percent) response. In total, 60 (75 percent) of the responses indicated fear of not being able to publish as a challenge, while 65 (81.2 percent) indicated lack of policy, 20 (25 percent) lack of time, 70 (87.5 percent) indicated copyright issues and 20 (25 percent) indicated slow internet as challenges to access and use of IRs. From the findings there is a clear indication that copyright issues with 70 (87.5 percent) responses are considered the most difficult to resolve. According to Wu (2015) "as a workaround to the risk of copyright infringement, libraries have encouraged faculty to deposit preprint to the IRs in place of the published version." However it is observed that preprints have not undergone the peer review process and may differ with the published version.

From an interview session with ICT and library staff charged with maintaining the IR at the university some challenges in the use of the IR were cited as:

- lack of skilled staff;
- unwillingness to deposit scholarly works by academic staff; and
- unreliable server back up.

Respondents were further asked to give suggestions on how the university library would improve access and utilization of the IRs among the academic staff. Following were some suggestions given:

- identify vigorous strategies for marketing IRs;
- provide literacy training to curb on underutilization of IRs;
- encourage postgraduate students and faculty to take the initiative to acquire IT skills; and
- library to liaise with graduate school to make it a mandatory requirement that all theses and dissertations be submitted to the university library in electronic format.

5. Conclusion

Primarily there are essential benefits of IRs for institutions and their libraries. Through sustainable IRs the status of academic institutions would be elevated to higher visibility both locally and internationally. IRs are powerful in moving academic institutions to higher levels more so in supporting scholarly communication, providing universities with an opportunity to collect, store and disseminate institutional output while bringing in value, visibility and prestige to the affiliated institution. The study revealed that the majority of the academic staff at the Egerton University are still not aware of the existence of an IR in the university. The study also indicated that for the few academic staff who were aware of the existence of the repository, they may not be conversant with the process of self-archiving and as such most of their scholarly results remain unshared or critiqued. Libraries should therefore ensure that they vigorously market the IRs with an aim of creating awareness to users and enhance proper access and usage.

The paper pointed out several technical and non-technical challenges which have a bearing to the success or failure of the IR as an effective scholarly and communication model. From the study it was established that academic staff's lack of participation

as a major challenge. This as observed by Nagra (2012) requires, “requires careful planning and enthusiasm from the institution’s community.”

The study recommends that all stakeholders need to be sensitized about benefits of OA, advocacy for improved government, donor and institutional support and funding for required infrastructure, staffing and continued staff training, marketing of IRs; and information literacy training to curb on underutilization of IRs and other information resources, encouraging postgraduate students and faculty to take the initiative to acquire IT skills, mandatory requirement that all theses and dissertations be submitted to the university library in electronic format would enhance the adoption of OA initiatives in other academic institutions:

An IR is “recognition that the intellectual life and scholarship of our universities will increasingly be represented, documented and shared in digital form, and that a primary responsibility of our universities is to exercise stewardship over these riches” Lynch (2003).

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