INVESTIGATING THE RELATIONSHIP BETWEEN LECTURER'S AWARENESS CUM ATTITUDE AND THEIR ADOPTION OF OPEN ACCESS SCHOLARLY PUBLISHING IN NIGERIAN UNIVERSITIES

BY

Blessing N. Otubelu
Festus Aghagbo Nwako Library,
Nnamdi Azikiwe University, Awka, Nigeria.
nb.otubelu@unizik.edu.ng

Chinwe V. Anunobi
Department of Library and Information Science,
Nnamdi Azikiwe University, Awka, Nigeria.
chiinobis@gmail.com

Angela N. Anike
Festus Aghagbo Nwako Library,
Nnamdi Azikiwe University, Awka, Nigeria.
an.anike@unizik.edu.ng

Abstract
The study investigated the relationships between lecturers' Awareness, Attitude and their adoption of open access scholarly publishing in state universities. Open access scholarly publishing is relatively a new medium to access and it disseminates scholarly output. It is a powerful tool that can enhance sharing of knowledge between scholars and readers and as well aim to reduce the access and knowledge divide. A correlational research design was adopted for the study. The population of the study comprised 1,111 lecturers in Faculties of Education and Sciences in the five state universities in the South-East of Nigeria while the sample was 834

respondents selected through proportionate sampling technique. The alpha coefficients of the instrument were 0.85 and 0.83 for the two sections of the instrument. The Pearson Product Moment correlation was used to answer the research questions while t-test was used to test the hypotheses at 0.05 level of significance. The findings of the study showed that there is high and positive relationship between lecturers awareness and their adoption of open access scholarly publishing in state universities. Also, the findings of the study revealed that there is high and positive relationship between attitude of lecturers and their adoption of open access scholarly publishing in state universities. Based on the findings, it was recommended among others that the university library management should provide continuous advocacy programs, trainings on open access to promote lecturers' awareness, positive attitude and enhanced knowledge of open access.

Keywords: Open Access Initiative; Attitude; Awareness; Lecturers; Relationship; Adoption of Open Access Scholarly Publishing.

Introduction

Open access initiative seeks to provide people, scholars, and researchers all over the world with equal access to knowledge and information irrespective of where they live. Globally open access is viewed as the solution to access and dissemination of scholarly publications. According to Budapest (2002), Open access is defined as "free availability on the public internet, permitting any 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". Furthermore, Open access is defined by the Bethesda Statement on Open Access Publishing as a publication where "The author(s) and copyright holder(s) grant(s) to all users a free, irrevocable, worldwide, perpetual right of access to, and a license to copy,

use, distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship as well as the right to make small numbers of printed copies for their personal use" (Bethesda, 2003).

In any developing world, inequality in the dissemination of scholarly communication exists (Czerniewicsz & Goodier 2014). According to Prosser (2015), the primary demand on any scholarly publishing system is to facilitate communication between scholars. To the contrary, the business mode of scholarly publishing has imposed barriers to information access to such an extent that only a few who can afford subscriptions can gain access to the scholarly content (Voss, 2017). This leaves the poor majority without access to the global research output. Therefore, the subscription-based publishing system has failed to serve the interests of the scholarly community. The digital publishing and networking technologies harnessed by an increasing dissatisfied library market as well as authors have led to the birth of open access (Yiotis, 2015). Open access is viewed as one of the means of addressing the escalating journal prices as well as circumventing a growing limited access to an increasing volume of literature (Lynch, 2013).

Open access is basically characterized by freely making research outputs available on the public internet granting users the freedom to make legal and non-commercial use of such scholarly material subject to proper acknowledgement of the rights of the original owner of the work. Hence open access initiative can advance science more effectively, as more scholars make their research findings freely available (Swan, 2017). According to Dulle and Minish-Majanja (2011), there are factors that determine lecturer's adoption of open access scholarly publishing.

According to them, such factors include cost and academic rewards, altruism, culture and influence of other actors. Other researchers also identified the contextual factors that can influence lecturers' adoption of open access scholarly publishing. The contextual factors include awareness, internet self-efficacy, attitudes, performance expectancy, effort expectancy, ease of use and facilitating conditions (Igwe 2014). Among these contextual factors, this study focused on awareness, and attitudes.

Awareness can be defined as the act of having perception or wide knowledge of the existence and relevance of any information (Okoh, 2016). Awareness is a situation where someone is informed of something. According to Baro, Endouwere and Ubogu (2011), awareness is the state or ability to perceive, to feel or to become conscious of events, objects, or new trend such as new technology or system. It is the knowledge gained through one's perceptions or by means of information. Awareness is the ability of people to realize or know that something exists. It can also be defined as one's knowledge or understanding of a particular subject, situation or trend. The knowledge or perception of a situation or fact is paramount in any decision to adopt and use new innovation. Open access publishing is a new concept that needs to be known before accepting or using this technology-based system. According to Obuh and Bozimo (2012), awareness plays a vital role and is a key factor influencing the adoption and use of Open access publishing. In this study, awareness means lecturers' familiarity with open access scholarly publishing.

All port as cited by Achugbue, & Anie, (2011) defines attitude as “a mental and neural state of readiness, organized through experience and exerting a directive or dynamic influence on the individual's response to all objects and situation to which it is related”. Attitude is an individual's overall

affective reaction to using a system. Attitude subsumes interest. It involves likes and dislikes. The word attitude implies the sum total of an individual's positive and negative predisposition or mental state of preparation for action or in response to a social object (Kpolovie, Joe & Okoto, 2014). Bashorun (2014) established that individual's attitude towards technology has a strong effect on the adoption and use intention.

However, it is not certain if any relationship exists between lecturer's awareness; attitude and their adoption of open access scholarly publishing in state universities in South-East, Nigeria. This justifies the need for this study.

The objective of this study is to determine the relationship between:

1. Lecturers' awareness and their adoption of open access scholarly publishing in state universities in South-East, Nigeria.
2. Lecturers' attitudes and their adoption of open access scholarly publishing in state universities in South-East, Nigeria.

Review of Related Literature

The adoption of open access outlets depends on awareness of open access scholarly publishing by scholars. However, scholars have been able to benefit from open access initiatives without knowing this mode of scholarly publishing. Studies on adoption of open access indicate that the general awareness of open access among the research community is gradually growing (Xia, 2010).

Oluwabamide and Akpan (2016) stated that awareness may be referred to public, common knowledge or understanding about social, scientific or political issues. It is the knowledge of existence and relevance of any

information (Okoh, 2016). Also, Okoh opined that awareness of any system or information goes with the activities of others which play important role in enabling effective collaboration among researchers. Adams (2010) is of the view that awareness means knowledge and knowledge is seen as understanding of how everyday world is constituted and how it works. Awareness can also be viewed as a state of ability to receive, know, to feel or to be conscious of events, objects or sensory pattern.

According to Dulle (2010) academics are becoming more aware of open access. However, there are indications that academics are still not aware of open access issues like existence of an institutional repository in their institutions, self-archiving practices and whether there was an existence of an institutional repository in some universities in developing countries (Ocheibu & Beba 2016). Similar observations were made about countries like Malaysia that academics did not know about self-archiving opportunities (Reneker, 2019). This probably led academics to use other types of repositories like subject-based repositories since they were not familiar with institutional repositories. These observations indicate that there is less understanding of the existence of open access initiatives therefore need for more awareness campaigns.

Burkett (2016) investigated awareness of open access publishing in South African universities. The research objective was to investigate the extent to which stakeholders in the local research system were aware of open access publication and the prospects for the adoption of the new scholarly communication system in South Africa. Four research questions and two null hypotheses guided the study. The study found that close to 61% of the biomedical researcher group could not explain properly what open access implied (88 of 145) while only 3 of the 8 official research organisations

were clear about what open access means. With regard to open access, the findings reveal that there was high and significant relationship between academics' awareness and their use of open access publishing in South Africa.

Elliah and Mligite (2018) investigated the awareness and use of open access within Tanzanian universities. The purpose of the study was to assess levels of awareness of open access initiatives as well as to ascertain the degree of open access usage. Four research questions and two null hypotheses guided the study. The study found that there is high awareness and use of open access publishing among lecturers in Tanzania.

It's also vital for researchers to have knowledge about the benefits of using open access outlets. Odawele and Uchechukwu (2018) identified these benefits as: free publications for authors, increase in citation and publishing scholarly work, increased research impact, free access to research work online, quality of research work is high and impact of a researcher's career in terms of development. Literature shows few authors publish their research in Gold open access journals and that researchers have also reported that there was a difference in the levels of researchers' involvement in publishing. Accordingly, Xia (2010) observed 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. Dulle (2010) argued 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 become aware of the available open access outlets and are able to disseminate and make their research to be open access. Promotion of open access initiatives will therefore be easy especially to users who are

already using it than those that do not use it.

Attitude is defined as the overall reaction of an individual towards using a system (Ogbomo & Ivwighreghweta, 2010). Maio et al (2018) opinioned that attitude could be seen as an acceptable bunch of feelings, beliefs and behavioural predisposition (Intentions) towards some specific objects. Ones feelings whether favourable or unfavourable toward an object depends on intentions. Nayakankuppam et al (2018) also believed that attitude are judgemants and they develop on three components which are affective, behavior and cognition (ABC) model.Ardies, Maeyer, Gijbels, and Kevlen (2015) further supported that attitude comprise three responses but added that belief include facts, opinions and our general knowledge about the object, feelings such as love, hate, likes, dislikes and similar sentiments while behavioural tendencies refer our inclinations to act in certain ways towards the objects, to reproach it and to avoid it. An attitude is an internal state that influences behavior. We can infer these internal states from a person's actions and words. We can, therefore, say that an individual who actively avoids open access scholarly publishing has a negative attitude towards it. In general, an individual will tend to avoid open access scholarly publishing because of his or her conceptions, beliefs and cognition.

Several authors have examined the attitude of respondents towards open access and the findings showed some insight regarding acceptance of this mode of scholarly publications. For example, Frass and Gardner (2013) observed that most academic staff believed that open access journals offer wider circulation, faster publication time and higher visibility than subscription journals and that only a few of them agreed they would want to publish in open access journals. In addition, Dulle (2010) also

acknowledged that most of the academic staff accept open access publishing and also indicated how it enable them to make a choice on what platform to use. Attitude of academic staff towards open access determines whether or not they will adopt open access initiatives. Swan and Brown (2014) noted that the attitude of researchers towards Open Access (OA) as perceived that the readership of OA journals was higher than subscription-based journals. Swan and Brown also claimed that citation of articles was more in open access journals and that publishing in open access outlets was faster. Swan and Brown further noted that OA ensures that there is free access to all the readers while only few academic staff is concerned about the cost of subscription-based journals to their institutions.

Other scholars show that researchers are yet to fully embrace open access initiatives. For instance, Vlachaki and Urquhart (2010) argue that majority of the researchers are yet to adopt open access journals due to lack of awareness of the existence of these avenues and the benefits of open access initiatives. In a similar fashion, Coonin and Younce (2010) also noted that senior lecturers had negative attitude towards open access copyright issues. They also observed that majority of the senior academic staff claimed that publishing in OA journals would not affect the chance for their promotion and that only few believed that it is more prestigious to publish in OA journals than in subscription-based journals.

Schroter, Tite, and Richard (2015) investigated authors' attitudes towards open access publishing and author charges. Their findings showed that authors were aware of the concepts of open access publishing and that they would not mind publishing in journals they perceived as being of high quality even if they charged authors fees. Hoornand-Graaf (2016) explored the attitudes of authors in the UK and the Netherlands towards Open

Access. The survey mainly dwelt into copyright issues. These were seen to have an influence on academics' views of OA.

Attitude towards adoption and use of Open access publishing plays an essential role. Academic staff that develops a positive attitude towards adoption and use of Open access publishing will embrace and use it to perform a given task. The findings of current and previous studies (Wickham, 2011; Khalli & Singh, 2012) established that attitude is a determinant in adoption and use of OA publications. Attitude in this study means lecturers' feelings towards open access publishing and constitute a factor influencing the use of OA publishing and has relationships with other variables (factors).Awareness and Attitude from the studies could be seen as rational factors in open access scholarly publishing that could affect its acceptance among lecturers.

Research Questions

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

Hypothesis

Ho1: There is no significant relationship between lecturers' awareness 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' attitude scores and their adoption of open access scholarly publishing scores in state

universities in South-East, Nigeria.

Methods

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 Faculties of Education and 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 Faculties of Education and 449 lecturers sampled in Faculties of Sciences in the five state universities in South-East 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 reliability of the instrument was established using cronbach alpha to analyse data collected from thirty (30) lecturers in two state universities in South-South geo-political zone of Nigeria. The overall alpha coefficient was 0.81.Data collected were subjected to statistical analysis. The Pearson Product Moment correlation was used to answer the research questions. Similarly, the hypotheses were at 0.05 level of significance using t-test.

Presentation and Discussion of Results

Research Question 1: What is the relationship between lecturers' awareness and their adoption of open access scholarly publishing in state universities in South-East Nigeria?

Ho1: There is no significant relationship between lecturers' awareness scores and their adoption of open access scholarly publishing scores in state universities in South-East, Nigeria.

Research Question 2: What is the relationship between lecturers' attitude and their adoption of open access scholarly publishing in state universities in South-East Nigeria?

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

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

N	r	T	P- value	Remarks
834	0.82	0.237	0.195	S.(High and positive relationship)

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

The results in Table 1 show that the scores (r=0.82) of lecturers on their awareness and adoption of open access scholarly publishing have high and positive relationship because the r is almost 1 which means high and positive coefficient. This means that there is high and positive relationship between lecturers' awareness and their adoption of open access scholarly publishing in state universities in South-East Nigeria.

The results in Table 1 indicate **t-**value of 0.237 with a P-value of 0.195. The P – value is less than **t-**value at significant level of 0.05. These results suggest that there is significant relationship between lecturers' awareness scores and their adoption of open access scholarly publishing scores. The null hypothesis is rejected. The conclusion is that there is significant

relationship between lecturers' awareness and their adoption of open access scholarly publishing in state universities in South-East, Nigeria.

Table 2: Research Question 3 & Hypothesis 3 Analyses for the Relationship between Lecturers' Attitude Scores and Their Adoption of Open Access Scholarly Publishing Scores

N	r	T	P- value	Remarks
834	0.86	0.102	0.100	S.(High and positive relationship)

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

Results in Table 2 shows that the scores (r=0.86) of lecturers on their attitude and adoption of open access scholarly publishing are high and positively related because the r is almost 1 which means high and positive coefficient. The result indicates that there is high and positive relationship between lecturers' attitude and their adoption of open access scholarly publishing in state universities in South-East Nigeria.

The results in Table 2 also indicate **t** value of 0.102 and a P-value of 0.100. These results suggest that there is significant relationship between lecturers' attitude scores and their adoption of open access scholarly publishing scores. Since the P – value is less than the significant of <0.05, the null hypothesis is therefore rejected. It is therefore concluded that there is significant relationship between lecturers' attitude and their adoption of open access scholarly publishing in state universities in South-East, Nigeria.

Discussion of Results

The analyses of research question one and hypothesis one indicated that there is high, positive and significant relationship between lecturers' awareness and their adoption of open access scholarly publishing in state universities in South-East, Nigeria. The finding of this study is a good one. The high and positive relationship between the lecturers' awareness and their adoption of open access scholarly publishing implies that if there is high awareness, then the lecturers are likely to publish more and if there is low awareness there is the tendency to publish less.

The finding of this study corroborates Elliah and Mligite (2018) who found that there is high and significant relationship between awareness and use of open access publications among lecturers in Tanzania. The study also found a significant relationship between lecturers' awareness and their adoption of open access scholarly publishing. This agrees with Burkett (2016) who found that there was high and significant relationship between academics' awareness and their use of open access publishing in South Africa.

The results of the analyses of research question two and hypothesis two indicate that there is high, positive and significant relationship between lecturers' attitude and their adoption of open access scholarly publishing in state universities in South-East Nigeria. The findings of this study are quite interesting because of the high and positive relationship between lecturers' attitude and their adoption of open access scholarly publishing. It therefore suggests that if the lecturer's attitude is high, they are likely to accept and publish more but when their attitude is poor, they are likely to publish less.

The findings of this study agree with Schroter, Tite, and Richard (2015) that

positive relationship existed between authors' attitude and their adoption of open access scholarly publishing. In the same manner, Hoornand-Graaf (2016) found that authors' attitude positively related to their publishing in open access journals. The agreement in the findings is quite indicative. For instance, if a lecturer does not have positive attitude towards open access publishing, it is not most likely that the lecturer will embrace online publishing.

Conclusion

From the findings of the study, it could be concluded that awareness and attitude of lecturers have high and positive relationship with their adoption of open access scholarly publishing in South –East, Nigeria. This therefore implies that when there is low awareness and poor attitude of lecturers towards open access scholarly publishing, publishing scholarly contents through open access will be less. There is need to work on the awareness and attitude by promoting awareness on open access benefits and providing rewards to enhance their publishing.

Recommendations

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

1. The university library management should provide continuous advocacy programs, trainings on open access to promote lecturers' awareness, positive attitude and enhanced knowledge of open access.
2. The university library management should also sensitize lecturers on the benefits, opportunities, challenges and policies guiding the use of open access policies and as well encourage them to use open access journals as an outlet for publishing scholarly findings.

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