

Electronic Resources Access and Usage for Scholarly Research Work by Postgraduate Students at Federal University of Agriculture, Abeokuta

Fredrick Olatunji Ajegbomogun Ph.D
Principal Librarian, Nimbe Adedipe Library, Federal University of Agriculture, Abeokuta, Nigeria
ajegbomofred@gmail.com

Olaronke O. Fagbola Ph.D
Librarian, Learning Resources / Library, National Open University of Nigeria, Lagos, Nigeria.
olaronke65@hotmail.com

Abstract

This study investigated the extent of electronic resource access and usage for scholarly research work by post graduate students at University of agriculture in Abeokuta. The thrust of this paper is to discuss the points of accessing, frequency of use, usefulness and strategies to improve students' use of electronic resources. The study adopted descriptive survey research design. The target populations for this study are postgraduate students of Federal University of Agriculture, Abeokuta, Ogun State. The participants sampled numbered 350 postgraduate students using stratified random sampling method. Out of 350 questionnaires distributed, a total of 210 were collected representing 60% return. Based on the analysis of the data, it was found that the postgraduate students use email as a means of communication while other electronic facilities that can aid their research works were not adequately used by them. Recommendations were made for improvement. Data collected were analysed using simple percentage, frequency counts and the mean.

Keywords: Electronic resources access, usage, scholarly research, University of Agriculture, Nigeria

Introduction

The proliferation of information globally has been a source of motivation for information users. It has radically changed the way we communicate with each other and the way we access information. Nwasuoke (2000) observed that the huge success recorded by man in the 21st century is attributed to man's enhanced ability to process and manage information with the ultimate goal of decision making. This has brought about the emergence of new ideas, innovations and new techniques in the communication world.

Upkebor (2011) stressed that electronic resources have been used to provide accurate and timely information especially for lecturers and students who depend greatly on electronic resources to boost teaching, research and collaborate with counterparts around the world for intellectual growth. An electronic superhighway is beginning to draw people closer globally as voice; video and data converge and create new innovations for digital multimedia and interactive communications technologies which intensify worldwide connectivity (Mukherjee-Das, 2009). Some recent articles indicate that electronic communication has facilitated scholarly interaction, by allowing people to talk informally through electronic mail, using electronic mailing lists, discussion groups and through the sponsorship of online conferences (Butler, 2007). Scholarly research, publishing and dissemination also provide local content for academic teaching and learning. To further establish the existing knowledge, the Internet, today, offers new tools for easy information dissemination.

Sukula (2008) asserted that the amount and variety of information content in electronic form is growing and at the rate it is expanding, some hope that all information can eventually be electronically accessed. This is also affirmed by Ajayi and Akinniyi (2009) who submit that the advantage posed by the Internet service ensured that explosion of information is not a waste because the technology has created easy access to vast information all over the world. E-resources have been contributing greatly to research activities and many researchers have commended the advantages of e-resources over other formats of information. According to Ekhihamenor (2003), researchers in the past relied on the print media as a source of information. Although the environment then encouraged scarcity and high costs of equipment, lack of reliable and accessible physical telecommunications infrastructure, encouraged low level productivity in developing countries. The proliferation of information in the global world (new environment) and exposure had modified users' attitude towards knowledge acquisition and information-seeking behaviour and subsequently provided high level research productivity. To ensure further development and quantitative research, there is a need to provide for individual an enabling working environment in which both teaching and research activities are encouraged and rewarded.

Any societal transformation has to be through large scale development and this greatly depends on knowledge creation, access to information and exchange of ideas globally. This calls for serious and urgent

provision of infrastructural facilities that will encourage accessibility and use of information sources in order to hasten the transformation of the Nigerian educational system from the traditional method of teaching, learning, and research, and develop it to those driven by the forces of highly networked information technology.

Within this context, this study, therefore, investigated electronic resources access and usage for scholarly research by postgraduate students in Federal Universities of Agriculture, Abeokuta.

Objective of the study

1. examine the points of access to electronic resources by postgraduate students in federal universities of agriculture in Abeokuta
2. investigate the frequency of use of electronic resources by postgraduate students in federal universities of agriculture in Abeokuta;
3. find out the usefulness of electronic resources for postgraduate students in federal universities of agriculture in Abeokuta; and
4. strategies for improving postgraduate students use of electronic resources in federal universities of agriculture in Abeokuta.

Literature review

The accelerating transition of information from paper to electronic media is making information resources available, easing accessibility and utilisation to an increasingly global audience and this is being accelerated through the discovery of Internet by millions of users all over the world. Electronic-based information contains e-books, e-journals, images, digital documents and database in various disciplines. Scholars believe that electronic communication facilities such as e-mail, discussion groups, e-mail, bulletin boards, chat groups and electronic conferencing, have opened up new channels of communication and accessibility to information. Liverpool (2002) is of the view that ICT has dominated education in developed world but its entry into the educational or work system in most developing world, especially Africa has been gradual. Nevertheless, ICT, particularly the electronic resources present an opportunity for those who can respond to the new paradigm and a threat to those who cannot.

Tenopir (2011) reported that faculty members at the University of Tennessee, Knoxville benefit maximally from e-resources available to them. Many were of the opinion that e-resources have made it considerably easier to locate academic materials they need for their work, serve as an essential research tool, time saving conveniences leading to increase in work quality by using e-resources. Sukula and Sukula (2010) opined that the change is basically of physical form where information content are increasingly being captured, processed, stored and disseminated in electronic format.

Banionytė and Vaškevičiene (2006) revealed that in 2001 only 40% of public libraries in Lithuania are able to offer computers connected to the Internet for their users while all academic libraries enjoyed Internet services. Likewise, due to several governmental and private initiatives in 2005, all Lithuanian public libraries with the exception of branches in villages, offer Internet services for their users. This improved the patronage and use of the library's electronic resources.

In Africa, Makondo and Katuu (2004) affirmed that as at 2000, the University of Zambia library had 29 CD-ROM database titles. The library was known as one of the first Southern African universities to have Internet connection in 1990. The CD-ROM databases like AGRIS, CAB Abstracts, MEDLINE, AGRICOLA, SILVER PLATTER and POPLINE are available in most of the libraries and information units in Malawi. Kiondo (1997) posited that the 1993 introduction of CD-ROM at the University of Dar es Salam (UDSM) library through grants from the Carnegie Corporation of New York led to the acquisition of two CD-ROM work stations, a laser printer and subscription to some CD-ROM databases. Also, Mutula (2000) averred that a South African subsidiary of a US-based company National Inquiry Service (NISC) makes the database available on CD-ROM. The service can be used by libraries in the region to publish their bibliographies on CD-ROM. Similarly, Chuene (2001) stated that 49 CD-ROM databases were acquired and the introduction of Internet in the late 1990s at the University of the North, South Africa, improved their work output.

In Nigeria for instance, Sani and Tihamiyu (2005) also reported the availability and use of OPACs in Federal University of Agriculture, Abeokuta, which enhanced academic research productivity. Idowu and Mabawonku (1999) reported that 76.9% of university libraries in Nigeria had CD-ROM databases for information retrieval. Anasi (2005) revealed that some of the universities like University of Ibadan, Ilorin, Jos, Lagos and Ahmadu Bello University, Zaria subscribed to Institute for Scientific Information (ISI) and Silver Platter Ebscohost for database CD-ROM. However, Igbeka and Okpala (2004) posited that since the 1995 introduction of CD-ROM literature search into the University of Ibadan library system, the population of users of the CD-ROM facility has been very small as against the number of registered library users. This attribute might be due to lack of current awareness to users or dissatisfaction of service to users.

Ojokoh (2005) revealed that Internet access was provided to the Federal University of Technology, Akure, through the university's cyber café. The study reported that none of the respondents used e-mail to communicate with lecturers. Oduwole (2005) also noted the increasing number of universities connected to the Internet but observed that the services were plagued with problems ranging from a limited number of work station, inadequate support services, and long queues of users, space problems and lack of proper management. Also, Staar (2001) was of the opinion that lack of fund to support the purchase of new technology, lack of training among established departments of the libraries remain as a bottleneck for technological advancement in higher institutions in Nigeria. However, some scholars opined that the existence of these problems has not in any way dampened the provision of the electronic resources by some universities in Nigeria. For example, the Federal University of Agriculture, Abeokuta news bulletin (2011) reported that the following electronic resources namely: HINARI, AGORA, ARDI, LAN-TEEAL, EBSCOHOST, E-GRANARY and DIGITAL LIBRARY were available for users in its library. There are also on-line journal resources such as, AGRICOLA, PORTAL TO THE WORLD, and MICROBS. INFO, AFRICAN JOURNALS ON-LINE, POPLINE, BIOMED CENTRAL and others acquired through the journals donation project. Information about the Micheal Okpara University of Agriculture, Umudike and University of Agriculture, Makurdi revealed that they also have similar databases and e- resources for their library users.

Oketunji (2009) implied that a broad range of technological equipment such as computers, mobile systems, MP3/MP4/WMA, storage devices, files transfer protocols, listserves, satellites, world wide web etc., are used for information exchange between people for different purposes. These devices are capable of communicating simultaneously to pass information, and the most used of these technological applications is the concept of multimedia, which is a learning process devices that include a combination of data manipulators e.g., CD ROMs, video, floppy disks etc. These facilitate interactive communication between individuals. The retrieval of electronic resources not only accelerate information disposition, but also reduces the bottleneck faced with the print option that were scarce. This is actually changing the way information is transferred, and ensures greater hope for better research productivity.

Research methodology

The study adopted descriptive survey research design. The target populations for this study are postgraduate students of Federal University of Agriculture, Abeokuta, Ogun State. The participants sampled numbered 350 postgraduate students from nine (9) colleges in the University of Agriculture, Abeokuta using stratified random sampling method. Out of 350 questionnaires distributed, a total of 210 were collected representing 60% return. Of these, 96 (45.7%) were males and 114 (54.3%) were females. A structured questionnaire consisting of two parts was used to gather relevant information. The first part consisted of items that measured personal and demographic variables. The second parts consisted of points of accessing electronic resources, frequency of use of electronic resources, usefulness of electronic resources and strategies for improving students' use of electronic resources. The participants' responses were structured on four-point Likert response scales ranging from strongly agree to strongly disagree. Data collected were analysed using simple percentage, frequency counts and the mean.

Result Analysis

The responses obtained are presented in table 1 through 5. The findings are discussed mainly on the basis of the set objectives of the study.

Table 1: Distribution of respondents by demographic characteristics

S/N	Variables	Frequency	Percentage
4	Age(years)		
	<= 20	41	19.5
	21-30	75	35.7
	31-40	63	30
	41-50	21	10
	> 50	10	4.7
	Total	210	100
5	Sex		
	Male	96	45.7
	Female	114	54.3
	Total	210	100

Field work: 20

Among the 210 users who responded to the survey, 54.3% were female and 45.7% were male. Table 1 clearly shows that 35.7% of respondents fall within the age bracket of twenty-one and thirty years of age. This group was followed successively by the following age groups: thirty-one to forty 30%, less than twenty years 19.5% while 4.7% fall within the age bracket of 50 years above.

Table 2: Points of accessing electronic resources

S/N	Items	VEA	EA	OA	NA	M	SD
1	Use of Global System of Mobile Telecommunication (GSM)	140 66.7%	28 13.3%	28 13.3%	14 6.6%	3.4	1.22
2	Cybercafé	35 16.7%	105 50%	56 26.7%	14 6.6%	2.89	0.57
3	ICT centre	49 23.3%	77 36.7%	70 33.3%	14 6.6%	2.77	0.45
4	My home	105 50%	7 3.3%	28 13.3%	70 33.3%	2.70	0.89
5	Library	28 13.3%	84 40%	63 30%	49 23.3%	2.57	0.40
6	Departmental office	14 6.6%	35 16.7%	70 33.3%	91 43.3%	2.13	0.10

Key: Very easily accessible (VEA), Easily accessible (EA), Occasionally accessible (OA) Not accessible (NA)

Respondents were asked to indicate the location from which they seek access to electronic resources. The finding revealed that 66.7% of the respondents agreed that electronic resources was very easily accessible through the use of Global System of Mobile Telecommunication (GSM) while 13.3% indicated easily accessible, 13.3% occasionally accessible and 6.6% of the respondents showed that they had no accessibility with mean and standard deviation scored rating of (\bar{X} =3.4, SD=1.22). This is followed by 13.6% of the respondents agreed that electronic resources were very easily accessible through cybercafé while 50% indicated easily accessible, 26.7% occasionally accessible and 6.6% did not had accessibility with a mean scored a rating of (\bar{X} =2.89, SD=0.89). The number of respondents who have access through the departmental office (\bar{X} =2.13, SD=0.10) was considerably smaller. The use of Global System of Mobile Telecommunication (GSM) and cybercafé ranked highest among the itemised responses. This could be attributed to individuals' greater access to mobile phone, an indication that users were attuned with the new technology.

Table 3: Frequency of use of electronic resources

S/N	Electronic Resources	6	5	4	3	2	1	0	M	SD
Communication										
1	E-mail	119 56.7%	42 20%	14 6.7%	7 3.3%	-	-	28 13.3%	4.77	1.25
2	E-mail discussion forums/List server	49 23.3%	35 16.6%	28 13.3%	7 3.3%	-	-	91 43.3%	2.87	0.54
Electronic Databases										
3	PORTAL TO THE WORLD	28 13.3%	42 20%	14 6.7%	-	14 6.7%	7 3.3%	105 50%	2.23	0.41
4	AGRICOLA/AGRIS/POPLINE	35 16.7%	14 6.7%	14 6.7%	14 6.7%	14 6.7%	14 6.7%	105 50%	2.00	0.33
5	MICROBS	21 10%	14 6.7%	28 13.3%	7 3.3%	-	21 10%	119 56.7%	1.67	0.25
Internet Portals/Gateways/Repositories										
6	Online full-text journal articles	35 16.7%	56 26.7%	35 16.7%	28 13.3%	-	21 10%	35 16.7%	3.50	0.52
7	Directory of Open Access Journals (DOAJ)	28 13.3%	42 20%	28 13.3%	28 13.3%	-	7 3.3%	77 36.7%	2.77	0.41
8	Electronic-books	28 13.3%	42 20%	35 16.7%	7 3.3%	-	28 13.3%	70 33.3%	2.70	0.42
9	AGORA/HINARI/EBSCOHOST	35 16.6%	14 6.7%	28 13.3%	21 10%	-	14 6.3%	98 46.7%	2.00	0.33
Information Websites										
10	Journal Websites	35 16.7%	49 23.3%	42 20%	28 13.3%	7 3.3%	7 3.3%	42 20%	3.47	0.50
11	Conference proceedings/Meetings/Notices	28 13.3%	42 20%	42 20%	21 10%	-	21 10%	56 26.7%	3.00	0.43

Daily (6), Weekly (5), Monthly (4), Quarterly (3), Bi-annually (2), Annually (1), Never (0)

Respondents were asked how frequently they used electronic resources. Options were daily, weekly, monthly, quarterly, bi-annually, annually, never. The frequency of use of electronic resources by postgraduate students is shown in Table 3 E-mail ($\bar{X} = 5.40$, $SD = 0.91$) is a major electronic resource used daily for communication by the respondents. The electronic databases: PORTER TO THE WORLD ($\bar{X} = 2.23$, $SD = 0.41$), AGRICOLA, AGRIS, POPLINE ($\bar{X} = 2.00$, $SD = 0.33$), MICROBS ($\bar{X} = 1.67$, $SD = 0.25$) were not regularly used by the respondents. The result also showed that Internet portals, gateways and repositories were the least patronized database by the respondents. These are: online full text journal articles ($\bar{X} = 3.50$, $SD = 0.52$) and Directory of Open Access Journals ($\bar{X} = 3.12$, $SD = 1.29$) only used weekly. The Electronic books ($\bar{X} = 2.70$, $SD = 0.42$), AGORA/TEEAL, EBSCOHOST ($\bar{X} = 2.00$, $SD = 0.33$) were also not used by the respondents. The journal website was used weekly ($\bar{X} = 3.47$, $SD = 0.50$) and lastly conferences proceedings/meetings/notices was never used ($\bar{X} = 3.00$, $SD = 0.43$). From the above analysis one can affirm that postgraduate students within the University of Agriculture in Abeokuta are not faring well with the use of electronic resources.

Table 4: Usefulness of electronic resources

S/N	Electronic resources	SA	A	D	SD	M	SD
1	I use electronic resources for my research	168 80%	21 10%	14 6.7%	7 3.3%	3.8	1.59
2	Access to electronic resources enables me to accomplish tasks more quickly	168 80%	42 20%	-	-	3.8	1.53
3	It helps to enhances the quality of my works	161 76.6%	35 16.7%	14 6.7%	-	3.7	1.44
4	It makes it easier to do my work	154 73.3%	56 26.7%	-	-	3.7	1.39
5	It enhances my personal knowledge	147 70%	56 26.7%	7 3.3%	-	3.7	1.31
6	I use it for extensive literature survey	119 56.7%	77 36.7%	14 6.7%	-	3.5	1.05
7	I communicate with other colleagues both locally and internationally through e-mail or discussion groups	98 46.7%	56 26.7%	35 16.7%	21 10%	3.1	0.78

Key: Strongly Agreed (SA), Agreed (A), Disagreed (D) Strongly Disagreed (SD).

The respondents were asked to indicate the usefulness of electronic resources in their scholarly research work and were requested to choose one of the options among strongly agreed, agreed, disagreed and strongly disagreed. From the data gathered, 90% of the respondents strongly agreed or agreed that they use of electronic resources for their research work ($\bar{X} = 3.72$, $SD = .55$) while 10% strongly disagreed or disagreed. 90% respondents strongly agreed that the application of electronic resources enables them to accomplish tasks more quickly ($= 3.72$, $SD = .55$) and no-one disagreed. The majority of the students agreed that access to electronic resources makes work easier to do ($\bar{X} = 3.72$, $SD = .55$). I communicate with other colleagues both locally and internationally through e-mail or discussion groups ($\bar{X} = 3.37$, $SD = .76$). This finding clearly indicates that the use of electronic resources meets the expectation of the students.

Table 5: Strategies for improving students' use of electronic resources.

S/N	Items	SA	A	D	SD	M	SD
1	The servers/systems should be upgraded regularly to make them fast in information retrieval	189 90%	14 6.7%	7 3.3%	-	3.87	1.76
2	Students should be given more education on the use of electronic resources for academic work	175 83.3%	21 10%	14 6.7%	-	3.77	1.60
3	Alternative power supply to augment erratic power supply	161 76.7%	28 13.3%	14 6.7%	7 3.3%	3.63	1.45
4	More computer should be provided for the students	161 76.7%	28 13.3%	14 6.7%	7 3.3%	3.63	1.45
5	Personnel providing the services should be competent and receptive	147 70%	49 23.3%	14 6.7%	-	3.63	1.30
6	Regular maintenance work should be carried out on electronics equipment	147 70%	28 13.3%	28 13.3%	7 3.3%	3.50	1.29

Key: Strongly Agreed (SA), Agreed (A), Disagreed (D) Strongly Disagreed (SD).

The data in Table 5 shows the percentages, mean and standard deviation scores of respondents to the items or statements on the strategies for improving students' use of electronic resources at university of agriculture, Abeokuta. 96.7% the respondents strongly agreed or agreed that the servers/systems should be upgraded regularly to encourage fast information retrieval ($\bar{X} = 3.87$, $SD = 1.76$) and was ranked highest by the mean score rating. In addition, 93.3% of the respondents supported that more education on the use of electronic resources for academic work should be given to the students ($\bar{X} = 3.77$, $SD = 1.60$) and 83.3% of the respondents strongly supported regular maintenance of electronics equipment ($\bar{X} = 3.50$, $SD = 1.29$). It could be inferred that the respondents were not satisfied with the electronic service provided for them.

Results and discussions

The study dealt with students using of electronic resources on their academic performances by postgraduate students in University of Agriculture, Abeokuta, Nigeria. The electronic resources offer the possibility of providing easy and efficient services for organizing and accessing scientific information. Advances in Information communication technologies, and the rapid rise of the web, have led to the increasingly available on online research activities.

- The use of a global system of mobile telecommunication has highest respondents rating. This implies that postgraduate students are inquisitive in this era of globalization and directly interfaces with primary sources of information. This was also supported by Tella, Tella, Ayeni and Omoba, (2007) who noted that the vast growing information resources available through ICT and its accessibility to the users should be seen as an opportunity to enhance their research performance. This is because it provides an atmosphere that encourages sharing of knowledge in the creative process and collaborative efforts among educationists, researchers and students.
- The cybercafé also ranked highest among the itemised responses. The literature reviewed showed that Nigerian cybercafés were opened for longer periods than the university libraries. Obviously, users will prefer where they could get maximum satisfaction in terms of adequate services.
- This analysis indicated that postgraduate students in Nigerian agricultural libraries are well disposed using Internet to send and receive mail.
- The findings of the study indicated that postgraduate students in Nigerian agricultural university were not frequently used databases, Internet porters/gateways/repositories. From this, it could be inferred that some students lack skills to access information and will therefore find it extremely difficult to benefit from the potentials the new technology has to offer.
- The findings of this study indicated that students highly benefited from the use of electronic resources whenever they have access particularly with their mobile devices.
- The findings identified inadequate support of infrastructures, particularly telecommunication facilities and need to be upgraded. This corroborates the findings of Ogunsola and Okusaga (2006) which showed that access to the Internet facilities is also compounded by Nigerian telecommunication networks, which were found to be inefficient and less reliable than networks in other regions of the world.

Recommendations

1. Information literacy training, including computer literacy and online searching should be available for all students while regular orientation be given on the content, adequacy and relevance of databases to enable them to maximize the use of electronic information resources.
2. Effective library instruction can be developed to guide students' information seeking behaviours and utilisation.
3. Adequate provision of infrastructural facilities and training and retraining of students on the intricacies of electronic resources should be done on a regular basis.

Conclusion

In conclusion, the Internet is used to provide free access to research and scholarly output of researchers noting minding the distance, recognising the change in the world communication order and researchers being knowledgeable enough in information technology usage will propel them for better scholarly research. Hence, the infusion of information technology into the educational process and utilisation has remarkably benefited libraries and their users both in terms of their operation and the new method of service delivery. However, the study revealed underutilization of agricultural electronic resources by the postgraduate students in university of agriculture, Abeokuta, the respondents agreed of their awareness of this e-resources but hardly used them. Users had the greatest opportunity to use much of this information from the numerous databases across the globe effectively and when such opportunity is provided by their library.

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