

Evaluating Use of Institutional Repositories by Lecturers in Nigerian Universities

Alice A. Bamigbola
University of Ibadan

Airen E. Adetimirin
University of Ibadan

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Abstract

The study investigated use of Institutional Repositories (IRs) among lecturers in Nigerian Universities. It examined the level of awareness, frequency of use, preferred archiving method, purpose of use of IRs and challenges of use of IRs among lecturers. Five universities in Nigeria that had functional institutional repositories for at least three years as at 2015 were purposively selected. Five faculties were purposively selected from which 1151 lecturers were randomly selected. A structured questionnaire was used to collect data and descriptive statistics were used for data analysis. Findings revealed that majority of the lecturers were aware of IRs, they accessed materials from IRs on daily and weekly basis while they deposited their works into IR on annual and bi-annual basis. It was also revealed that lecturers preferred mediated archiving and they used materials from IRs to prepare lecture notes and research works. Fear of copyrights infringement, plagiarism and lack of awareness were major challenges of use of IRs. The study recommended that the university libraries should check the copyrights status of scholarly works to ensure non-infringement, organise more awareness programs on IRs and mediated archiving method should be used to encourage lecturers to submit their scholarly works.

Keywords: awareness, institutional repositories, lecturers, mediated-archiving, Nigerian universities.

Introduction

Open Access (OA) was created to remove barriers to research output. OA means making scholarly works available online without price and permission barriers. There are two roads of achieving OA, the “Gold” road, Open Access Journal and “Green” road, Open Access Repository. In Green Road open access, the authors make their own published articles free for all through open access repositories. It is not self-publishing but rather archiving one’s scholarly work in open access repository. The repository could be subject-based, discipline-based, region-based or institution-based (Suber, 2012). Institutional repository (IR), therefore, is any digital repository that is set up to capture, manage, preserve and distribute the intellectual properties of the host institution. The purpose of establishing IR

is to create a central digital archive for scholarly works of an institution which helps the visibility of such institution and also proffer solution to serial crises.

Institutional repositories perform two functions: as information source to search for materials and as archive to deposit scholarly works. Hence, lecturers use IR to archive and disseminate their scholarly works and access IRs to retrieve works of other scholars. Resultantly, lecturers are both authors or creators and readers or consumers of IRs contents. It is worth noting that materials from IR are used for different purposes such as scholarly research, lecture notes, personal and cultural purposes, needs for everyday information and fun (Rieh, Markey & Yakei, 2009). This suggests that materials in IRs are of high quality and useful for the purposes mentioned.

The use of IRs by lecturers is beneficial to the individual lecturer, library, host institution and society at large. The benefits of IR to individual lecturers include increased dissemination and impact of scholarship, enhanced professional visibility due to broader dissemination and increased use of publications. Others are: storage and access to a wide range of materials, greater security and long term preservation of materials and the building of a central archive of a Researcher's work (Cullen & Chawner, 2010). However, globally, many lecturers access IRs to retrieve materials but only few deposit their works into IRs (Cullen & Chawner, 2010; Bamigbola, 2014). Cullen and Chawner (2010), in a study that explored factors affecting the adoption and success of institutional repositories reported that 193 (35%) out of the 542 lecturers from four universities in New Zealand had searched for materials from their universities IRs. On the other hand, only 131 (24%) had deposited their scholarly works in their universities IR. Similarly, Bamigbola (2014) surveyed the use of IRs by academics in Agriculture disciplines in a Federal University of Technology, Nigeria and found that, 7.8% of the academics had submitted their scholarly works into IR while 58.8% had not submitted their scholarly works into IR but had searched the IR to retrieve scholarly works. Meanwhile, the sustenance of IRs depends among others on content generation. Therefore, low submission of scholarly works by lecturers is a serious concern for academic library stakeholders.

The establishment of IRs in Nigerian universities is on the increase but very slow. As at 2008 there was no record of functional IR in Nigerian Universities (Christian, 2008). The first university that implemented IR in Nigeria was University of Jos in June, 2009. Similarly, Covenant University, Ota and Ahmadu Bello University, Zaria implemented IR in late 2009. University of Nigeria, Nsukka implemented IR in 2010 and Federal University of Technology, Akure implemented IR in 2011. However, as at September 2017, there are twenty (20) functional open access IRs in sixteen (16) Nigerian Universities out of 152 universities (NUC website, September, 2017). Learning from those who had implemented IR would be beneficial to universities in Nigeria that are just implementing or

embarking on establishing IR. It is therefore, pertinent to evaluate the use of IRs by lecturers in the Nigerian universities that have had functional IRs for at least three years in order to help other universities that are at the verge of making decision on implementation of IR.

Therefore, this study investigated the level of awareness, extent of use of IR, preferred archiving method, purposes of use of IRs materials, and challenges to the use of IRs by lecturers.

Objectives of the study

The main objective of this study is to examine the use of institutional repositories among lecturers in Nigerian universities and the specific objectives are to:

1. Ascertain the level of awareness about IRs among lecturers in Nigerian universities.
2. Establish the extent of use of IRs among lecturers in Nigerian universities
3. Examine the preferred method of archiving among lecturers in Nigerian universities.
4. Find out purposes for the use of materials from IRs among lecturers in Nigerian universities.
5. Identify the challenges of use of IRs among lecturers in Nigerian universities.

Research questions

The study answered the following research questions:

1. What is the level of awareness of IRs among lecturers in Nigerian universities?
2. To what extent do lecturers in Nigerian universities use the IRs?
3. What are the preferred methods of archiving among lecturers in Nigerian universities?
4. What are the purposes for the use of materials from IRs among lecturers in Nigerian universities?
5. What are the challenges of use of IRs among lecturers in Nigerian universities?

Literature review

Awareness is the realization and knowledge about a certain technology, its personal and social benefits (Dinev & Hu, 2005). Awareness comes first before usage of any object. In the open access environment, awareness has been acknowledged as an important factor determining usage of this mode of scholarly communication (Singeh, Abrizah & Karim, 2012; Dutta & Paul, 2014). The use of IR is based on the awareness of IR existence, its purposes and benefits. Past studies disclosed that the level of awareness of IR by academics was low, which resulted in low use. In a study by Yang and Li (2015) it was revealed that the level of awareness about IR of Texas A and M University (TAMU) OAKTrust was low. Out of 295 faculty members from 10 colleges/schools, only 27% were aware of the existence of TAMU IR OAKTrust and only 7% of them had deposited into the OAKTrust. Similarly, Chilimo (2016) found that out of 317 academic researchers in five public universities in

Kenya only 169 (53.3%) were aware of the existence of their university IRs, while 31% were aware of the IR policy, thus, resulted in low use of IRs.

Meanwhile, Obuh and Bozimo (2012) examined awareness and use of open access scholarly publications by Library and Information Science (LIS) lecturers in Southern universities in Nigeria and found that LIS lecturers had high level of awareness which led to high tendency of use of open access scholarly publication. The high level of awareness about IRs by LIS lecturers suggests that their discipline had influenced them and it also shows that awareness is a vital determinant of use.

Lecturers use IRs as information sources more than they use it as archives. Cullen and Chawner (2010), in a study that explored factors affecting the adoption and success of IRs reported that 193 (35%) out of the 542 lecturers from four universities in New Zealand had searched for materials from their universities IRs. On the other hand, only 131 (24%) had deposited their scholarly works in their universities IR. In addition, the study of Dulle, Minishi-Majanja and Cloete (2010) revealed that majority (62%) of Tanzanian researchers accessed free scholarly content while fewer (less than 20%) Tanzanian researchers disseminated their research findings through open access channels.

There are basically two archiving methods; self-archiving and mediated archiving. Self-archiving method is the process where the author archives his/her work while mediated archiving is where somebody else archives work on behalf of the author. According to Armstrong (2012) Boise State University, United States used mediated archiving method where library staff were saddled with uploading materials into the institutional repository. This might also encourage the lecturers to submit their works if they know that they do not need to spend time on self-archiving.

Literature affirmed that lecturers use IR materials for different purposes. Pelizzari (2003) submitted that lecturers use materials from IR to prepare articles (81.2%), teaching purposes (72.9%), personal and cultural purposes (41.6%) and other uses (10%). In the same vein, Rieh, Markey and Yakel (2009) submitted that lecturers use IR materials for scholarly research, needs for everyday information and fun.

Past studies revealed some general and context specific challenges of use of IRs by lecturers. Globally, some of the general challenges were: lack of awareness about IR, lack of awareness of publishers' policy in support of open access IR (Creaser, Fry, Greenwood, Oppenheim, Proberts, Spezi, & White 2010) and lack of adequate awareness of intellectual property rights (Nwokedi, 2011). Copyrights infringement issues, uncertainty over embargo period, fear of plagiarism, negative value perception of IR as low quality content (Abrizah, 2009; Cullen and Chawner, 2010; Nwokedi, 2011; Bamigbola, 2014), risk of being unable to publish elsewhere and lack of mandatory policy (Bamigbola, 2014). However, there were specific challenges that are peculiar to Nigeria, such as, lack of required

technological skills to use IR, lack of steady power supply, slow internet bandwidth and inadequate infrastructure (Nwokedi, 2011; Bamigbola, 2014).

Methodology

The study adopted descriptive survey of correlational type. The population consists of 2305 lecturers from five purposively selected faculties (Arts, Education, Environmental Design, the Social Sciences and Natural Science) in five Nigerian universities with functional IRs for at least three years by 2015 when the data was collected. They were Ahmadu Bello University, Covenant University, Federal University of Technology, Akure, University of Jos and University of Nigeria, Nsukka. The sample of 1151 (50% of the population) was randomly selected. Data were collected through an harmonised three sections questionnaire. Descriptive statistics such as frequencies, statistical mean and standard deviation were used for the analysis.

Findings and discussion

Questionnaire response rate

Table 1: Questionnaire response rate

| S/ N | University | Number Administered | Number Returned | Number Valid | Perce- ntage |
|----------|--|------------------------|--------------------|-----------------|-----------------|
| 1 | Ahmadu Bello University, Zaria | 327 | 263 | 263 | 80.00 |
| 2 | Covenant University, Ota | 86 | 64 | 64 | 74.4 |
| 3 | Federal University of Technology, Akure | 108 | 78 | 78 | 72.2 |
| 4 | University of Jos, Jos | 337 | 243 | 243 | 72.1 |
| 5 | University of Nigeria, Nsukka | 293 | 209 | 209 | 71.3 |
| 6 | Total | 1151 | 857 | 857 | 74.45 |

Table 1 reveals that out of the 1151 copies of questionnaire administered to the lecturers in five universities in Nigeria, 857 (74.45%) were returned and were found usable for analysis.

Demographic information of the respondents

Table 2: Demographic information of the respondents according to their universities

| Variable | Universities | | | | | | | | | | Total | |
|------------------------------|--------------|------|----|------|------|------|---------|------|-----|------|-------|------|
| | ABU | | CU | | FUTA | | UNI JOS | | UNN | | N | % |
| | N | % | N | % | N | % | N | % | N | % | | |
| Gender | | | | | | | | | | | | |
| Male | 216 | 82.1 | 44 | 68.7 | 63 | 80.7 | 167 | 68.7 | 156 | 74.6 | 646 | 75.3 |
| Female | 47 | 17.8 | 20 | 31.2 | 15 | 19.2 | 76 | 31.2 | 53 | 25.3 | 211 | 24.6 |
| Total | 263 | 100 | 64 | 100 | 78 | 100 | 243 | 100 | 209 | 100 | 857 | 100 |
| Age (years) | | | | | | | | | | | | |
| 25-29 | 20 | 7.6 | 6 | 9.3 | 4 | 5.1 | 9 | 3.7 | 8 | 3.8 | 47 | 5.4 |
| 30-34 | 54 | 20.5 | 9 | 14.0 | 20 | 25.6 | 16 | 6.5 | 23 | 11.0 | 122 | 14.2 |
| 35-39 | 50 | 19.0 | 22 | 34.3 | 14 | 17.9 | 60 | 24.6 | 44 | 21.0 | 190 | 22.1 |
| 40-44 | 43 | 16.3 | 15 | 23.4 | 15 | 19.2 | 55 | 22.6 | 58 | 27.7 | 186 | 21.7 |
| 45-49 | 53 | 20.1 | 5 | 7.8 | 18 | 23.0 | 51 | 20.9 | 41 | 19.6 | 168 | 19.6 |
| 50-54 | 32 | 12.0 | 5 | 7.8 | 3 | 3.8 | 29 | 11.9 | 21 | 10.0 | 90 | 10.5 |
| 55-59 | 10 | 3.8 | 1 | 1.5 | 4 | 5.1 | 19 | 7.8 | 11 | 5.2 | 45 | 5.2 |
| 60-64 | 1 | 0.3 | 1 | 1.5 | 0 | 0 | 3 | 1.2 | 3 | 1.4 | 8 | 0.9 |
| 65-69 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.4 | 0 | 0 | 1 | 0.1 |
| Total | 263 | 100 | 64 | 100 | 78 | 100 | 243 | 100 | 209 | 100 | 857 | 100 |
| Highest qualification | | | | | | | | | | | | |
| Masters | 72 | 27.3 | 22 | 34.3 | 26 | 33.3 | 70 | 28.8 | 62 | 29.6 | 252 | 29.4 |
| Ph.D | 175 | 66.5 | 36 | 56.2 | 49 | 62.8 | 160 | 65.8 | 140 | 66.9 | 560 | 65.3 |
| Others | 16 | 6.0 | 6 | 9.3 | 3 | 3.8 | 13 | 5.3 | 7 | 3.3 | 45 | 5.2 |
| Total | 263 | 100 | 64 | 100 | 78 | 100 | 243 | 100 | 209 | 100 | 857 | 100 |
| Rank | | | | | | | | | | | | |
| Asst. Lecturer | 30 | 11.4 | 13 | 20.3 | 11 | 14.1 | 43 | 17.6 | 35 | 16.7 | 132 | 15.4 |
| Lecturer II | 86 | 32.6 | 17 | 26.5 | 21 | 21.9 | 55 | 22.6 | 45 | 21.5 | 224 | 26.1 |
| Lecturer I | 79 | 30.0 | 20 | 31.2 | 18 | 23.0 | 75 | 30.8 | 51 | 24.4 | 243 | 28.3 |
| Senior Lecturer | 40 | 15.2 | 11 | 1.1 | 28 | 35.8 | 32 | 13.1 | 46 | 22.0 | 157 | 18.3 |

| | | | | | | | | | | | | |
|----------------------------------|-----|------|----|------|----|------|-----|------|-----|------|-----|------|
| Reader | 20 | 7.6 | 0 | 0 | 0 | 0 | 27 | 11.1 | 19 | 9.0 | 66 | 7.7 |
| Professor | 8 | 3.0 | 3 | 4.6 | 0 | 0 | 11 | 4.5 | 13 | 6.2 | 35 | 4.0 |
| Total | 263 | 100 | 64 | 100 | 78 | 100 | 243 | 100 | 209 | 100 | 857 | 100 |
| Years of Work Experience | | | | | | | | | | | | |
| 1-5 | 50 | 19.0 | 35 | 54.6 | 20 | 25.6 | 68 | 27.9 | 53 | 25.3 | 226 | 26.6 |
| 6-10 | 81 | 30.7 | 21 | 32.8 | 15 | 19.2 | 83 | 34.1 | 71 | 33.9 | 271 | 31.6 |
| 11-15 | 77 | 29.2 | 8 | 12.5 | 24 | 30.7 | 50 | 20.5 | 54 | 25.8 | 213 | 24.6 |
| 16-20 | 36 | 13.6 | 0 | 0 | 16 | 20.5 | 26 | 10.6 | 26 | 12.4 | 104 | 12.1 |
| 21-25 | 19 | 7.2 | 0 | 0 | 3 | 3.8 | 15 | 6.1 | 5 | 2.3 | 42 | 4.9 |
| 26 &> | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.4 | 0 | 0 | 1 | 0.1 |
| Total | 263 | 100 | 64 | 100 | 78 | 100 | 243 | 100 | 209 | 100 | 857 | 100 |
| Faculty | | | | | | | | | | | | |
| Arts | 45 | 17.1 | 0 | 0 | 0 | 0 | 55 | 22.6 | 26 | 12.4 | 126 | 14.7 |
| Education | 39 | 14.0 | 0 | 0 | 0 | 0 | 22 | 9.0 | 33 | 15.7 | 94 | 10.9 |
| Environmental Science/Technology | 64 | 24.3 | 14 | 21.0 | 30 | 38.4 | 43 | 17.6 | 59 | 28.2 | 210 | 24.5 |
| Natural/Physical Science | 75 | 28.5 | 20 | 31.2 | 35 | 44.8 | 69 | 28.3 | 52 | 24.8 | 251 | 29.1 |
| Social Sciences | 40 | 15.2 | 30 | 46.8 | 13 | 16.6 | 54 | 22.2 | 39 | 18.6 | 176 | 20.5 |
| Total | 263 | 100 | 64 | 100 | 78 | 100 | 243 | 100 | 209 | 100 | 857 | 100 |

Key: ABU = Ahmadu Bello University, CU= Covenant Univeristy, FUTA= Federal University of Technology, Akure, UNIJOS= University of Jos, UNN= University of Nigeria, Nsukka

The data from Table 2 reveals the demographic analysis of the respondents in each of the five universities. It shows that in all the universities, 646 (75.3%) of the respondents were males while 211 (24.6%) were females. The implication is that there were more male lecturers in the five universities. In all the five universities the highest age range group was 35 to 39 years with 190 (22.1%) and the least age range group was 65 to 69 with 1 (0.1%) respondent. This implies that there were younger lecturers in the five universities.

Majority of the respondents 560 (65.3%) had PhD as their highest educational qualification. In general, the results show that the highest group of respondents in this study, 243 (28.3%) are Lecturer I and the least group of the respondents, 35(4.0%) are Professorial cadre. Majority of the respondents

for this study 271(31.6%) had between 6 and 10 years of experience while the least group of respondents 1 (0.4) had between 26 and above years of work experience. The highest group of the respondents for this study 251 (29.1%) were from the Faculty of Physical/Natural Science while the least group of the respondents 94 (10.9%) were from the Education. The findings revealed that there were more respondents from Faculty of physical/natural Sciences.

Research question 1: What is the level of awareness of IRs among lecturers in Nigerian universities?

Table 3: Level of Awareness of institutional repositories by lecturers in Nigerian universities

| S/N | Items | SA | A | D | SD | Mean | S.D. |
|-----------------------|---|-----|-----|-----|-----|-------------|-------------|
| 1 | I am aware of the existence of my university IR | 431 | 200 | 126 | 100 | 3.22 | .69 |
| 2 | I am aware of the benefits of IRs | 20 | 482 | 217 | 51 | 3.16 | .65 |
| 3 | I am aware of the content of my university IR | 55 | 394 | 205 | 116 | 2.74 | .80 |
| 4 | I am aware of my university IR policy | 78 | 346 | 260 | 86 | 2.46 | .81 |
| 5 | I am aware of the publishers' policy on open access | 74 | 281 | 348 | 67 | 2.44 | .78 |
| 6 | I am aware of the processes of depositing my work into IR | 85 | 266 | 371 | 48 | 1.36 | .76 |
| Weighted Mean | | | | | | 2.56 | 0.75 |
| Criterion Mean | | | | | | 2.50 | |

The data in Table 3 reveals the level of awareness about IRs by lecturers in Nigerian universities. It could be noted that the weighted mean score for level of IR awareness of lecturers was 2.56 while the criterion Mean was 2.50 which means that lecturers in Nigerian universities are aware of IRs. The implication was that many lecturers in Nigerian universities had high level of awareness of IRs and it will definitely affect the use of IRs because without full awareness about the IR existence, benefits, content, its policy, publishers' policy, maximum use may not be realised. There seems to be an improvement in the level of awareness of IRs by lecturers in Nigeria, comparing the findings of current study with previous studies (Christian, 2008; Nwokedi, 2011).

Research question 2: To what extent do lecturers use institutional repositories in Nigerian universities?

Table 4 Extent of use of Institutional Repository as information source by lecturers in Nigerian universities

| University | Content | Annually | Quarterly | Monthly | Weekly | Daily | Never | Mean | SD |
|------------|----------------------|----------|-----------|---------|--------|-------|-------|------|------|
| | Published article | N | N | N | N | N | N | | |
| A B U | | 17 | 12 | 21 | 102 | 89 | 42 | 3.85 | 1.37 |
| CU | | 11 | 4 | 12 | 27 | 7 | 3 | 3.18 | 1.51 |
| FUTA | | 11 | 18 | 16 | 12 | 0 | 21 | 2.64 | 1.64 |
| UNI JOS | | 14 | 30 | 54 | 59 | 39 | 48 | 3.74 | 1.75 |
| UNN | | 24 | 30 | 34 | 59 | 25 | 37 | 3.95 | 1.54 |
| ABU | Conference papers | 58 | 39 | 47 | 27 | 17 | 75 | 3.58 | 1.51 |
| CU | | 0 | 10 | 25 | 17 | 3 | 9 | 2.86 | 1.48 |
| FUTA | | 13 | 13 | 12 | 10 | 4 | 26 | 2.16 | 1.7 |
| UNI JOS | | 18 | 41 | 51 | 46 | 25 | 62 | 3.4 | 1.76 |
| UNN | | 22 | 25 | 75 | 39 | 16 | 32 | 3.64 | 1.48 |
| ABU | Unpublished articles | 33 | 39 | 43 | 35 | 17 | 96 | 3.28 | 1.32 |
| CU | | 2 | 2 | 10 | 6 | 6 | 38 | 2.82 | 1.74 |
| FUTA | | 12 | 4 | 14 | 10 | 2 | 36 | 2.03 | 1.66 |
| UNI JOS | | 22 | 40 | 37 | 46 | 29 | 69 | 3.32 | 1.85 |
| UNN | | 29 | 34 | 38 | 21 | 0 | 87 | 3.24 | 1.76 |
| ABU | Theses | 6 | 20 | 11 | 6 | 2 | 218 | 1.01 | 1.48 |
| CU | | 10 | 21 | 8 | 10 | 0 | 15 | 1.88 | 1.39 |
| FUTA | | 16 | 10 | 5 | 4 | 0 | 43 | 1.92 | 1.65 |
| UNI JOS | | 20 | 49 | 55 | 32 | 11 | 76 | 2.05 | 1.73 |
| UNN | | 44 | 40 | 31 | 29 | 4 | 61 | 2.82 | 1.44 |
| ABU | | 11 | 7 | 9 | 7 | 6 | 223 | 0.66 | 0.24 |

| | | | | | | | | | |
|---|---------------------------------------|----|----|----|----|----|-----|------|------|
| CU | University lectures /Lecture notes | 4 | 7 | 9 | 17 | 1 | 21 | 2.01 | 1.73 |
| FUTA | | 19 | 23 | 9 | 5 | 4 | 18 | 1.73 | 1.65 |
| UNIJS | | 25 | 28 | 30 | 34 | 13 | 113 | 1.87 | 1.84 |
| UNN | | 42 | 24 | 23 | 0 | 0 | 120 | 1.29 | 1.65 |
| ABU | Administrative documents | 22 | 6 | 4 | 2 | 5 | 225 | 0.66 | 0.15 |
| CU | | 4 | 10 | 14 | 3 | 2 | 24 | 1.64 | 1.53 |
| FUTA | | 28 | 4 | 8 | 6 | 4 | 22 | 1.67 | 1.55 |
| UNIJS | | 21 | 31 | 39 | 21 | 11 | 120 | 1.72 | 1.2 |
| UNN | | 29 | 26 | 35 | 32 | 0 | 87 | 1.6 | 1.65 |
| ABU | Manuscripts | 23 | 12 | 7 | 5 | 6 | 210 | 0.62 | 0.25 |
| CU | | 9 | 7 | 17 | 6 | 1 | 21 | 1.66 | 0.57 |
| FUTA | | 10 | 10 | 8 | 3 | 0 | 48 | 1.61 | 1.45 |
| UNIJS | | 39 | 36 | 33 | 0 | 0 | 135 | 1.21 | 1.19 |
| UNN | | 30 | 31 | 37 | 19 | 0 | 92 | 2.47 | 1.55 |
| Table 5: Extent of use of Institutional Repository as archive among lecturers in Nigerian universities | | | | | | | | | |

| University | Content | Annually | Bi- annually | Quarterly | Monthly | Never | Mean | SD |
|------------|--------------------|----------|-----------------|-----------|---------|-------|------|------|
| | | N | N | N | N | N | | |
| ABU | Published articles | 69 | 49 | 3 | 0 | 142 | 3 | 1.5 |
| CU | | 27 | 26 | 0 | 0 | 11 | 3.37 | 0.87 |
| FUTA | | 9 | 0 | 0 | 0 | 69 | 1.75 | 1.37 |
| UNIJS | | 92 | 25 | 0 | 0 | 126 | 2.48 | 1.8 |
| UNN | | 65 | 41 | 0 | 0 | 103 | 2.61 | 1.59 |

| | | | | | | | | |
|--------|---------------------------|----|----|----|---|-----|------|------|
| ABU | Conference papers | 63 | 36 | 10 | 0 | 154 | 2.67 | 1.25 |
| CU | | 21 | 19 | 0 | 0 | 24 | 3.02 | 0.89 |
| FUTA | | 8 | 3 | 0 | 0 | 67 | 1.63 | 1.25 |
| UNIJOS | | 78 | 23 | 0 | 0 | 142 | 1.92 | 0.98 |
| UNN | | 38 | 34 | 13 | 0 | 124 | 3.95 | 1.51 |
| ABU | Unpublished articles | 45 | 87 | 4 | 0 | 195 | 2.39 | 0.87 |
| CU | | 19 | 15 | 0 | 0 | 35 | 2.47 | 0.65 |
| FUTA | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UNIJOS | | 27 | 15 | 0 | 0 | 201 | 1.43 | 0.05 |
| UNN | | 22 | 16 | 0 | 0 | 171 | 1.64 | 1.26 |
| ABU | University /Lecture notes | 26 | 1 | 9 | 0 | 214 | 1.3 | 0.95 |
| CU | | 8 | 15 | 10 | 4 | 27 | 2.37 | 1.67 |
| FUTA | | 3 | 8 | 3 | 0 | 62 | 2.77 | 1.29 |
| UNIJOS | | 24 | 27 | 17 | 0 | 175 | 1.84 | 0.86 |
| UNN | | 26 | 17 | 9 | 0 | 157 | 2.53 | 1.15 |
| ABU | Administrative documents | 19 | 10 | 7 | 0 | 227 | 1.59 | 0.91 |
| CU | | 23 | 3 | 2 | 0 | 36 | 1.85 | 1.36 |
| FUTA | | 9 | 11 | 0 | 0 | 58 | 2.58 | 1.25 |
| UNIJOS | | 27 | 26 | 8 | 0 | 182 | 1.79 | 1.63 |
| UNN | | 26 | 33 | 14 | 0 | 136 | 3.02 | 1.66 |
| ABU | Manuscripts | 21 | 17 | 5 | 0 | 220 | 1.45 | 1.08 |
| CU | | 19 | 4 | 1 | 0 | 40 | 1.78 | 1.32 |
| FUTA | | 3 | 3 | 0 | 0 | 72 | 1.9 | 1.51 |
| UNIJOS | | 23 | 14 | 0 | 0 | 205 | 1.36 | 0.03 |

| | | | | | | | | |
|---|--------|----|----|---|---|-----|------|------|
| UNN | | 46 | 26 | 0 | 0 | 137 | 1.71 | 1.01 |
| ABU | Theses | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CU | | 7 | 0 | 0 | 0 | 57 | 0.69 | 1.27 |
| FUTA | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UNIJS | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UNN | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Criterion Mean = 2.50; Weighted Mean = 1.92 | | | | | | | | |

The findings were presented in Tables 4 and 5. Table 4 indicates the extent at which the respondents use IRs as information source, that is, to access materials from it. The finding shows that published articles and conference papers were mostly accessed with the highest ranking by respondents from the five Universities ($\bar{x}=3.95$, $SD=1.54$) and ($\bar{x}=3.64$, $SD=1.48$). Published articles and conference papers were accessed on daily and weekly basis The least accessed materials by the respondents were Manuscripts ($\bar{x}=0.62$, $SD=.25$) and administrative documents ($\bar{x}=0.66$, $SD=.15$) and were accessed on quarterly and annually basis. Generally, the frequency of use of IR as information source among lectures in Nigerian universities is still low as the weighted Mean is 2.27 while the criterion Mean is 3.5

Table 5 shows the extent at which respondents from the five universities deposited materials into IRs. The respondents from the five universities had deposited six types of materials in varied frequencies. The findings revealed that conference papers ($\bar{x}=3.95$, $SD=1.51$) and published articles ($\bar{x}=3.37$, $SD=0.87$) were mostly deposited on bi-annually and annually basis by the respondents. Furthermore, Theses were the least deposited by the respondents 19 (7.2%) and 10 (3.8%) annually and bi-annually basis respectively. The frequency of use of IR as archive among lecturers in Nigerian universities is low as the Criterion Mean is 2.50 while the weighted Mean is 1.92.

In support of this finding, Cullen and Chawner (2010) submitted that 35% of the 542 lecturers from four universities in New Zealand had accessed materials from their universities IR but only 24% had deposited their works. Similarly the study of Dulle, Minishi-Majanja and Cloete (2010) revealed that 62% of Tanzanian researchers had retrieved scholarly content from their universities IRs while only 20% had deposited their own scholarly works.

Research question 3: What is the preferred method of archiving among lecturers in Nigerian universities?

Table 6: Lecturers’ preferred method of archiving

| University | Preferred method of archiving | | | | | | | | Total |
|-------------------------|-------------------------------|------|---------------------------|------|---------------------|-----|-------------|-----|-------|
| | Self-archiving | | Through the Library staff | | Through a colleague | | No response | | |
| | N | (%) | N | (%) | N | (%) | N | (%) | |
| Ahmadu Bello University | 15 | 5.7 | 200 | 76.0 | 0 | 0 | 48 | 8.2 | 263 |
| Covenant University | 20 | 31.2 | 40 | 62.5 | 0 | 0 | 4 | 6.2 | 64 |
| Federal University of | 0 | 0 | 58 | 74.3 | 0 | 0 | 20 | 5.6 | 78 |

| | | | | | | | | | |
|-----------------------|-----------|-------------|------------|-------------|----------|----------|------------|------------|------------|
| Technology, | | | | | | | | | |
| University of Jos | 45 | 18.5 | 198 | 81.4 | 0 | 0 | 0 | 0 | 243 |
| University of Nigeria | 10 | 4.7 | 157 | 75.1 | 0 | 0 | 42 | 0 | 209 |
| N=857 | 90 | 10.5 | 653 | 76.1 | 0 | 0 | 114 | 3.3 | 857 |

Table 6 shows that archiving through the library staff is the most preferred method by the respondents from all the five universities with 653 (76.1%) respondents while 90 (10.5%) respondents preferred self-archiving. This implies that lecturers do not want to self-archive and since the library is the custodian of knowledge, the onus is upon the library to archive the materials on behalf of the lecturers. This is what Armstrong (2012) referred to as mediated archiving. This finding also confirms the state of archiving at the Boise State University, the United States where library staffs were saddled with uploading the materials into the IR (Armstrong, 2012).

Research question 4: What are the purposes for the use of materials from IRs among lecturers in Nigerian universities?

Table 7: Purposes of use of materials in IRs among lecturers in Nigerian universities

| University | Purposes of use of IR materials | | | | | | | |
|---|---------------------------------|-------------|-------------------|-------------|----------------------|-------------|----------------|------------|
| | To prepare lecture notes | | My research works | | Seminar presentation | | Other writings | |
| | N | % | N | % | N | % | N | % |
| Ahmadu Bello University, Zaria | 151 | 57.4 | 127 | 48.3 | 95 | 36.1 | 0 | 0.0 |
| Covenant University, Ota | 42 | 65.6 | 35 | 54.7 | 38 | 59.4 | 0 | 0.0 |
| Federal University of Technology, Akure | 39 | 50.0 | 47 | 60.3 | 25 | 32.1 | 9 | 11.5 |
| University of Jos | 151 | 62.1 | 105 | 43.2 | 65 | 26.7 | 30 | 12.3 |
| University of Nigeria, Nsukka | 115 | 55.0 | 125 | 59.8 | 78 | 37.3 | 25 | 12.0 |
| Total N=857 | 498 | 58.1 | 439 | 51.2 | 301 | 35.1 | 64 | 7.5 |

The data in Table 7 reveals that majority of the respondents 498 (58.1%) indicated that they used materials from IRs to prepare lecture notes, while only 25 (11.9%) used it for other writings. This finding is in

agreement with that of Rieh, Markey and Yakel (2009) who discovered that in the United States, lecturers use materials from IRs for scholarly research, needs for everyday information and fun.

Research question 5: What are the challenges of use of IRs by lecturers in Nigerian universities?

Table 8: Challenges of use of IRs among lecturers in Nigerian universities

| Statements | Agree | | Disagree | |
|--|---------|----------|----------|------|
| | N | % | N | % |
| Fear of copyrights infringement | 60 2 | 70. 2 | 255 | 29.7 |
| Fear of plagiarism | 62 0 | 72. 3 | 237 | 27.6 |
| Lack of awareness about IR | 58 6 | 68. 3 | 271 | 31.6 |
| Fear of not being able to publish work deposited in IR in a peer reviewed journal | 50 2 | 58. 5 | 355 | 41.4 |
| Lack of awareness of publishers policy as regards depositing published works in IR | 51 4 | 59. 9 | 354 | 41.4 |
| Works in IR are not considered for promotion | 52 3 | 61. 0 | 334 | 38.9 |
| It is seen as very difficult to use | 38 9 | 45. 3 | 468 | 54.6 |
| IR is seen as not useful to my discipline | 35 8 | 41. 7 | 499 | 58.2 |
| With no peer review or quality control process, the quality of content of the repository would be questionable | 34 7 | 40. 4 | 510 | 59.5 |
| Lack of knowledge of how to use IR | 25 8 | 30. 1 | 599 | 69.8 |

| | | | | |
|--|-----|------|-----|------|
| I have negative feeling towards IR | 230 | 26.8 | 627 | 73.1 |
| Depositing work in IR consumes time | 392 | 45.7 | 465 | 54.2 |
| Articles from IR are seen as low quality works | 316 | 36.8 | 541 | 63.1 |

The data in Table 8 reveals the findings on the challenges of use of IRs among lecturers in Nigerian universities. The three major challenges were: fear of copyrights infringement, fear of plagiarism and lack of awareness of IRs. The three least challenges indicated by the respondents were: I have negative feeling towards IR, depositing work in IR consumes time, articles from IR are seen as low quality works. This finding is in consonance with Nwokedi (2011) discovered that many lecturers in Nigeria were not certain of the copyright status of their published works, hence they had fear of copyrights infringement, and fear of plagiarism which results in their hesitation to deposit their works. Similarly, Bamigbola (2014) discovered that fear of plagiarism and lack of awareness of IR were few of the major challenges preventing lecturers to use institutional repository in a study of attitude and use of institutional repository by lecturers in agricultural disciplines in Nigeria.

Conclusion

Development of IR in Nigerian universities is on the increase, and awareness of IR is on the increase. The study proved that majority of lecturers in Nigerian universities had the awareness of IR, they accessed and retrieved scholarly works on daily and weekly basis while they deposited their own scholarly works bi-annually and annually basis. Furthermore, lecturers in Nigerian universities preferred mediated-archiving and they used materials from IRs to prepare lecture notes, research work and seminar. Lastly, the study found that the major challenges of use of IRs among lecturers in Nigerian universities were fear of copyrights infringement, fear of plagiarism and lack of awareness of IRs among others.

Recommendations

Based on the findings of the study, the following recommendations are hereby made to increase the use of IR among lecturers in Nigerian universities:

1. The IR staff should endeavour to check the copyright status of journals on behalf of the lecturers to ensure non-infringement of copyrights.
2. More IR awareness programmes should be organised by the library management.

3. University management should make submission of scholarly works into IR mandatory to encourage use of IRs among lecturers.
4. The library management should adopt mediated archiving method instead of self-archiving method.

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About the authors

Alice A. Bamigbola, CLN is a Research Fellow at the Centre for Educational Media Resource Studies, University of Ibadan. She has a Bachelor degree in Library and Information Studies, Master degree in Personnel Psychology (Ibadan), Master degree in Digital Library Learning (DILL) (Oslo) and currently on her PhD at the Department of Library, Archival and Information Studies, University of Ibadan. Her research focus includes Digital Libraries, Open Access Repositories, e-learning and school libraries. Alice is an Erasmus Mundus Scholar, a member of the International Federation of Library Associations (IFLA), Nigerian Library Association (NLA), Nigerian School Library Association (NSLA) and Chartered Institute of Library and Information Professionals (CILIP), UK.

Airen Adetimirin is a Lecturer in the Department of Library, Archival and Information Studies, University of Ibadan, Nigeria since 2005 and teaches undergraduate and postgraduate courses related to the use of Information and Communication Technology (ICT) in library and information science profession. She supervises undergraduates and postgraduate students on different research projects. Prior to her employment as a lecturer, she was the Chief Librarian of Dominican Institute, Ibadan, Nigeria for six years. Airen has a Bachelor degree in Agriculture (Crop Science), Master of Library Studies and Ph.D in Library Studies from the University of Ibadan, Nigeria. Airen's research focus is on use of ICT for e-learning, library service delivery, teaching, Literacy and distance learning and she has published in both national and international journals. Airen also attends national and international conferences where she meets, works and interacts with people from different organizations and countries. She is a member of the International Federation of Library Associations (IFLA), Informing Science Institute (USA), Nigerian Library Association (NLA) and Chartered Institute of Library and Information Professionals (CILIP), UK.