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Expanding the Roles of Libraries: A Review of Institutional Repository in Promoting and Preserving Academic Research

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Abstract: Institutional repository is a new scholarly publishing model for researchers and academic institutions. The idea is conceived to enable broader access and dissemination of knowledge as well as preservation for future use, which are the core roles of traditional libraries. However, digital technology facilitates the adoption of institutional repository and makes libraries responsible for its management. Thus, libraries have reclaimed their function of preserving knowledge which has hitherto been hindered by digital right management policies whose emphasis is on access rather than ownership, and which has prohibited libraries from claiming ownership of subscribed materials. Institutional repository roles in enhancing academic research, faculty-librarian collaboration, library services and collections, as well as the roles of libraries in promoting and preserving academic research knowledge for posterity cannot be undermined. To achieve these laudable roles, preservation policy for repositories is of paramount importance. The study thus provides a review of different literatures to explore the key roles of institutional repositories in promoting academic research. The review of literature revealed that lack of adoption of repository policies pose challenges to institutional repositories in the preservation of academic research. The analysis of the Registry of Open Access Repository Mandates and Policies (ROARMAP) statistics showed a partial adoption of repository policies among research institutions. It is recommended that adoption of preservation policies for repository content should spread across borders and form prerequisite for establishing institutional repositories. This review suggested other factors to consider in

improving the implementation of institutional repository policies towards preserving academic research.

Keywords: Institutional repository, academic research, library services, preservation

Introduction

Institutional repository is a new scholarly publishing model for researchers and academic institutions. This new publishing platform that serves as a paradigm shift from publishers' domination to granting authors' freedom. This system of scholarly communication expands the readership and availability of most scholarly research while also showcasing its institutional origins. Robinson (2009) highlights some of the objectives of Institutional Repository as to providing a convenient self-archiving mechanism for published output, enabling staff to manage an online collection of their own publications for research and citation purposes; to provide a platform for the archiving of unpublished works; and enable the Institution demonstrate the depth of its research efforts to stakeholders. It ensures digital preservation, long-term access to research and breaking publishers' monopolies by reducing costs (or at least allow their re-allocation) associated with publisher subscriptions as well as assist research collaboration through facilitating free exchange of scholarly information. Digital repository enables easy access to extracting, detecting and finding new research study thereby serving as repertoire of knowledge and databank for the academic institution

Institutional Repository for Supporting and Enhancing Academic Research

Academic librarians have played a vital role in research process by ensuring availability of research materials right from when the idea is conceived to developing the manuscript, provide sources through which author determines quality journals to publish in, as well as disseminating to wider audience through the new publishing model known as institutional repository (McIntyre, Chan & Gross, 2013). Tenopir, Sandusky, Allard and Birch (2013) highlighted the emerging role academic librarians' play in data management and in the creation of metadata for research data. Academic libraries are also partnering with faculty in publishing journals, which is part of the final step of the Joint Information Systems Committee (JISC) research lifecycle (Perry, Borchert, Deliyannides, Kosavic & Kennison, 2011). According to Moruf and Adeleke (2018), many academic law libraries are also building their digital institutional repositories for easy and timely access to legal information resources. Nitecki and Davies (2017) define librarians' role in research process to include defining research topic, gathering background information, locating and evaluating information resources, and citing sources utilized in reporting research results. Also, provide publication-based view of research as expanding to

embrace emerging interactive open science (Foster open science). It is evidenced that academic libraries roles have expanded beyond citing sources utilized to communicating results of research but also publishing and enabling reuse through institutional repository.

Institutional repository provides a platform for academics to publish their research free of charge and; then, disseminate to a wider audience at no cost to enable international visibility and entrenching research network. According to Richard (2002), academic authors rarely receive direct compensation for the research articles they publish. Rather, they publish for professional recognition and career advancement, as well as to contribute to scholarship in their discipline. Institutional repositories also grant authors right management system to their publications; make arrangement for a reward system and enable institutional affiliation through an established policy system thereby granting authors academic freedom to determine mode of access, user type and user communities as well as choose time frame for access to their content.

Developing Library Collections to Guarantee Ownership of Library Resources

Libraries have seized from claiming ownership of their collections, with the proliferation of physical and electronic resources forming part of larger collections of the library through e-subscription to various electronic resources ranging from e-books, e-journals and databases and other open access sources (Moruf & Olajojo, 2017).

Thus, emphasis have shifted from ownership to access while the digital right management prevents library from claiming ownership even with the exorbitant rate paid for subscription of e-resources. Institutional repository, as a new publishing model of scholarly publications guarantees ownership of collections by the institution's library managing repository, as content owners grant non-exclusive permanent right to the institution to preserve, distribute and disseminate for use; therefore, library's collection continues to increase day by day as diverse resources are deposited in the repository. Institutional repository facilitates deposit of Open Educational Resources (OER), this is reiterated in a working definition given by the Organisation for Economic Co-operation and Development (OECD). OER is defined as "digitised materials offered freely and openly for educators, students and self-learners to use and reuse for teaching, learning and research" (OECD, 2007). All resources deposited increases institutional repositories content, which in turn contributes immensely to building library collections, though this does not guarantee full ownership of the repository content due to certain mandates which does not provide exclusive right to content holders (institutional repository/library) to own such materials till eternity.

Developing Library Collections to Guarantee Academic Freedom and Protecting of Authors' Rights

The intellectual property right grant authors non-exclusive right (unlimited right) to own and retain copyright of their work, as well as licensing such

rights. Copyright protection automatically subsists in all works of authorship from the moment (period of creation) of creation (Kumar, 2009). The benefits accrued to individual researchers, institutions and society have been highlighted; Institutional repository demonstrates to the academic community, that individuals and their work are valued, by supporting mechanisms that reduce workload and maximize the benefits accrued to their efforts by protecting author's rights and guarantee freedom of ownership; provide a reference point for scholarly works that can interoperate with other systems, maximizing efficiencies between them by sharing information (Prosser, 2004). Academic libraries play the role of educating authors to motivate institutional repository depositors, enable authors to have better understanding of intellectual property rights so as to negotiate their copyright with publishers, thereby improve their knowledge of copyright, make them aware of their rights and maximize the return of their efforts. Kumar (2009) reported that it is essential to create awareness among the creators of information and knowledge about Intellectual Property Right because of the difficulty to prove rights violation in

the digital environment whenever they occur.

Institutional Repository Roles in Maintaining and Completing Research Lifecycle

Research is a continuous process of knowledge development which begins from idea conception to disseminating the result of the research produce. Libraries have played a significant role in every stage of research process. Vaughan, Hayes, Lerner, McElfresh, Pavlech, Romito, Reeves, and Morris (2013) analyse the five broad areas through which library services support research lifecycle such as the role of library in finding literature to assist the development of ideas; learning about grant seeking tools; preparing data managements plans for grant proposals; managing citations during the process of conducting research; and depositing research output in repositories. Institutional repositories as a new research publishing model enable instant access to the result of research on depositing and/or archiving thereby completing the research continuum with wider dissemination to create knowledge which is the essence of research (Figure 1). Hence, Institutional repositories assists in building research network, visibility and promote institution research.



Figure 1: Research Lifecycle Model for Academic Library Services

Enhancing Faculty and Librarian Collaboration

Some academic libraries have fully succeeded in distributing scholarly literature in a digital environment and gained momentum in hosting journal publications produced by institution's research outputs through open access repository thereby unlocking access to research. These types of journals are regarded as library-hosted journal. Perry *et al.* (2011) reported that library-based journal publishing models, is one of the options employed by many libraries which involve hosting open access journals in collaboration with faculty. While also explaining the sustainability of faculty-published journals and suggest that library-based journal hosting via an institutional repository could offer a more stable environment for such journals, thus providing a valuable service to the faculty editors and to the journal. Journal hosting services through institutional repository offers opportunities for small institution's libraries that do not have sufficient resources to dedicate to wider

publishing services (McIntyre *et al.*, 2013). However, for library to fulfil the traditional roles of scholarly publishing there is need to measure and evaluate the success of library-hosted journal to encourage increased submission. For this reason, Crow *et al.* (2012) reiterated the need to develop metrics to evaluate the effectiveness and value of these services. Visibility is next to citation impact thus, high visibility of the library-hosted journal will guarantee higher impact factor (McIntyre *et al.*, 2013).

It was also affirmed that download statistics could also serve as a measure of visibility. As proclaimed by Bankier and Smith (2008), statistics can provide evidence to editors and authors of the impact of publishing through the library. McIntyre *et al.* (2013) mentioned sustainability, scalability and visibility as measures to a successful library journal hosting services in addition to other functions of scholarly communication; other measures revealed are: registration (ensuring that

URL: <http://journals.covenantuniversity.edu.ng/index.php/cjlis/>

the output clearly establishes the ownership of intellectual property on that output), archiving (preserving scholarly output for the future), certification (demonstrating the quality of research outputs) and awareness (enabling the distribution, discoverability, and accessibility of research outputs). In fulfilling the above-mentioned roles, academic libraries will be regarded as a publishing platform for academic institution which will have a great impact on librarians and faculty collaboration. Conclusively, library journal hosting can help improve the sustainability of faculty journals and add value beyond the provision of storage space (McIntyre *et al.*, 2013).

Strategic Roles of Institutional Repositories for Colleges and Universities

Asides hosting open access journals, institutional repositories removes the cost of publishing on the part of authors, enables institutional based research to be widely available and accessible without barrier therefore, improving research lifecycle for innovation and development, institutional repository could also serve as revenue to the institution when such hosted journals are being subscribed to by other academic institutions for their use. In assessing the sustainability of the library publishing services, Xia (2009) suggests that libraries should consider the degree of sustainability and scalability of library based published journal as these will help substantiate the capacity of journal hosting venture to survive and grow in longer term. Crow *et al.* (2012) also proposed that library publishing activities should be assessed and

evaluated on value proposition of the publishing venture (the content and service available to users) and the income streams set up to generate income from the publishing service (obviously, income streams may not exist for some open access publications). Thus, with Library responsible for managing institutional repositories, it also has the capability to handle all aspects of the publishing process e.g. copy editing, article formatting, marketing etc.

Researches have shown numerous roles and benefits of institutional repositories could offer to academic institutions including; provision of information repertoire for marketing institutions' research to show others how the institution is making a difference. Institutional repository also acts to attract staff, students and funding agencies; enables the management to develop an institution's intellectual property rights by raising awareness of copyright issues as well as facilitates the recording of relevant rights information; improves the accuracy and completeness of the institution's record of scholarly works, increase the visibility, reputation and prestige of the institution among others.

Evaluating Academic Research Contributions to Repository Content through DOAR

Open DOAR (Directory of Open Access Repository) is an authoritative directory of academic open access repositories providing repository services to information users through in-depth approach and analysis that gives a quality- monitored list of repositories (Norris *et al.*, 2008). The Directory of

Open Access Repositories represents a database that lists repositories and allows breakdown and selection by a variety of criteria which can also be viewed as statistical charts. The underlying database has been designed from the ground up to include in-depth information on each repository this can be used for search, analysis, or underpinning services like text-mining. Open DOAR has recorded 3,746 repositories by 2018, out of which 85.9% (3,024) constitute institutional repositories by higher education institutions, this shows the depth of research contributions by academic institutions towards open access publishing and scholarship (Norris *et al.*, 2008).

In the same vein, the Registry of Open Access Repository Mandates and Policies (ROARMAP) is a searchable international registry charting the growth of open access mandates and policies adopted by research institutions and funders that require their researchers to deposit research output into an open access repository. ROARMAP statistics shows that, out of 990 registered repositories by the universities and academic-based research institutions, 761 have adopted repository policies in order to fast-track and increase the visibility of their research thereby promoting academic research through open access repositories (ROARMAP policies adopted by quarter, 2019). The analysis above shows a higher percentage of research contributed by academic institutions as a result of depositing through their respective repositories compared to other organizations.

Institutional Repository Preservation Policies and Challenges

Preservation is an archiving activity in which specific data are maintained for a period so that they can still be accessed and utilized through changes in technology (Ball, 2010). One of the objectives of institutional repository is preservation of organizational scholarly contents as reiterated by Lynch (2003). Nevertheless, the big question is to whether institutional repositories will provide a period of preservation for its contents. Digital preservation is identified as the key function of a repository; however, data survey affirmed that repositories are not efficient enough in providing standard preservation services (Smith, 2007). The exponential increase of digital content in digital information age has made library realize the significance of electronic preservation as quoted by Wheatley (2004), “careful consideration must be given to the preservation needs of materials to be archived within an institutional repository”. Various significant opportunities have also been offered for digital preservation by institutional repositories to include digital content management, digital preservation and faculty legacy preservation (McGovern & Aprille, 2008). Li and Banach (2011) found out that digital preservation form an aspect of the major mission of Institutional Repositories (IRs). Therefore, it is important for institutions to develop preservation policies for their Institutional Repositories (IRs).

In a study conducted by Kenney and Ellie (2005) about institutional readiness on developing electronic preservation

programs, only about one-third of the institutions studied have developed, approved and implemented the policies of digital preservation. A similar research conducted by Li and Banach (2011) to investigate current practices in relation to the existence of digital preservation policies in research libraries, found that 51.5% of Institutional Repositories have preservation policies, and result of their research also shows an increase in digital preservation policy development since the 2003-2005 Cornell survey. It further indicated commitment of research libraries to providing long-term preservation for their IR content, hence, ensuring long-term preservation of research materials is one of the functions of institutional repository. Park and Shim (2011) described archiving as the second key role of institutional repository and according to Performance Based Research Fund (PBRF), institutional repository archiving permits research work to be deposited in digital form for easier retrieval in when preparing for promotion or funding.

Conclusion and Recommendation

Various studies have shown in different ways the benefits, objectives, and challenges of institutional repositories and many more, however, little or no study have been conducted on the contribution of IRs to academic research through which the adoption and implementation of repository policy for the preservation of repository content is guaranteed. Hence, the need for developing and implementing policies

that guide the deposit, use and preservation of repository contents. For institutional repositories to achieve its objective of promoting academic research and preservation for posterity, developing digital preservation policies is therefore central to guarantee preservation actions for academic research and implementation as the policies state the strategies for preserving IR content and decisions about what content requires short, medium- and long-term preservation. It was found that there is increased awareness of digital preservation among research libraries as many libraries are now developing policies for securing permissions to preserve IR content but most academic libraries are still making efforts towards developing preservation policies for IRs.

However, it is evidenced that certain factors such as insufficient knowledge of copyright issues among faculty, lack of time to secure permissions from copyright holders on the part of content contributors might hinder IR collection and preservation of academic research through the institutional repository efforts. This study therefore recommends the need for massive campaign on copyright education to assure collection of quality content and recognition of preservation policies for institutional repository, as well as research funding models for academic research that enable universities and other higher education institutions to ensure research control, long-term digital preservation and deposit of academic research.

References

- Ball, A. (2010). Preservation and curation in institutional repositories (version 1.3). Edinburgh, UK: Digital Curation Centre. 1-65.
- Bankier, J.G. & Smith, C. (2008). Establishing library publishing: Best practices for creating successful journal editors. Retrieved from http://works.bepress.com/courtney_a_smith/2
- Crow, R., Ivins, O., Mower, A., Nesdill, D., Newton, M., Speer, J., & Watkinson, C. (2012). Library publishing services: Strategies for success. Final research report. Retrieved from http://docs.lib.purdue.edu/purduepress_ebooks/24/.
- Kenney, A. & Ellie, B. (2005). Developing Digital Preservation Programs: the Cornell Survey of Institutional Readiness, 2003-2005. Retrieved May 15, 2010, from <http://worldcat.org/arcviewer/1/OCC/2007/08/08/0000070519/viewer/file1088.html#article0>
- Kumar, N. (2009). University Libraries and Copyright Laws . ICAL 2009 – Library Vendor/Publisher Interface, 407-409.
- Li, Y. & Banach, M. (2011). Institutional Repositories and Digital Preservation: Assessing Current Practices at Research Libraries. The Magazine of Digital Library Research, [D-Lib Magazine] 17(5/6), 1-13, doi:doi:10.1045/may2011-yuanli
- Lynch, C. A. (2003). Institutional Repositories: Essential Infrastructure for Scholarship in the Digital Age. Retrieved from <http://www.arl.org/bm~doc/br226ir.pdf>.
- McGovern, N. Y. & Aprille C. M. (2008). Leveraging short-term opportunities to address long-term obligations: A perspective on Institutional Repositories and Digital Preservation Programs. *Library Trends*, 57(2), 262-279. http://muse.jhu.edu/journals/library_trends/v057/57.2.mcgovern.html.
- McIntyre, G., Chan, J. & Gross, J. (2013). Library as Scholarly Publishing Partner: Keys to Success. *Journal of Librarianship and Scholarly Communication*, 2 (1). doi:eP1091. <http://dx.doi.org/10.7710/2162-3309.1091>
- Moruf, H. A. & Adeleke L. A. (2018). Electronic Information Resources and the Legal Profession. *Information Impact:Journal of Information and Knowledge Management*, 9 (1) 26-34. doi:<https://dx.doi.org/10.4314/ijikm.v9i1.3>.
- Moruf, H. A., & Olajojo, P. O. (2017). Virtual Law Library as a Veritable Tool for Justice Delivery System In Nigeria: An Investigative Study Of Oyo State High Court. *The information technologist: An International Journal of Information and Communication Technology*, 14(1), 1-10.
- Nitecki, D.A. & Davis, M.E. (2017). Expanding Librarians' roles in the research life cycle. IFLA World Libraries and Information Conference. WROCLAW: IFLA.
- Norris, M., Oppenheim, C., & Rowland, F. (2008). The citation advantage of open-access articles. *Journal of the American Society for*

- Information Science and Technology, 59(12), 1963-1972.
- OECD. (2007). Giving Knowledge for Free: the Emergence of Open Educational Resources. Retrieved from <http://tinyurl.com/62hjsx6>.
- Park, J.H. & Shim, J. (2011). Exploring how library publishing services facilitate scholarly communication. *Journal of Scholarly Publishing*, 43 (1), 76-89.
<http://dx.doi.org/10.1353/scp.2011.0038>
- Perry, A. M., Borchert, C. A., Deliyannides, T. S., Kosavic, A. & Kennison, R. R. (2011). Libraries as journal publishers. *Serials Reviews*, 37(3), 196-204.
<http://dx.doi.org/10.1016/j.serrev.2011.06.006>
- Prosser, D. (2004). The next information revolution – How open access repositories and journals will transform scholarly communications. *Liber Quarterly*, 14(1/4), 1-20.
- Robinson, M. (2009). Promoting the visibility of educational research through an institutional repository. *Serials Review*, 35(3), 133-137.
- Smith, A. (2007). Census of Institutional Repositories in the United States
MIRACLE Project Research Findings.
<http://www.clir.org/pubs/reports/pub140/contents.html#fore>
- Tenopir C., Sandusky R. J., Allard S. & Birch, B. (2013). Academic librarians and research data services: preparation and attitudes. *International Federation of Library Associations*, 39(1), 70-78.
<http://dx.doi.org/10.1177/0340035212473089>
- Vaughan, K.T.L., Hayes, B. E., Lerner R.C., McElfresh, K.R., Pavlech L., Romito D., Reeves L.H., & Morris E.N. (2013). Development of the research lifecycle model for library services. *Journal of the Medical Library Associations*, 101(4), : 310-314. doi:doi:10.3163/1536-5050.101.4.013
- Wheatley, P. (2004). Institutional Repositories in the context of digital preservation. *Microform & Imaging Review*, 33, 135-146. doi:doi:10.1515/MFIR.2004.135
- Xia, J. (2009). Library publishing as a new model of scholarly communication. *Journal of scholarly publishing*, 40(4), 370-383..
<http://dx.doi.org/10.1353/scp.0.0052>