Abstract

Scholars have increasingly expressed dissatisfaction with the existing model of scholarly communication such as high subscription prices for journals and restricted access. These issues have contributed to the quest for alternative modes of preservation and dissemination of information such as institutional repositories (IRs). The purpose of the study is to assess the level of awareness of lecturers in South-South federal universities in Nigeria of IRs. Three research questions and two null hypotheses were formulated for the study. The descriptive survey research was employed in the study. Simple percent and mean were used to answer the research questions while ANOVA was used to test the hypotheses at 0.05 levels of significance. The study revealed that there is significant difference in the level of awareness of IR among lecturers from different faculties in South-South federal universities in Nigeria. There is no significant difference in the level of awareness of IR among lecturers of different academic status. Lecturers become aware of IR through academic staff/colleagues and Internet browsing. The study concludes that universities should encourage promotional activities geared towards creating awareness of IR which will in turn lead to the establishment of IR in universities.

Keywords: Awareness, Institutional Repository, Open Access

Introduction

State of Institutional Repositories (IRs) in Nigeria

The emergence of scientific research in Nigeria could be traced back to the period of British colonial administration of Nigeria; bulk of the research works during this period was basically restricted to agriculture and its allied products. This trend was not prompted by the desire of the British administration to promote research or development in the region. Rather, the interest of the British administration in promoting scientific research in the region was borne out of the strategic role of the region in the supply of agricultural raw materials for British industries¹. To this effect, agricultural research stations were set up in various cities across Nigeria and British West Africa. Academic institutions at the tertiary level are the focal points of scholarly and applied research in Nigeria. In terms of research, university-based research entered the scene with the establishment in 1948 of the University of Ibadan—the first indigenous university in Nigeria. With the passage of time, the number has grown to
of three generations. The first generation universities are University of Ibadan, University of Lagos, University of Nigeria, Ahmadu Bello University and Obafemi Awolowo University. The second generation class is composed of University of Benin, University of Ilorin, University of Jos, University of Maiduguri, University of Calabar, Uthman Danfodio University and Bayero University. The third generation is composed of specialized universities of technologies and agriculture situated in Abeokuta, Akure, Bauchi, Makurdi, Minna, Owerri and Yola.

The federal universities receive a large proportion of their grant from the federal government. In addition, that (especially the first generation) account for a significant proportion of the scholarly research conducted in Nigeria. As a matter of fact, close to 50% of staff/students in Nigerian universities are teaching and enrolled in the first generation universities respectively. The state of research publishing in local academic journals in Nigeria has been on the rise in recent time. Unfortunately, these publications are not openly accessible. A recent trend in an attempt to make such publications widely accessible has been to list the journals in the African Journal Online database. Regrettably, the database is not openly accessible and hence only details limited to the abstract of the research is openly accessible. Notwithstanding, the statistics on the database help us to understand the state of research publishing in Nigeria as compared to other African countries.

The emergence of Open Access Initiatives as well as information and communication technologies provides a veritable medium to address the problem of poor visibility of academic research information emanating from developing countries like Nigeria. The shift from the conventional print publication to the use of digital sources and internet media have provided academic and research institutions in Nigeria with an opportunity to make their grey literature and research output accessible to the outside world. However, it may be surprising to observe that academic and research institution in the country are yet to take advantage of the benefits provided by open access institutional repositories.

Institutional Repositories

Institutional repository has been defined as “a digital archive of the intellectual product created by the faculty, research staff, and students of an institution, with few if any barrier to access” 3. Institutional repository is also defined as “a set of services that a
university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members.” The responsibility of each academic institution is to preserve, organize and distribute the intellectual output of their faculty to the entire world. Furthermore, institutional repositories are “a way that institutions can ‘get back’ some of the outputs from the researchers and accelerate the movement toward open sharing of knowledge.” Hence, the role of an institutional repository is basically to collect and preserve and disseminate the host institution’s research outputs. The research outputs could include electronic copies of pre-prints as well as post-print articles, conference and working papers, committee papers, teaching materials, theses and dissertations, monographs, multimedia, students’ projects, etc. According to Crow, Ware, and Rowlands, Nicholas, and Huntington, an IR is characterized as follows:

- It is institutionally defined – unlike a subject repository; the IR captures only the intellectual property of the host institution.
- Content may be purely scholarly, or may comprise administrative, teaching and research materials, both published and unpublished.
- It is cumulative and perpetual – once items are submitted they should not be withdrawn. This carries with it a long term obligation on the host institution to preserve IR content.
- It is open and interoperable – a primary goal of an IR is to disseminate the institution’s intellectual product. As a minimum, this requires the creation of metadata which can be harvested by appropriate software. In practical terms content should be Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) compliant.
- In collecting, storing and disseminating information, it contributes to the process of scholarly communication.

The IR concept was born out of competition for who was going to be responsible for dissemination of an institution’s intellectual product via the Internet. Individual institutions felt that the competitor in this instance was the e-print archive movement controlled by several well-funded or subscription-based groups, associations, and institutions serving a variety of disciplines. The key word that was used at that time was interoperability. This meant that a technical mechanism should be created and “designed to facilitate the discovery of content stored in distributed e-print archives” using an open archive architecture.
issues of concern were mainly technology, access (which should be free), and control of intellectual product. The IR was perceived to be an end unto itself. Every institution or a consortium of institutions would enter their e-prints into an IR and share useful academic and research products to enhance and stimulate study. The details of this process were much more complex than this description reveals. Copyright issues, institutional branding, peer review, faculty compliance and other challenges made the implementation difficult and costly. IRs are now becoming a component of the technical infrastructure in research intensive institutions and a favoured option for providing open access to research output. Universities and research institutions throughout the world are investigating, piloting, and developing systems for building collections of digital resources and learning materials in the shape of open access repositories. Arising from the above, an IR can be defined as a type of digital library established by an individual university, populated by the staff, researchers, students and other members of the university and to be consulted by both members of the university and the outside world.

The IR has gained momentum as universities begin to question the logic of buying back [their] research. "IRs will succeed precisely because they are responsive to the needs of campus communities, and advance the interests of campus communities and of scholarship broadly." The information environment is undergoing a period of change, from the delivery mechanism of materials to the expectation of the users of information service; IRs are a response to some of these changes. Thus, IR is perceived to be one of the methods to address users' information need by different groups though they are faced with many obstacles to grow as expected.

Therefore, in administering an IR, identifying clearly its purpose, maintaining a critical view of how the IR would be the best tool for disseminating research results, and identifying its technological drawbacks, advantages and challenges are the most important things. Expanding the role of the IR integrating functionality with other resources, and increasing exposure of the IR through collaborative projects are crucial to unlocking the full potential of an IR. The success of IR can be achieved in a collaborative effort through collaborators; an effective IR of necessity represents collaboration among librarians, information technologists, archives and records mangers, faculty, and university administrators and policymakers. The undeniable fact here is that if IRs are coordinate
implemented and managed, then their contribution to academic and research institutions will be fruitful\textsuperscript{4}.

Hence, one can argue that the success and the failure of IRs in academic institutions depend on the awareness and active participation of academic authors to IR and their perception to contribute to it.

**Lecturer’s Awareness of IRs**

Awareness is a pre-requisite to subsequent usage of IRs unless an individual uses it unknowingly. Some studies suggest evidence of advantages associated with open access. 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. It has been found that the level of awareness of researchers to the IR at the University of Oslo is very low\textsuperscript{10}.

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. Swan and Brown’s studies conducted successively in 2004 and 2005 have set milestones in the understanding of authors’ awareness of IR.

In 2004, survey of authors’ attitudes towards IR conducted by Rowlands, Nicholas and Huntington showed that 82% knew ‘nothing at all’ or ‘a little’ about IR\textsuperscript{7}. The study also indicated that scholars showed a positive awareness of IRs despite having some reservations about quality and preservation in such a model. However, concerns about the perceived low impact factor of IR have also been voiced in the IR literature, notably by authors subject to research audits such as the Research Assessment Exercise (RAE) in the UK, and was put forward as a reason for not choosing IR for dissemination of their research outputs (Swan & Brown, 2004\textsuperscript{12}; Watson, 2007\textsuperscript{13}).

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 (lecturers). Swan and Brown\textsuperscript{11}, and Waston\textsuperscript{13} 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”\textsuperscript{14}. These types of promotional activities are important because they raise awareness of the repository; and they must be supplemented with other more targeted content recruitment strategies. 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.

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\textsuperscript{15}. Lecturers 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\textsuperscript{15}. One has to be sure to outline explicitly the benefits of your service to academics. 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\textsuperscript{14}.

Literature has cited a number of reasons why lecturers’ awareness and participation rates are so low\textsuperscript{5}. 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\textsuperscript{12}; Swan & Brown, 2005\textsuperscript{16}). Lack of knowledge or awareness of IR is not peculiar with lecturers. In fact, this is the situation in most developing country institutions like Nigeria\textsuperscript{2}. A majority of researchers had heard about open access initiatives\textsuperscript{17}. The most common terms or initiatives by researchers are IRs. Levels of awareness of IR issues are varied. Most researchers claimed that they got IR awareness from their colleagues, internet debate, publishers’ promotion and workshops.

The faculty/discipline and academic status of lecturers may influence their awareness of IRs. The subject disciplines of those who are aware of IR are those in molecular biology, physics, mathematic, library science and computer science\textsuperscript{18}. This may be as a result of their active and frequent involvement in research activities\textsuperscript{18}. Awareness of the IR according to academic status is found to be equally distributed\textsuperscript{10}. This implies that academic status of
researchers did not bring any difference in their awareness of IRs. This means that the level of awareness according to lecturers’ academic status was found to be almost similar at all academic status levels. However, the academic status of associate professor and research fellow with regards to their level of awareness is found to be lower whereas in the professor and research assistant status, the gap is almost similar\textsuperscript{10}. This might be due to the reason that research assistants were more aware of DUO because at the end of their study they must submit their thesis to the university IR whereas in the professorial cadre, they are very much aware of research practices and experiences so that this might help them to be more aware of IR than associate professors and research fellows.

**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. With this fact, the emerging technologies have on the other hand brought several methods to the libraries and academic institutions for disseminating their research output, one of which is open access. 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.

The growth of IRs has been very remarkable in developed countries as well as some developing countries like Brazil, India and South Africa. A large number of academic and research institutions in Nigeria do not have a functional IR. Of the 28 federal universities in Nigeria, there are only three IRs. These research outputs addressing issues endemic to the region should be given wide circulation (access) so that the results of the researches can be applied in addressing the issues that they sought to tackle. Thus after so much painstaking commitment of efforts and resources in undertaking researches, the outcome are not widely disseminated. An IR is now regarded by many organizations as a new and important method in disseminating research results\textsuperscript{10}. 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 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 lecturers’ awareness of IRs in the South-South federal universities in Nigeria.

Research Questions

The following research questions will guide the study.

1. What is the percentage distributions of lecturers in the faculties used in the South-South federal universities in Nigeria?
2. What is the academic status of lecturers in the South-South federal universities in Nigeria?
3. What is the level of lecturers’ awareness of IR in the South-South federal universities?

Hypotheses

The following null hypotheses were formulated for the study and were tested at 0.05 level of significance.

1. There is no significant difference in the level of awareness of IR among lecturers from different faculties in South-South federal universities in Nigeria.
2. There is no significant difference in the level of awareness of IR among lecturers of different academic status in South-South federal universities in Nigeria.

Methodology

The research design that was utilized for this study is the survey design type of descriptive research. Federal universities in South-South Nigeria were used for this study. The states covered in the South-South Nigeria are Edo (Benin-city), Cross River (Calabar), Rivers (Port Harcourt), and Akwa-Ibom (Uyo). These are the states in which federal universities had been established. The target population for this study is all categories of lecturers in federal universities in the South-South geo-political zone of Nigeria. There are 3,786 lecturers in the federal universities in the South-South excluding Federal University of Petroleum Resources, Effurun which is a peculiar university.19
Table 1: Federal Universities and Lecturers in South-South Nigeria

<table>
<thead>
<tr>
<th>Names of Universities in South-South Nigeria</th>
<th>Lecturers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 University of Benin, Benin City</td>
<td>998</td>
</tr>
<tr>
<td>2 University of Calabar, Calabar</td>
<td>846</td>
</tr>
<tr>
<td>3 University of Port Harcourt, Port Harcourt</td>
<td>1,030</td>
</tr>
<tr>
<td>4 University of Uyo, Uyo</td>
<td>912</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,786</strong></td>
</tr>
</tbody>
</table>

A sample of 1,136 respondents (lecturers) was selected for the study. The figure represents approximately 30% of the target population of lecturers in South-South federal universities in Nigeria. Combinations of sampling techniques were used for this study. Firstly, four faculties were purposively selected from each university. The faculties were: Education, Arts/Humanities, Social Sciences and Sciences. These faculties are common to the federal universities in the South-South Nigeria. Secondly, the quota sampling technique was employed to select a sample size of 1136 respondents (lecturers) from the four universities. Thirdly, using the stratified sampling based on specified proportion, respondents were selected from each of the four faculties in the four universities. The sample size for each university was divided into four representing the four faculties. The availability sampling was employed to select each unit of respondent from the quota allotted to each of the four faculties in the selected universities.

Table 2: Details of Sample for the Study

<table>
<thead>
<tr>
<th>FACULTY</th>
<th>UNIBEN</th>
<th>UNICAL</th>
<th>UNIPORT</th>
<th>UNIUYO</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDUCATION</td>
<td>75</td>
<td>64</td>
<td>78</td>
<td>69</td>
<td>286</td>
</tr>
<tr>
<td>ARTS</td>
<td>74</td>
<td>62</td>
<td>77</td>
<td>67</td>
<td>280</td>
</tr>
<tr>
<td>SOCIALSCIENCES</td>
<td>75</td>
<td>64</td>
<td>77</td>
<td>69</td>
<td>285</td>
</tr>
<tr>
<td>SCIENCES</td>
<td>75</td>
<td>64</td>
<td>77</td>
<td>69</td>
<td>285</td>
</tr>
</tbody>
</table>
The research instrument that was used to collect data for the study was a questionnaire. Data generated were analyzed using both descriptive and inferential statistics. Simple percents were used to answer research questions one and two while statistical mean was used to answer research question three. The criterion mean for the research question was placed at 2.50. However, one way analysis of variance (ANOVA) was used for testing the two hypotheses at 0.05 level of significance.

Results

Research Question 1: What is the percentage distributions of lecturers in the faculties used in the South-South federal universities in Nigeria?

The faculties of the respondents are shown in Figure 1. There are (25.4%) lecturers in the faculty of Arts, Education (22.5%), Sciences (27.8%), while Social Sciences (24.3%). This implies that there are more lecturers in the faculty of Sciences than in other faculties in the federal universities in South-South Nigeria.

Research Question 2: What is the academic status of lecturers in the South-South federal universities in Nigeria?
The academic status of the respondents is shown in Figure 2. The result shows that majority of the respondents are Assistant/Lecturer II and Lecturer I/Senior Lecturer. However, not many Associate Professors/Professors were involved in the study. Assistant Lecturer/Lecturer II are (46.7%), Lecturer I/Senior Lecturer (39.4%) and Associate Professors/Professors (13.8%).

**Research Question 3**: What is the level of lecturers’ awareness of IR in the South-South federal universities?

**Table 3: Mean Responses of Lecturers’ Awareness of IR**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>Statistic</td>
<td>Std. Error</td>
</tr>
<tr>
<td>AWARENESS</td>
<td>946</td>
<td>3.35</td>
<td>.032</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>946</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A cursory look at Table 1 above, with a mean statistic of 3.35, reveals that lecturers in South-South federal universities in Nigeria are aware of or familiar with IR. This is because the statistic mean is above the acceptance point of 2.50.
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 3.

**FIGURE 3**
Sources of Awareness of IR

![Graph showing sources of awareness of IR](image)

**Hypothesis 1:** There is no significant difference in the level of awareness of IR among lecturers from different faculties in South-South federal universities in Nigeria.

To ascertain whether there is any significant difference in the level of awareness of IR among lecturers from different faculties in South-South federal universities in Nigeria, the scores of faculties of lecturers were cross tabulated with the frequency of the level of awareness of IR and the result is shown in Table 4.

**Table 4: Summary of ANOVA table showing Significant Difference in the Level of Awareness of IR among Lecturers from Different Faculties in South-South Federal Universities in Nigeria**
<table>
<thead>
<tr>
<th>Source of variance</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F-Cal.</th>
<th>F-Crit.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>32.112</td>
<td>3</td>
<td>10.704</td>
<td>11.177</td>
<td>2.61</td>
<td>0.00</td>
</tr>
<tr>
<td>Within Groups</td>
<td>902.163</td>
<td>942</td>
<td>.958</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>934.275</td>
<td>945</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*P* < 0.05 - *Highly Significant*

From Table 4 above, the F-calculated value of 11.177 is greater than F-critical value of 2.61 at 0.05 alpha level, df 3 and 942. The null hypothesis is rejected. This implies that there is significant difference in the level of awareness of IR among lecturers from different faculties in South-South federal universities in Nigeria.

Because the result of the test is significant, further analysis was carried out using the Scheffe Post-Hoc Analysis to find out where the significance lies. From the analysis, it shows that the significant difference lies in the faculty of Sciences. It may be deduced from the analysis that lecturers in the faculty of Sciences are more aware of IR than lecturers in other faculties. The result is presented in Table 5 below.

**Table 5: Scheffe Post-Hoc Analysis showing where the Significant Difference Occurred**

<table>
<thead>
<tr>
<th>FACULTY</th>
<th>N</th>
<th>Subset for alpha = 0.05</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>ARTS</td>
<td>240</td>
<td>3.15</td>
</tr>
<tr>
<td>SOCIAL SCIENCES</td>
<td>230</td>
<td>3.24</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>213</td>
<td>3.34</td>
</tr>
<tr>
<td>SCIENCES</td>
<td>263</td>
<td>3.62</td>
</tr>
<tr>
<td>Sig.</td>
<td>.208</td>
<td>1.000</td>
</tr>
</tbody>
</table>
FACULTY | N  | Subset for alpha = 0.05
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTS</td>
<td>240</td>
<td>1</td>
</tr>
<tr>
<td>SOCIAL SCIENCES</td>
<td>230</td>
<td>2</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>213</td>
<td></td>
</tr>
<tr>
<td>SCIENCES</td>
<td>263</td>
<td></td>
</tr>
<tr>
<td>Sig.</td>
<td>.208</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed.

**Hypothesis 2:** There is no significant difference in the level of awareness of IR among lecturers of different academic status in South-South federal universities in Nigeria.

To test the above hypothesis, lecturers’ level of awareness of IR was correlated with their different academic status. The result is shown in Table 6.

**Table 6: Summary of ANOVA table showing no Significant Difference in the Level of Awareness of IR among Lecturers of Different Academic Status in South-South Federal Universities in Nigeria**

<table>
<thead>
<tr>
<th>Source of variance</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F-Cal.</th>
<th>F-Crit.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>4.315</td>
<td>2</td>
<td>2.157</td>
<td>2.188</td>
<td>3.00</td>
<td>.113</td>
</tr>
<tr>
<td>Within Groups</td>
<td>929.960</td>
<td>943</td>
<td>.986</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>934.275</td>
<td>945</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*P > 0.05 - Not Significant*
Table 6 shows that F-calculated value of 2.188 is lower than F-critical value of 3.00 at 0.05 alpha level, df 2 and 943. The null hypothesis is therefore accepted. This implies that there is no significant difference in the level of awareness of IR among lecturers of different academic status in South-South federal universities in Nigeria. For the fact that the result of the test is not significant, there was no need for a Post Hoc (Scheffe Test for Multiple Comparisons) analysis.

Discussion

The study revealed that lecturers in South-South federal universities in Nigeria are familiar or aware (Mean= 3.35) of IR. 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. Lack of awareness of IRs among academics and researchers is high in the country’s academic and research institutions. 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. Majority of lecturers in Nigerian universities have access to the content of IR through cyber café and personal internet subscription.

Also, another finding shows that there is no significant difference (F.cal. = 1.177; F.crit. = 2.61) in the level of awareness of IR among lecturers from different faculties in South-South federal universities in Nigeria. The significance lies in the faculty of Sciences (3.62). This implies that lecturers in the faculty of Sciences are more aware of IR than those in the faculties of Arts, Education and Social Sciences. This finding supports the study of Abrizah (2009) who found that the subject disciplines of those who are aware of IR are those in molecular biology, physics, mathematic, library science and computer science. This may be as a result of their active and frequent involvement in research activities. However, the low level of awareness of IR among lecturers from the other faculties may be as a result of inadequate activities towards the promotion of IR on campus. According to Mark and
shearer (2006)\textsuperscript{5} the literature has cited a number of reasons why lecturers’ participation rates are so low. At the most basic level, faculty members lack awareness of the existence of IRs. Several surveys have found that many academic authors are not familiar with any IRs on campus (Swan and Brown, 2004;\textsuperscript{12} Swan and Brown, 2005)\textsuperscript{16}. This may be as a result of unavailability of IR in many universities. For those universities that have an IR, they may still be in a pilot testing phase and has not been widely publicized. It can be inferred from the study that the faculty in which lecturers are located definitely have an influence on their awareness of IRs.

The study also revealed that there is no significant difference (F\textsubscript{cal.} = 2.188; F\textsubscript{crit.} = 3.00) in the level of awareness of IR among lecturers of different academic status in South-South federal universities in Nigeria. This implies that knowledge of IR is very low among major stakeholders (different academic status) in developing region like Nigeria. Therefore, awareness of IR among lecturers seems to be one major issue to the development of IR for research in developing countries. It is only when awareness is tackled in an empirical study that establishment of IR will be implemented.

Another finding from this study is that lecturers’ become aware of IR through academic staff/colleagues and Internet browsing. This finding corroborates Dulle (2008)\textsuperscript{17} 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). 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 & Shearer, 2006)\textsuperscript{14}. Even with a variety of creative ideas and promotional activities, lecturers’ uptake has been reluctant where voluntary compliance is needed\textsuperscript{5}. These types of promotional activities are important because they raise awareness of the repository.

\textbf{Implications of the Study}

From the findings, it has been established that lecturers were aware of IR and increasingly recognized the need to store their intellectual output in the form of personal collections, and to make available the results of the work within and outside the institution. Therefore, institutions (universities) should establish IRs for the preservation of lecturers’ intellectual output in digital formats. The establishment IRs is dependent on lecturers’
Awareness. Hence, sources of awareness such as academic colleagues, institutions bulletins, Internet and workshop should be promoted to bring about greater awareness needed to improve attitude towards the establishment of IRs in South-South federal universities in Nigeria.

Conclusion

The study concludes that lecturers in South-South federal universities in Nigeria are aware of the concept of IRs. It is therefore imperative to note that there is likely to be IRs development in convergent ways over the next few years in our tertiary institutions of learning.

Recommendations

Based on the findings of this study, the following recommendations are made.

There is the need for university management and university library management to promote activities geared towards creating awareness such as internet debate, institutional brochures and through workshops. This will in turn create awareness on the part of the lecturers hitherto unaware of the concept and benefits of IRs. The study suggests that awareness creation seminars on IRs will educate users about the advantages and disadvantages of IR as a tool for digital scholarly communications.

References


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