Communicating the Value of an Institutional Repository: Experiences at Ghana's University for Development Studies

Edwin S. Thompson, Miriam Linda Akeriwe & Angela Achia Aikins

Routledge
Taylor & Francis Group

Communicating the Value of an Institutional Repository: Experiences at Ghana's University for Development Studies

Edwin S. Thompson, Miriam Linda Akeriwe, and Angela Achia Aikins

University for Development Studies, Library, Tamale, Ghana

ABSTRACT

The quality of research depends greatly on access to existing information. Institutional repositories (IRs) have the potential to enhance and promote the dissemination of knowledge and research. This may lead to discoveries and innovation alongside maximizing return on investment in research and development. Following some background information, this article briefly discusses the processes involved in the establishment of Ghana's University for Development Studies (UDS) IR (UDSspace). Marketing and advocacy strategies employed to engage Faculty to enable them to contribute meaningfully and effectively in the populating of the IR are outlined and benefits described. The study uses a quantitative method. A questionnaire was used to elicit data from faculty. This article describes the various communication methods used to promote the IR and evaluates their effectiveness in getting users to participate in populating the IR. The survey found that although as high as 80.3% of respondents were aware of the benefits of an IR and 66.2% were aware of the existence of the UDS IR, 86.8% of respondents had not submitted to the IR.

Introduction

Information and Communication Technologies (ICTs) are transforming the scholarly setting and how scholarly output is managed in higher educational institutions. ICTs have become a key component in scholarly publishing and online teaching and learning. They offer opportunities for collaboration in accessing information. Growth in information presents challenges, particularly to the management of scholarly information. A significant amount of research output may not reach a wide audience even if published. Academic and other institutions are therefore now addressing the issue of access to scholarly information. The concept of a flexible system to help in the management of scholarly output in terms of access control, rights management, community feedback and publishing abilities was discussed at the Massachusetts Institute of Technology (MIT) and resulted in

the DSpace Project (Jain, Bentley, & Oladiran, 2014). Since the introduction of DSpace and other IR software packages such as ePrints, repositories have been established in academic institutions worldwide. Establishing an IR is relatively straightforward. The challenge lies in communicating the value of the IR to the academic community, and working with them to deposit their research. A variety of communication channels to promote engagement are needed. This case study describes the methods used at the University for Development Studies (UDS) in Ghana.

University for Development Studies

Massive reforms to the tertiary education sector in Ghana in the early 1990s led to the passage of the Provisional National Defence Council Law (PNDCL) 317 of 1993, which has since been replaced by the National Accreditation Board Act 744 of 2007 (Government of Ghana, 2016). The operationalization of this law led to the rapid development of many private universities in Ghana. The National Accreditation Board of Ghana identifies nine public universities, 67 private universities, eight additional professional institutions accorded public university status and six registered foreign institutions in Ghana as of mid-2015 (National Accreditation Board, Ghana, 2015). Ghana The University for Development Studies (UDS) is one of the nine public universities in Ghana.

UDS is a multi-campus university with campuses in the Northern, Upper East, and Upper West regions of Ghana. With an academic staff population of 618 and student population of 20,421, of which 346 are graduate students (University for Development Statistics, 2015), the UDS currently has eight faculties, five schools, two institutes, and one center. Programs offered include medicine, allied health sciences, education, agriculture, renewable natural resources, agribusiness and communication sciences, planning, development studies, law, business studies, and mathematical and computer sciences. The subject coverage is extensive with a strong emphasis on development studies.

Literature review

IRs have been defined variously by a number of authors. However, Lynch's (2003, p. 2) definition has been most frequently cited and states that an IR is:

> 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 institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long-term preservation where appropriate, as well as organization and access or distribution.

Van Wyk and Mostert (2011) have indicated that IRs are generally institutional based, academic in scope, collective and permanent, open, and interoperable.

Challenges of an IR

In spite of the numerous identified benefits of IRs, their success is dependent on how well certain challenges are handled (Pickton & Barwick, 2006). This includes cost, which may be a challenge for many libraries especially those in the developing world. Although the initial financial cost of using open source software may not be high, recurring costs, particularly technical staff and staff training (specialist IT consultancy, publicizing, creating metadata, user support, developing policies), may be substantial. Using proprietary software is more expensive; hence, many academic libraries in the developing countries do not select that option. Having considered the cost of using open source software as against that of proprietary software, the IR team at UDS settled for the open source software. This was because the UDS Library had the technical expertise for customizing the open source software and for the creation of the metadata. An Assistant Librarian, a beneficiary of the Carnegie sponsored Masters in IT for librarians at the University of Pretoria, was placed in charge of the IR. She spent two weeks on placement working with the IR at the Kwame Nkrumah University of Science and Technology, the first university in Ghana to host an IR (Lamptey & Corletey, 2011). Costs were thus kept to a minimum.

A major challenge in establishing an IR is being able to effectively promote its benefits while addressing the concerns of its patrons; one of the most effective ways of demonstrating value of the IR is by quickly populating it (Giesecke, 2011).

Another challenge is gaining and maintaining the support and commitment of the parent institution and authors. It is essential that institutions plan well before establishing IRs to ensure their continuous existence. In the case of UDS, the Library management ensured that at every opportunity the benefits of the IR were promoted. One very visible example is the web ranking of universities in Ghana, where UDS has moved from the 9th position to 3rd mainly as a result of the IR. The IR team has also drawn up a continuous marketing program that library Management has agreed to incorporate into its annual programmes.

Other challenges include right management issues including authors' concern regarding infringing publishers' copyright. In Ghana, although there is a legal requirement for scientists to give a copy of their work to the national library, there is however no national policy requiring scientists to deposit their work in an IR (Bossaller & Atiso, 2015).

Also many researchers may want to deposit but time is an issue. It is therefore important that mediated deposit services are introduced. Finally, as indicated by Makori, Njiraine, and Talam (2015), the lack of rewards or incentives for depositing in the IR could lead to low patronage.

Communication challenge

Librarians may be aware of the numerous benefits of an IR, but as Fortier and Laws (2014) indicate, IRs are not as yet particularly attractive to authors and other

researchers in the academic community. This has created a situation where many IRs face the difficulty of attracting content even though the success of an IR is highly dependent on authors' willingness to deposit their research output in the IR.

Librarians need to be creative in their communication activities to convince authors and researchers regarding the benefits of depositing their intellectual output with an IR.

Marketing and communicating the UDSspace to the university community

Marketing and communicating of the IR is one of the key components in the successful establishment and management of an IR. In order to market the IR it is necessary to have content. Populating the IR is usually the challenging aspect. The marketing needs to be continuous and backed by a committed institutional policy.

The IR team recognized the need to win the support of the University's Senior Management. In addition to the support of the Executive Committee, the IR team sought and found support in the Deans of the various faculties and Schools who encouraged input from faculty and staff as well as the entire university community. The IR team organized awareness creation workshops for faculty, staff and graduate students on all the campuses of the University. These events were publicized widely by Campus Librarians and the IR team.

Fliers and personal letters were sent individually to all members of faculty as well as to all other Senior Members and graduate students; notices were placed on various notice boards; information on the benefits of IRs were constantly circulated through the University's mailing system and some fliers were deposited with Campus Librarians for onward distribution to faculty, other Senior Members and graduate students.

The IR team also made presentations at Academic Board meetings and at other university gatherings highlighting need for the IR and the benefits to be derived. The Team took advantage of every opportunity including personal visits to offices of faculty members to promote the benefits of the IR. Assistant Librarians in charge of faculties were also presented about the IR at all Faculty/School Board meetings.

Positive presentation of the IR was instrumental in attracting content by the entire academic community

Establishing the IR

Items accepted for the UDS IR include journal articles, books and chapters in books, theses (Masters and PhD) of faculty and graduate students, seminar presentations, Third Trimester Field Practical Training (TTFPT) reports, seminar presentations, institutional journals, conference proceedings, lecture notes, teaching resources, technical reports, University handbooks, software samples, maps, documentaries, and plans or blueprints.

Academics in Ghana and especially at UDS aspire to publish in international journals, this is particularly so for established academics as well as for those at an earlier stage in their career. At UDS, senior lecturers have, on occasion had their

application for promotion rejected on the basis that they have not published sufficiently in international journals.

Few journals are published in Ghana, those that are, are generally not international and are rarely adhere to their scheduled publishing dates.

In 2013, a committee made up of a Senior Assistant Librarian, three Assistant Librarians and the Head of the IT Section in the Library was constituted by the University Librarian to draft a policy for the establishment of an IR for the University. The Committee was mandated to make a case for the establishment of an IR, taking cognizance of personnel, cost implications, software, logistics and all other essentials as well as to draft a policy for the IR. The Committee opted for Dspace as open source solution due to cost factors. Members of the Committee had also had some training on the use of Dspace, which was in use in public universities in Ghana at that time. Thus it was envisaged that there would be technical support when necessary.

After the acceptance of the Report of the Committee by the University Librarian, it was presented to the Academic Board, the highest decision making body of the University. At a meeting of the Executive Committee of the Academic Board on July 23, 2013, the Chairman of the IR Committee presented a proposal for the establishment of the IR. Following clarifications and amendments, the proposal was approved. The Committee immediately set to work and in March 2014, the UDSSpace was established and by May the same year, it commenced full operation. By this feat, the UDS Library became the fourth public university in Ghana to have an IR.

From the outset, the UDSspace team—constituted by Librarians and Library IT staff—was proactive in creating awareness of the ongoing discussions on the establishment of a national repository, which would link all the IRs to enable people search all the IRs in Ghana simultaneously.

As of 2016, the UDSspace has 408 full text documents including 25 graduate theses, all articles in the "UDS International Journal of Development" (UDSIJD)—the official journal of the university—and also all articles from both "Ghana Journal of Science, Technology and Development" and "Ghana Journal of Development studies" two in-house journals of the university.

To ensure that more theses are deposited, the IR Team proposed to the University's Management that soft copies of theses of all graduate students should be submitted to the Library. This proposal has been approved and communicated to the Graduate School Board. It is envisaged that this decision would greatly enhance the number of theses archived in subsequent years.

To ensure greater visibility and access, the UDSspace is indexed by Google, Bing, Yahoo, and Yandex, and registered to OPENDOAR, PubMed, and WorldCat. The URL is http://udsspace.uds.edu.gh.

Methodology

A survey to measure the effectiveness of the marketing of the IR was carried out in April 2015 in all the five Campuses of UDS.

Copies of the questionnaire (see Appendix 1) were sent to Campus Librarians with detailed instructions for distribution. The Campus Librarians were to return all completed questionnaires a month thereafter. Stratified sampling was used to select the sample for the questionnaire. This method was used because UDS is a multi-campus university and so each campus was taken as a stratum. A simple random sampling was then used to select the sample for each stratum (Creswell, 2011). The sample size for each stratum was determined using the Sarantakos (2005) table adopted from Krejcie and Morgan. The data was collected via questionnaires. It was analyzed and interpreted using available literature and the researchers' experiences and knowledge of the study area. Results were presented in text and graphs using the Statistical Package for the Social Sciences (SPSS).

Findings and discussion

Out of a total of 234 copies of the questionnaire which were distributed, 154 were returned and found usable, thus achieving a response rate of 65.8% that Babbie (2010) indicates is suitable for analysis and reporting.

Although the distribution of the questionnaire was Campus-based and not Faculty-based, there were respondents from each one of the faculties. The Wa Campus had the highest number of respondents, this was followed by the Navrongo Campus, Nyankpala Campus, Tamale Main, and Tamale B Campuses, in that order.

The results of the survey are presented by participation rates, followed by data on awareness of the IR, data on the perceived benefits, and challenges of the IR and information on perception of communication channels by respondents (Figure 1 is a representation of responses by Faculties).

Awareness of IR

Although the IR Team mapped out a series of strategies and activities to ensure that adequate publicity had been created about the UDSspace, the responses revealed that as many as 32.4% of respondents were not aware of the existence of the IR. Even though a majority of respondents (66.2%) were aware of the IR, the responses showed that there was still a great deal more to be done, which raises questions as to whether the strategies employed and the activities undertaken were ineffective or inadequate or was it the implementation that was poorly executed.

The survey revealed that most respondents became aware of the IR through the UDS staff mailing system (21.7%), internal memos sent from the IR Team to all members of faculty individually (14.2%), IR sensitization workshops which were organized on all Campuses (18.9%), and personal conversations with IR staff (11.3%). These were the main strategies adopted by the IR Team to create awareness about the IR and the results indicate they were effective. The fliers/brochures/posters were less effective and mentioned by very few respondents (4.7%) as being the means through which they got to know of the IR. Figure 2 depicts this more vividly.
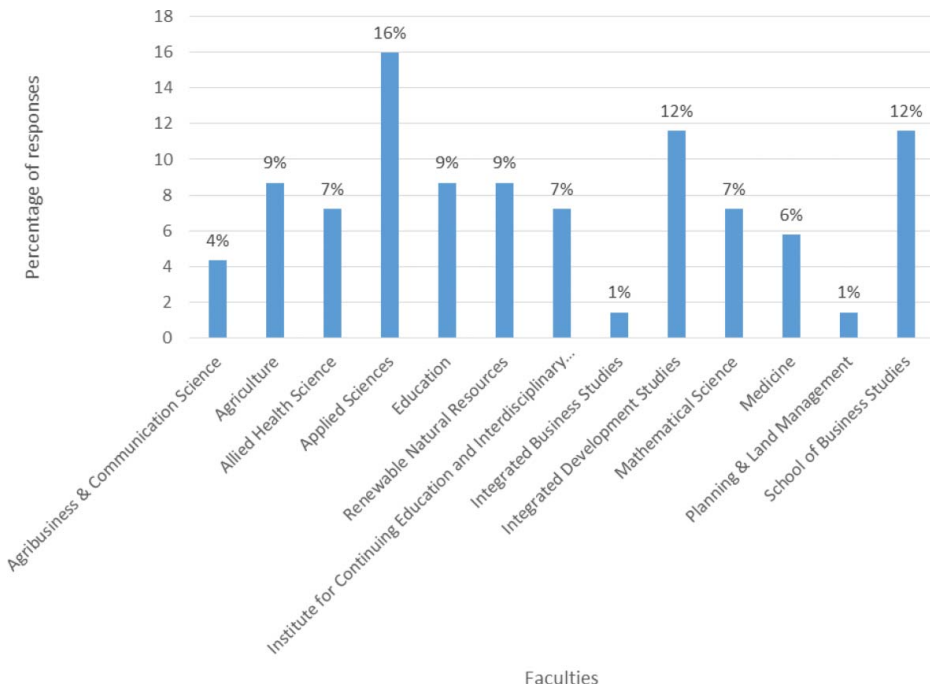
Figure 1. Responses from the various faculties.

The UDS staff mailing system was used extensively to disseminate information about the IR to staff; however, 55.9% of respondents indicated they had never received any mail from the IR Team. This was surprising as mail was sent to all recipients fortnightly and, later, monthly.

In a bid to further create greater awareness among faculty members, Assistant Librarians were assigned to faculties and tasked to attend all Faculty Board meetings and speak about the IR; however, only 2.8% of respondents indicated that they first heard about the IR at Faculty Board meetings. This assertion is further
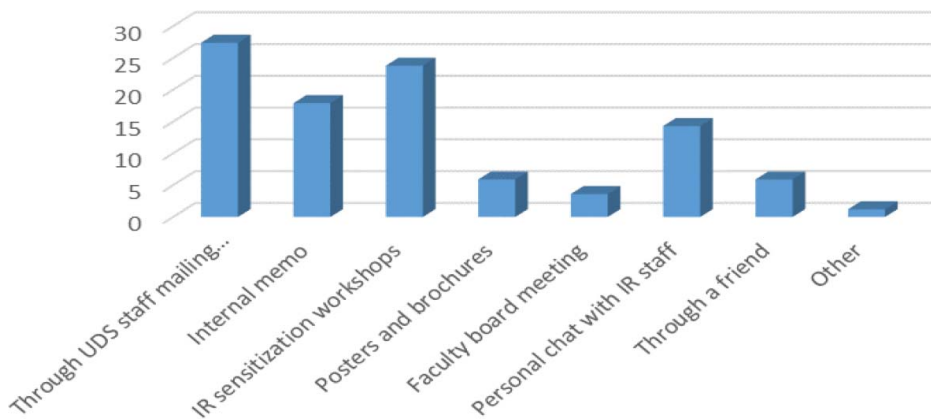

Figure 2. How did you get to know of IR?

confirmed when in a direct question, respondents were asked if they had ever been given any information about the IR at Faculty Board meetings. As many as 64.7% stated they had never been given any such information, with only 16.2% indicating that they had ever been given that information at faculty board meetings.

Although the IR Team was aware that a majority of faculty members could not attend the IR sensitization workshops as a result of various engagements, a question was posed to ascertain the number of respondents who could actually attend any of the said workshops. As many as 69.1% of respondents indicated they could not attend the said workshops. Thus, the aim of sensitizing faculty on the benefits of the IR and the need to contribute to populating it was only partially achieved.

Awareness of benefits of the IR

With regards to awareness of the benefits of the IR to the individual and the institution, a majority of respondents (80.3%) indicated they were aware of the benefits. This response indicated that the efforts of the IR team had been successful, with the use of UDS mailing system, sensitization workshops, internal memos and discussion with IR staff accounting for 71.7% of awareness of the benefits of the IR.

Although a majority of respondents were aware of the benefits of the IR, significantly 86.8% of respondents had not submitted any material to the IR, only 8.8% of respondents had done so with 4.4% non-responses. Factors which influenced their reluctance included concern about possible plagiarism of their work, copyright and journal policy on depositing in IRs. Bossaller and Atiso (2015) in their survey of IRs in four research institutes in Ghana had similar findings with copyright issues being the main challenge to depositing in the IR. Other issues they identified were trust in the IR and the need for training in using the IR. Another concern raised by respondents was about the quality of material including some graduate students' theses. The IR Team dealt with copyright concerns by directing them to http://www.sherpa.ac.uk/romeo.php to ascertain the copyright status of their publications. It however appears a number of them are still either not too convinced or confident enough to submit their works. This appears to be a confirmation of Jain et al.'s (2014) assertion that IRs are comparatively new to much of the academic world, particularly in developing countries and there is still some skepticism.

The IR Team is still working on these concerns and University Management is adding its voice urging people to submit their works as both the Vice-Chancellor and his Pro Vice-Chancellor have submitted quite a number of their manuscripts to the IR office and these have been uploaded on to the IR.

Perception of communication channels for submissions

In a bid to enable ease of submitting papers to the UDSspace, communication channels to facilitate submission of papers to the IR have been established. The UDSspace has two main channels for submission. The first and the most used is authors submitting soft copies of their works to the IR office personally or through the IR email or through

identified IR focal persons on each of the campuses. Provision has also been made for those who want to self-archive to do so. These channels of submission have been explained in the brochures on the IR and mails sent to the UDS community through the UDS mailing system. However, the majority of respondents (61.7%) indicated that they do not know of the channels for submitting manuscripts to the IR. This finding in indicates that further work needs to be done by the IR team in this area. When respondents were asked to suggest other means to enhance the communication of the IR, they came up with varied responses, the majority of which are the strategies currently in use by the IR Team: brochures/fliers/posters, UDS e-mail and personal emails/whatsapp, regular workshops/reminders, improve upon existing strategies, through Heads of Department, and individual memos regularly.

Conclusion

This study found that though the UDS IR team implemented a number of marketing strategies to communicate the IR to the university community, the expected results were mostly not achieved. It is however soothing to know that the strategies suggested by the respondents were the same strategies used by the IR team. Hence, this study has shown that these strategies could have been better co-ordinated and promoted. The results indicate that continuous marketing of the IR using multiple strategies might be more effective in reaching out to the university community and might yield better output from faculty. The marketing of the IR should therefore be an ongoing process that should be tailored to suit the UDS community and reexamined on a constant and continuous basis.

References

Babbie, E. (2010). *The practice of social research* (11th ed.). Franklin, MA: Wadsworth Cengage Learning.

Bossaller, J., & Atiso, K. (2015). Sharing science: The state of institutional repositories in Ghana. *International Federation of Library Associations and Institutions*, *41*(1), 25–39. doi: 10.1177/0340035214561582

Creswell, J. W. (2009). *Research design* (3rd ed). Los Angeles, CA: Sage.

Fortier, R., & Laws, E. (2014). Marketing an established institutional repository: Marquette Libraries' Research Stewardship Survey. *Library Hi Tech News*, *31*(6), 12–15. Retrieved from http://epublications.marquette.edu/cgi/viewcontent.cgi?article=1074&context=lib_fac

Giesecke, J. 2011. *Institutional Repositories: Keys to success*. Faculty Publications, UNL Libraries. Paper 255. Retrieved from http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1266&context=libraryscience

Government of Ghana. (2015). Examining the mandate of National Accreditation Board. Retrieved from http://www.ghana.gov.gh/index.php/media-center/features/807-examing-the-manadate-of-national-accreditation-board

Jain, P., Bentley, G., & Oladiran M. T. (2014). The role of institutional repository in digital scholarly communications. Retrieved from http://www.library.up.ac.za/digi/docs/jain_paper.pdf

Jantz, R., & Wilson, M. (2008). Institutional repositories: Faculty deposits, marketing and the reform of scholarly communication. *Rutgers University Community Repository*. Retrieved from http://www.asiaa.sinica.edu.tw/~ccchiang/GILIS/LIS/p186-Jantz.pdf

Lamptey, R. B., & Corletey, A. (2011). Enhancing institutional repositories (IR) in Ghana. In A. Katsrikous, (Ed.), *IFLA Publication 153*, Open Access to STM Information Trends, Models and Strategies for Libraries (pp. 105–112). Berlin: De Gruyter Saur.

Lynch, C. A. (2003) Institutional repositories: Essential infrastructure for scholarship in the digital age. *ARL Bimonthly Report 226*, 1–7. Available at: http://www.arl.org/newsltr/ 226/ir.html

Lynch, C. A., & Lippincott, J. K. (2005). Institutional repository deployment in the United States as of early 2005. *D-Lib Magazine*, *11*(9). Retrieved from http://www.dlib.org/dlib/september05/lynch/09lynch.html.

National Accreditation Board, Ghana. (2015). *Accredited tertiary institutions*. Retrieved from http://www.nab.gov.gh

Makori, E. O., Njiraine, D., & Talam, P. (2015). Practical aspects of implementation of institutional repositories in Africa with reference to the University of Nairobi. *New Library World*, *116*(9/10), 610–640.

Mee, N., Clewes, D., Phillips, P. S., & Read, A. D. (2004). Effective Implementation of a marketing communciations strategy for kerbside recycling: A case study from Rushcliffe, UK. *Resources, Conservation and Recycling*, *42*(1), 1–26. doi:10.1016/j.resconrec.2003.12.003

Pickton, M., & Barwick, J. (2006). A librarian's guide to institutional repositories. Loughborough University. Retrieved from http://magpie.lboro.ac.uk/dspace/handle/2134/1122

Sarantakos, S. (2005). *Social research* (3rd ed). New York, NY: Palgrave Macmillan.

University for Development Studies. (2015). *16th Congregation, Basic Statistics*. Tamale: Author.

Van Wyk, B., & Mostert, J. (2011). *Toward enhanced access to Africa's research and local content: A case study of the Institutional Depository Project University of Zululand South Africa*. Retrieved from https://www.researchgate.net/publication/289072314_Toward_Enhanced_Access_to_Africa's_Research_and_Local_Content_A_Case_Study_of_the_Institutional_Depository_Project_University_of_Zululand_South_Africa

Appendix A: Questionnaire

This study is being conducted to seek views of senior academic staff on the methods used to communicate the UDS Institutional Repository and the effectiveness of these methods in informing the entire University of the creation of an IR for the University.

Please all data collected will be treated with utmost confidentiality and will be used for academic purposes only.

Thank you.

1. Faculty………………………………………………………………………
2. Department…………………………………………………………………
3. Are you aware of the UDS Institutional Repository (IR) (UDSspace)?
   a. Yes [ ]
   b. No [ ]

4. If yes, how did you first get to know of it? (Tick as many as applicable)
   - Through UDS staff mailing system [ ]
   - Internal memo [ ]
   - IR sensitization workshop [ ]
   - Posters and brochures [ ]
   - Faculty Board meeting [ ]
   - Personal chat with IR staff [ ]
   - Through a friend [ ]
   - Other (Please state) ………………………………….

5. Do you hear of the IR through any other means? (Tick as many as applicable)
   - Through UDS staff mailing system [ ]
   - Internal memo [ ]
   - IR sensitization workshop [ ]
   - Posters and brochures [ ]
   - Faculty Board meeting [ ]
   - Personal chat with IR staff [ ]
   - Through a friend [ ]
   - Other (Please state) ………………………………….

6. Do you have the university staff e-mail address?
   a. Yes [ ]
   b. No [ ]

7. If yes, how often do you access that e-mail address?
   - Daily [ ]
   - Once a week [ ]
   - Once a month [ ]
   - Rarely [ ]
   - Never [ ]

8. Have you ever received an e-mail from the UDS Institutional Repository team?
   a. Yes [ ]
   b. No [ ]

9. 9.Did you attend any of the IR sensitization workshops?
   a. Yes [ ]
   b. No [ ]

10. Has there ever been any information on the IR at a Faculty/Academic board meeting?
    a. Yes [ ]
    b. No [ ]

11. Have you submitted your articles and other works to the IR?
    a. Yes [ ]
    b. No [ ]

12. Are you aware of the benefits of the IR to you and the University?

a. Yes [　]

b. No [　]

13. How did you get to know of the benefits of an IR? (Tick as many as applicable)
    - Through UDS staff mailing system [　]
    - Internal memo [　]
    - IR sensitization workshop [　]
    - Posters and brochures [　]
    - Faculty Board meeting [　]
    - Personal chat with IR staff [　]
    - Through a friend [　]
    - Other (Please state) ……………………………………….

14. What made you submit your articles/other works to the IR?
    - The benefits of the IR [　]
    - Already exposed to IRs [　]
    - Desire to archive my research output [　]
    - Test if the benefits are realizable [　]
    - Other (Please state) ……………………………………….

15. Are communication channels established for submitting a paper to the IR clear to you?
    a. Yes [　]
    b. No [　]

16. If no, what do you think should be done to enhance effective communication?

    ……………………………………………………………………………
    ……………………………………………………………………………
    ……………………………………………

17. In your opinion, are there other ways the IR could have been effectively communicated to you?
    a. Yes [　]
    b. No [　]

18. If yes, mention them?

    ……………………………………………………………………………
    ……………………………………………………………………………
    ……………………………………

19. Any other comments

    ……………………………………………………………………………
    ……………………………………………………………………………
    ……………………………………………………………………………
    ……………………………………………

Thank you!