

## Promoting Access and Use of Local Content by Academic Staff of Kenyatta University, Kenya: The Role of Institutional Repository

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**Abstract:** Institutional repositories are increasingly being fronted as a major way in which universities can disseminate research output globally. Despite the immense potential benefits they present to scholars, their use is significantly low. The aim of this study was to investigate the role of institutional repository in promoting access and use of local content by academic staff at Kenyatta University. Using a mixed method research paradigm, a sample size of 91 academic staff, was drawn through stratified random sampling method. Also the university librarian (1) and 3 institutional repository staff was used as key informants. Data was collected using interviews and questionnaires. Major findings indicate that academic staff contribute a range of content, albeit limited in number, into the institutional repository, the level of usage of the institutional repository is unsatisfactory and therefore need for improvement; to promote the access and usage of the institutional repository, Kenyatta University has put up a number of ICT infrastructures. Academic staff faces a number of access related challenges which include but not limited to, low internet bandwidth, institutional repository downtimes, and access barriers such as passwords; the profound barriers to effective usage of the institutional repository were: plagiarism, quality control, research impact, and long item submission procedure. The study concludes that access and use of local content at the Kenyatta University institutional repository is unsatisfactory.

**Keywords:** Institutional Repository, Local Content, Academic Staff, Access, Use, D-space

### INTRODUCTION

Increase in the cost of publication, subscriptions to online journals and the growth in the scholarly output in digital format has become a major challenge to libraries and their users. This coupled with developments in Information and Communication Technologies has led to libraries in developing alternative methods of disseminating research outputs through open access technologies such as institutional repositories.

Most academic institutions have developed institutional repositories using various softwares such as D-space, Greenstone, IR-plus among others to enable them disseminate research outputs and other publications to their users. These institutional repositories contain full text and abstracts of research output conducted within the universities as well as other unpublished publications that the universities feel appropriate to disseminate through open access.

Despite the success of institutional repositories in disseminating research outputs and other unpublished literature, a number of issues such as access and use of institutional repositories by their targeted user's needs to be addressed. Headland [1] observes non-use of information repositories calls for a deeper

understanding of open access practice by understanding the main incentives and barriers regulating the acceptance and use of institutional repositories in disseminating the research output and other unpublished literature through open access.

More often than not the level of access and use of institutional repositories is significantly low. This has been contributed to a number of factors. Westell [2] and Kingsley [3] observed that even though institutional repositories has sprung up across academic institutions across the world, so far deposit of materials in institutional repositories has been slow due to poor contribution to the institutional repositories by the academic researchers. Most of the content in these institutional repositories are theses of which some of them provide only abstracts. The access and use of these repositories by academic staff has also been shown to be significantly low. The purpose of the study was investigate the role of institutional repository in promoting access and use of local content by academic staff at Kenyatta University with a view to recommending solutions that can be used to promote access the same. This study focuses on the teaching members of staff at Kenyatta University, the university librarian as well as the institutional repository manager and institutional repository staff at Kenyatta University.

The study also focuses on access and use of local content available at institutional repository by academic staff at Kenyatta University.

**METHODOLOGY**

This study adopted a mixed method research design. Research design is the structure that holds together the research and enables one to address research questions in ways that are appropriate, efficient and effective [4]. Both quantitative and qualitative approaches were used to collect and analyze data. The design was complementary with qualitative method being used to clarify results obtained from the quantitative method.

This research design was preferred due to its advantages such as its ability to capture diverse views on access and use of local content by academic staff. It was also preferred because it allows the researcher to look at the research questions from different angles and

clarify unexpected finding and /or potential contradictions.

In this research, the researcher started with a survey in order to generalize results to a population and then embarked on qualitative open-ended interview to collect in-depth information from the participants. This was necessary in order to allow the researcher to orient his questions according to the predetermined objectives. This method guided the study in gathering the opinion of the librarian, institutional repository manager and staff on the role of institutional repository in promoting access and use of the local content to academic staff at Kenyatta University.

**Population of the study**

The target population of this study was the 972 comprising of 967 academic staff and 5 library staff. Library staff was categorized as follows;

**Table-1: Population of the library staff interviewed**

Category	Total Number
University Librarian	1
Institutional repository manager	1
Institutional repository staff	2

**Table-2: Population of academic staff under the study**

School	Total Number of academic staff
Education	100
Agriculture	50
Applied Human Sciences	73
Business	92
Engineering	64
Economics	83
Environmental Studies	79
Human and Social Sciences	75
Medicine	86
Public Health	90
Pure and Applied sciences	83
Visual and Performing Arts	92
<b>TOTAL</b>	<b>967</b>

Source: Kenyatta University human resources department.

**SAMPLE SIZE**

The sample size of this study constitutes of 91 respondents which was arrived at by applying Yamane’s (1967) formula:  
N=number of total population=967

Where e=10% which is the level of precision  
n=is the sample size which is representative of the group

$$n = \frac{N}{1+N(e)^2}$$

**Table-3a: Population of the library staff interviewed**

School	Total number of academic staff	Sample size
Education	100	9
Agriculture	50	5
Applied and Human Sciences	73	7
Business	92	9
Engineering	64	6
Economics	83	8
Environmental studies	79	7
Human and Social Sciences	75	7
Medicine	86	8
Public Health	90	8
Pure and Applied sciences	83	8
Visual and Performing Arts	92	9
<b>TOTAL</b>	<b>967</b>	<b>91</b>

In addition, interviews were conducted for institutional repository manager (1) and the institutional repository staff (3) as well as the university librarian (1) on the role of institutional repository in promoting access and use of local content by academic staff at Kenyatta University.

**Data collection instrument**

A combination of questionnaires and interviews were used to collect data for the purposes of this study.

**Data collection procedure**

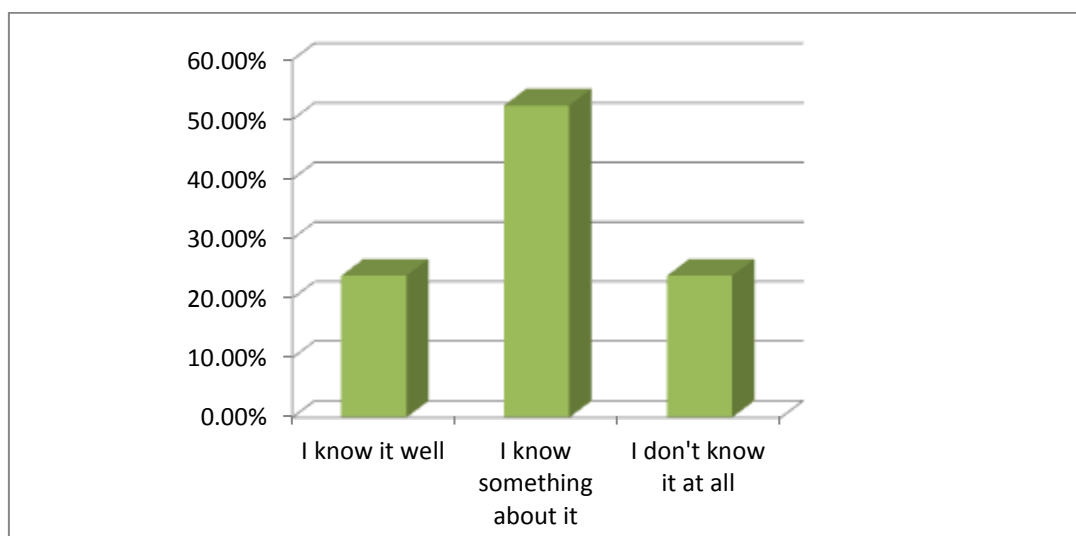
The first step involved design of questionnaires and then interview schedule which were to be used in collecting data. After designing the questionnaire and interview schedule, the researcher reviewed them with a group of experts to ensure clarity of the questions and also make sure the right information was to be captured.

The researcher then visited the respondents at their places of work and with the help of the school administrators distributed the questionnaires to the selected respondents. This ensured that most of the questionnaires were returned as the administrators helped in collection of the questionnaires. The researcher then collected the filled questionnaires from the respondents, interviewed the librarian, institutional repository manager and staff.

**Research findings**

**Awareness of Kenyatta university institutional repository**

This section sought to collect data on the awareness of the institutional repository among Kenyatta University academic staff. This is because the level of awareness of the institutional repository determines the access and use of local content by the users. The data collected is represented in figure 1.



**Fig-1: Percentage awareness of the institutional repository among Kenyatta University academic staff**

The main purpose of the institutional repository is to enable user’s access and use local content available [5]. This means user’s knowledge of the institutional repository is critical. The findings in figure 1 show that the percentage of academic staff who knew nothing or little about the institutional repository is way higher than those who knew the institutional repository well.

**Use of the institutional repository by contribution of local content by academic staff at Kenyatta University**

The findings revealed most of the respondents, who at least knew something about the institutional repository, make their publications available in the institutional repository. However none of the respondents who didn’t know anything about the institutional repository contributes content to the I.R.

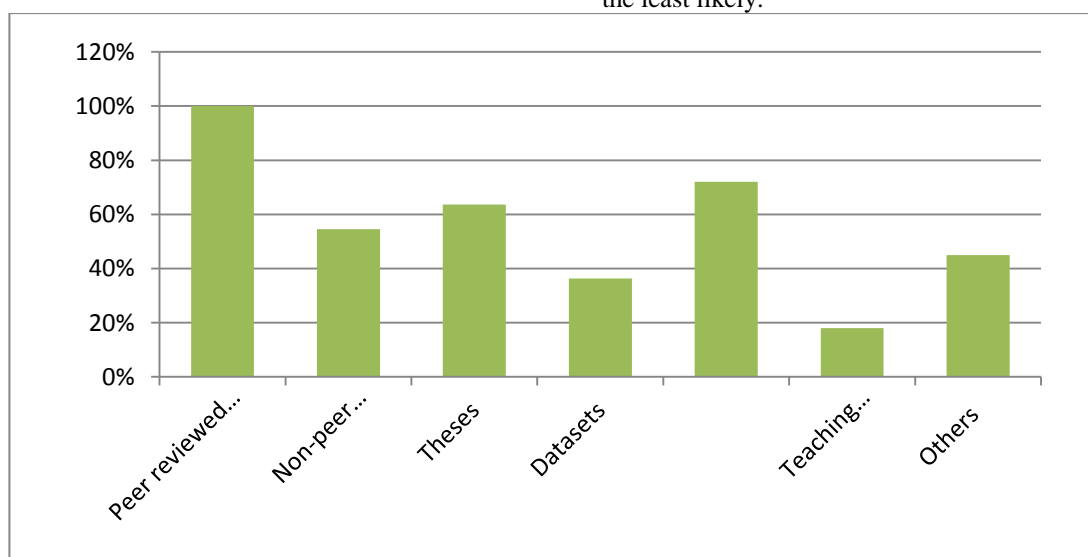
**Table-3b: Awareness of the institutional repository and the contribution to the institutional repository**

Awareness of the IR	Total	Contributes/d publications to the IR	Did not contribute Publications to the IR
I know it well	20	15	5
I know Something about it	44	30	14
I don’t know it at all	20	0	20
Total	84	45	39

The data represented in table 3b shows the usage of the institutional repository in terms of contribution of content into the institutional repository by academic staff. Although the usage of the institutional repository in terms of percentage is fair, this is unsatisfactory. For the institutional repository to have an impact in providing access and use of local content there is need to ensure more academic staff are encouraged to make use of the institutional repository. This is also backed up by the information obtained from the interview with the institutional repository manager and staff. They indicated although the institutional repository has attracted significant interest from academic staff, its usage is still unsatisfactory. They felt there is need for more academic staff to contribute their content into the institutional repository.

**Types of local content contributed to the institutional repository by academic staff**

This section sought to establish the type of content contributed to the institutional repository by academic staff at Kenyatta University. Type meant the kinds of intellectual output in terms of document academic staff are willing to avail to the institutional repository. The respondents who indicated that they would contribute content into the institutional repository were asked what type of work they would deposit. They were allowed to select all the types of contents they would contribute. The findings are represented in figure 2 and shows peer reviewed articles; conference papers and thesis are the most likely documents to be availed to the institutional repository compared to datasets and teaching materials which are the least likely.



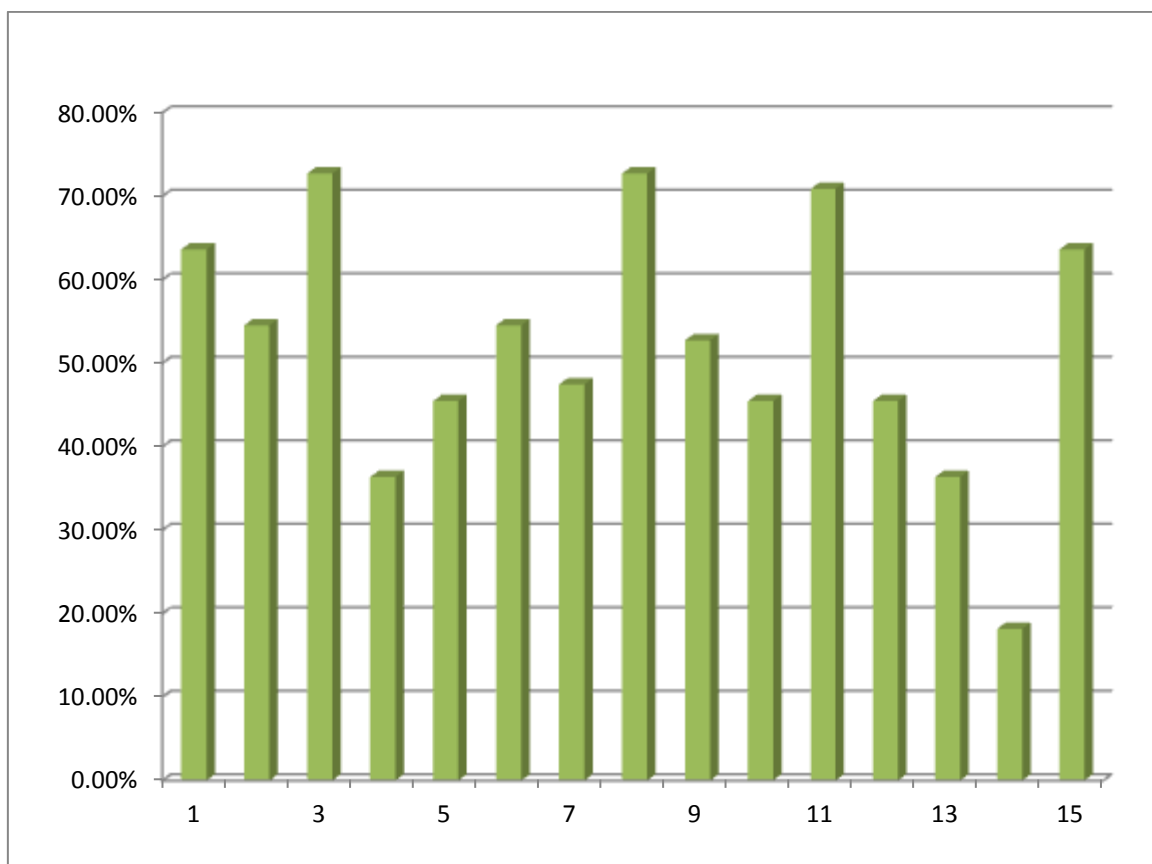
**Fig-2: Types of local contents contributed by academic staff to the institutional repository (\*respondents were allowed to select more than one response)**

The data above is reflective of the findings from the interview with the institutional repository staff and the librarian who indicated that although the academic staffs are allowed to contribute a number of contents into the institutional repository, most of them prefer to avail peer reviewed articles. This can be attributed to academic staff concern about the quality of the work they available.

**Motivations to contribute local content to the institutional repository**

This section aimed at establishing the factors that motivate academic staff at Kenyatta University to

contribute content into the institutional repository. The findings revealed that accessibility of the work, permanent archiving and availability, increased number of citations, and increased chances of promotion were among the major motivating factors. Others include; university saving money, the institutional repository is well indexed and archived, ease of use of the institutional repository, the work getting published among other high quality research, ease of dissemination of the work, protection from plagiarism among others.



**Fig-3: motivations to contribute local content into the institutional repository**

See the adjoining table 4 below for more explanations

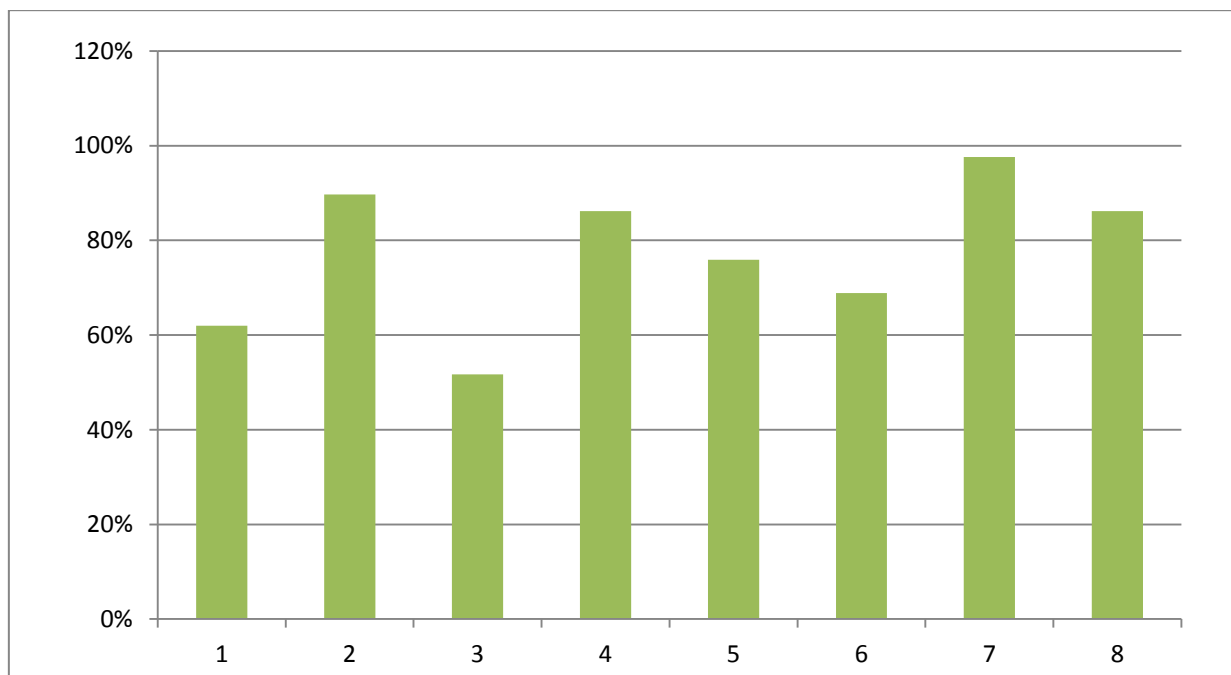
**Table-4: motivations to deposit content into the institutional repository**

1	Accessibility of my work is increased	6	Ease of dissemination of my work	11	My work is published along other high quality research
2	The Impact of my work is increased	7	I retain the copyright	12	The repository is easy to use
3	My work will be permanently archived	8	The number of citations of my work increases	13	The repository is well indexed and archived
4	Access to my work is cheaper for others	9	I can add extra data to the work such as photos, video, audio and datasets	14	The university saves money
5	My published work is easy to use	10	My work is protected from plagiarism	15	My chances of promotion are increased

From the figures above, factors that have a direct benefit to the academic staff and their research were rated highest. They include increased impact of their research work, increased citations of their research work, their work getting published along other high quality works, increased accessibility and increased chances of promotion. Factors that were deemed to have little direct impact to academic staff such as; the university saving money, the repository being well indexed and archived and the work being cheaper for others to access were rated lowest.

**Reasons for non-usage of the institutional repository**

The study sought to establish from the non-users the factors that hinder them from making use of the institutional repository. This data was necessary in order to find out factors that hinder usage of the institutional repository and therefore recommend remedial measures. The findings are represented in the figure 4 below.



**Fig-4: Reasons for non-usage of the institutional repository**

\*Respondents were allowed to choose more than one response  
See the adjoining table 5 for more explanations.

**Table-5: Hindrances to usage of the institutional repository**

<b>1</b>	<b>My work might be misused</b>	<b>5</b>	<b>Long item submission procedure</b>
<b>2</b>	With no peer review or quality control process the quality of content of the repository would be questionable	<b>6</b>	Institutional Repository is for disseminating students thesis
<b>3</b>	Publishers would not let me put my work in the repository	<b>7</b>	If I deposited m work in a repository then I could not later publish it in a peer reviewed journal and so my promotion prospects would suffer
<b>4</b>	The impact of my work would be less if I deposited in a repository and so my promotion prospects would suffer	<b>8</b>	The research assessment exercise would not take into account work in a repository

Ability to publish the work already in the institutional repository, questionable quality of content in absence of peer review, less impact of work in the institutional repository and assessment exercise not incorporating the content in the institutional repository were rated highest among the factors discouraging non-

users among academic staff from availing their content into the institutional repository. Others include, long item submission procedure, concerns on copyright, misuse of their work and institutional repository being for depositing students theses were also mentioned. Although some of the concerns may not be genuine,

there is need for the management of the institutional repository to address the concerns of the academic which will lead to increased usage.

**Challenges in accessing the institutional repository**

The research sought to establish from the academic staff the challenges they face in making use

of the institutional repository. The findings show that a huge segment of the respondents (73% n=91) had faced access related problem at one time or the other. However a significant number (27.27%) reported having not faced any access related problem.

**Table-6: Challenges in access and use of the institutional repository**

Challenge	Number of respondents	Percentage (%) (n=40)
Low internet bandwidth	30	75%
Institutional Repository downtimes	10	25%
Access barriers such as passwords	35	87.5%
Unavailability of the institutional repository outside the University intranet	10	25%
Lack of a dedicated computer facility to operate from	20	50%

**\*Respondents were allowed multiple responses**

From the table above access barriers such as passwords was cited as the biggest challenge that academic researchers face in their efforts to access and make use of the institutional repository. This is because D-space institutional repository system requires one to first log-in as a user before making any submission to the system [6]. Low internet bandwidth also follows closely as one of the challenges they face in accessing and making use of the institutional repository. This is important especially bearing in mind that internet connectivity is a pre-requisite for one to access the institutional repository from a remote location. Lack of a dedicated computer facility to operate from was cited also cited by half of the respondents meaning that this group felt there ought to be a staff computer facility to facilitate access and use of the institution repository. Others included institutional repository downtimes and unavailability of the institutional repository outside the university intranet which were cited by 10 % of the respondents.

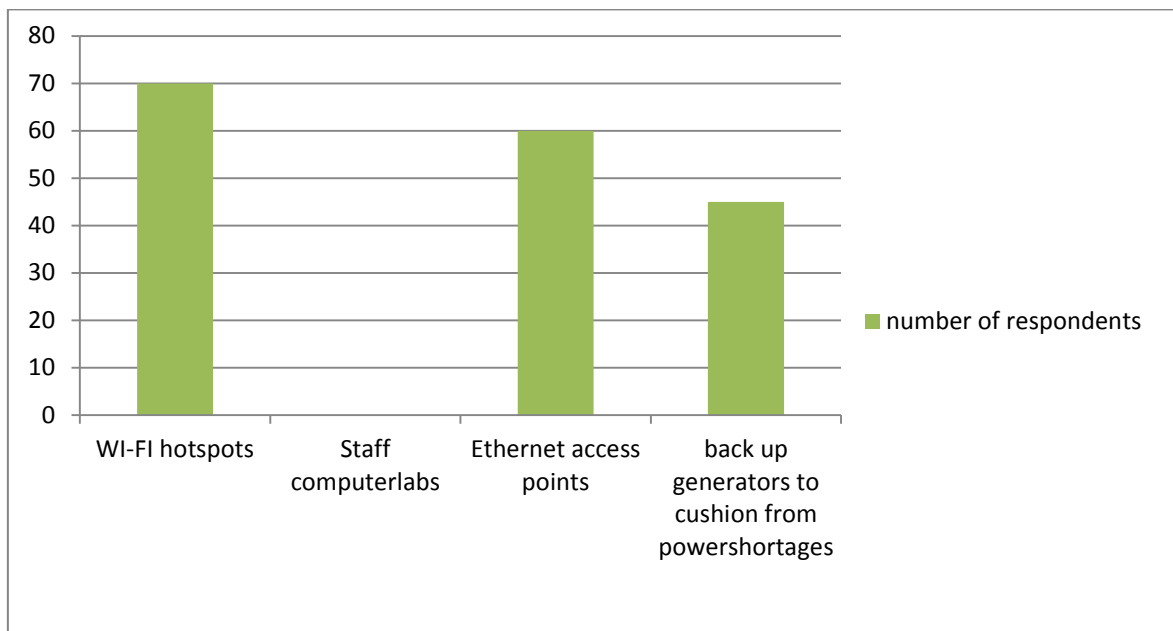
The interview with the librarian and the institutional repository staff also confirmed some of the challenges cited by the respondents. The interview confirmed that indeed, there is no dedicated computer lab to enhance access and use of the institutional repository by the academic staff. On the issue of downtimes, the librarian confirmed that the university was working on solving the problem by having a dedicated server for the institutional repository.

However the data obtained from the interview differed with the one obtained from the respondents on the issue of unavailability of the IR outside the university intranet. The institutional repository manager indicated that the institutional repository is readily available on the internet via a public IP address. He indicated that the users complain about unavailability of the institutional repository outside the university intranet may be as a result of the internet settings on their browsers.

**ICT infrastructure facilities available to facilitate access and use local content through institutional repository**

This section aimed at collecting data on the ICT infrastructure available at Kenyatta University. This was important because access and use of local content in the institutional repository is highly dependent on the ICT infrastructure [7]. The study found out that Kenyatta University has put in place a number of ICT infrastructure geared towards facilitating access and use of local content in the Institutional repository. Most the respondents who responded cited Wi-Fi hotspots, Ethernet access points among the facilities that the University has put in place to improve connectivity. However none of the respondents cited staff computer labs among the facilities offered to facilitate access and use of local content by academic staff at Kenyatta University.





**Fig-5: ICT facilities offered at Kenyatta University**

\*Respondents were allowed more than one response (n=84)

The findings above are confirmed by the information obtained from the interview with the librarian, who indicated that the university has emphasized on internet penetration by offering Wi-Fi hotspots and Ethernet access points at designated points to improve access. It is important to note that Wi-Fi hotspots are meant to facilitate wireless connection to devices while Ethernet is for facilitating connection to wired devices. The interview also established that the library is on the process of developing dedicated computer labs for the academic staff who may feel uneasy to use student’s computer labs.

**Improvement on Kenyatta University institutional repository**

This section sought to establish from the respondents ways of making the institutional repository more useful to the academic staff at Kenyatta University. It also sought to establish from the repository manager measures put in place to ensure improved access and use of the local content in the institutional repository. The findings from the academic staff are represented in the table that follows.

**Table 7: How different factors affect usability of the institutional repository (n=84)**

Factor	Very important	Important	Moderately important	Little importance	Un important	Total
Provide full text rather than abstracts	65.5%	11.90 %	11.90%	5.96%	4.76%	100%
Make pre-print versions available to worldwide audience	23.8%	11.9%	5.96%	23.8%	34.5%	100%
Provide a way to create online peer reviews	59.5%	17.9%	11.9%	5.96%	4.8%	100%
Show the number of times the document has been viewed and downloaded	83.3%	11.9%	5.96%	0%	0%	100%
The library to offer regular training on	100%	0	0	0	0	100%

The findings in the table 7 have been interpreted below:

**Provision of full text rather than abstracts**

From the above findings it is clear that most academic staff regards availability of full text articles

on the institutional repository rather than abstracts of importance to them. This is consistent with principles of open access where access barriers of access to information are bridged by provision of full text documents [8]. This means that academic staffs at



Kenyatta University deem it important to avail the whole document to their online audience.

### **Making pre-print versions of the work available to a worldwide audience**

The study found out that most of the respondents considered this factor of little or no importance to them. The findings above is attributed to the concerns on copyright because as noted in this study earlier the respondents had concerns with publishers letting them publish their works after they have appeared on the institutional repository. Also this concern could also arise due to the respondents 'fear' that their work could be plagiarized if it is availed to a worldwide audience.

### **Provision of online peer review**

The study found out that most respondents prefer the institutional repository to provide a forum for online peer review. This data shows the amount of importance academic staff at Kenyatta University attach to online peer reviewing of the documents in the institution repository. Most of them feel that if the institutional repository provided online peer review it would be more useful. This means that the respondents would like the institutional repository to give them an online platform to learn and interact with their peers.

### **Showing the number of times the document has been viewed or downloaded**

The study established most respondents consider this factor as important in improving the institutional repository Ability to show the number of times a document has been viewed helps researchers to gauge the impact of their articles/documents [9] and therefore the reason why most respondents felt this fact was important.

### **Regular training on the institutional repository by the library**

The findings of the study also revealed that most respondents consider regular information literacy training on institutional repository as important. Training on institutional repository is important to make sure that users are impacted with the necessary skills to make use of the content in the institutional repository and also enabled to deposit content into the Institutional Repository [10].

The interview revealed that the library has put up a number of measures to encourage academic staff to access and use the institutional repository. They include, organizing regular training on the use of the institutional repository, establishing an institutional repository team to handle issues relating to access and use of the institutional repository, ensuring that academic staff are provided with user name and passwords to make it easy to submit content into the institutional repository among others.

## **CONCLUSION**

This study investigated the role of institutional repository in promoting access and use of local content to academic staff at Kenyatta University. The study concludes that access and use of local content by academic staff at Kenyatta University is generally unsatisfactory. A number of factors affect academic staff ability to access and use the local content in the university repository. They include issues of perception, impact of research, and low internet bandwidth among others

## **Recommendation**

The study recommends information literacy training to academic staff, increase in internet bandwidth, download tracking, and incorporation of institution repositories in research assessment as ways of improving access and use of local content by academic staff via institution repositories.

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