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A Critique of Relationship between Performance and Effort Expectancy of Lecturer's and Their Adoption of Open Access Scholarly Publishing in Nigerian Universities.

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Abstract

The study investigated the relationships between lecturers' performance expectancy, effort expectancy and their adoption of open access scholarly publishing in the state universities. 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 performance expectancy of lecturers 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 effort expectancy of lecturers and their adoption of open access scholarly publishing in state universities. Based on the findings, it was recommended among others that management of the universities should reward the lecturers' performance through grants to enable them engage more in open access scholarly publishing. There is need to conduct more training and workshops on the use of open access outlet to enhance the lecturers' capability to use such system.

Keywords: Critique; Relationship; Lecturers; Performance Expectancy; Effort Expectancy; Open Access Outlets; Adoption of Open Access Scholarly Publishing.

INTRODUCTION

Open access is an immediate, toll-free access to the full-texts of peer-reviewed research journal articles. The goal of open access is to grant anyone, anywhere any time free access to the result of scientific research. Thus, access is usually in an electronic form via the Internet. Suber (2015), defined open access scholarly publishing as digital, online, free of charge, and free of most copyright and licensing restrictions. Open access scholarly publishing is free of charge for readers of online version, but does not exclude priced access to print versions of the same work. According to Suber, the Budapest (February 2002), Bethesda (June 2003), and Berlin (October 2003) definitions of open access scholarly publishing are the most central and influential for the OA movement.

As noted by Solomon and Bjork (2012), open access publishing is the process of a scholar making the content of their research available online to any one irrespective of location with the aid of helping to solve the access challenges posed by subscription charges of such articles. It is a revolutionary way of publishing your research articles in such way it will be accessible by other scholars around the globe facilitated by the possibility of the Internet (Laakso& Bjork, 2012). According to Joseph (2013), Open access publishing is the process in which knowledge is freely shared and freely used, making it possible for scientific discovery and other academic discoveries to be accelerated for the benefit of all irrespective of location.

The Budapest Open Access Initiative (BOAI) identified two parallel and complementary strategies for open access (Prosser 2013). They include open access journals and self-archiving. The open access journals are scholarly journals that are available online to the reader without financial, legal or technical barriers other than those inseparable from gaining access to the Internet itself. According to Swan (2017), self- archiving involves depositing a free copy of a digital document on the World Wide Web in order to provide open access to it. Self-arching is outside the scope of this study. The extent to which an individual adopts the open access scholarly publishing depends on performance expectancy of the individual and also their effort expectancy

Performance expectancy according to Venkatesh et al. (2003) refers to the extent or degree to which an individual believes that the system will help him/her to attain gains in job performance. Performance expectancy simply means perceived usefulness and is recognized to be a fundamental attribute in influencing individual's attitude or perception towards using any system (Chau et al. 2003).

Effort expectancy refers to 'the degree of ease associated with the use of the system. It can be defined as the extent to which users believe that using new innovative technology is free of effort (Venkatesh, cited in Kasseet al.2015). When users assume that a technological system is user-friendly, it will motivate behavioral intention and adoption attitude. Effort expectancy for this study is defined as the degree to which a person believes that using open access publishing would help achieve a set target. Most users prefer user-friendly technology that is flexible, and ease to use.

Louho, Kallioja and Oittinen (2016) found that performance expectancy had a significant influence on behavioural intention. It suffices to say that a user will only use a system due to the conviction that the system can provide answers to his/her queries. Therefore, performance expectancy may represent a critical factor in enhancing or hindering the use of any system. Similarly Giesing (2003) is of the view that effort expectancy is a factor that is highly significant in influencing the intention to use. In this regard, lecturer's adoption of open access scholarly publishing can be influenced by its perceived usefulness and ease of use among the lecturers. The usefulness may make them to put more efforts.

However it is not certain if any correlation exist between lecturer's performance expectancy; effort expectancy 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:

Lecturers' performance expectancy and their adoption of open access scholarly publishing in state universities in South-East, Nigeria.

Lecturers' effort expectancy and their adoption of open access scholarly publishing in state universities in South-East, Nigeria.

Theoretical Framework

Performance expectancy is a construct that has received a great deal of attention from several authors and researchers from different fields of human endeavours (Derntl, 2011;Khayati&Zouaoui, 2013). Some of these studies as pointed out by Rogers (2013) attempted to identify and use the construct to explain information system adoption and use. Venkatesh as cited by Kasse, Moya, and Annette (2015) defined Performance expectancy (PE) as the degree to which an individual believes that using a system will help him or her to attain gains in job performance. Performance expectancy concerns the degree to which a person believes that using OA publishing would improve his or her performance.

Similarly, Khayati and Zouaoui (2013) noted that performance expectancy (PE) is same as the perceived usefulness (PU) and viewed the concept as the gain in performance that an individual believes he can win when using a technology. Performance expectancy had also been reported as influencing factors towards information system adoption and use. Research has empirically demonstrated the influence of Performance expectancy on attitude towards the use of systems in different contexts. For instance, research reveals that performance expectancy directly motivates adoption behaviours among users (Zhou, Lu, & Wang, 2010).

According to Venkatesh et al.'s (2003) studies, Performance expectancy is found to uniquely, significantly and positively influence one's behavioral intension to accept and use an IT system. This is why performance expectancy is a crucial factor that could influence or hinder the use of open access scholarly publishing. Furthermore, Dulle (2010) established that performance expectancy relates to how well scholars believe that open access will help them in accessing and disseminating scholarly content.

Performance expectancy has implication for the use of open access scholarly publishing among lecturers. This is simply because the way lecturers perceive open access scholarly publishing to be useful in provision of current and timely research results in enhancing their research productivity and impact will influence their use of the system. However, if the lecturers perceive that open access scholarly publishing may not enhance their job performance, they may

decline the use of the system. Therefore, performance expectancy may represent a critical factor in enhancing or hindering the adoption of open access scholarly publishing among lecturers. In this study performance expectancy concerns the degree to which a person believes that using OA publishing would improve his or her performance.

Venkatesh et al. (2003) is of the opinion that effort expectancy refers to the effort an individual needs to use a system, whether it is simple or complicated. Effort expectancy, according to Wills, El-Gayar and Benett (2018) had been a strong predictor of behavioural intention. However, Jong and Wang (2009) found that effort expectancy was insignificant as far as intention was concerned. Lwoga and Questier (2014) found effort expectancy to be negatively associated with faculty's behavioural intention on open access usage. Their findings imply that faculty who perceived that it would be difficult for them to use open access system were less likely to adopt open access than those who felt the contrary. The study findings are however contrary to the results of other studies which showed that effort expectancy factor had positive relationship with the behavioural intention to adopt open access (Dulle and Minishi-Majanja, 2011). In a part, this indicates that scholars' interest to publish in open access avenues is acknowledged to be motivated by the scholar's ability to use open access system.

Literature Review

Anuradha, Gopakumar, and Baradol (2011) examined researchers' performance expectancy and availability of free open access resources via the internet. The analysis revealed that the Internet was the most preferred source of information by the academic community. Results also revealed unawareness of the freely available resources. The study pointed out that the librarians ought to play a role in imparting awareness and developing skills through information literacy sessions. As a collaborative support of academic staff, library staff needs to initiate appropriate user education programs to sensitize academic staff researchers on the existence of OA resources. It was necessary to establish the sources of information for academic staff.

Emojorho, Ivwighregweta and Onoriode (2012) studied open access scholarly publishing performance expectancy among members of the teaching fraternity drawn from the University of Benin in Edo State, Nigeria. Their study found that the respondents were aware of open access scholarly publication. Most of the respondents learnt about Open Access from their colleagues. The respondents cited increased impact and free online access were some of the advantages of open access while unavailability of internet facilities were some of the constraints reported. The authors suggested that the university library needed to intensify its efforts in the creation of awareness of both open access journals and institutional repository.

Stanton and Liew (2012) examined doctoral students' performance expectancy and attitudes to open access forms of publishing. A sequential exploratory design was used. These researchers

found that performance expectancy regarding open access and repository archiving was high and positively related to open access scholarly publishing. Only two of the eight interview participants could describe the concept of open access. Reported also was the fact that deeper knowledge of IRs was lacking among the respondents. While respondent lacked in-depth knowledge of IRs, they still preferred a voluntary system of self- archiving their work in an institutional repository as opposed to the compulsory system. This involves knowledge about various protocols, file formats, security measures, meta-data as well as preservation strategies. In order to improve on academics' self-archiving, there is need for knowledge of the above mentioned issues. That calls for extra support from specialized librarians.

Akanni and Adetimirin (2017) reported that the lecturers linked their use of open access resources to high level of performance expectancy. If they realize that these resources are very useful to them, they will use them more frequently. The study revealed that there was positive significant relationship between performance expectancy and use of open access resources by lecturers. This is because the benefits that lecturers hope to derive from the use of open access resources will motivate them to use them for academic activity. The lecturers will not want to waste their time on any activity that will not add value to the academic activities.

Darvish (2014) investigated faculty members' performance expectancy regarding open access at Çankaya University, Turkey. The purpose of the study was to investigate lecturers' performance expectancy regarding open access in universities. The study found that performance expectancy significantly related to lecturers' use of open access scholarly publishing in Cankaya University, Turkey.

Liebenberg, Chetty and Prinsloo (2012) investigated students' effort expectancy access to technology and their capabilities in using technology. The purpose of the study was to explore variations in the digital divide in the specific context of the University of South Africa (UNISA) a university with over 350,000 students. Specifically, the intention of the study was to investigate student access to and effective utilization of ICTs and specifically used mobile applications. From the survey, majority of online students used the Internet (57%) from home and (51%) at work. It was observed that more students had private access to the Internet from home. The study further revealed low relationship between effort expectancy and students' use of open access publishing.

In like manners, Ozoemelem and Bozimo (2012) examined effort expectancy and use of open access scholarly publications in the university. The purpose of the study was to determine effort expectancy of university lecturers with regards to open access and scholarly publishing. The population of the study comprised Library and Information Science (LIS) lecturers in (14) universities in southern Nigeria. The study revealed a relationship between effort expectancy and usage of open access publications among the participants.

Lwoga and Questier (2014) investigated the factors that influence effort expectancy and use of OA amongst staff in health sciences in Tanzanian universities. The main purpose of the study was to investigate the factors that influence effort expectancy and use of open access among university lecturers. They found that some of the factors influencing adoption include professional recognition, professional rank, and number of publications, attitude, academic reward and accessibility. They also found that one of the greatest fears that were observed by the researchers was one relating to copyright infringement. While this study focused in the health sciences sector alone the current work used a cross-section of academic staff.

However based on the literature reviewed, it was observed that various studies have been conducted on factors affecting adoption of open access publishing but no study on relationships of the variables in this study and adoption of open access scholarly publishing has been carried out in state universities in South-East, Nigeria.

Research Question & Hypothesis

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

What is the relationship between effort expectancy of lecturers and their adoption of open access scholarly publishing in state universities in South-East Nigeria?

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

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

RESEARCH METHOD

This study is a correlational study conducted in South-East of Nigeria. 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. The sample of the study was 834 respondents made up of 385 lecturers sampled in Faculties of Education and 449 lecturers sampled in Faculties 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. A researcher-developed instrument titled "Open Access Scholarly Publishing Questionnaire" (OASPQ) was used for data collection. 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 to answer the research questions while t-test was used to test the hypotheses at 0.05 level of significance. The decision rule is that wherever p-value is greater than or equal to the significant value of 0.05, the null

hypothesis is not rejected. On the other hand, a null hypothesis is rejected wherever the p-value is less than significant value and this means that the null hypothesis is significant.

PRESENTATION AND DISCUSSION OF RESULTS

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

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

Table1: Research Question & Hypothesis Analyses for Relationship between Lecturers' Performance Expectancy Scores and Their Adoption of Open Access Scholarly Publishing Scores

N	r	T	P- value	Remarks
834	0.83	0.112	0.101	S.(High and positive relationship)

* P< 0.05 & Significant; Hypo. Rejected

Results in Table 1 show that the scores ($r=0.83$) of lecturers on their performance expectancy 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 performance expectancy of lecturers' and their adoption of open access scholarly publishing in state universities in South-East Nigeria.

The results in Table 1 further indicate t value of .0112 and a P-value of 0.101. These results suggest that there is significant relationship between lecturers' performance expectancy 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' performance expectancy and their adoption of open access scholarly publishing in state universities in South-East, Nigeria.

Generally, the results in Table 4 indicate high, positive and significant relationship between lecturers' performance expectancy and their adoption of open access scholarly

publishing in state universities in South-East Nigeria. Since performance expectancy is the degree to which the lecturers believe that using open access publishing would improve their performance, it could be interpreted here that if lecturers' highly perceive open access scholarly publishing to be useful to them and enhance their job performance, then there is very tendency that they will publish more and if their perception is low then they are likely to publish less through open access.

The findings of this study agree with Stanton and Liew (2012) who found that performance expectancy was high and positively related to open access scholarly publishing. In the same manner, Akanni and Adetimirin (2017) found that performance expectancy significantly related to lecturers' use of open access resources in University of Ibadan.

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

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

Table 2: Research Question & Hypothesis Analyses of Relationship between Lecturers' Effort Expectancy Scores and Their Adoption of Open Access Scholarly Publishing Scores

N	r	T	P- value	Remarks
834	0.85	0.299	0.210	S.(High and positive relationship)

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

Results in Table 2 show the scores (r=0.85) of the lecturers on their effort expectancy of adoption of open access scholarly publishing is high and positive because r is almost 1 which means high and positive coefficient. The result indicates that there is a high and positive relationship between effort expectancy of lecturers and their adoption of open access scholarly publishing in state universities in South-East Nigeria.

Furthermore, the results in Table 2 indicate the t value of 0.299 and P-value of 0.210. These results indicate that there is significant relationship between lecturers' effort expectancy 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 significant relationship between lecturers' effort expectancy and their adoption of open access scholarly publishing in state universities in South-East, Nigeria.

The analyses of research question two and hypothesis two indicate high, positive and significant relationship between effort expectancy of lecturers and their adoption of open access scholarly publishing in state universities in South-East Nigeria. The high, positive and significant relationship between effort expectancy of lecturers and their adoption of open access scholarly publishing indicate that if the lecturers' have high effort expectancy then they are likely to publish more with ease but when it is low they are likely to publish less.

The findings of the study are in agreement with Ozoemelem and Bozimo (2012) who also found high and positive relationship between effort expectancy and usage of open access publications among the participants. However, the findings disagree with Liebenberg, Chetty and Prinsloo (2012) who found low relationship between effort expectancy and students' use of open access publications. Thus, within 9 years, some changes could have occurred. Again, the choice of students as respondents by Liebenberg, Chetty and Prinsloo could also have led to the difference in the findings.

Conclusion

The conclusion of the study is that there is high and positive relationship between performance expectancy of lecturers and their adoption of open access scholarly publishing in state universities in South-East, Nigeria. Also there is high and positive relationship between effort expectancy of lecturers and their adoption of open access scholarly publishing in state universities in South-East, Nigeria.

Recommendations

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

1. Since there is high, positive and significant relationship between performance expectancy of lecturers and their adoption of open access scholarly publishing, management of the universities should reward the lecturers' performance through grants to enable them engage more in open access scholarly publishing.
2. The various state universities should equip their libraries and update the digital sections in order to enhance lecturers' effort expectancy and adoption of open access scholarly publishing in the state universities.

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