

Institutional Repositories, as Emerging Initiative in Nigerian University Libraries

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Abstract

Scholars and researchers have increasingly expressed dissatisfaction with the existing model of scholarly communication such as high subscription prices for journals, heightened awareness that universities might lose print materials that are not properly archived and restricted access. These issues have contributed to the quest for alternative modes of preservation and dissemination of information such as institutional repositories (IRs). IRs had been considered one of the emerging initiatives in Nigeria university libraries. The success of IR is dependent on the awareness of and perceived benefits of IR by lecturers. The main purpose of the study is to assess the level of awareness of and perceived benefits of IR among lecturers in federal universities in the South-South zone of Nigeria. The study revealed that lecturers in South-South federal university in Nigeria are aware of IR and its benefits. The study concludes that universities should encourage promotional activities geared towards creating awareness of IR which will in turn enhance positive attitude towards IR establishment in universities.

Keywords: Institutional Repositories, Open Access

1. Introduction

The rapid development and advancement in Information and Communication Technologies (ICTs) has led to profound and progressive changes in all spheres of human endeavor (Abubakar, 2010). This of course includes the library and information profession and its environment. Interestingly, the emerging information environment at the global level now focuses more on the opportunities offered by the emerging ICTs that facilitate easy access to electronic information resources. Therefore, the application of ICTs has opened up new and wider possibilities and opportunities to global library and information services and products which the traditional library wouldn't have been able to provide.

Information is needed by all. Earlier people depended on traditional/print resources and now due to the emergence of advanced technologies, new avenues for information like online databases, e-journals, subject portals, open access, etc have emerged. The changing role of libraries now includes developing awareness among the library community regarding the digital resources and e-content sources of information. This is evident by the evolution and emergence of virtual, digital, libraries without walls, open access initiatives (such as open access journals and institutional repository).

Open access to knowledge is a key contributor in providing universal access to information and knowledge. Zccala, Oppenheim, and Dhiensa (2008) said that the term open access has been given a variety of definitions while its meaning is still evolving. However, following the Budapest Open Access Initiative meeting, a definition was produced as quoted in Bailey (2006):

First, open access works are freely available. Second, they are 'online', which would typically mean that they are digital documents available on the Internet. Third, they are scholarly works... Fourth, the authors of these works are not paid for their efforts. Fifth, as most but not all authors of peer-reviewed journal articles are not paid and such works are scholarly, these articles are identified as the primary type of open access material. Sixth, there are an extraordinary number of permitted uses for open access materials; users can copy and distribute open access works without constraint. Seventh, there are two key open access strategies: self-archiving and open access journals (Bailey, 2006:15).

Similarly, to the Berlin Declaration (2003) defined open access (OA) is a new mode of scholarly communication through which the author(s) and right holder(s) of scholarly work grant(s) to all users a free, irrevocable, worldwide right of access to, and a permission to copy, use, distribute, transmit, and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship. According to this definition, a complete version of the work and all supplemental materials, including a copy of the permission to use should be deposited in at least one online repository using suitable technical standards to enable open access, unrestricted distribution, and long-term

archiving of such works. This new form of scholarly communication is achieved through two main channels: Open Access Journals (OAJ) for electronic referred journals and Self-archiving-Institutional Repository (Chan & Costa, 2005; Barley, 2006). Essentially, IR collects and provides free access to the research output of a given institution. Crow (2002) presented a working definition of Open Access Institutional Repository namely “a digital archive of the intellectual product created by the faculty, research staff, and students of an institution and accessible to end users both within and outside of the institution, with few if any barriers to access”. Arising from the definitions, it could be seen that an institutional repository is institution-based, contains scholarly publications, organizes and provides free access. Hence, it may be defined as a type of digital library established by an institution, populated by the staff, researchers, students and other members of the institution and to be consulted by both members of the university and the outside world.

One of the major barriers faced by scholars and researchers is the lack of access to the current literature in their field. Institutional repository has evolved from the problem of inadequate access to current literature in the researchers’ various fields of study. Institutional repository can be searched for any phrase; it can be accessed all over the world; and it can be copied without error as such they address traditional problems of finding information, of delivering it to users, and of preserving it for future. The development of institutional repository has provided academic and research institutions with a very high level of visibility on the library digital resources electronically. As such, teaching, learning and research is widely enhanced in the society at large today. This initiative is aimed at bringing the knowledge society to a state of free access to all kinds of information and learning material using the internet and ICT tools.

The aim of IR is to increase visibility, preservation and storage of all types of institutional output, including unpublished literature, support for learning and teaching, standardization of institutional records, ability to keep track of and analyze research performance, breaking down of publishers’ cost and permission barriers, help universities to share their knowledge and expertise (Christian, 2008). Lynch (2003) observed that students and faculty members increasingly recognize the need to store their intellectual output in the form of personal collections, and to make available the results of their work within and outside the institution. Institutions increasingly recognize the need to develop repositories of intellectual output for long-term archival purposes, and to administer the property rights associated with stored assets. Most of the collections managed by libraries, however, are created outside the walls of the institutions. Yet access to the collection of information is often difficult because of the relatively high cost of scholarly journal, their printed and web – based versions. Another crucial matter is that removing access barriers will speed up research, improve education and contribute to learning. There is therefore a critical need to make research results accessible to faculty and students as possible free of charge.

2. Statement of the Problem

In recent years there has been increasing concern with the existing model of scholarly communication. The rise of publication cost, subscription rates of online journals and the bulk production of scholarly research output in a digital format are becoming big problems and challenges to libraries in rendering services to their users. There is the need to adopt some emerging initiatives in Nigerian university libraries. Hence, libraries have started adopting open access technologies by taking institutional repositories as an alternative solution to introduce free access to scholarly research results, as well as for the dissemination and preservation of digital documents as a response to the current digital age. It has been observed that there are no IRs in federal universities in South-South Nigeria. This may be as a result of lecturers’ lack of awareness of and perceived benefits of IR. This observation requires an empirical study to understand and appropriate measures taken to ameliorate the situation. Consequently, this research study is set out to investigate awareness and benefits as perceived by lecturers in South-South federal universities in Nigeria.

3. Research Questions

1. What is the level of lecturers’ awareness of IR in the South-South federal universities?
2. What do lecturers perceive as the benefits of IR?

4. REVIEW OF RELATED LITERATURE

4.1. Lecturer’s Awareness of IRs

Awareness is a pre-requisite to subsequent usage of IRs unless an individual uses it unknowingly. Much of the literature and previous research makes it clear that researchers’ decision to participate in contributing content to the IR can be affected in many ways. Similarly, to participate in any work or activities, awareness about the environment, how things are done and should be done is very crucial. Alemayehu (2010) observed that the level of awareness of researchers to the IR at the University of Oslo is very low. These studies have shown that there is generally a low level of awareness of IR. Researchers generally have a very confused understanding of the ‘IR’ concept, its purpose and the means to achieve it. However, researchers have not yet fully engaged with IR

or self-archiving. A 2004 survey of authors' attitudes towards IR showed that 82% knew 'nothing at all' or 'a little' about IR (Rowlands, Nicholas & Huntington, 2004). The study also indicated that scholars showed a positive perception of IR despite having some reservations about quality and preservation in such a model.

Given the vision and the potential, it is surprising and disappointing that IR collections have generally grown more slowly than proponents had anticipated. The phenomenon is worldwide. Also typically communicated through these activities are the benefits of depositing in an IR for faculty members. They further indicated that "as you begin to build a service; it is critical to communicate how the service benefits the university community – in other words, to do some marketing to advertise the service on campus" (Barton, Mark & Shearer, 2006). These types of promotional activities are important because they raise awareness of the repository. In other words, the information professionals and the host institution in general should play a very vital role in attracting and creating awareness of researchers' attitude toward the potential IR for the research community to make it usable in addition to those authors who are accustomed with it. According to Pickton (2005) most institutions begin their content recruitment activities through a variety of promotional activities on campus. Most commonly, such activities include passing out brochures, conducting presentations to faculty committees, publishing articles in the library or campus newsletters/newspapers, and formally launching the repository. "Academics have to hear about your IR service many times, over a period of time, and from several sources (print, online, in person). A good rule of thumb is that someone needs to have been exposed to your service seven times before they are fully aware of your service. Barton, Mark and Shearer (2006) said that "be sure to outline explicitly the benefits of your service to academics".

Barton, Mark and Shearer further noted that even with a variety of creative ideas and promotional activities, lecturers' uptake has been reluctant where voluntary compliance is needed. Certainly implementers have found that 'recruiting content' is the biggest challenge and frustration. According to Mark and Shearer (2006), literature has cited a number of reasons why lecturers' participation rates are so low. At the most basic level, faculty members [lecturers] lack awareness of the existence of IRs. Several surveys have found that many academic authors [lecturers] are not familiar with the concept of any IRs on campus (Swan & Brown, 2004; Swan & Brown, 2005). Christian (2008) noted that lack of knowledge or awareness of IR is not peculiar with researchers. In fact, this is the situation in most developing country institutions. However, Dulle (2008) established that a majority of researchers had heard about open access. The most common terms or initiatives by researchers are IRs. It therefore means that the levels of awareness of IR issues are varied.

4.2. Benefits of IRs to Lecturers

Benefits to the institution reflect on the individual, but there are further, more direct benefits to the users too.

(i) Dissemination and Impact

Lecturers produce research papers to share knowledge. They do this for their careers and for personal fulfillment. Success is achieved by disseminating work widely and quickly, with the hope of achieving the utmost impact. Key features of an IR are its openness and interoperability with other services. By making the content of an IR searchable by external discovery tools, an author's work is accessible to other members of the research community. As a matter of fact a large number of studies are also showing that the article and research result disseminated and published at IR have got more citations than other publishing methods, which means that open access articles have a significantly higher citation impact than non-open access articles (Jones, Andrew & MacColl, 2006; Harnad, et al, 2008). Thus, if the IR can attract large audiences then research result disseminated by it and the chances to be cited by other authors will be increased. Therefore, it is a good idea to persuade researchers in general and lecturers in particular that their research output should be deposited in an IR. As researchers make use of the IR, it would also gain more citation for articles in the IR.

(ii) IR Content

Compared with traditional print publishing, the IR offers the ability to store and provide access to a much wider variety of material. Researchers produce articles and reports, but also "original art, grant proposals, maps, radio/TV interviews, motion pictures, music scores, photographs, consulting (technical) reports, technical drawings, and poster session displays" (Cervone, 2004). All of these, once converted to digital format, might be deposited in the IR. Moreover, supplementary material such as supporting evidence and data, interim reports and draft versions of papers, may also be stored.

(iii) Feedback and Commentary

The content of a repository need not have been through a peer review process. In some disciplines it is conventional for researchers to make preprints available to their own research community in order to receive comments or assert priority (Hubbard, 2003). Repositories that serve subjects with these cultures have been found to be particularly successful at attracting content.

(iv) Added Value Services

IR systems can produce hit counts on papers, personalized publication lists and citation analyses (Hubbard, 2003, Pinfield, 2002). These tools can create useful post-publication quality indicators (Pinfield, 2004). For the

individual, monitoring download activity provides a measure of the impact of their research (Swan, Needham, Proberts, Muir & Oppenheim, 2005).

(v) Networked Information

The IR offers advantages to both ‘academics-as-authors’ and ‘academics-as-readers’ (Gadd, Oppenheim & Proberts, 2003). The same system that facilitates the dissemination of academics’ own work also enables them to gain access to the work of others. Internal and external cross-searching is invaluable to multidisciplinary subjects such as the social sciences (Crow, 2002).

Fry, Lockyer, Oppenheim and Houghton (2009) and Babel library (2007) listed the following as benefits of IR to the academics. They are:

- (i) greater speed of dissemination of knowledge;
- (ii) citation advantage;
- (iii) the general public’s right to access publications based on public-funded research (as well as greater accountability of public money);
- (iv) advancement of science in its most general sense;
- (v) facilitate access to the scientific information;
- (vi) increase their audience; and
- (vii) increase the impact of the teaching and research work they carry out.

In the study carried out by Abrizah (2009) in Malaysia, the survey solicits opinion on the usefulness and importance of an IR to the University. Five-Point Likert-Scale was given to 91 respondents who were aware of any digital repositories and IR. The majority of those who were aware felt that an IR would be very useful for the university and that it is critically important that the university implements an IR 63(69.2%). In general, lecturers unanimously felt that it is important for (a) the members of the university to retain those intellectual property rights needed to make their intellectual output available through an IR 72, (79.1%). (b) The members of the university consistently make their intellectual output available through an IR 76(83.5%). However, not everyone felt that it is important that the university consider works placed in an IR when evaluating lecturers for promotion (Not at all important 2(2.2%); slightly important 7(7.7%); somewhat important 26(28.6%); very important 56(61.5%) and critically important 0(0%). Lecturers’ know the benefits of an IR but would not want the work deposited in an IR to be used for assessment and promotion. This may be as a result of the fact that lecturers may have signed the copyright ownership to the publishers of their journal articles. Also Christian (2008) in his study of IR awareness in Nigeria found that a total of 55(78.4%) agreed that the development of IR is “very important” for their institution. 10 respondents representing (13.9%) of the total response agreed that it is “important”, 5(6.9%) respondents were neutral. None of the respondents sees IR as being “unimportant” to their institution. It could be inferred that lecturers’ in Nigeria know the importance of IR.

5. Methodology

The study employed the descriptive research method. The population of the study according to NUC (2009) is 3,786 lecturers in federal universities in the South-South Nigeria excluding Federal University of Petroleum Resources, Effurun. A sample of 1,136 respondents (lecturers) was selected for the study. It comprises all categories of lecturers in federal universities in the South-South geo-political zone of Nigeria. Questionnaire was the instrument used to collect the required data for the study. Data were analyzed using frequencies and statistical mean.

6. RESULTS AND DISCUSSION OF FINDINGS

Answering of the research questions

Research Question 1: What is the level of lecturers’ awareness of IR in the South-South federal universities?

TABLE 1
Mean Responses of Lecturers’ Awareness of IR

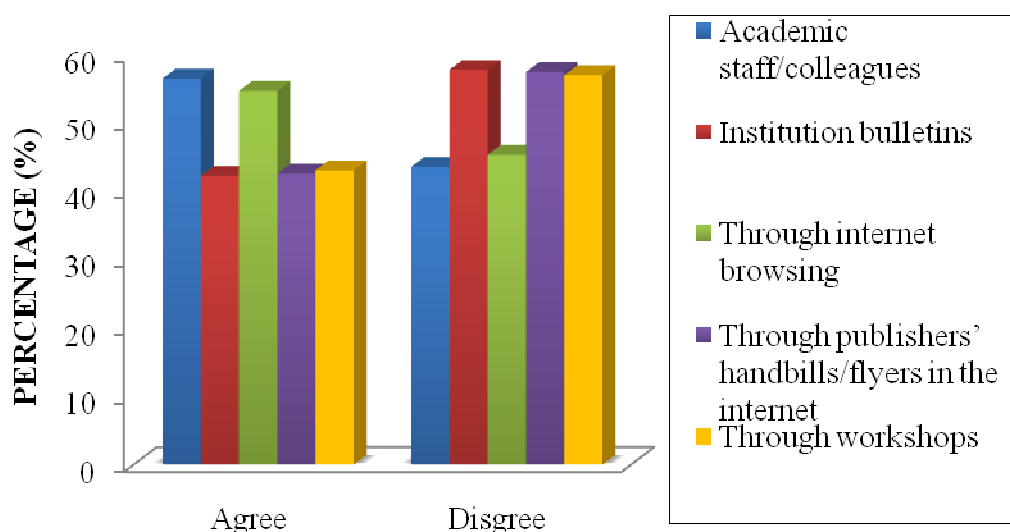
| | N | Mean | | Std. Deviation |
|--------------------|-----------|-----------|------------|----------------|
| | Statistic | Statistic | Std. Error | Statistic |
| AWARENESS | 946 | 3.35 | .032 | .994 |
| Valid N (listwise) | 946 | | | |

A cursory look at Table 1, with a mean statistic of 3.35, reveals that lecturers in South-South federal universities in Nigeria are aware of IR. This is because the statistic mean is above the acceptance point of 2.50. This finding is in line with Abrizah (2009) who found that “academics (Lecturers) know what open access meant and were aware of digital repositories and IR.” However, the finding is at variance with Christian (2008); Mark and Shearer (2006); Swan and Brown (2004); Swan and Brown (2005); and Rowland, Nicholas and Huntington

(2004) who found that the level of awareness of IR was alarmingly low among lecturers. Of particular interest is Christian (2008) who identified lack of awareness as one of the issues which adversely militate against the development of IR in Nigeria. He indicated that lack of awareness of IRs among academics and researchers is high in the country's academic and research institutions. He further noted that more than 74% of the respondents surveyed during the course of his research are completely unfamiliar with IR. This present situation may be explained as a result of internet revolution in Nigerian universities.

Respondents were also asked to indicate the source from which they became aware of IR. It was discovered that majority of the respondents became aware of IR through academic staff/colleagues and Internet browsing. Their responses are shown in Figure 1

FIGURE 1
Sources of Awareness of IR



This finding corroborates Dulle (2008) who indicated that most researchers claimed that they got IR awareness from their colleagues, internet debate, publishers' promotion and workshops. "Academics have to hear about your IR service many times, over a period of time, and from several sources (print, online, in person). Barton, Mark and Shearer (2006) noted that even with a variety of creative ideas and promotional activities, lecturers' uptake has been reluctant where voluntary compliance is needed. These types of promotional activities are important because they raise awareness of the repository.

Research Question 2: What do lecturers perceive as the benefits of IR?

TABLE 2
Mean Responses of Lecturers Perceived Benefits of IR

| | N | Mean | | Std. Deviation |
|--------------------|-----------|-----------|------------|----------------|
| | Statistic | Statistic | Std. Error | Statistic |
| PERCEIVED BENEFITS | 946 | 3.235 | 0.919 | 0.030 |
| Valid N (listwise) | 946 | | | |

Table 2 shows the mean responses of lecturers with regard to the benefits of IR as perceived by the lecturers. The mean statistic of 3.235, which is well above the acceptance point of 2.50, shows that lecturers in South-South federal universities in Nigeria will benefit immensely if their universities establish an IR. This finding corroborates Christian (2008) who found that the development of IR is "very important" for institution. It therefore means that lecturers' in South-South federal universities in Nigeria know the importance of IR.

To further confirm the benefits of IR to lecturers, they were also asked to indicate the specific perceived benefits for depositing works in an IR. Their responses are presented in Table 3.

It should be noted that some respondents did not respond to some of the items in the questionnaire hence there were missing values. Therefore, only valid data were analyzed and reported in this table (Table 3). This means that there were variations in the total for the item analysis.

TABLE 3
Lecturers Perceived Benefits for Depositing Research Outputs in an IR

| Items | Benefits | Response | | | | |
|-------|--|----------|-------|-------|----------|-------|
| | | Total | Agree | | Disagree | |
| | | | NO. | % | NO. | % |
| 1 | To communicate results to my peers | 932 | 698 | 74.89 | 234 | 25.11 |
| 2 | To advance my career | 925 | 693 | 74.92 | 232 | 25.08 |
| 3 | For personal prestige in my field | 925 | 688 | 74.38 | 237 | 25.62 |
| 4 | For longtime preservation | 918 | 651 | 70.92 | 267 | 29.08 |
| 5 | For protection from plagiarism | 921 | 616 | 66.88 | 305 | 33.12 |
| 6 | To boost my university's prestige | 926 | 590 | 63.71 | 336 | 36.29 |
| 7 | To increase the citation impact (citation counts) to my research works | 926 | 662 | 71.49 | 264 | 28.51 |
| 8 | To reduce user dependence on our institution's library print collection | 925 | 640 | 69.19 | 285 | 30.81 |
| 9 | To increase visibility to my research works | 915 | 638 | 69.73 | 277 | 30.27 |
| 10 | To support student academic work by providing access to electronic theses/dissertations and scholarly articles | 924 | 681 | 73.70 | 243 | 26.30 |
| 11 | To provide record of downloaded statistics to my articles | 933 | 597 | 63.99 | 336 | 36.01 |
| 12 | For wider and faster dissemination of knowledge | 933 | 603 | 64.63 | 330 | 35.37 |

From Table 3, the respondents indicated the following as perceived benefits for depositing in an IR. They are: to communicate result to my peers- 698 (74.9%); to advance my career- 693 (74.9%); for personal prestige in my field- 688 (74.4%); for longtime preservation- 651 (70.9%); for protection from plagiarism- 616 (66.9%); to boost my university's prestige- 590 (63.7%); increase the citation impact (citation counts) of my research works- 662 (71.5%); reducing user dependence on your library's print collection- 640 (69.2%); increase in visibility to my research works- 638 (69.7%); supports students academic work by providing access to electronic theses/dissertations and scholarly articles- 681 (73.7%); provides record to download statistics to my articles- 597 (64.0%); and wider and faster dissemination of knowledge- 603 (64.6%). This corroborates Crow (2002); and Chan (2004) who found the following as benefits of IR. They include increase visibility, prestige, and public value of contributors; maximize access to the results of publicly-funded research, and increase the number and diversity of scholarly materials that are collected and preserved by academic institution. Also, Michaels (2009) found that IRs benefit researchers by enabling them to show case their work, and by providing tangible, easy accessible evidence of an individual's intellectual digital output. This study also support Foster and Gibbons (2005) who noted that the single most important benefit of institutional repositories to researchers is visibility, as researchers want other people to find, use, and cite their work.

7. Conclusion and Recommendation

Arising from the findings of the study, the study therefore concluded and recommended that there is significant difference in the level of awareness of IR among lecturers in South-South federal universities in Nigeria. Lecturers were also in affirmation that they will benefit immensely if their universities establish IR. It is therefore imperative to note that we are likely to see IRs development in convergent ways over the next few years in our tertiary institutions of learning. It is therefore recommended that every institution should develop an IR coupled with greater network collaboration among lecturers and this may give rise to IRs hosted by university's management.

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