

# The status of the implementation of institutional repositories in selected newly established universities in Kenya

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## Abstract

*Rationale of Study* – Academic institutions worldwide have embraced institutional repositories as a means to showcase their research globally. In Kenya, the majority of academic institutions with effective repositories are established universities. Little is known of institutional repositories of newly established universities in Kenya. This study evaluated the status of the implementation of institutional repositories of universities established between 2016 and 2017 in Kenya.

*Methodology* – The researchers used a descriptive research design in this study. Data was collected from professional library staff in three newly established universities using questionnaires. The actual respondents were selected through information-oriented purposive sampling. The sample size was twenty librarians from Kirinyaga University, Machakos University, and University of Embu.

*Findings* – All the university libraries investigated had functional institutional repositories. The libraries had developed submission and metadata policies. The staff charged with implementing institutional repositories had relevant skills, understood the scholarly communication cycle, and were responsible for recruitment of institutional repository content. The challenges faced in implementing institutional repositories included low levels of awareness of the existence of IR by the intended users, reluctant of the researchers in submitting their research with the IR, lack of resources, inadequate staff, and submission policy.

*Implications* – The findings of this study buttresses the place of information repositories as a platform to share research literature and open access to scholarly materials globally even for newly established universities in developing countries.

*Originality* – Unlike the majority of research on institutional repositories in Kenya which focused on established universities, this study tells the story of newly established universities in Kenya.

## Keywords

Institutional repository, newly-established universities, academic libraries, Kenya

**Citation:** Njagi, P.R. & Namande, B. (2018). The status of the implementation of institutional repositories in selected newly established universities in Kenya. *Regional Journal of Information and Knowledge Management*, 3 (1),30-40.

Published by the Regional Institute of Information and Knowledge Management  
P.O. Box 24358 – 00100 – Nairobi, Kenya

## 1 Introduction

Institutional repositories in the present era of digitisation have opened up vast opportunities in the dissemination and sharing of scholarly communication. Institutional repositories enable academic libraries to communicate the intellectual output of their community of users, boost online access and enhance the image of libraries in the institution (Chang, 2017).

According to Aziz (2011), institutional repositories originally emerged as depositories of theses and dissertations but have evolved over time to include other scholarly work such as journal papers, conference papers, and other student publications. A study by Ezema (2013) on content in institutional repositories in Nigerian university libraries established that the dominant content in the repositories were theses, dissertations, faculty and departmental journals, conference proceedings, inaugural lectures, as well as conference and seminar papers.

Institutional repositories are associated with a number of benefits. Hockx-Yu (2006) argues that institution repositories support the open access objective of scholarly communication. Besides, institutional repositories give authors visibility, make it easy for users to find information, increase the research profile of the institutions, and widen dissemination of research outputs. According to Uhlir (2006), institutional repositories provide universities with a

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permanent and global window to enhance research and teaching. In addition, the repositories facilitate access and re-use of materials for research and teaching. Institution repositories also advertise the institutions' achievements and capabilities leading to more funding, attraction of new talent and students. More so, they facilitate higher citations and readership which raise the profile of the institution and its faculty. Ezema (2013) postulates that institutional repositories globalise research output leading to improved global ranking of institutions and increased impact of their research output.

Successful implementation of institutional repositories is depended on a number of factors. Farida, Tjakraatmadia, Firman and Basuki (2015) maintain that collaboration, and technological functions, are important for successful implementation of an open access institutional repository (OAIR) for academic libraries in Indonesia. According to Lagzian, Abrizah and Wee (2015), management, services, technology, self-archiving practices, people, and resources, are the critical factors influencing the success or failure of institutional repositories. People are important in content recruitment, advocacy and overall management of the repository. Management support ensures the sustainability of the institutional repository. Self-archiving aids in submission, updating, and copyright management of the content of the institutional repository. Technology enables institutional repositories to achieve effective

interfaces, search capabilities, speed, and reliability. However, Roy, Biswas and Mukhopadhyay (2013) point out that the successful implementation of institutional repository is not dependent on the type of system software an institution adapts but the quality and quantity of the resources recruited to populate the institutional repository.

Content recruitment is an important factor for successful implementation of an institutional repository. Libraries should develop content submission policies to guide the submission of content to the repositories. Information professionals in universities should write guidelines and submission policies if populating institutional repositories will be achieved (Biswas and Paul, 2012). Leaving users to choose when and how to submit their research output, probably through creation of an online submission form, will not yield result, according to Row (2011), because users require unrelenting persuasion for them to comply. Roy, Biswas and Mukhopadhyay (2013) observed that institutional repositories can be a platform where copyright issues can be violated since they hold various types of publications. They assert that there is the need for appropriate submission policies.

Closely-related to content recruitment is metadata which are essential in the description and discoverability of institutional repository content. However, as *Regional Journal of Information and Knowledge Management*

noted by Chapman, Reynolds and Shreeves (2009) institutional repositories use different types of metadata leading to inconsistency, lack of authority and poor vocabulary control. Institutional repository managers should strive to provide more descriptive, preservative, and structural metadata options. Palavitsinis, Manouselis and Sánchez-Alonso (2017) emphasise the need to train indexers on metadata entry, use of controlled vocabulary, and Library of Congress subject headings. Solodovnik (2013) opines that it is important that the technology employed during the implementation of an institutional repository have standards that deal with the criteria of selection of metadata for items ingested in the facility.

Staffing, besides the content recruitment and description, is paramount in the success of implementation of institutional repositories. A survey by Cassella and Morando (2012) at Kansas State University concluded that though the university had successfully implemented an institution repository, its staffing levels were wanting. One person managed the repository. They observed that this staffing situation could severely hinder the growth of the repository. According to Marrow and Mower (2009), institutional repositories deserve to be equipped with personnel who fully understand the process of scholarly communication from data collection, authoring, publication, and digital archiving of information resources. Aziz (2011) points out that staffing is a critical

issue to the success of institutional repository. Failure to hire competent staff to manage the institutional repositories could lead to failure of the repositories. Chang and Hopkinson (2017) proposes the provision of in-house training on the scholarly communication cycle to all staff charged with the responsibility of managing the institutional repositories. Simons and Richardson (2012) suggest that the management of institutional repositories be left to trained librarians who understand the process of collection development and are knowledgeable about selection criteria and what forms quality information materials that can be recruited to the institutional repository.

Implementation of institutional repositories faces a number of challenges. Mapulanga (2013) conducted a study on building digital repositories in the University of Malawi Libraries and established that the process was slow and hampered by inadequate bandwidth, virus attacks, as well as lack of technical skills, policy, and funding. In Nigeria according to Ezema (2013), the repositories encounter poor ICT infrastructure, lack of awareness, irregular power supply, inadequate funding, lack of relevant policies, and low internet bandwidth. A study by Makori, Njiraine and Talam (2015) established that libraries in Africa had not integrated the institutional repositories into the mainstream library information services; the library users were unaware of the

existence of the repositories because of lack of marketing and promotion; and content format excluded graphic, video, and sound files.

Academic university libraries the world over have embraced institutional repositories. Kenyan universities libraries have not been left behind. Gichiri, Nge'tich, Omwoha and Maina (2017) surveyed the status of institutional repositories of the Kenya Library and Information Service Consortium (KLISC) member libraries. The survey established that a majority of surveyed libraries had a functioning repository. However, the repository managers did not have a clear designation and professional status. At the United States International University-Africa's institutional repository, Okumu (2015) revealed that the staff lacked skills to manage the repository effectively and that there were no policies on the access and use of the repository content.

Mugambi and Ongus (2016) conducted a case study of Dedan Kimathi University of Technology's institutional repository and established that there was no institutional repository policy. Mosei (2016) studied institutional repositories of six universities in Kenya. The study found that the scholars rarely used the university's repositories to preserve their research because they were not aware of the role of the repositories in the preservation of research output. Chilimo (2016) studied five university repositories in Kenya. The research revealed that three of the repositories had adopted mandatory open

access policies. Nevertheless, the majority of scholars were unaware of the existence of the repositories and the policies. This and concerns on copyright, lack of time and skills contributed to low participation in the use of the repositories by the researchers. Ratanya (2017) conducted a case study of access and use of Egerton University's institutional repository by academic staff. The findings of study showed that the majority of the respondents were not aware of the existence of the repository while those who were aware faced myriad challenges in accessing and using the repository content.

## **2 Rationale of the study**

The majority of studies on institutional repositories in Kenya's academic libraries have thus far focused only on established universities. There is little research on the status of the implementation of institutional repositories of newly established universities in Kenya. This study addresses this research gap by evaluating the status of the implementation of institutional repositories in newly established universities in Kenya to determine their adequacy in satisfying scholarly communication needs. Newly established universities in Kenya, in this study, refer to universities awarded charters in the year 2016 and 2017. According to Commission for University Education (2017), the following eight universities were awarded university charter in 2016 and 2017, Kirinyaga University, Machakos

University, Murang'a University of Technology, Rongo University, Taita Taveta University, The Co-operative University of Kenya, University of Embu and Garissa University.

The specific objectives of the study were to assess the status of the implementation institutional repositories in newly established universities in Kenya; establish the role of staff charged with the implementation of institutional repository in newly established universities in Kenya; identify the challenges hampering the successful implementation of institutional repositories in newly established universities in Kenya.

## **3 Research methodology**

The researchers used descriptive research design to conduct this study. The rationale for using this approach was because of its potential to help them to investigate and describe the status of the implementation of institutional repositories in newly established universities in Kenya. The total population was 40 librarians. The researchers purposively sampled 20 librarians charged with the responsibilities of managing the IR, and were therefore knowledgeable on IR. The 20 librarians were sampled from three newly chartered universities, Kirinyaga University, Machakos University, and University of Embu. The three were considered because they were the newly chartered in 2016. The researcher visited the universities and physically distributed the questionnaires to the sampled librarians.

#### **4 Research findings and discussion**

The findings of the study are reported and discussed according to the objectives of the study in this section.

##### *4.1 Status of implementation of the institutional repository*

The first objective of the study was to assess the status of the implementation of institutional repositories by the newly established university libraries in Kenya. To establish the status of the implementation of institutional repositories, the library staff were asked to indicate if the institution they were working in had a functional repository or not. The majority (57.69%) of the respondents agreed that their institutions had a functional IR. The library staff were then asked to state if there was a submission policy that guided the recruitment of IR content. An equal percentage, 26.3%, (n=5), of the respondents agreed and strongly agreed that the institutions had IR submission policy.

Apart from the existence of a submission policy, the study sought to find out if the institutions had a metadata policy to guide the description of IR content to facilitate discovery. 42.11% of respondents agreed that their institutions had a metadata policy in place. The overall results show that the institutions under study had a functional IR, and had a policy in place to guide content recruitment and description.

The findings indicated that the libraries had functional repositories which were well

managed and guided by established recruitment and metadata policies. This will enable these newly established universities in Kenya to communicate their intellectual output, and boost their online access. The presence of a submission policy in these libraries will guide and fast-track the submission of content to the repository. The metadata policy is vital in establishing consistency and discoverability of the content in the repositories.

##### *4.2 The role of library staff on implementation of institutional repository*

The second objective of the study was to establish the role of the staff charged with the implementation of institutional repositories in newly established universities in Kenya. To establish the role of the librarians on IR, the study sought to find out if the librarians possessed the right skills to implement IR. The majority, 52.63%, of the respondents agreed that they had the relevant skills as compared to 5.26% who strongly disagreed that they did not possess the right skills. Proper implementation of IR calls for a good mastery of the scholarly communication cycle and the role of the IR in the process. Majority of the librarians, 52.63%, agreed that they possessed a good understanding of scholarly communication process, though 15.79% of respondents were uncertain if they had a good grasp of scholarly communication cycle. Besides the librarians' knowledge on scholarly communication, the study sought to establish if the librarians were responsible for

recruiting IR content. Majority of the respondents, 63.16%, were responsible for recruiting content for the IR, and 10.53% were not responsible.

Staff are key in the implementation of IR. They should possess the relevant skills, understand the scholarly communication cycle, and their responsibilities should be well spelt out. The findings indicate that majority of the librarians had the relevant skills to implement and manage institutional repositories. The librarians were also well versed with the scholarly communication cycle and the place and role of the institutional repository. The librarians were also responsible for content recruitment. This is important in that when left on the researchers, the chances are that majority of them would fail to upload their research output into the repository. The librarians go out of their way to ensure that the researchers avail to them their research publications for uploading, even if it calls for a visit to their offices.

#### *4.3 Challenges to successful*

##### *implementation of Institutional repositories*

The third objective of the study was to identify the challenges to successful implementation of institutional repositories in newly established universities in Kenya. One of the challenges the librarians experienced in IR implementation was lack of resources. The majority of the respondents, 31.6% (n=6), agreed that the lack of resources was a major challenge to

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the implementation of IR, though 26.3% strongly disagreed that the lack of resources was a challenge to IR implementation.

Given that staff are crucial in implementation of IR, the study sought to establish if the respondents felt that lack of staff was an impediment to the implementation of IRs in their institutions. Most (31.579%) of the respondents agreed and strongly agreed that lack of staff was a major challenge in IR implementation, as compared to 5.26% who disagreed.

The respondents were also asked if they regarded lack of a submission policy as a hindrance to IR implementation. Most of the respondents, 42.11%, agreed that lack of a submission policy was a challenge to implementation of IR, as compared 10.53% who disagreed and strongly disagreed. Management support is important for successful implementation of IR. The respondents ranked their opinion on management support as a challenge to IR implementation. 6 (31.6%) of the librarians strongly disagreed that management support was a challenge to IR implementation, as compared to 5 (26.3%) who strongly agreed that it was. Awareness of the existence of the institution repository to the target group is of paramount importance. The librarians expressed their views on the effect of users' awareness of IR on successful implementation of the IR. The majority of the respondents, 52.63%, felt that the low user awareness of IR was a major challenge for successful

implementation of the IR, in comparison to 10.53% who disagreed and strongly disagreed. The respondents were asked to rank their opinions on content recruitment responsibilities as a challenge to IR implementation. Most of the librarians, 63.16%, felt content recruitment responsibilities, which includes ensuring that the researchers avail their publication for uploading, was a challenge to IR implementation, in comparison to 5.26% who strongly disagreed. However, a 10.53% were either strongly agreed, or were neutral, or disagreed.

It is evident from the findings above that the implementation of IR in institutions under study faced a number of challenges. IR is a capital-intensive venture in terms of hardware and software investment. Newly established universities are usually underfunded; establishing an IR may not be a priority. The majority of the librarians agreed that lack of resources was a challenge to IR implementation. Adequate staffing is an important resource for the effective implementation of IR. The studied libraries are understaffed; the librarians cited lack of sufficient staff as a challenge to IR implementation. Besides staffing, the need for a policy to guide the content recruitment is essential. However, the librarians found the implementation of the submission policy as a challenge to IR implementation. The policy requires the researcher to furnish the library with their publication as soon as they

are published. This, however, is not the case and the librarians are forced to chase after the researchers for the publications. This may imply that the researchers were resistant to the policy, and therefore, refused to avail their publications for uploading. Management support is crucial in IR implementation. The majority of the librarians surveyed showed that their management was supportive. This means the management were well versed with the role and importance of IR in promoting the visibility and awareness of the institution. Lack of user awareness is a challenge the librarians should tackle. The librarians should educate the researchers on the importance and role of IR in their academic endeavours. The majority of the users are reluctant to submit their publications for uploading in the IR. This may be because they fear violation of privacy, plagiarism, and copy infringement. Therefore, content recruitment of IR content becomes a challenge to the librarians.

## **5 Conclusion**

The institutions under study had functional repositories. The libraries had established recruitment and metadata policies. The majority of the librarians had the relevant skills and a good understanding of the scholarly communication cycle as well as the place and role of the institutional repository. The librarians were responsible for content recruitment. The challenges faced by the librarians in implementing IR included lack of resources, understaffing, reluctant of faculties submitting their research for upload, and low

user awareness of existence and importance of IR. The newly established universities in Kenya have embraced the institutional repository concept. This will greatly improve the international impact of research output of the universities in Kenya. However, the universities should do more in promoting the concept of open access to the research fraternity to widen the access of the research publications.

### 6 Recommendations

There is a need by the management to support IR by ensuring there is adequate number of staff that is well trained and motivated. The management should also invest in hardware and software necessary for effective implementation of IR. The librarians should intensify their efforts in creating IR awareness among the faculty through well-planned and executed marketing campaigns.

### 7. Implication of the study

The findings of this study can contribute to the clarification and emphasis of the primary role of institutional repositories in newly established academic institutions in Kenya. The findings of this study can provide a point of reference to university colleges that are in transition to university status in Kenya.

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