



An Appraisal of Relationships between Lecturers' Ease of Use and Internet Self-Efficacy and their Adoption of Open Access Scholarly Publishing in State Universities in South-East Nigeria

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Abstract

The open access scholarly publishing is an outlet created to enable scholars to publish their scholarly articles made freely available for use of researchers. It was unfortunate to discover that there is great apathy by lecturers in South Eastern Nigeria to utilize this opportunity, hence the motivation for this study. The focus of this study is to determine the relationships between lecturers' ease of use of open access outlets and Internet self-efficacy and their adoption of open access scholarly publishing. The result of the study indicated that there is significant relationship between lecturers' ease of use of open access outlets and their adoption of open access scholarly publishing. Also, it indicated that there is significant relationship between lecturer's Internet self-efficacy and their adoption of open access scholarly publishing. This implies that if the internet self-efficacy and ease of use of lecturers are high then there is every likelihood for them to use open access publications more and as well publish more through open access outlet. In order to increase adoption of open access scholarly publishing the researcher made recommendations that the university management should sensitise the lecturers about the benefits of open access through workshops, seminars and should implement open access policies that are favourable to the adoption of open access.

Keywords: *Open Access Outlets; Open Access; Scholarly Publishing; Perceived*

1.1 Introduction

Open access scholarly publishing as a concept has been defined in different ways by numerous authors. In 2012, Swan's study of open access showed that the concept of open access scholarly publishing was first defined globally by Budapest Open access initiative (BOAI) (Swan, 2012). 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 (Swan, 2012). Again, Joseph (2013) expounded the concept to be a tradition where scholars publish papers in journals without expectation of payment while the conveying

technology is the Internet. Joseph also noted that in Budapest Open Access Initiatives conference in 2002, that open access publishing has the potential to transform research process as it can allow researchers to have access to tens of thousands of articles that were previously available for them to read, but now possible, available in unimaginable ways more especially in digital format.

There are many groups that play roles in the open access to scholarly literature such as scientists, educationist, researchers, institutions, organizations, librarians etc. Of all the groups that play roles in the open access to scholarly literature, lecturers are prominent. Most lecturers are researchers and authors and as such, they are the ones to decide whether to submit their works to open access journals, to deposit their works in open access archives or to transfer copyright (Wang & Su, 2016). They are the core of open access and their understanding and views of open access determine the destiny of open access

In order to engage in open access scholarly publishing, members of academic staff need to have the right skills to use open access outlets, self-archive their research output and ability to access research outputs from open access outlets. Edem and Ottong (2010) note that some academic staff accessed and used the Internet highly because they are highly skilled in access and use of internet. Similarly, Odawele and Uchechukwu (2018) note that some researchers were not aware of the existence of open access avenues and that they lacked skills to access and use the internet which was a challenge for adoption of open access initiatives.

It is also vital for researchers to understand the benefits of using open-access outlets. Odawele and Uchechukwu (2018) identify these benefits as: free publications for authors, increased citations of scholarly work, increased research impact, free access to research work online, high-quality research, and an impact on a researcher's career in terms

of development.

Ease of use is a factor in determining lecturers' adoption of open access publishing. According to Park and Oni (2017), ease of use has positive effects on the adoption and use of open access scholarly publishing. Ease of use refers to the degree of convenience experienced when using open access journal articles. In this regard, it is important to note that lecturers prefer selecting articles that are instantly available at their desktops rather than going to libraries for printed copies.

Internet self-efficacy, which is often defined as individuals' confidence in their ability to use the Internet (Chuang, et al. 2015; Kao, Tsai, & Shih, 2014), is one of the factors that has a strong influence on the academic performance of both lecturers and learners in contemporary educational environments where the Internet is actively used. Similarly, individuals who perceive themselves as highly efficacious in performing a task on the Internet may be more willing to use new Internet applications (e.g., search engines, wikis, blogs) to solve problems they encounter. According to Osudina (2019), Internet self-efficacy refers to what individuals believe they can do with the Internet skills they possess. They further noted that it is essential for the adoption of open access scholarly publishing.

1.2 Objectives of the Study

The objectives of this study are to determine the relationship between:

1. Lecturers' ease of use of open access outlets and their adoption of open access scholarly publishing in state universities in South-East, Nigeria.
2. Lecturers' Internet self-efficacy and their adoption of open access scholarly publishing in state universities in South-East, Nigeria.

1.3 Research Questions

1. What is the relationship between ease of use of open access outlets of lecturers and

their adoption of open access scholarly publishing in state universities in South-East Nigeria?

2. What is the relationship between lecturers' Internet self-efficacy and their adoption of open access scholarly publishing in state universities in South-East Nigeria?

1.4 Hypotheses

Ho 1: There is no significant relationship between lecturers' ease of use of open access outlet scores and their adoption of open access scholarly publishing scores in state universities in South-East, Nigeria.

Ho2: There is no significant relationship between lecturers' internet self-efficacy scores and their adoption of open access scholarly publishing scores in state universities in South-East, Nigeria.

2.1 Literature Review

2.2 Theoretical Framework

Literature shows that few authors publish their research in Gold open access journals and researchers have also reported that there was a difference in the levels of researchers' involvement in publishing. Accordingly, Xia (2010) observes that more scholars were slowly getting involved in publishing their research work in open access journals over the years, but the level of publishing was not high. Again, Dulle (2010) argues that researchers who had self – archived their research were likely to have used their fellow researchers' self-archived research work. This means that the more the researchers accessed open access materials, the more they became aware of the available open access outlets and could disseminate their research through open access. Promotion of open access initiatives will therefore be easier, especially for users who are already

using it, than for those who do not use it.

Tsai and his colleagues (2011) report that the performance of learners with a higher sense of Internet self-efficacy in Internet-based learning settings may be better than that of those with a lower sense of Internet self-efficacy. For example, they documented that student who had higher confidence in their own capability to use the Internet were more successful in using searching strategies in a Web-based learning task than those who had lower confidence. Furthermore, Ivwighrehweta and Onoriode (2012) reveals that the majority of the lecturers in their survey lacked skills and knowledge on open access. Matthew and Baby (2012), in their study on technological skills for librarians in India, report that the majority (90.3%) of librarians lacked ICT skills, which was a challenge to their usage. Similarly, Okendo and Mligite (2014) in their study find that the majority of staff managed to access and disseminate on the internet when they are assisted by friends. However, a lack of knowledge and skills was a major hindrance to publishing in open access outlets by scholars in the sampled universities.

Similarly, individuals who perceive themselves as highly efficacious in performing a task on the Internet may be more willing to use new Internet applications (e.g. search engines, wikis, blogs) to solve problems they encounter (Kim, & Glassman, 2013).

New and fast-changing technology has led to a requirement that users must have Internet skills to access and self-archive their research work. Hu and Jiang (2014) carried out an investigation to discover the attitudes of users toward Open Access 94% of the respondents expressed an interest in participating in a lecture conducted by the staff about how to use Open Access resources.

2.3 Empirical Review

Nariani and Fernandez (2012) examine the ease of use of open access publishing (OAJ) outlets at New York University. The

main purpose of the study was to examine ease of use of open access publishing (OAJ) outlets among academic staff of the university. The survey showed increased author publishing in Open Access Journals. Their study reveals a relationship between ease of use and lecturers' publishing in open access outlets. The study also indicated that authors like to have their works read and cited. The factor of impact was found to be important to them. However, the researchers pointed out the small sample size used as a major limitation of their study.

Sawant (2012) explores the ease of use within the scholarly communication process over time. The purpose of the study was to use available literature on both the traditional and open access to compare and contrast the two processes. The author posed the question as to whether academic journals were less relevant in light of Web 2.0 technologies. Printed journals and online publications formed the population of the study. The author finds that Web 2.0 technologies have affected the creation and dissemination of knowledge and that new avenues of the peer review process have been established. This study reveals that ease of use is significantly related to scholarly publication processes. This study concludes that open access publishing has changed scholarly publishing in the generation and dissemination, with open archiving, using institutional repositories to aid collection, preservation, and dissemination of an institution's intellectual capital. The reviewed study mainly focused on social media and not on open access, and limited itself to literature searches.

Bjork (2014) analyzes the barriers associated with the ease of use of various outlets in dissemination. The purpose of the study was to examine the barriers associated with the ease of use of various outlets with reference to open access journals, subject-specific repositories, and institutional repositories. The major focus was on such

issues as legal framework, academic reward system, marketing business models and indexing services and standards. The study finds a high relationship between ease of use and open access journal publication. Findings also indicate that academics' behaviour in the choice of an outlet for dissemination was determined by the reward system. It was also found that most universities, the most rewarding systems were established journals in one's field and that use of such systems places upcoming journals, whether subscription-based or open access, in a disadvantaged position. The researcher concentrates on legal framework, academic reward system, marketing business models and indexing services, but did not address the issue of the relationship between ease of use and open access scholarly publishing, which is the main focus of the current study. None of them was conducted in Nigeria, let alone the South East of the country.

Isaac *et al* (2017) investigate employee usage of internet technology within government institutions in Yemen. The purpose of the study was to examine the internet self-efficacy on perceived ease of use and perceived usefulness in the context of employee internet usage. The result finds that there is a positive relationship between internet self-efficacy on one side, and perceived ease of use and perceived usefulness on the other side. It indicated that the more confident an employee is in browsing the WWW, using a search engine, and sending e-mail, the easier the internet becomes to use, understand, and accomplish tasks more quickly and easily.

Mortland (2012) explores how organizations could enhance their Internet self-efficacy by combining various outlets, including traditional and social media. The main purpose of the study was to determine whether a positive relationship exists between Internet self-efficacy and open access scholarly publishing. The study reveals that

nearly 94% use social media such as Facebook, Twitter, blogs, and Pinterest to reach their desired audiences, while 64% used traditional media such as newspapers, radio, and TV. Further findings indicate that there is a positive relationship between Internet self-efficacy and open access scholarly publishing among students and professional communicators.

Cao et al (2016) in their study posit that Internet self-efficacy is a mediator between perceived access and online health information-seeking behavior. The results of the study indicate that people tend not to seek health information online if they think they are incapable of using the Internet. Given the potential benefits of the Internet, it is important to raise people's levels of Internet self-efficacy so that more people can have access to online health information. This study investigates online health information-seeking behavior, not open access publishing. Karaseva, (2016) carried out a study with the aim of examining the relationships between secondary school teachers' perceived Internet self-efficacy and online search performance. The results indicate that teachers' perceived Internet self-efficacy neither correlated with their actual search performance nor was it related to the search strategies that teachers applied.

Xiao and Askin (2014) examine academics' internet self-efficacy towards Wikipedia and Open Access journals for academic publishing in order to help understand perceived benefits and challenges of the two models. The main objective of the study was to compare Wikipedia and open access journals in order to determine their advantages and disadvantages. Their study shows that Wikipedia has perceived advantages and challenges compared to the

Open Access model. It also reveals that researchers' experiences with Open Access journals were correlated with their Wikipedia experiences, whereby those who have not had any Open Access journal experiences were more likely not to have a Wikipedia experience.

One of the things that stand out is that none of these studies has been carried out in state universities in the South-East, Nigeria. Some of the studies used students, others managers and very few used academic staff as their subjects.

3.1 Research Method

The correlational research design was adopted in this study. It was conducted in state universities in the South-East of Nigeria. The population of the study was made up of 1,111 lecturers in the Faculty of Education and Faculty of Sciences in the five state universities in the South-East of Nigeria. The sample of the study was 834 respondents made up of 385 lecturers sampled in the Faculties of Education and 449 lecturers sampled in the Faculties of Sciences in the five state universities in the South-East of Nigeria. The proportionate sampling technique was used to sample 75% of the lecturers in each of the faculties. The instrument for data collection was a questionnaire. The instrument was divided into two. The first section was on the bio-data of the respondents, while the second section contained items of the questionnaire. The data collected were subjected to statistical analysis. The Pearson Product Moment correlation was used to answer the research question. Similarly, the hypothesis was at 0.05 level of significance using t-test.

4.1 Analyses of Results (From Research Questions & Hypotheses)

Table 1: Research Question 1 & Hypothesis 1 Analyses for the Relationship between Lecturers' Ease of Use Scores and Their Adoption of Open Access Scholarly Publishing Scores

N	r	T	P- value	Remarks
834	0.81	0.219	0.201	S.(High and positive relationship)

* **P < 0.05 & Significant; Hypo. Rejected**

Results in Table 1 show the scores ($r=0.81$) of lecturers on their ease of use of open access outlets and adoption of open access scholarly publishing is high and positive because r is almost 1, which means a high and positive coefficient. The results indicate that there is a high and positive relationship between ease of use of open access outlets of lecturers and their adoption of open access scholarly publishing in state universities in South-East Nigeria.

In the same vein, the results in Table 1 indicate the t value of .0219 and a P-value of

0.201. These results suggest that there is a significant relationship between lecturers' ease of use of open access outlet scores and their adoption of open access scholarly publishing scores. Since the P – value is less than the significant value (<0.05), the null hypothesis is therefore rejected. The conclusion is that there is a significant relationship between lecturers' ease of use of open access outlets and their adoption of open access scholarly publishing in state universities in South-East, Nigeria.

Table 2: Research Question 2 & Hypothesis 2: Analyses for the Relationship between Lecturers' Internet Self -Efficacy Scores and Their Adoption of Open Access Scholarly Publishing Scores

N	r	T	P- value	Remarks
834	0.81	0.595	0.213	S.(High and positive relationship)

* **P < 0.05 & Significant; Hypo. Rejected**

Results in Table 2 indicate that the scores ($r=0.81$) of lecturers on their Internet self-efficacy and adoption of open access scholarly publishing are high and positively related because the r is almost 1 with a very high and positive coefficient. This means that there is a high and positive relationship between lecturers' Internet self-efficacy and their adoption of open access scholarly publishing in state universities in South-East Nigeria.

The results in Table 2 also indicate a t -value of 0.595 and a P-value of 0.213. These results suggest that there is a significant relationship between lecturers' internet self-efficacy scores and their adoption of open

access scholarly publishing scores. Since the P – value is less than the significant value (<0.05), the null hypothesis is therefore rejected. The conclusion is that there is a significant relationship between lecturers' internet self-efficacy and their adoption of open access scholarly publishing in state universities in South-East, Nigeria.

5.1 Discussion of Findings

The result analyses for research question one and hypothesis one indicates that there is a high, positive and significant relationship between ease of use of open access outlets of lecturers and their adoption of open access scholarly publishing in state

universities in South-East Nigeria. This finding indicates that the higher the lecturers find it easy to use open access outlet, the more they publish using the new system, but when the ease of use is poor, the less likely they are to publish using this mode of publishing.

The findings of this study are therefore supported by the literature. For example, Nariani and Fernandez (2012) found that there is a high and positive relationship between ease of use and lecturers' publishing in open access outlets. Again, the study by Sawant (2012) revealed that ease of use is significantly related to scholarly publication processes. Furthermore, Bjork (2014) found a high relationship between ease of use and open access journal publication.

The summary finding of research question number two and hypothesis number two is that there is a high, positive and significant relationship between lecturers' Internet self-efficacy and their adoption of open access scholarly publishing in state universities in South-East Nigeria.

The findings of the study therefore, suggest that if the Internet self-efficacy of lecturers is high, there is a likelihood they will publish more through open access, and if their Internet self-efficacy is poor, then they are likely to publish less. The findings of this study agree with Mortland (2012), who found that there is a positive relationship between Internet self-efficacy and open access scholarly publishing among students and professional communicators. The findings also agree with Gul, Shah and Baghwan, (2010) that Internet self-efficacy is significantly related to the adoption of open access scholarly publishing among lecturers in Kashmir University.

Conclusion

From the findings of the study, it could be concluded that ease of use of open access outlets and internet self-efficacy of lecturers have a high and positive relationship with

their adoption of open access scholarly publishing in South-East, Nigeria. This therefore implies that there is a need to take into consideration positive strategies to enhance their necessary internet surfing skills to ensure their usage of open access outlets. It is also important to ensure that open access platforms within the institution are user-friendly to facilitate easy access and publishing of scholarly research.

Recommendations

Based on the findings of this study, the following recommendations are as follows:

1. The various state universities should equip their libraries and update the digital sections to enhance lecturers' ease of use of open access outlets and adoption of open access scholarly publishing in the state universities.
2. The various state universities should consistently organize training and workshops to help enhance lecturers' Internet self-efficacy and adoption of open access scholarly publishing.

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