

# Use of the University of Khartoum Institutional Repository by Graduate Students

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## ABSTRACT

This paper attempted to investigate the use of the University of Khartoum Institutional Repository (Khartoumspace) by graduate students and to explore their attitudes towards the repository and its contents. The study adopted a descriptive survey approach. A questionnaire was used to collect data from 150 students who formed the study sample from a study population of about 1800 graduate students in the Humanities and Social Sciences disciplines at the University. Data collected was analysed in simple statistics and presented in tables consisting of frequencies and percentages. The study revealed that electronic theses and dissertations and eBooks are the most frequently used items of the repository's collection. The study also showed that there is low usage rate of the repository by the respondents but they have positive attitudes towards the repository, and that the majority of the respondents learnt about the existence of the repository from a colleague rather than from a librarian. The findings indicated that, in order to enhance the usage of the repository by graduate students, there is a need for more awareness raising and advocacy programmes to be carried out by the library about the repository and its benefits to the academic community of the university.

**Keywords:** Institutional repositories, khartoumspace, open access repositories, university of khartoum

## 1. INTRODUCTION

Access to academic and scientific information for faculty members and students, particularly graduate students has always been difficult in Sudanese universities. This is particularly true at the University of Khartoum which has become the hub for graduate studies in Sudan during the last two decades of what was called in Sudan the 'Higher Education Revolution'. This difficulty in accessibility of much needed information is mainly due to the poor status of the University Library in terms of acquisition of information sources such as journals, textbooks and references. The problem is exacerbated by the continuous devaluation of the Sudanese Pound in the face of foreign currencies. Due to these difficulties, the University of Khartoum library has not been allocated an acquisitions budget since the year 1991<sup>1</sup>. The current proliferation in open access to academic and scientific information has played an important role in bridging this gap. Open access journals and institutional repositories are the two major routes for open access. The University of Khartoum is not an exception and it has established and launched a digital institutional repository in its quest to provide its community with open access to the much needed information.

## 2. OBJECTIVES

This study attempts to explore how graduate students at the University of Khartoum (UofK) use the institutional repository of the university, and to understand their awareness of and attitudes towards the University of Khartoum Digital Institutional Repository.

## 3. METHODOLOGY

The study adopts the descriptive survey approach. A questionnaire was distributed to a convenience sample of the University of Khartoum Humanities and Social Sciences graduate students. The sample was composed of 150 students out of a total of about 1800 graduate students' population. The number of completed and returned questionnaires was 93 constituting a 62% response rate. Data was analysed by using simple descriptive statistics, and presented in tables showing frequencies and percentages.

## 4. LITERATURE REVIEW

Hertenstein<sup>2</sup> noted that research on institutional repositories (IRs) has primarily focused on issues related to faculty scholarship and that thus far, little has been written on issues related to student scholarship. It is also true that little research has been done on the use of institutional repositories by students. Thus, most of the literature available deals with the use of IRs by faculty members and researchers as presented in the following literature review.

The Confederation of Open Access Repositories (COAR)<sup>3</sup> defines an open access repository as a set of services that provide open access to research or educational content created at an institution or by a specific research community. They may be institutionally-based or subject-based collections.

Gosetti<sup>4</sup> presents Lynch's definition who defines an institutional repository in a narrower definition as: 'a

set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institutions and its community members. It is most essentially an organisational commitment to the stewardship of these digital materials, including long-term preservation where appropriate, as well as organisation and access or distribution’.

Jain<sup>5</sup>, *et al.*, stress that an open access repository has benefits for both the university and the author; Specific to the university, an IR offers increasing visibility and prestige and centralisation and storage of all types of institutional output, including unpublished literature. It also offers support for learning and teaching and the ability to keep track of and analyse research performance. According to them, benefits of an IR to authors include enhancing dissemination and impact of scholarship and offering storage and access to a wide range of materials in addition to feedback and commentary from users.

Chisenga<sup>6</sup> while commenting on the benefits of IRs to African researchers pointed out that institutional repositories have the potential to increase the visibility and accessibility and impact of research in Africa as well as globally, in addition to preserving and maintaining Africa’s universities research output.

Sadfar & Rehman<sup>7</sup> studied users’ perception, awareness, purpose, problems, and satisfaction with Pakistan Research Repository (PRR). They found that the majority of their respondents knew about the PRR from library staff and that they mainly accessed the repository to retrieve information although some of their respondents said that they accessed the repository to deposit material as well.

Yang & Li<sup>8</sup> studied the faculty at Texas A&M University (TAMU) with a view to understanding their awareness of open-access publishing; assess their attitudes towards, and willingness to contribute to an institutional repository. Their study revealed that the responding TAMU faculty was willing to consider publishing in OA publications, and almost half of them believed OA journal publications are acceptable for consideration of tenure and promotion in their departments, but they were not so positive towards OA mandates.

Bamigbola<sup>9</sup> examined the level of awareness, attitude to use of institutional repositories, and challenges faced by faculty in Agriculture disciplines in Federal University of Technology, Akure, (FUTA) Nigeria. His findings revealed that the level of awareness about IRs by faculty members was increasing; and there was general positive attitude to the IR, yet there was low submission of scholarly works by faculty members.

Dhanavandan & Tamishchelvan<sup>10</sup> investigated the awareness of institutional repositories and open-access publishing among faculty members in Annamalai University in India. They revealed that awareness of open-access and repository archiving was low, but there was high level of support for the concept of open-access and that

perceived benefits of enhanced exposure and potential for sharing outweighed the perceived risks. They also revealed that the majority of respondents were supportive of an existing mandatory thesis submission policy.

Stanton & Liew<sup>11</sup> investigated doctoral students’ knowledge of and attitudes toward open-access models of scholarly communication and institutional repositories in New Zealand, and examined their willingness to comply with a mandatory institutional repository submission policy. They identified that lack of awareness, rather than resistance to deposit, as the main barrier to IR depository participation. Major benefits perceived for participating included the public good of knowledge sharing and increased exposure for one’s work. Concerns included copyright and plagiarism issues.

Dulle & Minishi-Majanja<sup>12</sup> explored the awareness, usage and perspectives of Tanzanian researchers on open-access as a mode of scholarly communication. Their study revealed that the majority of the researchers were aware of and were positive towards open-access and that the majority of researchers in Tanzanian public universities used open-access outlets more to access scholarly content than to disseminate their own research findings. They concluded that many of these researchers supported the idea of establishing institutional repositories at their respective universities as a way of improving the dissemination of local content.

Tripathy<sup>13</sup> surveyed the distance learners enrolled in Indira Gandhi National Open University (IGNOU) in India with a view to exploring experiences about the availability and accessibility of educational resources and concluded that distance learners lose interest and become indifferent to their studies when faced with inadequate library support and information resources, and that the availability of open educational resources in open repositories can help them to bridge this gap.

Pickton & Mcknight<sup>14</sup> investigated the Loughborough University research students with a view to exploring their experiences and opinions of publishing, open-access and the proposed Loughborough repository. They found that the students were most interested in accessing complete theses, postprints and conference papers.

## 5. UNIVERSITY OF KHARTOUM REPOSITORY USAGE

### 5.1 Background Information on Khartoumspace

The University of Khartoum Digital Repository (<http://khartoumspace.uofk.edu>) emerged as a result of the development of the first open-access repository in the Sudan; the Dspace@ScienceUofK. This departmental institutional repository was set up as a result of the EIFL-funded OASCIR (Open-access awareness-raising campaign among researchers at the Faculty of Science) Project, aimed to raise awareness about open-access at the Faculty of Science, University of Khartoum (UofK) through a series of training activities for scholars and the

implementation of an OA IR for researchers to deposit their research output. The Dspace@ScienceUofK, which acted as a seed digital repository for the Sudan, has now been developed into the Khartoumspace; the University of Khartoum open-access institutional digital repository.

## 5.2 Contents of the Repository

The University of Khartoum Digital Repository contains different types of digital materials. These include articles, conference papers, graduate theses and dissertations, undergraduate dissertations, books, and the University of Khartoum archives documents. The disciplines covered include pure and applied sciences, medical and health science, and humanities and social sciences. The full text of all publications, except theses and dissertations submitted less than five years ago, is available either in English or in Arabic. There are now a total of 13352 items deposited in the repository and this number is steadily increasing. Table 1 shows a breakdown of the different items held by the Khartoumspace.

**Table 1. Items held by the university of khartoum digital repository**

Item type	Number
Graduate theses	7000
Undergraduate dissertations	1008
Conference papers	223
Books and book chapters	373
Journal articles	754
Administrative documents	3995
<b>Total</b>	<b>13352</b>

## 6. USER SURVEY AND ANALYSIS

Questionnaires were distributed to 150 graduate students in the Humanities and Social Sciences, out of which 93 returned their completed questionnaires representing 62% of the originally surveyed sample.

Questions on the use of Khartoumspace by graduate students included the following aspects:

- User characteristics
- How the students learned about the existence of the repository
- How frequently respondents used the repository
- What was their primary purpose of using the repository
- What was their mode of accessing the repository
- How easy or difficult did they find the repository to use
- How beneficial was the repository to the respondents
- Attitudes of the respondents towards the repository.

Data collected from the repository users was statistically analysed and presented in tables containing frequencies and percentages.

### 6.1 User Characteristics

The respondents were composed of 45 (48.39%) male and 48 (51.61%) female graduate students registered for all graduate degrees offered by the University of Khartoum in the Humanities and Social Sciences disciplines, i.e. Post Graduate Diploma, Masters by courses and research, Masters by research only, and Doctor of Philosophy Degree(PhD). Table 2 shows the details of degrees registered for by respondents.

**Table 2. Degrees registered for by respondents**

Degree	No. of students	Percentage
PG diploma	25	26.88
Masters by courses and research	30	32.26
Masters by research only	24	25.81
Doctor of philosophy (PhD)	14	15.05
<b>Total</b>	<b>93</b>	<b>100</b>

### 6.2 Learning About the IR/ Frequency of Use

The majority of respondents (52.69%) indicated that they learned about the existence of the Khartoumspace through a colleague, whereas (35.48%) said that they knew about it accidentally while surfing the internet. Others said they learned about the repository by means of a workshop, seminar or a conference, or from their teacher or a librarian. Table 3 shows how respondents learned about the existence of the Khartoumspace. As for the frequency of use of the repository by the respondents, a considerable proportion (48.39%) said that they use it infrequently, i.e., once or less in a month, whereas (24.27%) indicated that they use it twice or more monthly. The remaining respondents said that they use the repository either once or more than once a week as shown in Table 3.

**Table 3. Respondents learned about the existence of the Khartoumspace**

Means	No. of students	Percentage
From a colleague	49	52.69
While surfing the internet	33	35.48
In a workshop or seminar	07	07.53
Others		
From one's teacher	03	03.23
From a librarian	01	01.08
<b>Total</b>	<b>93</b>	<b>100</b>

### 6.3 Purpose of using the IR/Mode of Accessing the IR

A large proportion of respondents (35.48%) stressed that their main purpose of using the Khartoumspace is

to access the electronic theses and dissertations (ETDs) available in the repository. A considerable proportion (33.33%) indicated that their primary purpose is to access the eBooks collection, whereas only 12.9% said that their primary purpose is to access journal articles. The rest of the respondents said they use the repository to equally access all types of materials available in the repository. Table 4 shows the different purposes of accessing the Khartoumspace by respondents. In answering the question of how they access the repository, the majority (59.14%) said they do so through a link from the main University of Khartoum webpage, whereas 31.18% stated that they use google to get access to the repository. The rest of the respondents said they paste the repository's URL directly on the web browser they use.

**Table 4. Primary purpose of using the repository**

Purpose	No. of students	Percentage
To access ETDs	33	35.48
To access ebooks	31	33.33
To access journal articles	12	12.90
To access all types of material available in the repository	17	18.28
<b>Total</b>	<b>93</b>	<b>100</b>

#### 6.4 Ease of Use/Benefit from the IR

The majority of respondents (65%) stated that the content of the Khartoumspace partially satisfies their information needs, while 28% indicated that the content is very satisfying for their information needs. The remaining respondents said that the content does not satisfy their information needs. Consequently, some users asked for the inclusion of more recent ETDs in the repository besides the introduction of the University of Khartoum course materials in the repository.

As for the question of how easy or difficult is it to access the repository's content from the main repository's homepage, most of the respondents (69.89%) indicated that they find it easy to access the content from the main repository's homepage while (30.11%) stated that it is not easy to do so.

#### 6.5 Attitudes Towards IR

In order to investigate the general users' views and attitudes towards the Khartoumspace, they were asked whether they would recommend the repository to their colleagues and whether they themselves would use the repository again for their future studies or research. The majority of respondents (83.87%) affirmed that they would recommend it to their colleagues, whereas only (16.13%) said that they would not do so. In answering the latter question, the vast majority of respondents (91.4%) stated that they would use the repository again for their future studies or research, while only 8.6% said that they would not use it again.

## 7. CONCLUSIONS

Analysis of the data collected by the user survey reveals the following:

- Students registered for the Master's degree constitute the majority of the repository users. This is corollary to the fact that most graduate students at the U of K are doing Master's degree either by courses only, by research only, or by courses and research.
- ETDs and eBooks are the most frequently used items. This is complemented by the respondents' demand for the deposit of the full-text of more recent ETDs in the repository. However, full text of recent ETDs cannot be deposited immediately until a deposit mandate policy is in place.
- The majority of the respondents learned about the existence of the repository from a colleague, whereas only very few respondents knew about it from a librarian. This indicates that the library should carry out awareness raising and advocacy programmes about the repository and its benefits to the academic community of the U of K.
- There is low usage frequency of the repository by respondents. This may be partly attributed to the relative internet low speed and connection problems in Sudan.
- There is a considerable proportion of respondents who indicated that they find it easy to access the content from the main repository's homepage which indicates that the material in the repository are well organised.
- Results show that the IR is easily accessible from the University's webpage and that the content of the repository only partially satisfies graduate students' information needs. This fact calls for more selective policies of what to include in the repository's collection, as a large component of the repository's collection seems irrelevant to the graduate student's information needs. However, there is a positive attitude towards the digital repository and its content. This could be attributed to the apparent lack of traditional library services and information resources necessary to satisfy the graduate students' information needs.

## REFERENCES

- Abdelrahman, Omer Hassan. Towards an annual budget for the university of khartoum main library, *ADAB J.*, 2012, **31**(2), 32-59.
- Hertenstein, E. Student scholarship in institutional repositories. *J. Libra. Schol. Comm.*, **2**(3), <http://dx.doi.org/10.7710/2162-3309.1135>.
- Confederation of Open-access Repositories (COAR). Promoting Open Knowledge and Open Science Report of the Current State of Repositories. <https://www.coar-repositories.org/files/COAR-State-of-Repositories-May-2015-final.pdf>.



4. Gosetti, Pietro. Institutional repositories in scholarly communication: A literature review on models, issues and current trends. <http://dspace-nipr.cineca.it/bitstream/1889/1156/1>.
5. Jain, P.; Bentley, G. & Oladiran, M.T. The role of institutional repository in digital scholarly communications. In African Digital Scholarship and Curation Conference 2009, 12-14 May, CSIR Conference Centre, Pretoria. [http://www.library.up.ac.za/digi/docs/jain\\_paper.pdf](http://www.library.up.ac.za/digi/docs/jain_paper.pdf) 4 August 2015.
6. Chisenga, Justin. The development and use of digital libraries, institutional digital repositories and open access archives for research and national development in Africa: Opportunities and challenges. 28 March 2006. <http://repository.uneca.org/bitstream/handle/10855/2597/Bib-21318.pdf?sequence=1>.
7. Safdar, Muhammad & Rehman, Shafiq. Users' uerception and satisfaction with higher education commission Pakistan Research Repository (PRR): problems and opportunities. *Lib. Philo. Prac.* (e-journal 2015). Paper 1271. <http://digitalcommons.unl.edu/libphilprac/1271>.
8. Yang, SY & Li, Y. University faculty awareness and attitudes towards open access publishing and the institutional repository: A case study. *J. Lib. Schol. Comm.*, **3**(1). <http://dx.doi.org/10.7710/2162-3309.1210> (accessed on 15 August 2015).
9. Bamigbola, Alice A. Surveying atitute and use of institutional repositories (IRs) by faculty in agriculture disciplines: A case study. *Procedia-Social Behav. Sci.*, **147**(2014), 505-09.
10. Dhanavandan S. & Tamishchelvan M. A critical study on attitudes and awareness of institutional repositories and open access publishing. *J. infosci. Theory Pract.*, 2013, **1**(4), 67-75. <http://www.jistap.org>.
11. Stanton, K.V. & Liew, C.L. Open access theses in institutional repositories: An exploratory study of the perceptions of doctoral students. *Info. Res.*, 2012, **17**(1). <http://InformationR.net/ir/17-1/paper507.html>.
12. Dulle, F.W. and Minishi-Majanja, M.K. Researchers' perspectives on open access scholarly communication in Tansanian public universities. *SA J. Info. Manag.*, 2009, **11**(4). doi: 10.4102/sajim.v11i4.413. <http://www.sajim.co.za/index.php/SAJIM/article/view/413>.
13. Tripathi, Manorama. Istitutional repositories, open educational resources for distanceeducation: A case study of India. 2009. [https://www.ou.nl/Docs/Campagnes/ICDE2009/Papers/Final\\_Paper\\_055Tripathi.pdf](https://www.ou.nl/Docs/Campagnes/ICDE2009/Papers/Final_Paper_055Tripathi.pdf).
14. Pickton, Margaret and McKnight, Cliff. Research students and the Loughborough Institutional repository. *J. Lib. Info. Sci.*, 2006, **38**(4), 203-19.

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