

Influence of E-Library Usage on Agricultural Lecturers in Tertiary Institution in Anambra State, Nigeria

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Abstract

The study investigated the influence of e-library usage among agricultural lecturers in tertiary institution in Anambra State, Nigeria. The specific objectives were to ascertain the perceived benefits of e-library among agricultural lecturers in the State, examine the categories of lecturers who used e-library, determine the socio-economic and institutional factors that influence the use of e-library and identify the constraints working against e-library usage among lecturers. A multistage random sampling was used to select 120 lecturers. Structured questionnaire was used for data collection. Descriptive statistics and regression model were used for data analysis. The results show that majority (60.0%) of the respondents were male, while 40.0% were female. The mean age of the lecturers was 44 years. Similarly, 54.2% of the lecturers sourced research materials from Google, while 29.2% sourced research material from library. The average mean year of teaching experience was 25 years. Out of 18 variables investigated, only seven (7) variables were found to be statistically significant with respect to the factors influencing e-library usage among agricultural lecturers in Anambra state. They were training received ($p < 0.000$), access to laptop computer ($p < 0.003$), income ($p < 0.001$), perceived constraints ($p < 0.000$), power outage ($p < 0.004$), access to internet ($p < 0.001$) and marginal utility ($p < 0.002$). Majority (48.3%) of Lecturer I used e-library while 13.3% of the senior lecturers used e-library for research. Frequent publication (3.25), promoting efficiency in disseminating research (3.10), derived satisfaction from internet (3.05), updating lecturers (2.58), giving multimedia contacts (2.48), giving information related to fields of studies (2.20) and giving a good background of the study were seen by the lecturers as the benefits derived from the use of e-resources. The major constraints militating against e-library usage were download delay (3.50), high cost of internet materials (3.43), inaccessibility of some website/networks (3.35), power outage (2.85), lack of innovative experience (2.65), insufficient and high cost of training (2.49), family distraction (2.32) and lack of ICT skills (2.15). This study recommended that power supply should be improved upon, internet providers should improve their network services and cost of accessing electronic information resources should also be subsidized to a minimum so as to make them affordable. Staff training and re-training should be built into staff development program.

Keywords: E-Library Usage; Influence and Agricultural Lecturer

Introduction

Internet since the last couple of the years has become a major source for study, research and development. It has a vast network of computers that connect many of the world's business, institutions and individual. Internet has become a hot issue in the field of library

and information studies. It has an efficient tool for finding latest news, research work and exchange of ideas. Therefore, the use of internet has revolutionized the way and the manner the global community sourced and used information [1].

In the past, academic libraries were totally dominated by physical parameters. Library users' sourced information by going to the library, walked around the library and searched for their information, or asked a librarian for help. When got material, they read or took the hard copy information out of the library. This model supported a wide variety of users from many different disciplines. However, with the advent of library technology those physical boundaries have gradually changed. The searching was done via microfiche or CDROMs then information was either photocopied or read in the library online (e.g. via CDROMs or Library IP based computers). With the introduction of web-accessible digital libraries and remote authentication (e.g. Athens password), users' physical interaction with the library was partly changed [2]. Thus libraries are using technology to improve, strengthen and speed up access to research information both digitally and locally transformed.

According to Arms W [3], today's use of libraries are hybrid in nature, that is a combination of traditional and modern libraries. The term modern libraries encompass three concepts [4]; Electronic, Digital and Virtual Libraries. An electronic library is a library consisting of electronic materials and services. Electronic materials can include all digital materials, as well as a variety of analog formats that require electricity to use. A digital library is a library consisting of digital materials and services. Digital materials are items that are stored, processed and transferred via digital (binary) devices and networks. Digital services are services (such as reference assistance) that are delivered digitally over computer networks. These are the libraries "with walls as well as without walls"; it depends upon the way the users access it. Both digital and electronic libraries can be virtual libraries if they exist only virtually, that is, the library does not exist "in real life." These are libraries "without walls" and also known as web based libraries. An informal definition of a digital library is a managed collection of information, with associated services, where the information is stored in digital formats and accessible over a network".

The term "e-library" [5] refers to information accessed through the Internet. Unlike traditional libraries, e-libraries are not limited by location or time. Libraries have changed with the emergence and application of IT. They have assumed the role of educators, teaching users to find, evaluate, and use information both in the library and over electronic networks. As the use of e-library continues to soar, users are expected to develop information literacy skills. These skills, as Julien [6] observed, will enable users to make efficient and effective use of information sources.

Digital libraries (DLs) have the potential to transform educational process, with remote access to specialized information in a format that is easily updated and speedy searching as well as access facilities. However, the invisible presence of these resources, their poor usability and user support has made their impact less dramatic [2,7]. A key element in the successful design and implementation of digital libraries has, in the past, been identified as their social context [8,9]. The social contexts of organizational systems can have important impacts on the community involvement in resulting technology systems (Kling 1999).

In as much as academic institutions progressed towards the 21st century, student's number increases, distance learning, changes in copyright licensing and lack of funding means that they have to look more closely at the use of electronic resources in order to meet these challenges. The "wired campus" and "virtual university" mean more users looking for electronic resources and increased pressure on libraries to provide these services [10]. As matter of this, Libraries have witnessed a great metamorphosis in recent years both in their collection development and in their service structures. Thus Libraries are using technology to improve the management of scholarly information to strengthen and speed access to scholarly information not held locally. Over the last several years, a significant transformation has been noticed in collection development policies and practices. Print medium is increasingly giving way to the electronic form of materials [11]. Ani [12] states that "the transition from print to electronic medium apart from resulting in a growth of electronic information, has provided users with new tools and applications for information seeking and retrieval. Electronic resources are invaluable research tools that complement the print-based resources in a traditional library setting. Writing on the advantages of electronic resources, Dadzie

[13] writes that electronic resources are invaluable research tools that complement the print – based resources in a traditional library setting. Their advantages, according to her include: access to information that might be restricted to the user due to geographical location or finances, access to more current information, and provision of extensive links to additional resources related contents. This rapid emergence and development of electronic information technologies therefore makes it possible to envision radically different ways of organizing the collections and services the library has traditionally provided. While libraries approach a crisis point in financing collection development, these new technologies offer possible ways to mitigate costs and revolutionize ways to access information.

Sequel to these, she of the view that electronic resources are invaluable research tools that complement the print-based resources in a traditional library, thus, supporting the argument that users preferred different kinds of database depending on their needs. Navjyoti (2007) also finds that speedy publication and availability on the desktop are the key advantages that attract research scholars, in order words electronic resources provide the platform for that.

Ray and Day [14] opined that using electronic resources saved time, and it's relatively easy to use. But users sometimes face numerous problems while browsing electronic information, such as lack of knowledge about the resources, lack of trained staff and inadequate terminals which means creating awareness must be critical in all institutions and supported the findings in this present study (Ali 2005).

According to Madhusudhan [15] studies carried out on the use of electronic resources by teachers, students and research scholars of universities and research institutions indicated that seventy-eight percent (78%) of the respondents feel that the use of the Info net e-journals has created high dependency value on their research work and need current article alert services and electronic document supply services. This contradicted the revelation from the present study, Ajuwon., *et al.* [16] who found that 57% of students sampled could not use a computer, that the use of the database was poor, due to lack of awareness, lack of access to computers, insufficient training and the high cost of provision. Hence this meant that there is the urgent need to employ intensive awareness methods because is not far from the findings of the current study. Despite the advantages of E-library for nation building, other problem observed by researchers were, download delay, failure to find information, lack of search skills, high cost of access, power outages, unavailability of some websites, inaccessibility of some websites and difficulties in navigating through e-resources.

In the light of this, this study therefore, seeks to investigate the perceived effects of e-library on agricultural lecturers in Anambra State, Nigeria. The specific objectives were to; ascertain the perceived benefits of e-library on agricultural lectures in the State, determine the categories of lecturers who used e-library, determine the socio-economic and institutional factors that influence the use of e-library and identify the constraints working against e-library usage among lecturers.

Materials and Methods

The study was conducted in Anambra state. The State is presently located in the South-East of Nigeria. It is bounded by Delta State to the West, Imo State to the South, Enugu State to the East and Kogi State to the North. It has estimated population of 4,177,828 million people (National Population Commission, 2006) which stretches over about 60 kilometers between surrounding community. The State lies on the longitude 6° 35E and 7° 21E and latitude of 5.38N and 6° 47E (Wikipedia.org/Wiki Anambra State, 2010). Anambra State comprises 21 local governments and is predominantly occupied by Igbo people who are farmers and business oriented. Six tertiary institutions in the State were selected due to the availability of agricultural departments in the institutions. Nwafororaizu collage of education Nsugbe, Chukwuemeka Odumegwu Ojukwu University, Anambra State Polytechnic Ngbakwu, Federal Polytechnic Oko, Nnamdi Azikiwe University Awka and National Open University Abagana were used for the study. However, 20 lecturers were selected from each school using simple random techniques and this gave a total sample size of 120 lecturers. Structured questionnaires were used for data collection. Frequency, percentage, mean scores and regression model were used for data analysis.

Measurement of variable

To ascertain the determinants of the socio-economic and institutional factors that influence the use of e-library in the study area, regression model was used.

$$Y = a + b_{1x_1} + b_{2x_2} + b_{3x_3} + b_{4x_4} + \dots + b_{18x_{18}} + u$$

Model specification

Y = e-library usage

a = constants term

b_1 - b_{18} = regression co-efficient

X_1 = Age (measured in years)

X_2 = Sex (dummy variable, male = 1, female = 2)

X_3 = Education level (measured by years spent in school)

X_4 = Household size (measured by the number of people living under one roof)

X_5 = Member of social organization (member = 1, non-member = 2)

X_6 = Marital status (1 = married, 2 = not married)

X_7 = Teaching experience (measured in years)

X_8 = Training received (Received training = 1, non-training = 2)

X_9 = Access to library (dummy variable for access = 1, no access = 0)

X_{10} = Income of the lecturers (measured in Naira)

X_{11} = Access to laptop computer (access to laptop service = 1, No access = 0)

X_{12} = Access to credit (access = 1, No access = 0)

X_{13} = Perceived constraints (very serious = 3, serious = 2, no serious = 1)

X_{14} = Power outage

X_{15} = Slow download

X_{16} = Access to internet (access = 1, No access = 0)

X_{17} = Marginal utility (measured by satisfaction derived from internet usage)

X_{18} = Technical know-how

u = Error term

Results and Discussion

Entries in table 1 show that 60% of the respondents were male while 40% were female. This implies that male dominated female population in terms of lecturing field. The reasons could be attributed that females are far much better carried out by domestic activities than their male counterpart and this also could hinder them from furthering education to become lecturers. This finding is in consonance with Okon, Partrick and Bosire [17] who found males predominantly participated in the lecturing job. The mean age of the lecturers was 44 years, this implies that young people with enough strength dominate the field of lecturing professions in the study area. Majority (37.5%) of the respondents were married while about 25% of the respondents were single. The average mean household size of the respondents was 7 persons. Greater percentage (50%) of the respondents completed M.Sc while 26.7% of them completed first degree. Similarly, 54.2% of the lecturers sourced research materials from Google while 29.2% of them sourced research material from library respectively. The average mean year of teaching experience was 25years. This implies that the respondent had a long teaching experience and this will increase their knowledge and experience on lecturing fields.

Variables	Frequency	Percentage
Age		
21 - 30	23	19.2
31 - 40	12	10.0 44 years
41 - 50	55	45.8
51 - 60	20	16.7
61 - 70	10	8.3
Gender		
Male	72	60.0
Female	48	40.0
Marital Status		
Married	45	37.5
Single	30	25.0
Divorced/separated	25	20.8
Widowed	20	16.7
Household size		
1 - 5	57	47.5
6 - 10	39	32.5 7 persons
11 - 15	24	20.0
Education Level		
First degree	32	26.7
HND	15	12.5
M.Sc	60	50.0
Ph.D	13	10.8
Social organization		
Yes	90	75.0
No	30	25.0
Access to credit		
Yes	85	70.8
No	35	29.2
Source of research material		
Library	35	29.2
Google	65	54.2
textbook	11	9.2
Face book	9	7.5
Teaching Experience		
1 - 10	30	25.0
11 - 20	11	9.2
21 - 30	25	20.8 25 years
31 - 40	50	41.7
41 - 50	2	1.7
51 - 60	2	1.7

Table 1: Distribution of lecturers according to socio-economic characteristics.

Source: field survey 2018.

The result of regression analysis in table 2 indicates that out of 18 variables investigated, only seven (7) variables were found to be statistically significant with respect to the factors influencing e-library usage among agricultural lecturers in Anambra state. They were; training received ($p < 0.000$), access to laptop computer ($p < 0.003$), income ($p < 0.001$), perceived constraints ($p < 0.000$), power outage ($p < 0.004$), access to internet ($p < 0.001$) and marginal utility ($p < 0.002$). These variables were able to explain 68% variation of the factors influencing e-library usage among lecturers. Adjusted R^2 also supported the claim with a value 0.645 or 65%. This implies that the independent variables explain the behaviour of the dependent variable at 65% of confidence.

Variable	Unstandardized coefficient			Standardized coefficients	
	B	Standard error	Beta	T	Significance
Constant	1.567	0.772	-	3.658	0.004
Age	0.006	0.014	0.024	0.380	0.876
Sex	0.054	0.036	0.138	0.573	0.107
Education level	0.207	0.085	0.175	2.569	0.618
Members of social org.	0.370	0.254	0.114	1.352	0.587
Teaching experience	0.054	0.035	0.137	0.563	0.107
Training received	1.536	0.407	0.463	3.809	0.000
Access to library	0.372	0.254	0.115	1.352	0.678
Income	1.275	0.155	0.724	8.827	0.001
Access to laptop	1.766	0.435	0.375	4.050	0.003
Access to credit	0.817	0.0341	0.223	2.341	0.74
Perceived constraints	1.637	0.407	0.453	3.976	0.000
Power outage	1.633	0.407	0.545	3.988	0.004
Slow download	0.047	0.267	0.012	0.175	0.816
Marginal utility	1.635	0.507	0.554	4.987	0.002
Technical know-how	0.055	0.034	0.137	0.564	0.107
Marital status	0.208	0.085	0.184	2.549	0.618
Household size	0.818	0.0341	0.223	2.332	0.074

Table 2: Regression model for socio-economic factors of E-library among lecturers in Anambra state.
 Source: Field Survey 2018; $R = 0.783$, $R^2 = 0.678$, Adjusted $R^2 = 0.645$.

Training received. This is one of the factors that influenced e-library usage in the study area. It has a positive sign which implies that once a lecturer receives training on e-library he/she will be able to make use of the resource thereafter. Therefore, those who attained training on ICT tend to adopt e-library resource more easily than those who have not. This agrees with Emenike, Obiorah and Chibuzor [18] who saw training as a factor influencing e-resources usage. Income: There is a positive correlation between income and factors influencing e-resources usage among lecturers. This implies that people who have more income tend to buy e-resource material to support their research work than those who have not. High income from lecturers is important for an increase in the overall adoption of e-library among lecturers in the study area. Hence, people tend to engage in active research using internet once they have the resource to buy material for the research. Access to laptop computer: This is another variable that positively related to the factors influencing e-library usage in the study area. People who have access to laptop computer also have more access to internet usage than those who have not and this could make them source information online at any moment in time as far as network remains available. Power outage: This has a negative

value which implies that the relationship between the dependent variable and independent variables are not directly proportional. This means that people tend to use internet more readily when there is power supply than when there is power outage. Therefore, availability of power supply tends to increase e-library usage among lecturers. Marginal utility: This also has a positive sign which implies that the satisfaction derived from using internet/e-library is directly proportional to the factors influencing e-resources usage. Therefore, the higher the satisfaction derived from using e-library by the lecturers, the more adoption of it. Constraints: This is another factor that decides the influence of e-library usage among lecturers in the study area. The negative sign of the factor implies that people tend to avoid pains and seek pleasure. Therefore the amount of constraints perceived during the application of e-library could as well constrain lecturers from using internet. Hence, negative sign indicates that the higher constraints perceived, the more decline among internet users in the study area provided that all things being equal. The study is in line with Olasore and Adekunmis [19] who reported that awareness and familiarity with e-library usage, poor power supply, slow download and lack of computer system were the factors influencing the use of e-library in their study.

Figures in table 3 show that majority (48.3%) of lecturer I used e- resources while 13.3% of the senior lecturers used e-library. Similarly, 10.8% and 10% of lecturer II and professors used e-r-library. However, 8.3% and 9.2% of associate professors and assistance lecturers used e-resources respectively. The high degree usage of e-resources among lecturer I staff could be attributed to the facts that they are jostling to attain the rank of senior lecturers that will in subsequent time qualify them to the rank of associate professors and professorship there in. This finding disagreed with the findings of Nwaogu and Goodluck [10] which stated that assistant lecturers used e-resources more frequently than the other lecturers.

Categories	Frequency	Percentage
Assistant Lecturer	11	9.2
Lecturer II	13	10.8
Lecturer I	58	48.3
Senior lecturers	16	13.3
Associate Professors	10	8.3
Professors	12	10.0

Table 3: Categories of lecturers who used e-resources.
Source: Field Survey 2018.

Figures in table 4 also indicate the benefits of e-library usage among lecturers in the study area. Frequent publication with a weighted mean score (3.25), promoting efficiency in disseminating research with a weighted mean score (3.10), derived satisfaction from internet (3.05), updating lecturers (2.58), giving multimedia contacts (2.48), giving information related to fields of studies (2.20) and giving a good background of the study were seen by the lecturers as the benefits derived from the usage of e-resources in the state. These findings are in line with Emenike, Obiorah, and Chibuzor [18] in Olasore and Adekunmis, [19] who saw these factors as the benefits derived from using e-resources among the perspective users.

Table 5 shows the different levels of constraints militating against e-library usage among agricultural lecturer in Anambra State. The constraints were download delay (3.50), high cost of internet materials (3.43), in accessibility of some website/networks (3.35), power outage (2.85), lack of innovative experience (2.65), insufficient and high cost of training (2.49), family distraction (2.32) and lack of ICT skills (2.15).

Download delay was seen as the major factory working against online resource usage among lecturers in the State, because of this, it was ranked first as one of the first major constraints working against e-library usage among lecturers. High cost of internet materials, in

Variables	Mean
Frequent publications	3.22
promoting efficiency in disseminating research work	3.10
Derived satisfaction from internet	3.05
Keeping lecturers up to date	2.58
Giving multimedia contacts	2.48
Collection of information related to fields	2.22
Helping in information interpretations	1.35
Giving a good background of the study	2.15
It could be easily edited	1.55
Giving an off-campus access	1.66
Indoctrinating knowledge for good literatures	1.60
delaying job performance	1.59
outshining the use of analog library	1.47
creating academic laziness among lecturers	1.35

Table 4: Perceived benefits of e-library among lecturers in the state.

Source: Field work, 2018; cut off point=2 and above.

Constraints	Mean
Download delay	3.50
High cost of internet materials	3.43
In accessibility of some websites/networks	3.35
Power shortage/outage	2.85
Lack of innovative experience	2.65
Insufficient training and high cost of training	2.49
Failure to find information on time	1.58
Levels of education	1.56
Lack of awareness	1.49
Family destruction	2.32
Lack of ICT skills among lecturers	2.15
Lack of time due to academic and job schedule	1.48
Irrelevant contents of electronic resources to academic needs	1.73
Inability to manipulate ICT grades by the potential users	1.69
Non availability of desired electronic sources within the institution	1.58

Table 5: Constraints to e-library usage among lectures in the state.

Source: Field survey, 2018; cut off point=2 and above.

accessibility of some website/networks and power outage were seen as constraints militating e-resource usage among users because high cost of internet material, power outage and inability to access some network could seriously cause impediments to the users, thereby creating levity attitude in terms of internet application as well as delay in time frame needed to deliver research work. On the other hand, lack of innovative experience, high cost of training and lack of ICT skills among lecturers could also constrain e-library usage in the study area; it could be so because high cost of training and lack of ICT knowledge can as well hesitate the adoption of e-library usage. However, an adopter cannot adopt an innovation which he/she does not have an experience on and this could also be seen as an impediment that is incompatible with his, or her life experience. In view of this, the study agrees with Nwabueze and Urhiewhu [20], Akporhonor and Akpojotor [21] who identified poor internet connectivity, download delay, inaccessibility of some websites, power outage, non availability of online data base and lack of trainings on internet skills as problems working against the use of e-library in their studies [22-25].

Conclusion and Recommendations

The study concludes that despite the comparativeness of electronic information resources in providing the academic need of agricultural lecturers in Anambra State, Nigeria. Certain impediments to the use of electronic resources were identified. Some of the impediments are download delay, high cost of internet materials, in accessibility of some website/networks, power outage, lack of innovative experience, insufficient and high cost of training, family distraction and lack of ICT skills. Therefore, if the identified impediment or challenges are not addressed there may be information gap and agricultural lecturers in the study area may suffer set back in relative to other lecturers outside the state. On the other hand, out of 18 variables investigated, only seven (7) variables were found to be statistically significant with respect to the factors influencing e-library usage among agricultural lecturers in Anambra state. They were training received, access to laptop computer, income, perceived constraints, power outage, access to internet and marginal utility. Based on the findings, the study recommended that power supply should be improved upon, internet providers should improve their network services, cost of accessing electronic information resources should be subsidize to a minimum so as to make them affordable. Staff training and re-training should be built into staff development program. This will ensure that the knowledge staff is constantly updated with relevant skills that are needed in teaching and learning activities. There is need for lecturers to upgrade themselves through involvement in private training program that will enhance their computer, internet and online usage skills, in order to be able to locate access and make more effective use of online resources for their academic and research activities.

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