

Open Access and University Researchers: Challenge and Ways to Promote open Access Scholarly Publishing Model in High Learning Institutions in Tanzania.

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Abstract

The study sought to analyze the challenges facing University researchers in the use and implementation of Open Access model and the ways that could help to promote the use of Open Access scholarly publications in higher learning institutions in Tanzania. The study used cross sectional descriptive survey which was done in two Universities, that is Mkwawa College of Education (A Constituent College of University of Dar es Salaam) and Ruaha Catholic University in Tanzania. A stratified random sampling was used to ensure representativeness of the respondents from each university, followed by simple random sampling which was used to get 275 respondents from each stratum based on their university. Data were analyzed using mean in descriptive statistics to rank the magnitude of each challenge which is hindering the use and implementation of open access and to rank the magnitude of the impacts and each way of promoting Open Access model. Findings related to the challenges that are facing researchers on the use and implementation of Open Access scholarly publications revealed that high publishing cost, lack of awareness, lack of proper technology infrastructure, lack of enough funds, lack of specialized personnel and low quality of Open Access are the main challenges facing researchers in Africa more particularly in Tanzania in their order of impacting researchers. On the other hand findings based on the ways for promoting open access revealed that, there is a need of funding more open access projects, there should be a policy to recognize open access publishing, Improve network backbone and telecommunication network services, self –archive of research output on open access, Support open access movement, Academic reward system and enabling infrastructure are the most methods that can be used to promote the use of open access in their order.

Key words; Open access, scholarly model, higher learning Institutions, University researchers

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Introduction

It is widely recognized that scholarly publications and communication are in crisis; it is resting on an academic publishing model that is not effective and unsustainable. As argued by Dulle (2008), the current model of scholarly communication has been noted to restrict dissemination of scholarly content such that it is increasingly becoming difficult for researchers from developing countries to access scholarly content of their choice. One response to this crisis has been the emergence of open access publishing, bringing scholarly literature out from behind a pay wall and making it freely available to anyone online. The ability to digitize information to a common standard has allowed scholarly research to be made available to anyone even in remote locations so long as they have access to a computer linked to the World Wide Web (Obuh, 2013).

According to Dulle (2008), open access is liberating the scholarly communication process from the current crisis of restricted dissemination of scholarly content. This has been also advocated by Gbaje (2010) that open access has been identified as an initiative that can improve access and provide global visibility for research work conducted by researchers and scholars. This is explained by Dulle (2008) that, open access offers a means of free availability of scholarly content on the Internet, permitting any user to read, download, copy, distribute, print 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.

Despite its potential, scholars have argued that, this mode of scholarly communication is not widely utilized in developing countries. Notably for example a study done by Dulle, et al.(2010) among Tanzanian university researchers has indicated that most of the researchers accessed free online content more (62%) than they disseminated their scholarly content (20%) through open access. This means that the use of open access model for dissemination of information is low. On the other hand Obuh (2013) in his study of attitude towards the use of open access scholarly publications in Nigeria, found that the level of usage of open access publications

by both senior and junior lecturers accounts for only 20.20% of their tendency to use open access publications. This means that, approximate by 70% is left without the actual tendency of using open access model. In the same perspective Dulle and Minishi-Majanja (2015) argued that most of researchers would support open access publishing more if issues of recognition, quality and ownership were resolved. Technology is considered successfully if it is fully used to its intended objective to save the needs of a particular group of users. As argued by Dulle (2008), it is evident that researchers in high learning institutions, more particularly in Africa are not fully in a position to take advantage of the potentials offered by open access scholarly model.

Given this situation, this study intended to assess the challenges that are currently facing the use of Open Access in high learning and the way of promoting Open Access in Tanzanian high learning institutions.

Challenges Facing Researchers in High Learning Institutions in the Use and Implementation of Open Access Scholarly Model

Empirical evidence has revealed a number of challenges facing high learning communities in the use and implementation of open access. Notably for example, Tarragó and Molina (2008) in their study of knowledge and attitudes toward open access journals among Cuban health researchers, indicated that Little knowledge of Open Access journals and other Open Access Movement terms and initiatives, and little use of Open Access journals as a publication means, were observed as challenges facing researchers in Cuban health institution. On the other hand Marques (2011) in his study of challenges and strategies of Open Access and Repository implementation in Seventh-day Adventist University Libraries, reported the following challenges facing researchers: technological infrastructure; lack of budget or funds; lack of specialized personnel, and lack of implementation and maintenance quality control system of Open Access and Repository model.

In the same perspective, Okendo and Mligite (2014) investigated the awareness and use of Open Access within Tanzanian

universities, findings indicated that Incompatibility of Open Access with the scholarly communications, unguaranteed availability of Open Access publications, low quality of Open Access and lack of skills and knowledge to publish in Open Access outlets are the major challenges facing scholars in the sampled universities. Similarly, Dulle, et al.(2010) in their study of factors influencing the adoption of Open Access scholarly communication in Tanzanian public universities, revealed that, the current poor research conditions and researchers' low Internet self-efficacy such as, inadequate information search skills, were cited as the main hindrances for researchers to use Open Access outlets to access scholarly content. Additionally, inadequate online publishing skills, and the slow Internet connectivity are the main issues that discourage researchers to disseminate their research findings through Open Access outlets.

Gbaje (2010) advocated that, lack of awareness of the potentials of Open Access journals, and concern over copyright issues are some of the challenges hindering the adoption of, and transition from closed journals to Open Access journals by publishers of scholarly journals in Ahmadu Bello University in Zaria, Nigeria. Matheka, et al. (2014) in their study on academic publishing and its implications for knowledge equity in Kenya, revealed that high publishing cost that is placed on authors is the main barriers for the researchers to use Open Access. Ivwighreghweta and Onoriode (2015) also found that unavailability of Internet facilities is a major constraint to the use of Open Access scholarly publications.

Moreover, Anupama, et al. (2012) advocate that given the growing number of Open Access sources already out there the most challenging issue facing those who develop and manage library collections is how they will keep track of Open Access sources. In addition, lack of adequate funding for building and upgrading ICT infrastructure and lack of total awareness regarding exploiting maximum benefit from them has been hindering the implementation of Open Access model.

Ways to Promote the Use of Open Access Scholarly Model in Higher Learning Institutions

In the body of literature, empirical findings have indicated several ways which could help to promote the use of Open Access. For instance, Obuh (2013) in his study of attitude towards the use of open access scholarly publications, recommended that management should equip schools with the enabling infrastructure and that academic reward systems should be designed to encourage Open Access publications. On the other hand, Matheka, et al.(2014) in their study of academic publishing and its implications for knowledge equity in Kenya, recommended that in order to overcome the challenges of implementing Open Access in Africa, there is a need of an urgent action by African governments to follow the suit of high-income countries like the UK and Australia, in mandating Open Access for publicly-funded research in their region and in supporting future research on how Open Access might bring social and economic benefits to Africa.

Salager-Meyer (2012) advocate that university students and junior researchers can help improve the Open Access situation even further. They can indeed require that their universities adopt the Open Access model, and they can exert pressure upon their governments so that the national research centers that fund research require the products of that research to be of Open Access status (Green road/self-archive). They can also convince their professors to support the Open Access movement, to publish in Gold Open Access journals or in journals whose publishers back up the Green road to Open Access and to self-archive their research output in their institutional repository or in their personal homepage. In a related perspective, Ivwighreghweta and Onoriode (2015) in their study, revealed that, majority of the respondents agreed that a strategy to enhance open access publications is to improve Internet connectivity. On the other angle, Jain (2012) in his study of promoting Open Access to researchers in academic libraries advocated that academic Librarians have a critical role in the comprehensive promotion and publicity of the benefits of Open Access to the Faculty and all other stakeholders. Governments in developing countries should fund more research projects in order to enable researchers to participate actively in the Open Access

movement by contributing through their research work; Governments in developing countries should reduce the cost of ICTs to make Open Access more approachable; Governments should improve internet connectivity, the backbone of the Open Access and the telecommunication infrastructure to realize the real purpose of open access.

Organizations in developed countries should sponsor more research projects in developing countries to encourage more scholarly research and make a positive impact on Open Access publishing. Academic institutions in developing countries should consider assisting in payment of author's fees to publish in Open Access journals. All academic institutions should use both top-down and bottom-up approaches to advocate Open Access and eliminate the misconceptions associated with Open Access. There should be a policy to recognize Open Access publications in the promotion and tenure evaluation. There should be a provision of clear policies on ownership, IR contents, quality standards, copyright issues and related matters.

Methodology

Descriptive cross sectional was used in this study as it provided picture of the characteristics of the phenomena (Gray, 2009). Cross sectional descriptive was used in this study to profile and rank the challenges and ways to promote the use and implementation of Open Access model.

Targeted Population

According to Goretti (2008), target population is the entire set of units for which the survey data are to be used to make inferences. In this study the targeted population was researchers from two Universities, namely Ruaha Catholic University and Mkwawa College of Education (A Constituent College of University of Dar es Salaam) in Tanzania. These universities were selected because they comprise students and academic members of staff who are researchers in different disciplines requiring the use of Open Access and other models for publishing of their work.

Sampling technique and procedure

The sampling technique for this study was stratified random sampling technique followed by simple random sampling. Stratified Sampling technique is commonly used to provide a sample which is more representative, easy to administer and leading to more reliable results (Goretti, 2008). Since this study was conducted in two Universities, stratified sampling was good to ensure representativeness of the sample among researchers in those two universities. Simple random sampling was used to draw a sample from each stratum for survey.

Data analysis

In analyzing data, Mean was used to rank the impact of each challenge facing the use and implementation of Open Access publishing model and ways to promote the use of open access scholarly model in higher learning institution.

Findings: Challenges Facing High Learning in the Use and Implementation of Open Access Model

The results of this specific objective is presented in Table 1.

Table 1: Descriptive Statistics on Challenges Facing High Learning in the Use and Implementation of Open Access Model.					
Challenges on the use and implementation of Open Access Model	Rank	Number	Minimu	Maximu	Mean
High publishing cost	1	275	1	5	4.5
Lack of awareness	2	275	1	5	4.4
Lack of proper technology infrastructure	3	275	1	5	4.3
Lack of enough funds	4	275	1	5	4.2
Lack of specialized personnel	5	275	1	5	4.2
Low quality of open access	6	275	1	5	4.0
Valid N (listwise)		275			

The results of the analysis as shown in Table 1 above depict the challenges facing researchers in High learning institution in the use and implementation of open access model. The results show that, low quality of open access was found to be the least challenge in impacting researchers. High of the seven items listed, High publishing cost was found to have high challenge in their ascending order, it (publishing cost) was also found to have high impact during interview, [<Internals\Respondent code 01>](#) said that,

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“accessing Open Access published work is not a challenge since it is free...however publishing and dissemination of information require the author to a pay fee for hosting the article in the web...this brings more challenge due to lack of enough budget”. This idea was supported in the work of Dulle, et al, (2010) who argued that in Open Access mode of scholarly communication in developing countries, more particularly in Tanzania, researchers accessed free online content more (62%) than they disseminated their scholarly content (20%) through open access (Dulle, et. al, 2010).On the other hand, Lack of awareness in the use of Open Access was ranked the second the to have high impact. The explanation of this was found in the interview, [<Internals\Respondent code 03>](#)who said that “In Tanzania following the mushrooming of universities, most scholars have concentrated on teaching rather than researching...this has now been building the culture of few publications which affect the awareness of model of publishing like open access since only few people are in the industry of publishing”.Empirical evidence by Salager-Meyer (2012) have a similar finding, that lack of cooperation from the researchers themselves and lack of knowledge about open access challenge the use of Open Access model.

Ways to Promote the Use of Open Access in Higher Learning Institutions

The results of this specific objective is presented in Table 2.

Table 2: Descriptive Statistics on ways to promote the use of open access in higher learning institution				
Ways to promote the use of Open Access in higher learning institution	Number	Minimum	Maximum	Mean
Fund more open access project	275	1	5	4
Academic reward system	275	1	5	3.9
Enabling infrastructure	275	1	5	3.8
There should be a policy to recognize open access publishing	275	1	5	3.7
Improve network backbone and telecommunication network services	275	1	5	3.6
Support open access movement	275	1	5	3.5
Self–archive of research output on open access	275	1	5	3.4
Valid N (listwise)	275			

The results of the analysis shown in Table 2 depict the ways to promote the use of Open Access model in High learning institution in Tanzania. The results shows that among the 7 items listed, funding more Open Access was found to have high impact in promoting the use of open access model followed by academic

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reward system, policy to recognize open access, Improve network backbone, Support Open Access movement and self –archive of research output on open access was found to be least in promoting the use of open access model in high learning institutions.

Conclusions

This study has given a comprehensive analysis of the challenges currently hindering the use of Open Access and the ways that can be used to promote open access usage among researchers in higher learning Institutions in least developing countries where Tanzania is included .The findings are viable for stimulating the use of Open Access and in understanding the barriers that hinder the implementation of Open Access initiatives. Hopefully, planners and policy makers will find it usefully in Tanzania and other countries with similar conditions.

Recommendations

While cost of publishing was found to have high impact in challenging the use and implementation of Open Access model, this study recommends the followings:

- The government should provide more fund to support open access publication and infrastructure development in high learning institutions.
- High learning Institutions should prepare a special budget for publishing in open access and in the improvement of university infrastructures.
- High learning institutions should prepare a policy and recognize it to support all form of Open Access publishing.
- Culture should gradually be developed from the internal and external environment of each institution to boost the use and implementation of Open Access.

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