# The Potential Impact of Oers on Zou Library Services: A Case for the Zimbabwe Open University Mashonaland East Region Library

**Gift Rupande,**
Department of Student Affairs,
Zimbabwe Open University
*grupande@yahoo.com*

**Abstract:** *This study is a case study undertaken at the Zimbabwe Open University (ZOU), Mashonaland East Region, to assess the impact of OERs on library service provision. In order to solicit data from respondents, questionnaires were used. Two library staff was conveniently sampled for this study. Results from the study established that library staff has the potential to promote and introduce information resources to users. The study also found out that answering questions by researchers about OERs and the variety of things OER articles can be used for is another way library personnel can help "channel" this information. Knowing the area in which a researcher is heavily involved allows library personnel to make referrals to relevant OER journals thus providing alternatives to traditional publications. It was also established that library staff can be involved in setting up repositories to facilitate "green" OERs, which is when the researcher deposits the final version of the article to a public repository. This helps researchers find information published by their own community of scholars. The paper established that the library staffs is not familiar with open access resources. The study therefore recommends that the university could assist with dedicating more staff time and resources to providing much more detailed advice and support for academics navigating their way through Open Access (OA) publishing, in particular on issues relating to Intellectual Publishing Rights and publisher agreements. Since OA is still a new and developing area, there is need to keep abreast on what is happening both locally and internationally hence the paper recommends the need for initial and continuous training in OA by the library staff.*

## 1. INTRODUCTION

Open Educational Resources (OERs) offer a real chance to fundamentally change the research landscape through the dissemination of its results, potentially facilitating greater productivity, collaboration and transparency in research. What position should the library take with regards to OERs and how will an increase in the volume of OERs change the nature of work for the library staff? In the words of Nageswara Rao and Babu (2001), many libraries are in transit from the traditional towards the digital library. Many historical library holdings are being digitised. These digital collections allow users from anywhere at any time to consult the material without doing any harm to the fragile documents. Despite numerous digitisation projects, electronic media is still not as dominant as print media. The paper-based library will coexist with the digital library for the foreseeable future, because electronic publications are not developing at the expense of print media, but in addition to them (Grothkopf, 1997). Also physical convenience and emotional attachment of people to printed books are factors that ensure their survival. The tools used by the librarians in their daily work have changed vastly during recent years. In addition to traditional card catalogs and microfiche readers, most libraries now offer an Online Public Access Catalog (OPAC), public PCs equipped with CD-ROM drives, DVD drives, scanners, or terminal connected to the Internet. An increasing number of libraries are building home pages on the World Wide Web from where users have access to a variety of services without physically entering a library. Also, information push and pull technologies have given librarian an opportunity to automate the required information gathering and dissemination to the users. Of interest is the role of the librarian in this technologically fast changing environment, the main purpose to be examined by this paper.

## 2. STATEMENT OF THE PROBLEM

This study aimed at establishing the extent librarians at ZOU at Mashonaland East Region have appreciated the new culture of using open access and institutional repository in their scholarly work and the impact of OERs on their work.

## 3. RESEARCH QUESTIONS

1. How familiar are librarians with Open Access publishing?

2. What are the current roles of librarians at ZOU in relation to Open Access?

3. Is OER changing the role of the librarian at the Zimbabwe Open University?

4. What roles do librarians at ZOU play in institutional repository in an Open Education environment?

5. What are the constraints to the use of open access at ZOU?

## 4. 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.

Open Educational Resources (OERs) are "teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions. Open licensing is built within the existing framework of intellectual property rights as defined by relevant international conventions and respects the authorship of the work" (UNESCO, 2012). The term was coined by UNESCO at its 2002 Forum on Open Courseware (UNESCO, 2002), and emphasised at their recently published Paris OER Declaration (UNESCO, 2012).

With respect to OER, the term "open" generally means that the resource can be accessed and used by everyone in a non-discriminatory manner, and also that it can be adapted, modified, and shared. More specifically, the characteristic of openness addresses the removal of technical, economic, and legal barriers to gain access to and make use of open educational resources.

Global Public Goods, GPGNet, 2005, defined  open access 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

## 5. GOLD OA

According to Brazier (2012), the Open Access (OA) picture is divided into two broad areas. One of these is gold OA, where payment for publication is made by the author, the author's institution, research funder or another source of author-side funding so that the resulting paper can be read by anyone, anywhere, without the requirement to pay for access or wait for an embargo period. Papers can be published under a gold OA model in gold OA journals, where every paper is made freely available under the same model. They can also be published in a hybrid journal; where some authors have paid to make their papers OA but other papers are published under a traditional subscription model (where payment takes place on the reader side). Published gold OA papers can generally be deposited in institutional and/or subject repositories.

## 6. GREEN OA

The other approach to OA is green OA, where accepted authors' manuscripts or other pre-publication versions are deposited in institutional and/or subject repositories. This approach works with traditional subscription publishing but many publishers impose embargo periods and particular conditions on publication in such a way.

Antelman (2004) investigated impact of OERs 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.

## 7. THE CURRENT ROLE OF THE LIBRARIAN WITH REGARDS TO OPEN ACCESS

Robertson proposes that libraries might also: have an interest in promoting 'openness'/ open resources; help users describe, discover, manage and disseminate OERs; and evolve their approach to information literacy and study skills to include OERs, as well as support the use of OERs for learning and teaching in collaboration with other relevant services. Robertson (2010b) suggests that libraries can best offer advice and engage in meaningful relationships with Open Education in relation to: metadata and resource description; and information management.

As for the librarians' views of their role with respect to OER, the key findings of two UKOER related initiatives, Open Transferable and Technology-enabled Educational Resources (OTTER), and the Support Centre for Open Resources in Education (SCORE), are revealing. The results from an OTTER's survey (Nikoi, 2010) showed that librarians had a predisposition toward assuming that their role would be managing OER repositories, developing generic OER, indexing, cataloguing, and promotion the use of OER. They have still, however, some concerns about third party copyright clearance, currency and quality of OERs, funding and so on. Moreover, they would like to see policies and recommendations on some issues as management of OER and metadata requirements. The recently published SCORE Library Survey Report (de Beer, 2012), highlights the low demand for librarians to locate OER, and confirms the predominance of intellectual property concerns (thirty-two librarians from twenty-three higher education institutions from UK participated in the survey). A significant majority of the respondents were not confident in using and promoting CC licences, and most of them cited that, alongside a lack of digital literacy skills, these were among the main reasons for lecturers not engaging with, using, or releasing OER. The findings of these studies demonstrate that, despite the advantages and benefits that libraries could bring to OER initiatives, and the clear need of their skills and knowledge (for example, advising and training about intellectual property and digital literacy), the value of their involvement is not generally recognized. The boundaries and opportunities of this involvement are also not well defined, nor are the implications and challenges for the library services and professionals. A more thorough analysis is needed that could pave the way for a more constructive relationship between libraries and OER initiatives. A prime benefit from this research could be:

- The announcement of a set of recommendations for Higher Education institutions that are currently carrying out OER initiatives, or planning to do so, regarding the roles and responsibilities of libraries and librarians and the benefits that their participation could bring to their projects.

- The creation of a set of guidelines and recommendations for libraries and library and information science (LIS) professionals with respect to OER.

According to Mackenzie-Cummins (2012), the study he conducted showed that repositories are still being introduced in many libraries and 70% of participants' institutions already have an institutional repository. However, 18% of participants' institutions neither have an institutional

repository nor any plans for one in the near future. 42% of the participants whose institutions already have them admit to not actually using them very actively. In fact, 58% of participants claim to rarely or never deposit articles in their institutional repository. The two most common ways in which participants currently support Open Access are by attending events or reading articles to keep in touch with developments. Librarians currently support Open Access least frequently by helping to organise funds to contribute to OA charges. Nearly half of the librarians sampled do not know how Open Access charges are funded within their institution. Providing information on OA to their community is considered part of a librarian's role by the majority of librarians yet only a few of librarians currently feel they have sufficient knowledge / information to help educate their community on OA. Regarding educating communities on OA, the sources of support and information considered most useful are library conferences and events, personal research and contacts, and government funded initiatives.

## 8. HOW OPEN ACCESS IS CHANGING THE ROLE OF THE LIBRARIAN

Mackenzie-Cummins (2012), argued that the librarian community does see OA as changing the role of the librarian, but not as a threat to the librarian's role. The majority of the librarians agree that OA is changing the role of the librarian in the following ways:

- Librarians need to be better integrated with their research community as a research partner and innovator.

- Librarians need to be developing value added discovery and delivery tools.

- Librarians should focus on workflow within their institution to improve efficiencies and enhance collaboration.

- Librarians need to find ways to create trusted information environments, Librarians need to develop enhanced search and discovery skills.

- Librarians should support authors in relation to rights with advice on publishing options and agreements.

- Librarians should focus on metadata creation and management.

- Librarians need to focus less on being gatekeepers and have more active involvement in the creation and dissemination of content.

- The role of the librarian should now be focused outward, promoting the output of their institution worldwide.

## 9. SKILLS NEEDED BY LIBRARIANS TO OPERATE EFFECTIVELY IN AN OER ENVIRONMENT

Brazier (2012) summarised the skills needed by the librarian as follows:

Communication skills are very important for librarians in an OA environment. In communicating about OA, relationships with all departments are a key strength of libraries that other academic functions do not have. Skills in management, information literacy, and understanding how OA links with the broader information chain will be very important. Tools to manage the OA process will also be important. One example raised is Open Access Key. Skills that librarians already have should also help in an OA environment. In particular, skills in preservation and linked data will be needed. Managing metadata will also be very important in an OA landscape. Such tools should be able to help people find information. Librarians will have to forget about traditional cataloguing and create web-scale metadata, Preservation is also to be done at scale, Scaled up OA also challenges the traditional role of collection development for librarians, and it raises the question of how universities can compete with each other on the basis of their libraries if the resources and tools are almost the same. The quality of library provision will be one of the benchmarking issues in the future, rather than the number of books or journals that a library holds. As more content becomes available without barriers across the web and services become web based, librarians can share repositories. Licensing content across consortia is another longstanding example of working at scale. Such moves can reduce overhead costs and help librarians focus

their energies on providing advice to users. The concept of the individual library is going to go away. Librarians are going to work together,

According to Okoye and Ejikeme (2011) most librarians have expertise in most of the general library and information science technologies and activities needed at OER initiatives. Primarily in indexing and classification techniques , information literacy and information retrieval , and in the use of general purpose vocabularies and classifications  and metadata standards  They also had some expertise in specific e-learning and OER knowledge, technologies and standards already known by librarians, mainly basic OER concepts  learning content management tools  and learning content metadata. The areas where librarians needed to develop expertise were mainly specific to e-learning and OER, such as learning content package standards or learning content authoring tools. Nevertheless, there were also some areas of expertise of relevance at the library/information systems domain where further skills were needed, for example,  licensing options and technologies SEO preservation techniques, technologies and standards or communication protocols

## 10. INSTITUTIONAL REPOSITORIES AND OPEN ACCESS

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 organise 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:

- Academic libraries retain responsibility for managing and archiving traditionally published print materials.

- Library programmes and budgets will have to support faculty open access publishing activities in order for libraries to remain relevant in this constituency.

- For libraries with organizational imperative to invest in the future, institutional repositories offer a compelling response.

- 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.

- 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.

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 organise 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 an international community of researchers (Okojie, 2008).

## 11. 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 (Harnad et al, 2004). Even in developed countries, people are yet being sensitised 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.

## 12. METHODOLOGY

A single case study design was adopted for the study. The focus of the study was narrowed to only one region of ZOU, which is Mashonaland East. This was deliberately done in order to get an in-depth analysis of the problem at hand. In order to solicit data from the respondents, a questionnaire was used.

## 13. POPULATION AND SAMPLE

Population for the current study comprised two academic librarians at the ZOU Mashonaland East Region. These provided responses on the questionnaire items. Both questionnaires were returned giving a response rate of 100%.

## 14. FINDINGS AND DISCUSSIONS

**Table 1:** *Familiarity with OA publishing*

(N=2)

| Knowledgeability of OA | Number | % |
|---|---|---|
| Familiarity with OA publishing | 2 | 100 |
| Understanding of EORs in general | 1 | 50 |
| Familiarity of others with OA resources | 2 | 100 |

The two participants (100%) are not familiar with Open Access publishing; (50%) of the participants are familiar with a good understanding of educational open resources in general. The respondents believe authors should be familiar with OA so that they can utilise these open access resources.
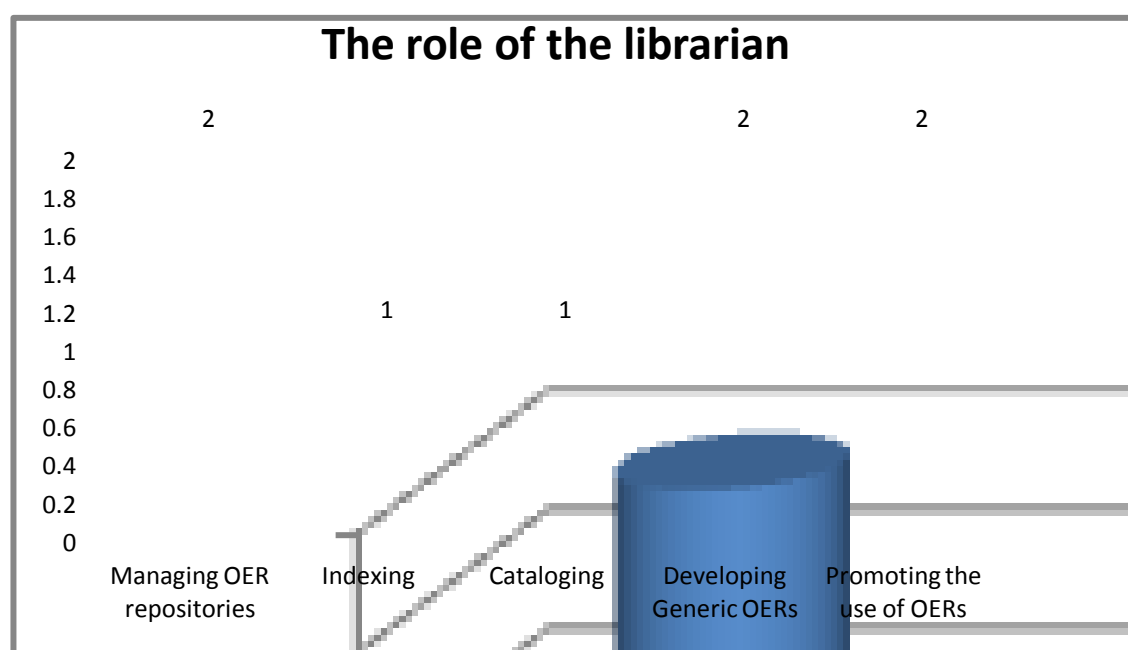


**Figure 1.** *The current role of the librarian with regards to Open Access*

With regards to managing repositories, developing generic OER and promoting the use of OER the participants felt that they are the current roles of librarians in an Open Access environment. One of the librarians felt that indexing and cataloguing are not currently the roles of the librarians. These findings are in agreement with Nikoi, (2010) findings which showed that librarians had a predisposition toward assuming that their role would be managing OER repositories, developing generic OER, indexing, cataloguing, and promotion the use of OER. These results differ with those of Nikoi (2010) in that whereas Nikoi found out that cataloguing and indexing form the core of the current roles of a librarian, in this research one of the participants felt that this is not the core duties of the librarian. The findings of this research showed that the duties of the librarian with regard to OA librarians at ZOU at Mashonaland East Region is rather narrow as compared to the roles expected by authorities like Robertson (2010) and Nikoi (2010).

**Table 2.** *How Open Access is changing the role of the librarian*

(N=2)

| Changing roles | Number | Percentage |
|---|---|---|
| Be better integrated with the research community | 2 | 100 |
| Developing value added discovery and delivery tools | 2 | 100 |
| Focus on workflow within their institution | 1 | 50 |
| Find ways to create trusted information environments, | 2 | 100 |
| Focus on metadata creation and management | 2 | 100 |
| Support authors in relation to rights with advice on publishing options | 1 | 50 |
| Promote the output of their institution worldwide | 1 | 50 |

The participants believe that the roles of the librarian is changing in that librarians should now be better integrated with the research community and develop value added discovery and delivery tools, find ways to create trusted information environments as well as focussing on metadata creation and management. These findings are in harmony with the findings of Mackenzie-Cummins (2012), who argued that the librarian community does see OA as changing the role of the librarian, but not as a threat to the librarian's role. The roles of the librarian according to Mackenzie-Cummins (2012), are changing in the following ways: Librarians need to be better integrated with their research community as a research partner and innovator, librarians need to be developing value added discovery and delivery tools, librarians should focus on workflow within their institution to improve efficiencies and enhance collaboration, librarians need to find ways to create trusted information environments, Librarians need to develop enhanced search and discovery skills, librarians should support authors in relation to rights with advice on publishing options and agreements, librarians should focus on metadata creation and management, librarians need to focus less on being gatekeepers and have more active involvement in the creation and dissemination of content and finally the role of the librarian should now be focused outward, promoting the output of their institution worldwide. It could be seen that Mackenzie-Cummins view on the changing roles of the librarian with regards to OA is much broader that those envisaged by the librarians at the ZOU Mashonaland East Region.

Hundred percent of the participant pointed out that communication skills, tools to find information and the sharing of information among librarians are very important for librarians in an OA environment. Fifty percent of the participants pointed out that relationships with all departments are a key strength of libraries and preservation is also to be scaled up. In addition the literature also pointed out that librarians will have to forget about traditional cataloguing and create web-scale metadata. Brazier (2012), Okoye and Ejikeme(2011) pointed out that most librarians have expertise in most of the general library and information science needed to operate in an OA environment.
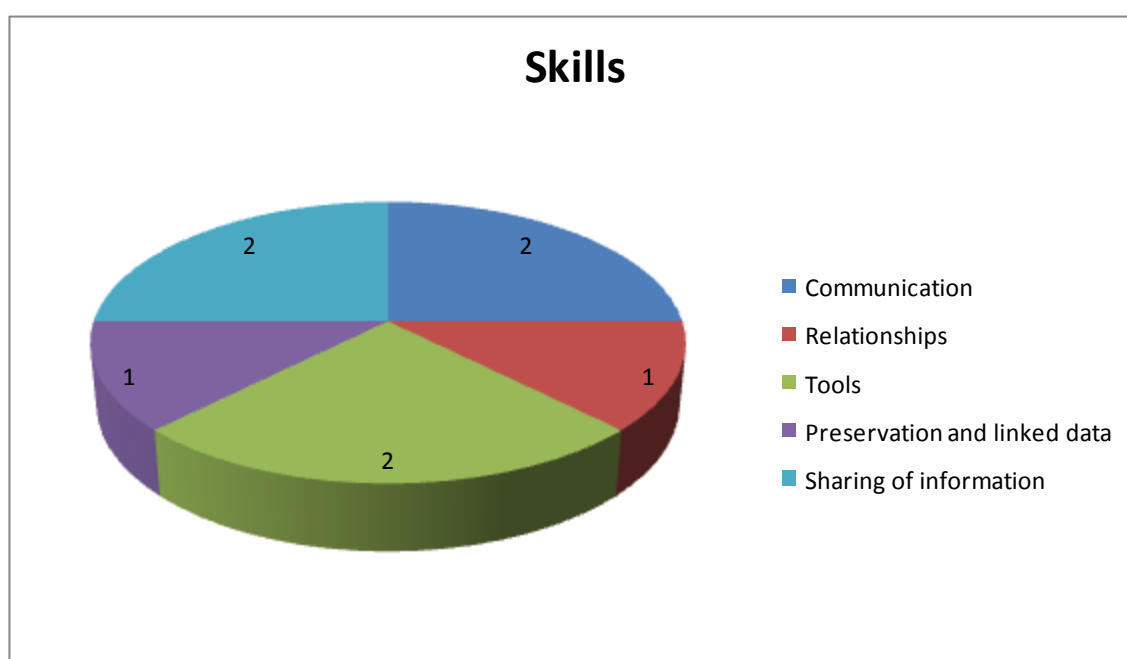
**Figure 2.** *Skills to be possessed by the librarian for the librarian to operate effectively in an OER environment*

**Table 2.** *Roles of librarians in institutional repositories* **(N=2)**

| Role of librarians in institutional repositories | Number | Percentage |
|---|---|---|
| Liaison officers to faculties | 1 | 50 |
| Advocates in the open access movement | 1 | 50 |
| Familiarise with vendor licensing and copy right laws | 2 | 100 |
| Give general information about the repository | 2 | 100 |

Hundred percent of the respondents pointed out that familiarisation with vendor licensing and giving general information about the repository are some of the roles articulated by the librarians as forming the core of the roles of the librarian. Fifty percent of the participants are of the opinion that advocating for the use of the repositories, practising the liaison role and proposing the implementation of the repositories in the institution in which they are working falls under the role of the librarian in institutional repositories. The above results are in conformity with roles of the librarian which were proposed by Crow (2002). Bozimo, (2008) and Okojie (2008) are also in agreement that the roles listed by Crow (2002) are the ones that librarians practice in institutional repositories.

**Table 3:** *Constraints to the use of open access in scholarly publishing* **(N=2)**

| CONSTRAINTS | Number | Percentage |
|---|---|---|
| Inadequate skills to navigate the internet | 2 | 100 |
| Lack of knowledge of open access journals. | 2 | 100 |
| Unstable power supply | 1 | 50 |
| Unavailability of internet facilities | 2 | 100 |
| Full texts of some open access journals are not down loadable | 2 | 100 |

Hundred percent of the respondents cited inadequate skills to navigate the internet, the failure to down load full texts of some open access journals, unavailability of internet and lack of knowledge of Open Access journals as some of the constraints which the librarians face with regards to Open Access. Fifty percent of the participants pointed out that unstable power supply is also a notable constraint to the use of Open Access in scholarly publishing. These results are in tune with what Harnad et al, (2004) who argued that 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.

## 15. CONCLUSIONS

This research has highlighted the fact that academic libraries, sometimes being redefined as Learning Resource Centres (LRCs), around the world are playing an increasingly active role in the teaching-learning process. Among other functions, LRCs are intended to develop educational digital resource collections, gathering together both institutional and externally created resources. In this context, OER take up an important and prominent position. The results of these studies would be of particular value to those academic libraries that are still in their infancy in terms of the configuration of open educational digital collections.

## 16. RECOMMENDATIONS

- There is a clear need to promote the role that libraries and librarians can play at OER initiatives, highlighting their expertise and competencies. This is needed to build awareness among stakeholders about their potential contribution to the OER movement, but also, among Libraries and librarians about their key role as OER advocators within and out-with their institutions.

- Libraries and librarians should further engage in the OER movement as creators and users themselves of OER content, for their own training in common areas as information literacy.

- Librarians should develop further expertise in some technologies and activities specific to educational digital content (learning content package standards or authoring tools) and OER implications.

- Internet connectivity needs should be improved.

- Government should provide funds to promote educational open resources.

- There is also need for the provision of appropriate mechanism and infrastructure for training and exploration of knowledgeable skill in information technology usage by researchers.

### REFERENCES

Global Network a Global public Goods (GPENet) (2005). Open access to scholarly publications. Available at :http://www.sanp.undo.org/gpgn/topics.php.

Antelman, K. (2004). Do open access articles have a greater research impact? Available at: http://www.socolar.com/man/News upload /200726948375274 pdf. Accessed on 24th April 2013.

Bozimo, D. O. (2008). Strategic Approach to Open Access in Nigeria. International Workshops on the Open access repositories: New models for Scholarly communication. Retrieved on 10/4/2013 from http://www.pressreleasepoint.com(200805)12-strateg.

Crow, J. (2008). Open access and scholarly communication SPARC/ Science commons. Retrieved on 19/10/2013, from http://ar.org/Sparc.

Harnad, S & Brody, T (2004). Comparing the impact of open access (OA) vs non –OA articles in the same journals. Available at: http. www. dlib.org/dlib/june 04/harnad/o6hanad.html. Accessed on 30th March 2013.

Harnard, et al, (2004). The access /impact problem, and the green and gold roads to open access. Serials Review 30 (4), 310 -314

Harvard University Office for Scholarly Communication (2010). Open Access and Scholarly publishing. Available at http://osc.hul.harvard.edu/osc.php. Accessed on 29th April 2013.

Lynch, C. (2008). "Institutional: Essential infrastructure for Scholarship in the Digital Age". ARL Bimonthly Report, No 226 Retrieved on 2/5 2013 from http://www.cai.org/

Marine Biological laboratory Woods Hole Oceanographic Institution (2006). Open access and the research scientist Available

athttp.//mblwhoilibrary.mbl.edu/services/copyright/openaccess.html. Accessed on 20th April 2013.

Okojie V. (2008). Strategic approach to open access in Nigeria. An international workshop on open access repositories: New models for scholarly communication. Retrieved on 10 04/2013 from http://www.pressreleasepoint.com (200805) 12 –strateg.

Velterop, J.M (2005). Open access publishing and scholarly societies. Available at: http://www.soros.org.openaccess/pdf/open - access - publishing – and – scholarly –societies. Pdf. Accessed on 28th April 2013.

Wikipedia, the free Encyclopedia (2008). Open access publishing. Available at: en.wikipedia.org/wiki/open –access –(publishing). Accessed on 5th May 2013.

## AUTHOR'S BIOGRAPHY

**Mr. Gift Rupande** is an academician and an educationist who has vast experience in education spanning for over fifteen years. Gift is a renowned ODL scholar and presenter who has presented papers various international conferences. Gift Rupande holds a Masters degree in Educational Psychology (Midlands State University) and is currently a DPhil candidate with the Zimbabwe Open University. He is currently the Student Advisor/Counsellor at the Zimbabwe Open University stationed at the Mashonaland East Regional Centre. He is also a member of the Zimbabwe Non-fiction Authors Association (ZANA).