



## Library Science

*Elixir Library Sci. 129 (2019) 53042-53047*

**Elixir**  
ISSN: 2229-712X

# Influence of Awareness and Technological Issues on the Sustenance of Institutional Repositories in Three State Universities in Nigeria

Bamidele Olawale

University Library, Ekiti State University, Nigeria.

### ARTICLE INFO

#### Article history:

Received: 5 March 2019;

Received in revised form:  
9 April 2019;

Accepted: 20 April 2019;

#### Keywords

Awareness,  
Technological Issues,  
Institutional Repositories,  
University Libraries.

### ABSTRACT

The focus of this research work was to investigate the influence of awareness and technological issues on the sustenance of institutional repositories (IRs) in three state universities in Nigeria. The study adopted a descriptive survey research design. The population was made up of librarians and lecturers from Ekiti State University, Ado-Ekiti, Adekunle Ajasin University Akungba Akoko, and Osun State University Osogbo. Data were collected using questionnaire designed to elicit response from respondents and analysed using descriptive statistics method of frequency counts and percentages. However, out of three hundred (300) copies of questionnaire administered to the respondents two hundred and forty three (243) were returned which represents 81% response rate for the study. Findings revealed that there is generally low level of awareness of the existence of institutional repositories among the respondents which could possibly inhibit its sustenance in the long run. In addition, technological challenges such as poor ICTs facilities and telecommunication infrastructure among other issues are factors militating against the sustenance of institutional repositories in Nigeria. However, the study concluded that university management and library stakeholders should mount awareness programmes and advocacy emphasising the benefits of IRs. It was recommended that for universities in Nigeria to keep pace with their counterparts across the globe, there is need to improve on the resources allocation to libraries by the university management to fast track IRs implementation and sustenance among other recommendations.

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### Introduction

The essence of establishing universities is to advance the society through education, research and manpower training. The university can hardly achieve these goals and make any impact on the society without its intellectual output being well accessed and utilised by the citizens and decision makers. Universities are therefore expected to facilitate the documentation, preservation and dissemination of the intellectual output of their academics, students, and other staff for optimal access and utilisation in order to realise their goals. The branch of the university responsible for the management, provision and dissemination of information to support the effective and expeditious attainment of the objectives of the university is its library.

In this era of resource constraint, it is evident that many university libraries are beset with dearth of information resources, especially in the local content which includes thesis, dissertations and faculty research works. There is a huge divide between the explosive output of literature in the universities and the users of information for research and manpower development. Consequent on this, there is need for free and permanent access to peer-reviewed content over the internet and the freedom to use, distribute and adapt that content with proper attribution (Cullen, and Chawner, 2009).

Open Access (OA) aims to remove the barriers that existed on access to electronic articles and knowledge of the world scholarly communication. With the deployment of Open Access initiative, web access to research articles has

created new opportunities and showed that alternative or complementary economic models can be experimented with (Suber, 2004; Willinsky, 2003). Thus, open access journals not only offered free availability of the articles, they also pioneered the use of the electronic medium. As a result, Libraries began cancelling print journals in favour of open access journals. All these factors have evolved to create new expectations in the academic community for the production, distribution, and interchange of scholarship and to force a rethinking of the relative roles of authors, librarians, and publishers. In such an environment Institutional repository was born.

The case for institutional repositories was made by SPARC in 2002 where Crow (2002) described institutional repositories as, "digital collections capturing and preserving the intellectual output of a single or multi-university community". That means that Institutional repository has a way of reducing the cost of scholarly publications and increasing visibility and access of scholarly research from academics and students of the institutions by hosting them in the institution's professional societies, or third-party provider's website. Crow continued that IRs provide a compelling response to two strategic issues facing academic institutions: they provide a central component in reforming scholarly communication by stimulating innovation in a disaggregated publishing structure; and they serve as tangible indicators of an institutions quality, thus increasing its visibility, prestige, and public value.

Institutional Repository (IR) is a resource or a system that facilitates the capture, storage, preservation, and dissemination of an institution's intellectual outputs in an electronic form (Rosenblum, 2008). Dhanavandan (2015) defines IR as an online archive for the intellectual output of a particular institution for collecting, preserving, and disseminating research which can be viewed as a set of services that institutions offer to members of the academic community to maintain and provide the digitised materials. Therefore, IRs play important role in the preservation and dissemination of institutional research outputs which in turn becomes a constituent part of a global research output (Crow, 2002). IRs does not only act to preserve an institution's intellectual product but will equally contribute to a fundamental and long-term change in the structure of global scholarship.

Such outputs vary from one institution to the other, but often capture theses and dissertations, while others capture published papers, unpublished preprints, working papers, conference presentations, datasets, teaching materials, etc. Most institutional repositories include grey literature which is usually difficult by their nature to access by researchers. IRs therefore complements and boosts the library resources and services and facilitates the development of university intellectual property policies (Rosenblum, 2008).

Institutional repositories also complement existing parameter for measuring institutional productivity (Sharma, Saha and Meichieo, 2008). Buehler and Boateng (2005) indicated that Institutional Repositories allow libraries to provide direct access to scholarly materials instead of through the systems of serials' publishers and vendors". This aids in alleviating serial subscription, which is usually slow, expensive and cumbersome. Above all institutional repositories in academic institutions can fulfil two basic requirements; firstly it serves as a method of disseminating output under the aegis of the institution and secondly helps as a central location of intellectual output (Jones, 2007).

An institutional repository concentrates on the institutional products created by academics or other institutions researchers, making it easier to demonstrate its scientific, social and financial values (Dabholkar, Prabakaran, and Kurahatti, 2008). IRs give the opportunity to faculties and scholars from universities to freely publish and facilitate open access to the results of their research activities, especially now that it is obvious to the academic community that the traditional model of scholarly communication via subscription-based journals serves to hinder rather than expand access to research output.

Christian (2008) stated that in the case of research and academic institutions in developing countries, development of institutional repository will not only boost the global visibility and utility of their research, but will also introduce a novel research culture focused on meeting international standard and values. This is due to the fact that the knowledge by a researcher that his research will be openly accessible to a global audience will have an impact on his research focus and standard. Another benefit of institutional repositories is that they enable free sharing of information, encouraging collaboration and the widespread communication of institutional research activities. Jones (2009) explained that "The faster the research is known and understood, the faster we all benefit." Hence, Institutional Repository can play effective communication role with a very remarkable speed. When various digital materials, including faculty e-prints,

student work and archived primary sources are put together, digital content has the potential to become the greatest intellectual capital of an institution.

Furthermore, Institutional Repositories provide access to a wealth of scientific and technological information and knowledge embedded in research, which are very essential for development. Chisenga (2006) ascertained that Institutional Repositories and Open Access archives present great opportunities to the development of Africa. Therefore the sustenance of Institutional Repositories in academic and research institutions in Africa is a serious developmental issue that requires urgent attention.

In the light of innumerable benefits of IRs, universities and other academic institutions all over the world are embracing institutional repositories (IRs) as a means of bridging the gap between the authors, scholars, researchers and the various users of information as well as preserving their wealth of knowledge. Christian (2008) reported that academic and research institutions in many developing countries like Nigeria are still battling to overcome many challenges in attempt to make their research outputs openly accessible by means of internet technologies like institutional repositories. He further noted that institutions in South Africa seem to be making greater progress in terms of development and deployment of Institutional Repositories, while their counterparts in Nigeria are bugged down by a complex combination of problems.

Eke (2011) highlighted some of the challenges associated with IRs sustainability in Nigeria as lack of awareness, academics' attitudes and technological issues among other factors. Mark and Shearer (2006) pointed out that faculty members are yet to come to full consensus regarding to the establishment of institutional repository. Earwage (2008) added that faculty members have been reluctant in contributing to institutional repository. If the academics who are the major contributors to IRs are feeling reluctant to do so, how then can the system be sustained? Mark and Shearer gave three reasons why academics are not cooperating in submitting their works in the repository. Firstly, faculty members lack awareness of the existence of institutional repositories. Several surveys have found that many academic authors are not familiar with the concept of institutional repositories on campus. Finally authors express concern that posting to an institutional repository will be considered prior publication.

Christian, (2008) remarked that "Some of the issues identified in this regard which are adversely militating against the development of institutional repository in Nigeria are: Lack of awareness of open access institutional repositories among researchers and academics in Nigerian universities and inadequate information and communication technology infrastructure". According to Christian, (2008) more than 74% of the respondents surveyed during his research were completely unfamiliar with open access institutional repository. He found that the low level of awareness of open access institutional repository in Nigeria is directly linked to the issue of inadequate advocacy for open access in Nigeria. That means the more advocacies given to open access; the more awareness is created for institutional repositories.

Sharma, Saha and Meichieo (2008) opined that faculty will not contribute willingly to a central repository unless they have been consulted and trust the process. Faculty need to be convinced that contributing to a repository will enhance their reputations in their disciplines and result in wider

dissemination of their work. Swan and Brown (2005) have also found that awareness of self-archiving is a means to providing open access of authors' works, only 29% of the respondents used in their research were aware of IR and open access while 71% were not. In Ghana, Agyne-Gyasi, Corleley and Frempong (2011) identified the challenges of open access institutional repository as ignorance of open access institutional repository. Thaotip (2011) reported that "there are issues, hurdles and misunderstandings about open access resources among the scholars in Thailand and also in some developing countries. There are examples of scholars arguing that an institutional repository is not that much important to the research communities because the contents found on institutional repositories are thought to be of low quality". Jones (2009) in this regard explained that it is not yet clear whether institutional repositories will take root and flourished in the digital landscapes because many researchers are not willing to publish their research works in the institutional repositories, as long as they gain a reputation by disseminating their work in prestigious journals and through well-known publication mediums.

Apart from lack of awareness, technological issues need to be addressed and strengthened if IRs sustenance is to be achieved. Lynch (2003) remarked that an institutional repository will be supported by a set of information technologies. A key part of the services that comprise an institutional repository is the management of technological changes, and the migration of digital content from one set of technologies to another as part of the organisational commitment to providing repository services. For instance in the age of print, information was relatively simple to preserve since paper is a durable format when made properly and stored under the proper conditions, but in the digital age, preserving information has become a more complex task.

Digital information is fragile and faces diverse threats including technological obsolescence and deterioration of digital storage media (Li and Banach, 2011). Smith, (2009) ascertained that preservation is viewed as one of the top three benefits of IRs. In this regard, there is need to identify the file formats for which IRs will provide long-term access. When making decisions about preserving file formats, Jones, (2006) suggested that IRs staff should answer these questions: Is the file format an open standard/format, widely used? Is the file format and associated technology likely to be preserved? Are the contents of the file human readable? And is the file format itself human read-able?" At the moment IRs have not become the equivalents of trusted digital repositories with "a mission to provide reliable, long-term access to managed digital resources to its designated community, now and into the future (Smith, 2009). All these are concerns on institutional repositories that need to be dealt with in order to achieve a sustainable IRs.

#### Statement of the problem

Universities are the major centre for research output and other information resources, many of which remain unpublished and never utilised by students. However, there is a glaring outcry of institutional scholarly output for human access and use in the university libraries. Institutional repository becomes imperative to maximise the potential and global impact of the institution's research outputs, considering the weakness of the existing model of publishing which is rigorous, time consuming, expensive, and scarcely caters for the grey materials and other local scholarship.

In the light of the innumerable benefits of IRs, university libraries all over the world are resorting to IR as a means of coping with, preserving and disseminating the ever increasing scholarly output of researchers. Literature has revealed that adoption rate of IRs in Nigeria is abysmally low coupled with the uncertainty about IRs sustenance which could be attributed to lack of awareness and technological issues surrounding its implementation and sustenance.

#### Objectives of the study

The main objective of this research is to investigate the Influence of Awareness and Technological Issues on the Sustenance of Institutional Repositories in Three State Universities in Nigeria.

The specific objectives are to:

- Find out the level of awareness of IRs by librarians and academics in Ekiti State University (EKSU), Adekunle Ajasin University Akungba Akoko (AAUA) and Osun State University Osogbo (UNIOSUN);
- Ascertain the material content of IRs in the surveyed universities libraries;
- Find out the technological challenges affecting the sustenance of institutional repositories in the surveyed universities libraries;
- Identify the solutions to the challenges of the sustenance of institutional repositories in three universities libraries.

#### Research Questions

- What is the level of awareness of IRs by librarians and academics in Ekiti State University (EKSU), Adekunle Ajasin University Akungba Akoko (AAUA) and Osun State University Osogbo (UNIOSUN)?
- What is the material content of IRs in the surveyed universities libraries?
- What are the technological challenges affecting the sustenance of institutional repositories in the surveyed universities libraries?
- What are the solutions to the challenges of the sustenance of institutional repositories in three universities libraries?

#### Presentation and Discussion of Results

Below is the comprehensive analysis of data and findings based on the responses received from the respondents through the use of questionnaire. Out of the four hundred (300) copies of questionnaire distributed, two hundred and forty three (243) copies (81%) were returned with valid responses. While fifty seven (57) copies (19%) were not returned at all.

**Table 1. Distribution of respondents by Institution and Designation**

University	Lecturers	Librarians	Total
EKSU	83 (84.7%)	15 (15.3%)	98 (40.3%)
AAUA	69 (86.3%)	11 (13.7%)	80 (33.0%)
UNIOSUN	57 (87.7%)	8 (12.3%)	65 (26.7%)
Total	209 (86%)	34 (14%)	243 (100%)

This section presents findings on the distribution of the respondents by institution and designation 40.3% of the respondents were from EKSU, 33.0% from AAUA while the remaining 26.7% were from UNIOSUN. From EKSU, 84.7% of the respondents were lecturers and 15.3% were librarians, 86.3% of the respondents from AAUA were lecturers and 13.7% were librarians, from UNIOSUN, 87.7% were lecturers while the remaining 12.3% were librarians.

In determining the level of awareness of respondents on IRs, discrepant statistics was computed and the result reveals that, a total of 27.2% of the respondents agreed that they are aware of the existence IRs in their universities, 23.8% are aware of the benefits of IRs, while 23.8% are aware of the

content of their universities' IRs. Also 30.0% are aware of their universities' IR policy and only 28.0% of the respondents have read about IRs this is in line with the findings of Earwage (2008) that faculty members have been reluctant in contributing to institutional repository. If the academics who are the major contributors to IRs are feeling reluctant to do so, how then can the system be sustained? Also, the result reveal that only 23.4% got information about IRs through their colleagues, 51.0% agreed that they got information about IRs initiative through on social media, while 50.6% of them were aware of IRs through Departmental meetings, 48.6% of the respondents got their awareness through librarians in their institutions who brought to their attention the institutional repository publishing initiatives and 53.9% of the respondents ascertained that they have not heard about IR at all. The general implication of this result is that the level of awareness of IRs in Nigeria is low. This aligns with the position of Eke (2011) who highlighted some of the challenges associated with IRs sustainability in Nigeria as lack of awareness, academics' attitudes and technological issues among other factors. The findings is also in tandem with the position of Mark and Shearer (2006) who pointed out that faculty members are yet to come to full consensus regarding to the establishment of institutional repository. They gave three reasons why academics are not cooperating in submitting their works in the repository. Firstly, faculty members lack awareness of the existence of institutional repositories. Several surveys have found that many academic authors are not familiar with the concept of any institutional repositories on campus.

The table below affirmed that there are technological issues because 64.2% of the respondents agreed that there is slow internet connectivity, 77.7% affirmed that there is erratic power supply. Also, 72.8% of the academics attested to poor ICTs facilities, 78.2% agreed that their university lack of internet connectivity. 53.5% were of the opinion that ICTs

equipment on campus is obsolete, 69.5% agreed that lack qualified personnel to handle internet facilities. Also, 56.4% of the respondents agreed that there is constant breakdown of equipment this aligns with the position of Li, (2011) that digital information is fragile and faces many threats including technological obsolescence and the deterioration of digital storage media. Also, 65.1% agreed that there is inadequate telecommunication infrastructure, 56.3% of them affirmed that there is inadequate provision of computer systems, 75.7% agreed on poor upgrade of required systems that support IRs and 59.3% were of the opinion that there are no inverter to complement power supply.

### Conclusion and Recommendations

Universities in Nigerian are making progress in the attempt to constitute IRs, but the pace of IR development has been very slow especially in state owned universities. For university libraries in Nigeria to keep pace with their counterparts across the globe in bridging the divide between the institutional literature and the users, there is need for a leap towards a sustainable IRs. Findings have revealed the various kinds of issues contending with the sustainability of IRs in Nigeria. Awareness and technological issues are not only militating against the sustenance of the existing IRs, but equally acting as a threat to the institutions that are yet to begin their IRs project. To salvage the situation, the universities' management and all the stake holders need to be interested and fully persuaded on the need to have a working IRs for their universities. Awareness programmes and advocacy emphasising benefits of IR through different media is inevitable. Also, trainings for the librarians and academic staff members and other IRs drivers, coupled with adequate financial interventions by the government, friends of the library and other philanthropic organisations are urgently needed to take Nigerian universities' IRs to a higher level of guaranteed sustainability.

**Table 2. Awareness of Institutional Repositories by Academics and Librarians in Universities in Nigeria.**

Statement	Strongly Disagree	Disagree	Agree	Strongly Agree
I am aware of the existence of IRs in my university	73(30.0%)	104(42.8%)	41(16.9%)	25(10.3%)
I am aware of the benefits of IRs	80(32.9%)	111(45.7%)	38(15.6%)	14 (5.8%)
I am aware of the content of IRs my university	64(26.3%)	121(49.8%)	30(12.3%)	28(11.5%)
I am aware of my university's IRs policy	71(29.2%)	99(40.7%)	43(17.7%)	30(12.3%)
I read about institutional repository	68(28.0%)	107(44.0%)	40(16.5%)	28(11.5%)
Information about IRs through my colleagues influenced my awareness	85(35.0%)	101(41.6%)	39(16.0%)	18(7.4%)
I got information about IRs through on social media	43(17.7%)	76(31.3%)	82(33.7%)	42(17.3%)
My Departmental meetings consistently remind me IRs initiative in my university	39(16.0%)	81(33.3%)	95(39.1%)	28(11.5%)
Librarians in my institution brought to my attention Institutional Repository publishing initiatives	54(22.2%)	71(29.2%)	69(28.4%)	49(20.2%)
I have not heard about it	37(15.2%)	75(30.9%)	86(35.4%)	45(18.5%)

**Table 3. Technological Issues affecting the Sustenance of Institutional Repositories in Universities in Nigeria.**

Statement	Strongly Disagree	Disagree	Agree	Strongly Agree
Slow internet connectivity	39(16.0%)	48(19.8%)	74(30.5%)	82(33.7%)
Erratic power supply	23(9.5%)	31(27.8%)	81(33.3%)	108(44.4%)
Poor ICTs facilities	28(11.5%)	38(15.6%)	79(32.5%)	98(40.3%)
Lack of internet connectivity on campus	20(8.2%)	33(13.6%)	102(42.0%)	88(36.2%)
Obsolete equipment	54(22.2%)	59(24.3%)	68(28.0%)	62(25.5%)
Lack of personnel to handle internet provision	29(11.9%)	45(18.5%)	80(32.9%)	89(36.6%)
Constant breakdown of equipment	52(21.4%)	54(22.2%)	62(25.5%)	75(30.9%)
Inadequate telecommunication infrastructure	37(15.2%)	48(19.8%)	75(30.9%)	83(34.2%)
Inadequate provision of computer systems	48(19.8%)	58(23.9%)	65(26.7%)	72(29.6%)
Poor upgrade of required systems	19(7.8%)	40(16.5%)	85(35.0%)	99(40.7%)
Lack of inverter to complement power supply	44(18.1%)	55(22.6%)	66(27.2%)	78(32.1%)

The above results offered a significant insight into the level of awareness and technological issues on the sustenance of institutional repositories in the surveyed universities. Based on the findings, the following recommendations are suggested.

1. For universities in Nigeria to keep pace with their counterparts across the globe in the sustenance of the IRs, the universities need to improve on the resources allocation to libraries. There should be specific revenue allocation for IR sustenance by the university management.
2. More financial intervention by the government and philanthropic organisations is highly needed to augment the fund available for IR sustenance.
3. Mass publicity and awareness campaign by the library and university management are to be embarked upon for IR sustenance. Intensive awareness and advocacy especially on the aims and benefits of IR; through seminars, fliers and publicity on Universities' websites, and IR presentations at the faculties is urgently needed.
4. Availability and adequate network system, constant supply of electricity through backup generators, coupled with robust and adequate provision of computer systems to all departments are to be guaranteed for a working IR.
5. Furthermore regular upgrading of the systems, adequate bandwidth, as well as consistency of the institutional repositories are to be ensured by the drivers of IRs for a sustainable IR in universities in Nigeria.

#### References

Agyen-Gyasi, K., Corlety, A. and Frempong, A.T. 2011. Open access institutional repositories: issues and challenges. Ghana: University Library, Kwame Nkrumah University of Science and Technology.

Buehler, M. A. and Boateng, A. 2005. The evolving impact of institutional repositories on reference librarians. Retrieved February 5, 2010 from <http://www.emeraldinsight.com/Insight/viewContentItem.do?contentType=Article&contentId=151318126> Centre for Research Libraries, Trustworthy Repositories Audit and Certification: Criteria and Checklist.

Chisenga, J. 2006. "The development and use of digital libraries, institutional digital repositories and open access archives for research and national development in Africa: opportunities and challenges" WSIS Follow-up Conference on Access to Information and Knowledge for Development March 27-30 2006 <<http://www.uneca.org/disd/events/2006/wsislbrary/presentations/Development%20and%20Use%20of%20Institutional%20Repositories%20%20Justin%20Chisenga%20-%20EN.pdf>>.

Christain, G.A. 2008. Issues and challenges to the development of open access Institutional repositories in academic and research institutions in Nigeria. A Research paper prepared for the International Development Research Centre (IDRC), Ottawa, Canada.

Smith, K. 2009. "Recruiting content for the institutional repository: the barriers exceed the benefits", *Journal of Digital Information*, Vol. 12 No. 3, pp. 1-18.

Crow, R. 2002. The Case for Institutional Repositories: A SPARC Position Paper. Retrieved April 30, 2011 from <http://www.arl.org.sparc/IR/ir.html>.

Cullen, R. and Chawner, B. 2009. Institutional repositories and the role of academic libraries in scholarly communication. Proceedings of A-LIEP (Asia-Pacific Association of Library and Information Education and Practice) Tuskuba.

Dabholkar, R. Prabakaran, R. Kurahatti, B .T. 2008. Building an Institutional Repository: A TIFR Initiative. Dhanavandan, S. and Tamizhchelvan, M. 2015 Institutional Repositories in BRICS Countries: A Study. *International Journal of Knowledge Content Development & Technology* Vol.5, No.1, 33-47 33

Earwage, A.S. 2008. Running head: institutional repositories: benefits and challenges for libraries. Retrieved February 26, 2012 from <http://infosherpas.com/ojs/index.php/openandlibraries/article/view/5/9>.

Eke, H. N. 2011. Digitizing resources for University of Nigeria repository: Process and Challenges. *Webology*, Volume 8, Number 1, June, 2011

Jones, C. 2007. Institutional Repositories: Content and culture in an open access environment. Chandos Publishing, Oxford, England.

Jones, P. 2009. Institutional Repositories Should Be Built on Open Source Software Institutional Repositories: The Great Debate Bulletin of the American Society for Information Science and Technology – April/May 2009 – Volume 35, Number 4.

Li Yuan and Banach, M. 2011. Institutional Repositories and Digital Preservation: Assessing Current Practices at Research Libraries. *D-Lib Magazine* Volume 17, Number 5/6 retrieved April 29 2013 at <http://www.dlib.org/dlib/may11/yuanli/05yuanli.html>

Lynch, C. A. 2003. Institutional Repositories: Essential Infrastructure For Scholarship In The Digital Age. *Libraries and the Academy*, Vol. 3, No. 2, pp. 327–336.

Mark, T. and Shearer, K. 2006. Institutional repositories: a review of content recruitment strategies. Paper presented at the 72<sup>nd</sup> IFLA General conference and council held in Seoul, Korea from 20-24 August, 2013.

Rosenblum, B. 2008. "Developing new skills and expertise to support digital scholarship and scholarly communication", Proceedings of the 74th IFLA General Conference and Council (IFLA 2008), Quebec, Canada, 10-14 August.

Sharma, A.K., Saha, N.C. and Meichieo, K. 2008. Institutional repositories and skills Requirements, a new horizon to preserve the intellectual output: an Indian perspective. presented at 6<sup>th</sup> Convention Planner- 2008 on 6-7 November, 2008 at Inlibnet Centre, Ahmedabad, Nagaland. [7] SHERPA <<http://www.sherpa.ac.uk>>. See also John MacColl and Stephen Pinfield, "Climbing the scholarly publishing mountain with SHERPA". *Ariadne*, 33, September- October 2002. Available at: <<http://www.ariadne.ac.uk/issue33/sherpa/>>.

Smith, K. 2009. All Universities Should Have an Institutional Repository Bulletin of the American Society for Information Science and Technology – April/May 2009 – Volume 35, Number 4.

Suber, P. 2004. A very brief introduction to open access. Retrieved from <http://www.earlham.edu/peters/fos/brief.htm> (Accessed November 15, 2012).

Swan, A. and Brown, S. 2005. Open access self-archiving: An author's study. Key Perspectives Ltd, TRURO, Corn. Retrieved 30 March, 2012 from <http://eprints.soton.ac.uk/260999/1/jisc2.pdf>

Thaotip, L. 2011: Impact of Open Access Resources on LIS Scholars in Thailand. *Asia Pacific Journal of Library and Information Science*. Vol. 1, No. 1, retrieved November 20, 2012 from <http://is.msu.ac.th/ojs/index.php/APJLIS/article/view/12/pdf>.

Velterop, J. 2004 "Submission to the House of Commons Science and Technology Committee's Inquiry into Scientific Publications" 6 February 2004 <<http://www.biomedcentral.com/openaccess/inquiry/bmcsubmission.pdf>>.

Willinsky, J. 2003: Copyright contradictions in scholarly publishing. *First Monday*, Volume 7, Number 11-4 November 2002, retrieve November 20, 2012 from <http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/1006/927>.