AWARENESS AND USE OF INSTITUTIONAL REPOSITORY FOR ACADEMIC STAFF OUTPUT IN TERTIARY INSTITUTIONS

Dr. Adaeze, Nwona Nzewi

Pharmaceutical Library, Agulu Campus, Nnamdi Azikiwe University, Awka

ABSTRACT*: The paper is on Awareness and Use of Institutional Repository for Academic Staff output in Tertiary Institutions. The use of IRs by academic staff 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. Institutional repositories have been established in academic and research libraries. University based institutional repositories manage, disseminate, and preserve where appropriate, digital materials created by the institution and its community members. The paper discussed awareness, use and benefit of IRs, academic staff attitude towards intellectual work deposit in IRs and challenges of IRs in our academic community. Based on the literature in area of the problems that face academic libraries in Nigeria, the researchers made some recommendations*

KEYWORDS: awareness, use, benefits, institutional repository, academic staff and output

INTRODUCTION

In academic community word output and productivity are used interchangeable. Output/ productivity is viewed as the rate at which a worker, an organization, or a country produces goods and services (Ogunsanwo, 2012). It stands for the expected output of manpower in ratio to the energy exerted on the job at hand. Invariably, productivity could be seen as the output of an employee to the ratio of the amount of remuneration received in an organization. Moreover, Srivastava and Barmola (2011), described productivity as the rate of power to produce an item or service in any organization. In a study conducted by Ali, Ali and Adan (2013) on the productivity of employees/workers, it was revealed that the quality of environment in the workplace simply determines the level of employee's motivation, performance and productivity. This is an indication that there is a relationship between office environment and productivity of employees, and that improved employees' morale has direct relationship with their productivity in an organization or institution, and that there is a positive relationship between working condition and employees' productivity. It simply means an expected output of manpower in ratio to the energy exerted for the job at hand.

Employees' productivity is generally acknowledged as a necessary factor that enhances growth and development in every known human society, institution or organization (Rogers, 1998; Yaya, 2016). It was emphasized that productivity is linked to issues of organizational effectiveness and efficiency or success. To this end, Rogers (1998), stressed that for organizations to improve

productivity, they should establish an information systems vision. This is the tenet of Institutional Repository initiatives across the globe. Indeed, organizations that understand the importance of information in our modern world which has been branded as knowledge economy, driven by information has long been enjoying the benefits of information driven production processes and gaining global competitive advantages.

In essence, for university employees, especially the academic staff to be reasonably productive, they would need reliable information. Reliable or verified information is the pivotal point of library information functions in organizations and institutions. Global practice shows that many IRs are administered by libraries/libraries in the academia (Izuagbe, 2018). Libraries as information-based organizations, have increasing and important roles to play in the establishment and management of institutional repositories (IRs) with expectation of encouraging academic staff to make use of available materials within the university system's information domain. Many centuries ago, institutional libraries and scholarly publishing operated the traditional or print/conventional model in preserving and disseminating knowledge from academic and research institutions, whereby information resources or research outputs in the form of periodicals, journals, articles, textbooks and monographs and other information bearing objects, were housed; thereby playing greater role in terms of preservation than dissemination. Scholarly publishing played a much greater role in terms of dissemination through scholarly journals (Christian, 2008; Yaya, Unegbu, & Onyenania, 2017). Moreover, the primary task of libraries is to select, acquire, maintain, and provide access to relevant and representative information resources. This is because libraries are established to provide information resources and services for the institutions/communities they serve" (Akande, Igbinlola, Diyaolu & Salvador, 2018).

This shift has resulted in what Benkler (2006) called the ''network information economy'' (free access) which is gradually displacing the ''industrial information economy'' (restricted access) that typified information production from about the second half of the nineteenth century and throughout the twentieth century. According to Fry, Bruce, Lockyer, Oppenheim and Houghton (2008), ways in which scientific and scholarly knowledge is created and disseminated are undergoing radical change in the light of new digital technologies, though the extent and pace of this change is not uniform across disciplines.

One major barrier faced by Scholars/academic staff and Researchers alike is the lack of access to the current literature in their field (Mark & shearer, 2006; Urhiewhu, Okeke & Nwafo, 2015). In Canada, for example, from 1986 to 2002, serials expenditures in Canadian Research Libraries (CARL) have increased by 233%, while the number of subscriptions has increased by only 22% (CARL, 2003 in mark and shearer, 2006). As a result, CARL is spending over three times as much on serials as they did in 1986. This is a worldwide problem. However, the situation is even more critical in developing countries such as Nigeria, where library budgets are extremely small. As a consequence, the teaching and research in some countries is being carried out below international standard otherwise regarded as poor standard of education.

However, the state of research publishing in local academic journals in Nigeria has been on the

rise in recent times (Christian, 2008; Yaya, 2016). 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 African journal online database. Regrettably, the database is not openly accessible. Notwithstanding, the statistics on the database help us to understand the state of research publishing in Nigeria as compared to other countries. The lack of access to information resources around the world is a matter of concern and an issue that a growing number of initiatives seek to remedy. One of such initiatives is the open access movement upon which IR initiative, implementation and development is fundamental.

The aim of open access 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. This new trend in information access, has prompted many higher institutions across the globe to be engaged in the establishment of Institutional Repositories (IRs), including those in Nigeria. Institutional Repositories (IRs) play key roles in today's societal education system (Koutras & Bottis, 2013).

Thus, Institutional Repositories (IRs) are proposed as one of the major strategies for achieving open access initiatives. Essentially, IR collects and provides free access to the research output of a given institution. Institutional Repositories are, most often, Open Access Initiative (OAI) – complaint databases of the university or other research institutions intellectual output, most typically research papers, although many other forms of digital media can also be stored and disseminated. The main aim or function of IR is to provide improved and free access to the full text of research articles within and outside an institution by members of an institution hosting or that has an IR.

Institutional Repository definition varies depending on the extent at which artefacts in IR are stored. They range from every digital material created by an institution (Koutras & Bottis, 2013; Lynch, 2003; Bevan, 2007) to a well-defined set of materials. Koutras and Bottis (2013) presented a working definition of Open Access Institution Repository as "a digital of the intellectual product created by the faculty research staff and student of an institution and accessible to end users both within and outside of the institution with few if any barrier to access". Moreover, Lynch (2003) defined Institution Repository as "a set of service that a university offer to the members of its community for the management and dissemination of digital materials created by the institution and its community members". It is most essential an organizational commitment to the stewardship of these digital materials, including long-term preservation where appropriate, as well as organization and access or distribution''. From the above definitions, it could be seen that an Institutional Repository is institution based, contains scholarly publications, organizes information resources content and provides free access. Thus, it could 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 all members of the university and the outside world". Although it was mentioned that the purposes of Repositories may vary (for instance, some

universities have teaching/learning repositories for educational materials), in most cases they are established to provide open access to the institution's research output for the purpose of increased academic output or productivity among staff (Koutras & Bottis, 2013).

Objective of the study

1. To know academic staff awareness and use of Institutional Repositories (IR)
2. To find output academic staff willingness of contribution to Institutional Repositories
3. To know the challenges faced by academic libraries about IR

ACADEMIC STAFF PRODUCTIVITY

Academic staff productivity level has become a key determining factor for evaluation of effectiveness and reward systems in tertiary institutions of learning. Over the years, "publications, citations and high index level are three quantitative measures of scholarly productivity commonly used to evaluate university academic staff members" (Noble & Kecojevic, 2015). They also expressed that the quantity and quality of an individual's publications' record is often an integral part of promotion and tenure decisions as well as post-tenure notoriety and awards as promoted by IR and open access initiatives. "This phenomenon has gone a long way to support "the axiom 'publish or perish' which has been proven true as the number of peer-reviewed publications is often used as an integral component of internal promotion and tenure decisions as well as post-tenure annual evaluations and merit-based pay increases" (Noble & Kecojevic, 2015:222).

Several other studies have been put forward over the years to explain the nature and level or degree of academic productivity of academic staff in tertiary institutions all over the world. One of such studies in recent times is the one of Kyvik and Aksnes (2015), cite Larsen & Von-Ins (2010) who posited that "there has been a very large growth in scientific and scholarly publishing, enabled by the large increase in the number of journal articles, proceedings from conferences or associations, book-series and monographs"; noting that this trend has led to significant increase in the number of overall research works across the world and that there is reason to believe that individual scholars or academics now publish more than ever before across the globe. This circumstance may not be true or the same in every institutions of learning. Thus, forms one of the bases for this study. Moreover, "questions could arise if whether the increase in publications rises solely due to the strong growth of the academic professions, or partly due to more productive scientists and scholars or access and use of IRs" upon which this work is based. Although, Kyvik and Aksnes (2015) disclosed that over the last three decades, several institutional research process and productivities has changed profoundly towards more collaboration thereby increasingly enhancing scholars' publication outputs especially in the international context. It was also expressed that this observed increase in publication output of scholars in the foreign scene was due to incentives and reward systems put in place in promoting scientific publishing which has been a source of motivation in driving inner joy among researchers coupled with the need for recognition or visibility in the scientific community recently promoted by IRs and open access initiatives (Kyvik & Aksnes,

2015).
In Nigeria however, some recent studies have shown that there exists low level of research productivity among academic staff in higher institutions. One prominent study in this regard, is that of Achonna (2018) who reported low level academic productivity among scholars in university libraries in Southern part of Nigeria especially in the following areas: "(1) Total number of articles published in high impact or professional journals right from the commencement of their career life, (2) Number of articles published in professional journal in the past three years, (3) Number of researches that they have on-going or presently going on, (4) Number of professional journal articles they had co-authored with professional colleagues, (5) Number of abstracts/indexes they have compiled, (6) Number of book(s) reviewed, (7) Number of bibliographies they had also compiled in the past three years; and (8) Number of books they have written since they began their career, as well as having very low numbers of book chapters' contributions". His study also found low level of research productivity in the number of citation their few published works had received, and on the number of professional conferences/seminar or workshops they had presented papers as well as the number of grants won through research proposal writing since the beginning of their work/career; and lastly number of patents registered since commencement of career. In a nutshell, the research findings from Achonna (2018) study discovered "a generally low level of research productivity among academic staff/librarians in public universities in Southern Nigeria". The shortfalls in academic productivities of scholars or academic librarians reported by Achonna (2018) could have resulted from several factors which may include poor access and use of IRs.

Academic Staff Awareness of IRs
Awareness is a pre-requisite to subsequent use of institutional repositories unless an individual uses it unknowingly. Manjunatha (2001) found in his studies, research scholars made awareness of Institutional Repositories and keen interest in access to IRs in their university. It shows that institutional level IRs have scope to build repositories. Barwick (2007) made efforts in setting up an institutional repository at Loughborough University and made available to the institutional access. Erickson et al. (2008) have applied the basic techniques to build an institutional repository for external resources like blogs, wikis, and other web resources. Managing the publication and sharing of research artifacts is within the individual's scholarly network. There is steady increase in the usage of the repository model for archiving and sharing digital resources and in an item tagging scheme that suggests user preference of the resource as a platform for enhancing professional rather than personal interests. User interactivity by way of textual scholarly discussions on the repository platform is however almost nonexistent (Asunka et al., 2011). Existing studies do not only reveal IRs awareness among scholars but suggest evidence of advantages associated with its open access contents. For instance, the study of Ivwighreghweta (2012) disclosed that scholars were overwhelmingly or completely aware of open access and institutional repository existence.

Madsen and Oleen (2013:2) stressed the availability of literature directly related to the 'back-end' processes of IR management and the discussion of its advocacy or marketing, and recruitment of IRs professionals for content development. They iterated that successful promotional efforts in form of awareness creation would lead to effective and progressive use of IRs among scholars;

and that such form of promotional efforts would be an important institutional asset for the use of IR. To this end, multiple authors stressed the importance of libraries and their professionals (librarians) roles in marketing IR and communicating with faculty about IRs features and benefits (Madsen & Oleen, 2013; cite Bailey, 2005; Bell, Fried Foster, & Gibbons, 2005).

Aggressive, but not overly aggressive marketing or awareness creation of IRs advantages was therefore recommended by Madsen, and Oleen (2013) as **a** value-added service necessary to increase faculty (academic staff) participation in its development and utilization for academic prosperity. IR awareness would in no little measure help to remove potential barriers to academic resources (productivities) deposits in IRs among scholars with its resultant benefits. Thus, Ivwighreghweta (2012:9) captured that "some of the issues identified by existing literatures as being responsible for the slow uptake of IRs in Africa include lack of knowledge or awareness of open access institutional repository, poor state of information and communication technology and inadequate advocacy for open access repositories".

In addition to communicating with researchers and dialogues with other IR or library staff in form of awareness creation would also help IR staff to connect the right persons in order to address issues affecting IRs development and use especially in meeting with people and getting involved or to cooperate and talking to others about understanding IRs projects and advantages (Lee & Stvilia, 2017).

Academic staff Attitude towards Intellectual Work Deposit in IRs
Scholars' intellectual work deposit in IRs is fundamental to the success and failures of IRs management and sustainability. Thus, a survey of institutional repository managers by Hanlon and Ramirez (2011) indicated that a majority of IRs follow a mediated deposit process, with librarians and library staff playing the key functions especially the role of copyright clearance and contacting publishers or stakeholders building its information resources deposit workflow.Interestingly, there are different categories of products that scholars or researchers and authors can deposit in IRs projects (Akintunde, n.d). According to him, they include pure researches – self funded or other funded, researches leading to the award of degrees and diplomas, pre-prints and reprints of peer-reviewed articles. They also include lecture notes, full-length technical papers as well as presentations in all formats.

Moreover, resources such as these and dissertations, pre-print and post-print journal articles, technical reports, lecture notes, matriculation and convocation lectures as well as inaugural lectures and related articles' deposits greatly determines the success of IRs management in terms of growth and development (Madsen & Oleen, 2013; cite Boock & Kunda, 2009). It was relatively acknowledged that work (electronic theses and dissertations among others) deposits in IRs are much more flexible and faster compared the workflows for the deposit and processing of print equivalents especially in cost and time saving as well as in the visibility of authors, yet most scholars still finds it difficult in submitting their works for inclusion in IRs projects in tertiary institutions due to attitude problems. This could be one of the reasons why existing literature noted that data or information resources are often either deposited or not deposited in IRs projects

depending on scholars' attitudes or degree of discipline or willingness (Yoon & Tibbo, 2011; as cited by Madsen & Oleen, 2013). Invariably, as positive attitude could greatly enhance IRs success, so would negative attitude to work deposits in IRs could be a great barrier to IRs building and utilization.

Attitude therefore becomes an important factor in the development and use of IRs for the enhancement academic staff productivities. To this end, it was noted that "in providing services that remove barriers to stakeholders' participation can help ameliorate the difficulty of recruiting faculty or academic staff work contents (Bankier & Perciali, 2008; as cited by Madsen, & Oleen, 2013), who point out that for many universities the "core mission is to advance research and scholarship," while making such research outcomes publicly available is much more important through IRs functions. The "build it, and they will come neither use it attitude or model is not good enough" which definitely becomes a serious issue and of great concern here (Giesecke, 2011). In this regard, the issue of incentives must be built in or dully considered as well while planning the implementation of IRs to ensure success and sustenance.

Use and Benefits of IRs
Institutional repositories development and use offer several and varying benefits to support academic activities. For example, IRs enhances curatorial activities, including preserving, discovering, controlling, reusing and repurposing institutional intellectual contents including the provision of channels for contents' dissemination and use. This IRs drive is geared towards increasing institutional name, value, visibility and image by aggregating and showcasing institutional intellectual works produced by its communities (Lee & Stvilia, 2017). This form of all-encompassing benefits goes a long way in the rating of institutional values in world academic ranking. Thus, "the potential increase in an institution's name value and the emphasis that major funding agencies place on research data sharing motivates many institutions to establish IRs and related value added services for research data use and communication" (Lee & Stvilia, 2017); noting that IR has the capacity of storing and curating research data can increases its value, credibility, and reuse potentials.

In this direction, Akintunde (n.d) came up with four main objectives or benefits of having an institutional repository as follows (i.e. "IRs helps) to:
➢ Create global visibility for an institution's scholarly research
➢ Collect content in a single location
➢ Provide open access to institutional research output by self-archiving it
➢ Store and preserve other institutional digital assets, including unpublished or otherwise easily lost ("grey") literature (e.g., theses or technical reports)".

Akintunde (n.d) also acknowledged that "IRs immediately makes an institution and authors who deposit their work(s) visible because the repository usually follows some international standards and refined internet protocols with search engines; and that IRs contents are in most cases, open and access to its content is unrestricted".IRs functions go a long way to enhance the best use institutional intellectual contents. Thus, Harnad (2010) sees IR as an infrastructure for maximizing

tertiary institutions' research impacts and outcomes, and that higher institutions of learning such as the universities need to adopt self-archiving policies driven or piloted by such institution's library especially by helping with the "first wave of self-archiving". He also encourages funding agencies to make self-archiving as part of the research cycle, and that some form of scient metric performance indicators be developed to "monitor, and reward maximization of research impact through open access". Studies have earlier proven that IRs greatly increase authors' citation impacts (Lawrence, 2001); noting that – "an average of 336% more citations occur to online articles (open access) such as in IRs compared to offline articles (restricted access) published in the same venue". Fantastically, IRs ultimate benefit could be expressed as "publish for visibility or don't publish and perish silently". Thus, Noble and Kecojevic (2015) posited that "the axiom 'publish or perish' has been proven true in most intellectual scene as the number of peer-reviewed publications is often used as an integral component of internal promotion and tenure decisions as well as post-tenure annual evaluations and merit-based pay increases wherein the role of IR is becoming prominent.

It is therefore observable and clear that IRs offer ample opportunities for self-archiving, preservation, open access, and research impacts. The benefits of IRs include visibility and citation impacts for both the institutions and authors that engage in IRs projects and use. But, beyond this, the sharing of knowledge at every conceivable stage in the production process appears to be a great attribute of Open Access IRs (Akintunde, n.d).

It was also reported that some issues peculiar and identified by existing literatures as being responsible for the slow uptake of institutional repositories in Africa as relative to Nigeria include "lack of knowledge or awareness of open access institutional repository, poor state of information and communication technology, inadequate advocacy for open access repositories, poor or inadequate funding, and copyright and intellectual property rights" (Christian, 2011 as cited by Ivwighreghweta, 2012:9). He recalled that the most commonly reported problems affecting the use of scholarly communication in universities have been outlined and discussed in several studies (Durrant, 2004). On the bases of the cited studies, "the following are the highly reported scholarly communication problems facing the Nigeria University IRs growth, development and use:

➢	Low funding for research and higher education;
➢	Low staff morale due to low salaries and unrewarding research system;
➢	Brain drain;
➢	Overburdening of researchers with teaching and administrative loads;
➢	Low exploitation of information and communication technologies (ICTs); and
➢	The serial crisis".

Another possible explanation is that academic staff have used increasingly more time teaching and administrative activities than in research which could be attributed to attitudinal problems Ivwighreghweta (2012:5) acknowledged that the major problems confronting the development of open access institutional repositories are that of funding by government and institutional parent bodies. He further stated that opportunities presented by institutional repositories and Open Access

archives to the development of Africa as well as the challenges hindering the development of digital information repositories on the continent has been examined by Chisenga (2006). He acknowledged the fact that "several of the research output from the region exists in the form of grey literature i.e. unpublished information and knowledge resources such as research reports, theses and dissertations, seminar and conference papers". Very little research outputs find their way into the world's well-established international scientific journals due to various problems. This also includes recorded prejudice against research work submissions from developing country scientists; and that local journals in general have poor distribution and visibilities problems leading to questionable reputational issues in library practices.

In an earlier statement of Olowu (2004), library's poor reputation was attributed to lack of accessibility of information resources. In a similar expression of Oyediran-Tidings (2004) at Yaba College of Technology, Lagos, low use of the library by students were attributed to accessibility problems. However, Aguolu and Aguolu (2002) earlier disclosed that efforts are being made worldwide to promote access to information in all formats but lamented the attendants of underdevelopment relation to power failure, facilitating tools or machine breakdowns, and lack of spare parts and technicians, which intermittently stall the performance of the modern gadgets of information storage and transfer in developing countries.

Meanwhile, Oliver (2003) noted that teaching, learning and research in universities require access to a variety of information resources, information forms and types by students and teachers and this call for the adoption of ICT and use of electronic resources in universities. In order to remain relevant in the current Information Age, university lecturers and students have to adopt the use of electronic resources to enhance their teaching, learning and research activities. One critical issue, according to Atinmo (2000), that has been affecting availability and by extension access and use has been the need for library managers to carry out feasibility study and staff training before embarking on provision of ICT facilities such as the IRs implementations via open access initiatives.

To create availability, accessibility and use of IRs, it is expected that required and related facilities be put in place. The noticeable improvement in the availability and accessibility of IRs has however been handicapped by the problems of electricity and network which has adversely affected their implementations and use in developing countries such as Nigeria (Zhang, 2001). It was emphasized that the importance of accessibility and use of information systems could be hampered by negligence of networking technologies that could facilitate their connectivity and use especially those in the electronic environment like the IRs that is currently becoming very crucial for academic excellence, productivity and participation in the present day information and knowledge-based society (Ukachi, 2012).

Moreover, Madsen and Oleen (2013) posited that the provision of services that remove barriers to participation and use of information systems such as IRs can help ameliorate the difficulties of accessing faculty members' productivity contents. The issues and problems of lack of skillful librarians in effective implementation and management of IRs in the African continent were not

left out. For instance, Lee and Stvilia (2017) pointed out that many libraries hiring the services of new data professionals are having it difficult to sustain them; noting that there exist "dearth of knowledge and skills with regards to the current practices of IRs especially in data curation-related activities, IRs' activity structures, and role-related skillsets among others".

Conclusion and Recommendations

From the foregoing, one would summarize that: issues on key concepts to the paper…….. However, IRs has been described as an important aspect of library services that consequently engender high academic productivities among scholars directed towards national growth and development. No wonder, many authors explained that IRs use via open access initiative takes the pride of place on the list of priorities of viable academic institutions across the globe. It was therefore observed that its development and use by scholars and researchers is becoming very essential and inevitable in our present-day academic community.

Thus, in most tertiary institutions across the globe and Nigeria are making frantic efforts to key into IRs benefits through their establishment and use as well as to guarantee effective use of library information resources. This need has been a central focus of library practices in recent times. Hence, several studies have been conducted by several authors who postulated that IRs will help in enhancing scholars' information access effectiveness especially in searching, identifying, locating, and selecting required library materials for use to enhance/improve their learning and research outputs or productivities. Recommendations based on related literature reviewed, the following recommendations are hereby made to increase the use of IR among academic staff in Nigerian higher institutions:

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

References

Adebayo, E. L. (2013). *Digital institutional repository: the challenges of instituting a viable library policy in Nigerian universities libraries*. A Lead Paper Presented at the   Annual General Meeting of the Nigerian Library Association, Ogun State Chapter held   on Thursday,   17th January, 2013 at the Neuro-Psychiatric Hospital, Aro, Abeokuta.
Allen, A. L. (2017). Lessons Learned in Partnerships and Practice: Adopting Open Source Institutional Repository Software. JLSC, 5 (General Issue), 1 – 15.
Baro, E. E. Oni, O. & Onyenania, G. (2009). Gender and publication output of librarians in Edo and   Delta state university libraries in Nigeria. *Emerald Journal of Performance Measurement and   Metrics: The International Journal for Library and Information Services,* 10((3), 180-192.
Halder, S. N. & Chandra, S. (2013). Users' attitudes towards institutional repository in Jadavpur university:

A critical study. *International Journal of Management and Sustainability*, 1(2),   45-52.

Ivwighreghweta, O. (2012). An investigation to the challenges of institutional repositories development in six academic institutions in Nigeria. *International Journal of Digital Library   Services,* 2 (4), 1 – 17.

Izuagbe, R. (2018). Institutional repositories and libraries in Nigeria: Interrogating the nexus. *Journal of Cases on Information Technology,* 20(2), 16-29. Retrieved October 27, 2018from:https://covenantuniversity.edu.ng/Profiles/Izuagbe-Roland/Institutional Repositories-and-Libraries-in-Nigeria-Interrogating-the-Nexus.

James, O. D. (2016). Strategies for bridging ICT gap through open access and open source software. A Presented at the International Workshop on Africa and the Challenge of the   Digital Divide: Lessons for the 21st Century Librarianship, Digital Bridge Institute International Centre for ICT Studies, Cappa, Oshodi, Lagos, Nigeria.

Koutras, N. & Bottis, M. (2013). Institutional repositories of open access: A Paradigm of innovation   and changing in educational politics. Retrieved October 27, 2018 from:

https://www.sciencedirect.com/science/article/pii/S1877042813047927

Kyvik, S. & Aksnes, D. W. (2015). Explaining the increase in publication productivity among academic staff: a generational perspective. *Studies in Higher Education,* 40 (8), 1438– 1453.

Lee, D. J. & Stvilia, B. (2017). Practices of research data curation in institutional repositories: A qualitative view from repository staff. *PLoS ONE,* 12(3), 1 – 44.

Madsen, D. L. & Oleen, J. K. (2013). Staffing and workflow of a maturing institutional repository. *Journal of Librarianship and Scholarly Communication,* 1(3), 1 – 12.

Noble, A. & Kecojevic, V. (2015). Analysis of research scholarship for academic staff at US ABET accredited mining engineering schools by publications, citations and h-index. *Mining Technology,* 124 (4), 222 – 230.

Ogunsanwo, G. A. (2012). *You and Your Job: Attitude Required for Improving Performance and Productivity.* Paper presented at the Training Workshop for Junior Staff of Library Unit of Yaba College of Technology. Held at Center for Management Development (CMD),

Ukachi, N. B. (2012). Knowledge societies and sustainable development: The roles of libraries. *Madonna Journal of Research in Library and Information Science*, 2 (1), 1 – 18.

Urhiewhu, L.O, Okeke, I. E. & Nwafo, M. C. (2015). Extent of digital information resources usage by undergraduates of selected higher institutions in Delta and Edo State, Nigeria. *Research on Humanities and Social Sciences*, 5 (14), 110 – 117.

Yaya, J. A., Unegbu, V. & Onyenania, G. O. (2017). The nexus between motivation, job satisfaction   and productivity of librarians in public universities in Nigeria. *International Journal of   Education, Development, Society and Technology (IJEDST),* 5 (5), 25 – 50.