Open Access, Institutional Repositories, and Scholarly Publishing: The Role of Librarians in South Eastern Nigeria

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Introduction

There is a rapidly expanding stock of scientific knowledge. Yet access to this pool of knowledge is often difficult because of the relatively high cost of scholarly journal, their printed and web-based versions. Another vital issue is that removing access barriers will accelerate research, enrich education and share learning. There is therefore a critical need to make research results available to as many academics and elite class as possible free of charge. Because of this need, concerned institutions and organizations felt challenged. One of such initiatives which has been undertaken to demonstrate that scientific knowledge need not be published in forms that make access expensive, is the Budapest.

Open Access

The term open access was first properly defined at a meeting in Budapest of a variety of open access advocates, brought about by the Open Society Institute in early December 2001. (Velterop, 2005); (The Global Network on Global Public Goods, GPGNet, 2005). Out of that meeting, open access was defined as:

"free availability on the internet, permitting users to read, download, copy distribute, print, search, or link to the full texts of these articles, crawl them for indexing pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited “(The

Other initiatives include that of Harvard Law school Faculty which started on May 1st 2008. (Harvard University Office for Scholarly Communication, 2010) and that of Marine Biological Laboratory Woods Hole Oceanographic Institution (MBL WHOL, 2006). Library, Budapest Open Access Initiatives (BOAI) and Bethesda (MBL WHOL, 2006), Scholarly Publishing and Academic Resources Coalition (SPARC) and Directorate of Open Access Journals (DOAJ) (Petricig, 2007). The author opines that the system of underwriting publishing fees may place scholars in developing countries at a disadvantage because of the fact that research grants may not be as easily available to them than for industrial – country scholars. However open access can be delivered through archives and institutional repositories. Institutional OA repositories do not perform peer review, but can host and disseminate works that have been peer –reviewed elsewhere.

Open access is of vital importance to developing countries which often do not have the capital necessary to access scholarly literature. Although schemes like Jstor, Journal Storage, Online Access to Research in the Environment (OARE) and EBSCOHOST and the Health Inter Network Access to Research Initiative (HINARI), sponsored by the World Health Organization do give access to scholarly literature at little or no cost, they however have restrictions because individual researchers may not register as users unless their institutions have access.

Librarians are vocal and active advocates of open access because of the belief that open access promises to remove both the prize barriers and the permission barriers that undermine library efforts to provide access to the journal literature. Many library associations have either signed major open access declarations or created their own, (Wikipedia, the free encyclopedia, 2005). The import of this research is to find out the level of appreciation of open access, institutional repositories and scholarly publishing of librarians.

**Statement of the Problem**

Open access and institutional repository are of current usage and many researchers and librarians are neither familiar nor have assimilated the new culture in their scholarly publishing, nor have known the advantages derivable from them. The problem of this study is to find out the extent librarians in South Eastern Nigeria, have appreciated the new culture of using open access and institutional repository in their scholarly publications.

**Research Questions**

1. What are the advantages of open access in scholarly publishing?
2. What roles do librarians play in institutional repository?
3. What are the constraints to the use of open access in scholarly publishing?
4. What strategies enhance open access for scholarly publications?

**Literature Review**

Harvard University (2010); GPGNet (2005) and Velterop(2005) defined open access journals in various terms but these definitions were thematically and conceptually the same. Antelman (2004) investigated impact of results from research studies which are made available freely on the internet. He chose four disciplines, philosophy, political science, electrical and electronic engineering and mathematics. His result revealed that across the four disciplines, freely
available articles do have greater impact. He concluded that scholars in diverse discipline are adopting open access practices and are being rewarded for it. Harnad et al (2004), studied access / impact problem and the green and gold roads to open access. Their findings confirmed that of Antelman (2004). They bifurcated the "road" to open access by showing that there is a "golden road". This states that articles are published in OA journals. A second path, the "green road" shows that articles are published in non –OA journal but can also be self –archived in an OA archive.

They found that only 5% of the journals are gold, but over 90% are already in green. Harnad and Brody (2004) compared the impact of open access (OA) vs. non –OA articles in the same journals, in this process they compared the citation impact of the much higher percentage of articles from the 98% non –OA journals that have been made OA by their authors (by self – archiving them) with the citation impact of articles from those very same journals and issues that have not been made OA by their authors. Their result showed that open access can increase both usage and impact.

Institutional Repositories

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. They also organize and access these materials, (Lynch 2003). A survey conducted by the Coalition for Networked Information (CN1) and (United States Higher Education Institutions, 2005) found that research libraries have taken on a leadership role in both policy formulation and operational deployment roles for institutional repositories at research universities. In the Latter’s survey, 88% of the respondents indicated that the library had the sole responsibility. Crow (2002) articulated the roles of libraries in institutional repositories as follows:

1. Academic libraries retain responsibility for managing and archiving traditionally published print materials.
2. Library programmes and budgets will have to support faculty open access publishing activities in order for libraries to remain relevant in this constituency.
3. For libraries with organizational imperative to invest in the future, institutional repositories offer a compelling response.
4. Libraries are best suited to provide much of the document preparation expertise (document format control, archival standards etc) to help authors contribute their research to institution’s repository.
5. Libraries can most effectively provide much of the expertise in terms of metadata tagging, authority controls and the other content management requirement that increases access to and usability of the data.

Institutional Repositories and Open Access

In Nigeria, an international workshop was held in Ahmadu Bello University Zaria, in 2008 on open access repositories. There-in, Nigerian universities and research libraries were encouraged to organize their scholarly output into institutional repositories in order to make their research works available both nationally and internationally through open access (Bozimo, 2008), Supporting the call for open access through institutional repositories, Okojie (2008) endorsed open access for all journals, dissertations and conference proceedings in the library and information science (L.I.S.) sector in Nigeria. She promised to encourage members to archive their pre –prints and post prints in open access. She believed that the paradigm would make Nigerian researchers and librarians, gain leverage, leapfrog and become part of
Constraints on Open Access

In spite of the advantages of open access, there are constraints associated with its application. Many authors are hesitant to leave established publishers and move to financially unstable OA journals. Meanwhile, traditional publishers may try to retain their dominance by continuing to discredit the OA movement by creating new OA like products (Petricig, 2007). Also to reach 100%, OA self archiving needs to be mandated by researchers’ employers and funders (Hamad et al, 2004). Even in developed countries, people are yet being sensitized to adopt open access. In developing countries, inadequate skills to navigate the internet, ignorance of open access journals facility, unstable power supply and unavailability of internet could exacerbate constraints to the use of open access.

Enhancing Open Access for Scholarly Publishing

Many organizational movements, which are already in place if sustained, could entrench the open access paradigm. The cost of computer and internet accessibility should be reduced. Capacity building with respect to information communication technology should be improved.

Methodology

Descriptive survey was adopted for the study. Population comprised 67 academic librarians in 2 (two) Federal and two (2) state universities in South Eastern Nigeria. The universities and their population of academic Librarians are, University of Nigeria (U.N.N) (50), Micheal Okpara University of Agriculture Umudike (MOUAU) (6) Enugu State University of Technology (ESUT) (6) and Anambra State University (ANSU) (5). Criterion for choosing the universities is based on their years of establishment, While U. N. N and ESUT represented first generation federal and state universities in the South Eastern Nigeria, MOUAU and ANSU represented later generation of Federal and State universities. There was no need for sampling due to smallness of the population.

A 38 – item structured questionnaire was used for data collection and Cronbach Alpha reliability coefficient was used to establish the reliability of the instrument at 0.76. The instrument contained six (6) sections and items in four (4) sections were based on a four –point weighting scale. Analysis of the items was done using percentages and mean score. Items that have mean scores of 2.5 and above were accepted. Only 52 (77.61%) copies of the questionnaire were returned and 45 (86.54% were found usable.

Results

Biodata from returned usable copies of the questionnaire showed that:

1. 25 (55.56%) respondents have served as librarians for 1 – 5 years
2. 5 (11.11%) respondents have served as librarians for 6 - 10 years
3. 5 (11.11%) respondents have served as librarians for 11 – 15 years
4. 7 (15% -56 %) respondents have served as librarians for 16 - 20 years
5. 3 (6.67%) respondents have served as librarians for over 20 years
6. 18 (40%) Assistant Librarians ; 9 (20%) Librarian II;
7. 5 (11.11%) Librarian I ; 10(22.22%) Senior Librarians
8. 1 (2.22%) principal Librarian and 2(4.44%) Deputy University Librarians participated in the study.
Level or proficiency in the use of internet for Open Access and Scholarly Publishing Showed that:

1. 42 (93.33%) respondents can make use of search engines
2. 39 (86.67%) respondents can send e-mails
3. 44 (97.78%) can access information through the Internet
4. 44 (97.78%) respondents know that some information can be accessed online free of charge (open access)
5. 44 (97.78%) respondents know that some information cannot be accessed free of charge (non-open access)
6. 40 (88.89%) respondents are aware of open access journals
7. 15 (33.33%) respondents have published articles online.
8. 6 (13.33%) respondents have published in open access journals.

<table>
<thead>
<tr>
<th>TABLE 1: ADVANTAGES OF OPEN ACCESS IN SCHOLARLY PUBLICATION</th>
</tr>
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<tbody>
<tr>
<td>S/N</td>
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<td></td>
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<tr>
<td>1</td>
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<td>9</td>
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<td>10</td>
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</tbody>
</table>

KEY: U.N.N. – University of Nigeria, Nsukka
MOUAU- Michael Okpara University of Agriculture Umudike
ANASU- Anambra State University
ESUT- Enugu State University of Technology

Table 1 shows that respondents in the four universities accepted all the listed advantages of open access

<table>
<thead>
<tr>
<th>TABLE TWO: ROLES OF LIBRARIANS IN INSTITUTIONAL REPOSITORIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>S/N</td>
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<tr>
<td></td>
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<tr>
<td>11</td>
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<tr>
<td>12</td>
</tr>
</tbody>
</table>
Librarians are familiar with vendor licensing and copyright laws.

<table>
<thead>
<tr>
<th>Constraint</th>
<th>UNN N=30; X-</th>
<th>MOUAU N=5; X</th>
<th>ANASU N=5; X-</th>
<th>ESUT N=5; X-</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>17 Inadequate skills to navigate the internet</td>
<td>3.43</td>
<td>3.20</td>
<td>2.80</td>
<td>3.80</td>
<td>ACCEPTED</td>
</tr>
<tr>
<td>18 Lack of knowledge of the existence of open access journals in the internet.</td>
<td>3.17</td>
<td>3.20</td>
<td>3.00</td>
<td>3.60</td>
<td>*</td>
</tr>
<tr>
<td>19 Unstable power supply</td>
<td>3.73</td>
<td>3.20</td>
<td>3.80</td>
<td>3.40</td>
<td>*</td>
</tr>
<tr>
<td>20 Unavailability of internet facilities</td>
<td>3.33</td>
<td>3.20</td>
<td>3.60</td>
<td>3.80</td>
<td>*</td>
</tr>
<tr>
<td>21 Unpredictable permanence of open access movement due to unstable financial support</td>
<td>3.26</td>
<td>3.80</td>
<td>3.60</td>
<td>3.20</td>
<td>*</td>
</tr>
<tr>
<td>22 Being hesitant to leave established publishers</td>
<td>2.77</td>
<td>3.20</td>
<td>3.00</td>
<td>2.80</td>
<td>*</td>
</tr>
<tr>
<td>23 Full texts of some open access journals are not downloadable</td>
<td>3.13</td>
<td>3.80</td>
<td>3.00</td>
<td>3.60</td>
<td>*</td>
</tr>
</tbody>
</table>

In Table 2 respondents accepted all the roles of librarians as listed. However, respondents at Michael Okpara University of Agriculture did not agree that librarians are familiar with vendor licensing and copyright laws. This is contrary to the library roles articulated by Crow (2002).

Table three shows that all the constraints to the use of open access were accepted by the respondents.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>UNN N=30; X-</th>
<th>MOUAU N=5; X</th>
<th>ANASU N=5; X-</th>
<th>ESUT N=5; X-</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 Organizations should float more open access journals</td>
<td>3.67</td>
<td>3.40</td>
<td>3.40</td>
<td>3.60</td>
<td>*</td>
</tr>
<tr>
<td>25 Internet connectivity needs to be improved</td>
<td>3.70</td>
<td>3.00</td>
<td>3.80</td>
<td>3.80</td>
<td>*</td>
</tr>
<tr>
<td>26 Provision of constant power supply</td>
<td>3.83</td>
<td>3.80</td>
<td>3.80</td>
<td>4.00</td>
<td>*</td>
</tr>
<tr>
<td>27 Establishment of institutional repositories</td>
<td>3.50</td>
<td>3.60</td>
<td>3.80</td>
<td>3.80</td>
<td>*</td>
</tr>
<tr>
<td>28 Provision of funds for open access movement by Government</td>
<td>3.53</td>
<td>3.00</td>
<td>3.80</td>
<td>3.80</td>
<td>*</td>
</tr>
<tr>
<td>29 Acquisition of knowledgeable skill in information technology usage</td>
<td>3.60</td>
<td>3.60</td>
<td>3.60</td>
<td>3.80</td>
<td>*</td>
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</tbody>
</table>
Provision of appropriate mechanism and infrastructure for training and exploration of knowledge

<table>
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<tr>
<th>by researchers</th>
<th></th>
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<tbody>
<tr>
<td>30</td>
<td>3.57</td>
<td>3.60</td>
<td>3.60</td>
<td>3.60</td>
</tr>
</tbody>
</table>

Table four shows that respondents accepted all the strategies

Discussion

It is surprising to note that while 88.89% of respondents were aware of open access journals and their advantages only 13.33% have published articles on open access journals. From the responses, librarians appreciated the roles of librarians in institutional repositories. However, 5 (11.11%) respondents did not agree that librarians are familiar with vendor licensing and copyright laws.

Recommendations

1. Open access and institutional repository are new concepts and efforts should be made to give librarians exposure they need in orders to play their expected roles.
2. Institutions especially universities should endeavour to establish institutional repositories. Librarians should initiate the move for their establishment since the management of these repositories should situate librarians in the mainstream of academic activities and should be a boost to their function as information providers and managers of access to knowledge.
3. Internet facility is a crucial factor in access to knowledge. Therefore institutions should provide this facility as top priority

Conclusion

The paper concludes by advocating that more awareness programmes be put in place to sensitize librarians of the advantages of open access. Research could be conducted to find out why many librarians do not publish in open access journals

References


Harnad, S & Brody, T (2004). Comparing the impact of open access (OA) vs


