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Assessment of Electronic Information Resources (EIRs): Availability and Use among Researchers in Nigerian Research Institutes Libraries in South West, Nigeria

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Abstract

Purpose: *This study investigated the assessment of electronic information resources availability and use among researchers in Nigerian research institutes libraries. This is to address the problem of underutilization of the electronic information resources in the institutes.*

Methodology: *Descriptive survey design was adopted and questionnaire was used to gather information for the study. 140 (82.3%) researchers out of 170 samples drawn from the four research institutes in Southwest, Nigeria responded to the questionnaire. Data obtained through the questionnaire were analyzed using descriptive and inferential statistics.*

Findings: *Analysis of data collected revealed that abundant electronic resources were available in the research institute that was investigated. Finding indicates that only few of electronic information resources were used while some were not even used at all. The respondents considered EIRs useful and enhances research output. The analysis further revealed that correlations exist between the two variables while constraints identified on the use of electronic information resources were low level of expertise assistance and inadequate technical skills, coupled with low internet connectivity.*

Implications: *This study has implications on the management of electronic information resources and use in Nigerian research institute's libraries. This is crucial because electronic information resources play a pivotal role in enhancing research development activities, and academic institution globally.*

Recommendations: *The study recommended that institute's libraries should be encouraged to organise seminars/workshops or conferences on ICT/Web training to acquire relevant skills needed to access and use web information regularly.*

Keywords: *Electronic Resources; Information availability; Information use; Researchers; Research Institutes, Research institutes libraries*

Paper Type: *Empirical study*

Introduction

Research is the bedrock of development in any society which compliments the availability and accessibility of information resources through the library as essential for a long-lasting research output. Over the years, the government has established several agricultural institutes, colleges and universities to support agricultural research in order to boost food production and to alleviate poverty. One of the functions of these institutes and their libraries is to procreate and propagate agricultural information to researchers, teachers, students, farmers, extension workers as well as to the policy makers in authorities. The agricultural research libraries have been a centre of information dissemination that serves the nation since the inception of agricultural research institutes. Today, there are eighteen (18) public sectors of agricultural research institutes in Nigeria, each with a specific mandate and basically to improve food production and reduce the poverty syndrome via the massive production of agricultural crops and to fulfill unique agriculture dreams of the society. Uganneya, et.al (2013) quoted Faris (1991) maintained that it is in recognition of the significance of agricultural research and development that Nigeria established libraries in all the eighteen (18) agricultural research institutes and the three (3) universities of agriculture to reinforce information service delivery with the intention to assist research and encourage development.

The role of an agricultural research library, therefore, is to make available, organize materials that will enable the institution to achieve its set objectives. The agricultural research library is also responsible for storing, supplying and disseminate information that is applicable to the work ethics of

the institute. Additionally, they are answerable for connecting researchers, academics, scientists and groups of students with the cause of sharing information or work collectively to solve agricultural issues and to apply current sources for success. For any considerable improvement, it is essential for the agriculturist to liaise and tap from the reserved knowledge available inside the library. Rhoe, Oboh, and Shelton (2010) agreed that agricultural research libraries support and enhancing access to information through effective management of its resources and provision of a wide range of information services. Agricultural researcher depends on available information resources to achieve high-quality research. They need to be conversant with new trends in research exercise. Navijoti (2007) also stated that speedy publication and availability of free published articles at the Internet are the key advantages that attract research scholars to conduct research with ease.

Library information resources according to Gambari and Chike-Okoli (2007) are those varieties of materials in print, non-print, and electronic resources found in agriculture libraries which guide information needs. Printed items include books, magazines, newspaper, periodicals, pamphlets, newsletters, directories, dictionaries, encyclopedias, microfiches or microfilms. Non-print items include films, disc records, filmstrips, slides, audiotapes, videotapes, compact discs, and computer software. Electronic resources include electronic journals, electronic books, electronic magazines, internet resources, online databases, CD-ROM, Online Public Access Catalogue (OPAC), projectors, hardware tools with other computer networking and other communication tools. As print and electronic resource collections develop in length and format, they must be constantly assessed to determine their relevance, utility and appropriateness to researchers. A number of the electronic databases within the field of agriculture consist of: Access to Global Online Research in Agriculture (AGORA). This is an initiative led by Food and Agriculture Organization (FAO) to provide free or low-cost access to major scientific journals in agriculture and related biological, environmental and social sciences to public and qualifying not-for-profit organizations in developing countries. The Essential Electronic Agricultural Library (TEEAL) launched in 1999, is an offline resources containing over 375 full-text journals in agriculture and related sciences. LanTEEAL 2.0, the contemporary model of TEEAL is available on a hard-drive and most journals in collection span from 1993 through 2009. Their content encompasses agricultural sciences in the broadest terms, from agricultural economics and crop improvement to food science and nutrition and natural resources management. These kinds of resources are utilized by the researchers to enhance research output and a good way to preserve intellectual growth.

In Nigeria, agricultural research institutes are many; however, most of the researchers are not getting adequate information for their users while some are confined by inability to access information with the skills to retrieve it. In corroborating this assertion, Okwu and Dauda (2011) maintain that, Nigeria has an elaborate agricultural research institute, the researchers, extension workers, farmers, and many others, however the findings of these researches aren't made absolutely available to the end users for use. They are not sufficiently exposed to new knowledge. Consequently, there is a need to examine library information resources available for researchers in Nigerian research institutes and why it turned into inadequately use to support the knowledge acquisition and dissemination of information for sustainable agricultural production development in Nigeria.

Literature review

The accumulation of the large quantity of information created globally, is because of man's consistent quest for knowledge. This quest for knowledge knows no bond and limits, a researcher is by no means satisfied. Research libraries are veritable repositories of knowledge and they seek to discover their roles in contributing every day to their mother institution's objectives and outcomes within the areas of studies, teaching and learning. Osigwe (2012) states that one major factor that makes agricultural research libraries different from others is based on their ability to provide information resources and services unique to the institutions they serve and concludes that even other information gateways including Google Scholars etc. do not possess these unique traits. Accordingly, agricultural research libraries are expected to acquire, organize, preserve, and disseminate information, as well to stimulate, improve and guide research in agriculture by way of coordinating the efforts of research findings in agriculture, set in motion a level playing ground for interaction and better working relationship. Bhatt (2013) asserts that having an efficient library service delivery depend mainly on the level of satisfaction of its numerous users, a user-centric library services and

library staff's supportive mind-set are always germane to knowledge development. Nwabueze et al (2010) notes that the best research and development is not be ascertained without good relationship among team of workers and users. The library provides the needed required materials, data, information and literature and technical information services for research and development.

Raza (2010) concludes that a Central Drug Research Institute (CDRI) library has been providing effective services to researchers. Most of the users are satisfied with the services provided by using the library. The study found out that there is a good application of Information and Communication Technology (ICT) within the library services. Singh and Satija (2008) conduct a survey to find out the information seeking behaviour of teachers and research scientists working in India Council of Agricultural Research Institutes of Delhi and Punjab Agricultural University, Ludhiana. The findings of the study indicated that agriculture scientists preferred library information center to meet their information requirements. Agricultural scientists have been especially dependent on library collection for accessing information, followed by their personal collection, a collection of their supervisor and colleagues. Accessing these resources encourages research productivities of the lecturers. Devaraj and Stanley (2012) stated that it is imperative to regularly monitor the use of library resources to identify the changing information needs. Angello and Wema (2010) describe agricultural researchers' appreciation of the role played by electronic information resources in their day-to-day activities.

Study conducted by Singh and Bebi (2012) in India shows that agriculturalist used electronic resources for research work, teaching and for updating themselves with current information. Howbeit, few researchers aren't using the electronic journals properly as it was expected. Ajegbomogun (2007) observes in a research study carried out, that electronic journals have become indispensable tools for learning, teaching, consulting, and research, however most scholars and researchers are not absolutely making use of them. Ezeala and Yusuf (2011) reveal that NARIs research officers are upset with the electronic resources in the libraries. The electronic resources are supposed to be at the disposal of every research library to enhance information services in the libraries. Nonetheless, from the end result, a total of 72% indicated felt that electronic information resources inside the library have been either insufficient or enough. And they concluded that research officers in NARIs are displeased with electronic information resources inside the libraries, and Agricultural research institute libraries in Nigeria are incompetent in their service provisions. This incompetence has resulted from disgusting underfunding of the libraries by the parent institutions. Similarly, Oyewusi and Oyeboade (2011) quoted in Ehikhamenor (1993) that during the last decade, most agriculture research libraries in Nigeria had been experiencing many difficulties providing materials to the users on account of the alarming rate of inflation of the prices of books and journals as well as the depreciation cost of the Nigerian financial system.

Findings of Ahmad and Nishat (2012), show that 46.31% of the research scholars indicated that low bandwidth reduces computer speed. This followed by 44.21% of research scholars face difficulty in accessing full-text, 32.63% of the research scholars indicated slow internet connectivity as well as lack of sufficient electronic journals, 21.10% of research scholars responded that limited access terminal is the problem and 16.84% respondents that they face difficulty in finding the relevant information, 20% respondents that they face retrieval problems, 15.79% respondents indicated that they faced insufficient time and training. Some consist of loading(retrieval problem) followed by 13.68% indicated that poorly designed internet site make a problem, followed by 5.26% respondents that they face problem to read the journal from the computer. Only 2.1% respondents face other types of problem. This means that using those electronic information resources always encountered varieties of problems.

Agarwal and Dave (2009) has studied the use of the internet by the scientists and research fellows of Central Arid Zone Research Institute, Jodhpur (Rajasthan), their study discovered that the respondents accessed Google search frequently (100%) followed by Yahoo (85.29%). It is also found that similarly (97.06%) respondents use the internet for training and research. Tinashe (2014) quoted in Dulle et al (2001), this study also revealed that most of agricultural researchers felt that the information provided by many agricultural libraries in Tanzania was insufficient. Many of the demanding challenges faced by libraries at that time were: lack of comprehensive journal collections; lack of up-to-date information; lack of information technology facilities (internet, CD-ROMs); insufficient funding; poor information access skills; and books mutilation.

In another vein, (Sokoya, et al., 2012, quoted in Agbama, 2000) observes that Nigerian agricultural

research linkages open up researcher's annually through representations to participate in discussing natural problems and development. This suggests that no matter the wealth of agricultural research output from research institutions in Nigeria, there are challenges of non-availability, cognizance, and full use of research reports in most of the developing countries including Nigeria. Study of Uganneya, et al (2012) also reveal that referral service and shelf management of books were rated dissatisfied, irregular internet services, expensive internet services, outdated materials and staff unresponsiveness were number of limitations to user satisfaction in the agricultural research institute libraries in Nigeria. This has been a severe bottleneck on access and use of electronic information resources in most of the developing countries.

Objectives of the study include:

i. **to** investigate the accessibility of electronic information resources in the research institutes libraries in Southwest Nigeria?
ii. to examine the usefulness of electronic information resources in the research institutes libraries in Southwest Nigeria?
iii. determine whether the users meet their needs in term of accessing library electronic information resources in the research institutes libraries in Southwest Nigeria?
iv. to find out the constraints encountered in accessing library electronic information resources in the research institutes libraries in Southwest Nigeria?

Research Question

i. What is the extent of access and use of electronic information resources in research institutes libraries in Southwest Nigeria?
ii. Which of the electronic information resources useful to the researchers in Southwest Nigeria?
iii. Do the users meet their needs in term of accessing library electronic information resources in Southwest Nigeria?
iv. What are the challenges of accessing electronic information resources in research institutes libraries in Southwest Nigeria?

Research hypothesis

Ho1: There is no significant relationship between usefulness and the challenges of using electronic information resources in Research Institutes libraries in Nigeria

Methodology

The survey research design was adopted. The population of the study comprised of the researchers in research institutes in Nigeria. The research institutes include the Cocoa Research Institute of Nigeria (CRIN), Institute of Agricultural Research and Training (IAR&T), Forestry Research Institute of Nigeria (FRIN) and National Institute of Horticulture and Root Crop Technology (NIHORT) in Southwest Nigeria. A questionnaire designed based on the objectives of the study was used for data collection. The questionnaire was in five (5) sections. It contains questions on demographic information, electronic information resources access and use, usefulness and issues militating against the use of electronic information resources in research institutes in Southwest, Nigeria. Out of one hundred and seventy (170) copies of questionnaire administered, 140 (82.3%) were returned and found usable. Statistical Package for Social Sciences (SPSS) was used to compute the result using descriptive statistics with tables of frequencies and percentages, Pearson Moment Correlation. The respondents' population comprises of 53 female, while 97 male carried the highest percentage of respondents in the institutes.

Results

Table 1: Demographic Information of the respondents **N=140**

1	**Institutions**	**Frequency**	**Percentage**	**Valid %**	**Cumulative**
	CRIN	46	32.8	32.8	32.8
	NIHORT	22	15.7	15.7	48.5
	IAR&T	32	22.8	22.8	77
	FRIN	40	28.5	28.5	100
3.	**Designation**				

	Prin. Res. Officer	28	20	20	20
	Snr. Res. Officer	29	20.7	20.7	40.7
	Chief Res. Officer	5	3.5	3.5	44.2
	Res. Officer I	23	16.4	16.4	60.6
	Res. Officer II	15	10.7	10.7	71.3
	Prin. Forest Technologist	6	4.3	4.3	75.6
	Assist. Forest Officer	7	5	5	80.6
	Research Fellow	17	12.1	12.1	92.7
	Junior Res. Fellow	10	7.1	7.1	99.8
4.	**Age bracket**				
	21 – 30	16	11.4	11.4	11.4
	31 – 40	51	36.4	36.4	47.8
	41 – 50	54	38.6	38.6	86
	51 and above	19	13.6	13.6	99.6
5.	**Highest qualification**				
	Diploma	7	5	5	5
	HND	5	3.6	3.6	8.6
	Bachelor's Degree	25	17.9	17.9	26.5
	Masters	69	49.3	49.3	75.8
	PhD	34	24.2	24.2	100
6.	**Years of experience**				
	Less than 5 years	20	14.3	14.3	14.3
	5years	24	17.1	17.1	31.4
	5 to 10 years	59	42.2	42.2	73.6
	More than 10 years	37	26.4	26.4	100

Table 1 shows the percentage of respondents from each institute. CRIN had 32.8%, FRIN 28.5%, IAR&T 22.8% and NIHORT 15.7%. Senior Research Officer had the highest percentage in the table of designation, which is 20.7% followed by Principal Research Officer with 20%.

The Table clearly shows that the majority of respondents' falls within the age bracket of 31-40 years had (36.4%) while 41-50 years had (38.5%) respectively. 49.2% of the respondents had a Master's degree and 28.2% of the respondents had a doctorate degree. The result also reveals years of experience of the respondents. Respondents within the bracket of 5-10 had the highest amount of experience. This implies that the demographic information are evenly distributed.

Table 2: Mean and Standard Deviation of Electronic Information Resources (EIR) access and use in research institutes

Research Institutes	**CRIN(N=46)**		**IAR&T(N=32)**		**FRIN (N=40)**		**NIHORT (N=22)**			
EIR(s)	**A/U(%)**	**A/NU(%)**	**A/U(%)**	**A/NU(%)**	**A/U(%)**	**A/NU(%)**	**A/U(%)**	**A/NU(%)**	**Mean**	**SD**
E-journals	31(67.3)	15(32.7)	24(75)	8(25)	31(77.5)	9(22.5)	11(50)	11(50)	1.69	0.21
CD ROM	33(71.7)	13(28.3)	17(53.1)	15(46.9)	23(57.5)	17(42.5)	9(41)	13(59)	1.59	0.26
AGORA	35(76.1)	11(23.9)	22(68.8)	10(31.2)	27(67.5)	13(32.5)	11(50)	11(50)	1.58	0.24
E-Books	24(52.2)	22(47.8)	18(56.2)	14(43.8)	20(50)	20(50)	12(54.5)	10(45.5)	1.53	0.25
E-Ency	24(52.2)	22(47.8)	23(71.9)	9(28.1)	22(55)	18(45)	12(54.5)	10(45.5)	1.42	0.24
TEEAL	30(65.2)	16(34.8)	19(59.3)	13(40.7)	33(82.5)	7(17.5)	20(91)	2(9)	1.41	0.24
Newsgroups	36(78.3)	10(21.7)	6(18.8)	26(81.2)	35(88)	5(12.5)	3(13.7)	19(86.3)	1.39	0.27

WEB/Direct	11(23.9)	35(76.1)	-	-	-	-	4(18.2)	18(81.8)	1.22	0.17
OARE	7(15.2)	39(84.8)	15(46.8)	17(53.2)	37(92.5)	3(7.5)	18(81.8)	4(18.2)	1.21	0.16
JSTOR	7(15.2)	39(84.8)	9(28.1)	23(71.9)	7(17.5)	33(82.5)	4(18.2)	18(81.8)	1.19	0.16
Emerald/Jour	6(13.0)	40(87.0)	12(37.5)	20(62.5)	2(5)	38(95)	2(9)	20(91)	1.16	0.13
EBSCHOST	5 (10.9)	41(89.1)	7(21.8)	25(78.2)	1(2.5)	39(97.5)	2(9)	20(91)	1.11	0.10

Note: A/U=Access/Use A/NU=Access/Not Use

Table 2 reveals 13 items designed to measure the electronic information resources access and use in research institutes by the researchers in CRIN, IAR&T, FRIN and NIHORT. The two scale instruments were used, that is, Access/use and Access/not use. Respondents in CRIN, IAR&T, FRIN and NIHORT agreed that they enjoy the use e-journals with a mean score of ($\overline{X}$ =1.69, SD=1.69). The next is CD ROM with a mean score of ($\overline{X}$ =1.59,SD=1.59). Furthermore, the table reveals that a large number of the respondents indicated that AGORA ($\overline{X}$ =1.58, SD=1.58), e-books ($\overline{X}$ =1.53,SD=1.53), e-encyclopedias ($\overline{X}$ =1.42,SD=1.42) and TEEAL ($\overline{X}$ =1.41, SD=1.41) are freely access and use in their various libraries. These imply that the provision institutes.

of electronic resources access and use in CRIN, FRIN, IAR&T and NIHORT will encourage research skills development among researchers if adequately exploited. Responses to Newsgroups use and access, CRIN (78.3%) and FRIN (88%) were far better than IAR&T (18.8%) and NIHORT (13.7%). However, other EIRs available in the institutions are OARE, JSTOR, Emerald journals and EBSCOHOST but with low use. Meanwhile, Web/Direct recorded no response in IAR&T and FRIN. Thus, it can be inferred that out of the abundant electronic resources available in these research institutes that only few were used while some were not even used at all. This is not encouraging and such may retard the growth of high level research productivity among staff in these research

Table 3: **Usefulness of electronic resources**

S/N	Usefulness	SA	A	D	SD	X	SD
1.	To update my knowledge	69(49.2)	45 (32.1)	15 (10.7)	11 (7.8)	3.20	.98
2.	T````o consult databases for my research work	57(40.7)	42 (22.8)	17 (12.1)	24(17.1)	2.99	1.04
3.	To download articles	53(37.8)	30 (21.4)	28(20)	29(20.7)	2.77	1.16
4.	For finding relevant information in my area of specializations	50(35.7)	36 (25.7)	29 (20.7)	25(17.8)	2.76	1.15
5.	To publish my research work	58(41.4)	34 (24.8)	27 (19.9)	21 (15)	2.74	1.13
6	Use to prepare for seminar/ conferences/ workshops purposes	55(39.3)	40 (28.6)	24 (17.1)	31(22.1)	2.58	1.15

Note: SA- Strongly Agree; A- Agree; D- Disagree; SD- Strongly Disagree; X- Mean; SD- Standard Deviation.

Table 2 revealed the usefulness of electronic information resources by researchers in Nigerian Research Institutes. The study reveals mean scores of respondents to the items on the purpose of using electronic information resources by researchers in Nigerian Research Institutes. For example, Findings of this study indicated that respondents use electronic information resources to update their knowledge. When the percentages of responses to these items are put together on the basis of strongly disagreed/disagreed and agreed/strongly disagreed, responses to the items revealed that 81.3% of the respondents agreed that using the internet enables them to update their knowledge while 18.5% of the respondents disagreed with this resulting in the mean and standard deviation scored rating of ($\overline{X}$ =3.20,SD=.98). The study revealed that 66.2% of the respondents agreed that they use electronic resources for research work while 34.9% of the respondents disagreed with this leading to the mean

and standard deviation scored rating of ($\overline{X}$ =2.99,SD=1.04). It was revealed that 53.5% of the respondents agreed that they use electronic resources to prepare for seminar/ conferences/ workshops while 50.9% of the respondents disagreed with the mean and standard deviation scored rating of ($\overline{X}$ =2.58, SD=1.5). This implies that respondents knew the importance of using the electronic information resources for research study.

Table 4: Problems limiting against the use of electronic resources

S/N	Problems	SA	A	D	SD	X	SD
1.	Interrupted power supply	70 (50)	41 (29.2)	16(11.4)	13 (9.3)	3.20	.98
2.	Slow internet connectivity	65 (46.4)	44 (31.4)	19(13.6)	12 (8.5)	3.11	1.04
3	Restriction of some resource access/not full-text access	55 (39.3)	35 (25)	22(15.7)	28 (20)	2.66	1.15
4.	Downloading problems	26 (18.5)	18 (12.8)	54(38.5)	42 (30)	2.11	1.2
5.	Technical problems	23 (16.4)	17 (12.1)	57(40.7)	43(31.7)	2.04	1.09
6.	Lack of training and guidance	18 (12.8)	10 (7.1)	75(53.5)	37(26.4)	1.45	.83
7.	Compatibility of systems	9 (6.4)	4 (2.6)	99(70.7)	28 (20)	1.79	1.04
8.	I am not computer literate	- -	- -	86(61.4)	54(38.5)	1.39	.49

Note: SA- Strongly Agree; A- Agree; D- Disagree; SD- Strongly Disagree; X- Mean; SD- Standard Deviation.

Table 3 revealed problems associated with the use

of electronic information resources by researchers in Nigerian Research Institutes. Responses to item 1 revealed that the respondents strongly agreed on the following: Findings also revealed that 79.2% agreed that interrupted power supply was one of the challenge to e-resources utilization while 20.7% of the respondents disagreed with this resulting in a mean and standard deviation scored rating of ($\overline{X}$ =3.20,SD=.98). The findings of this study also attested to the fact that 77.8% of the respondents agreed that slow internet connectivity constitutes a problem to e-resources accessibility while 22.1% disagreed with this assertion resulting in a mean and standard deviation scored rating of ($\overline{X}$ =3.11,SD=1.04). It was also revealed that 64.3% of the respondents agreed that they were restricted access to some databases while 35.7% of the respondents disagreed thus giving a mean and research Institutes

standard deviation scored rating of ($\overline{X}$ =2.66,SD=.1.15). However, response to item 8 indicated that the majority of the respondents disagreed of not being computer literate with the score rated as (X=1.39,SD= .49). Finally, accessing constraints to harness electronic resources, number 1-6 items of indicators received relatively high level scores. The institutes should find solutions to these challenges in order to encourage effective use of these electronic resources. These may likely continue to derail the technological advancement of a country.

Table 5: Test of hypothesis

H_1: There is no significant relationship between usefulness and challenges of using electronic resources in Nigerian

Correlations

	Usefulness	Challenges
Usefulness	1	.945**
Pearson		.000
Correlation	140	140
	.945**	1
Sig. (2-tailed)	.000	
	140	140
N		
Challenges		
Pearson		
Correlation		
Sig. (2-tailed)		
N		

***Correlation is significance at the 0.01 level (2-tailed)*

The hypothesis was tested at 0.05 levels of significance and the result reveals that a relationship exist between usefulness and challenges of using electronic resources in Nigerian research Institutes where correlation is significant at 0.01 level of significance. Therefore, the null hypothesis is rejected.

Discussion

- The result indicates that staff in both institutes has access to electronic information resources to a great extent. This is an indication that staff has enough resources to augment their research work.
- The result indicates that staff in both institutes have abundant electronic information resources that are available for use but only few of it were used.
- The majority of the respondents agreed that they consult electronic information resources to enhance research output.
- The study reveals that the majority of the respondents agreed that they were discouraged by the problems identified as constraints for EIRs. This implies that staff could be hindered with enormous potentials of electronic information resources available for use. This collaborated with Ahmad and Nishat (2012) findings, which indicate that the research scholars' faced a lot of information retrieval problems due to low bandwidth or connectivity.
- The result reveals that correlations exist between the two variables that is, the usefulness and challenges of using electronic information resources in Nigerian Research Institutes. Therefore, the null hypothesis is rejected.

Recommendations

Based on the finding of this study the following recommendations are made.

- Institutes should properly train their personnel on how best to manage the electronic information resources in their libraries.
- Users should be properly trained on how best to use these resources. The money incurred to subscribe for these resources will not be a waste of effort.
- Electronic devices that support access to electronic information resources should be kept properly for future use.
- To ameliorate constant power failure in the institutes, alternative sources of power should be provided to guarantee good service delivery.
- Institute's libraries should encourage regular seminars/workshops or conferences of ICT/Web training to acquire relevant skills needed to access web information.

Conclusion

The emergency of electronic information resources which pervaded all human endeavours has tremendously changed the face of information handling and control in academic environment. Many electronic information resources are available to institutes researchers in Southwest Nigeria, which could be utilized for purposeful research. The findings of this study indicated that the institutes' researchers have access to a myriad of electronic information resources which include e-journals, CD ROM, e-books AGORA, e-encyclopaedias and TEEAL and so on. However, some of these electronic resources were not effectively utilized. This cannot be far-fetched from the negligence of researchers on the relevance of these EIRs use.

The study identified some of the bottlenecks of accessing the electronic information resources as low level of expertise assistance and inadequate technical skills coupled with poor internet connectivity and so forth. This additionally collaborated with the findings of Akporhonor and Akpojotor (2016) that bad telecommunication infrastructure has been a serious problem that breeds poor skills in navigating electronic information resources. Also, Prangya and Rabindra (2013) found that lack of training; bad infrastructure and excessive value cost of usage are barriers and full usage of electronic information resources. Those demanding situations must be addressed with a purpose to encourage institutes researchers to assist scientific research in Nigeria. It is necessary that managements of research institutes have to intensify their efforts on staff training and retraining programmes in contemporary techniques of electronic retrieval of information through the organisation of instructional conferences, workshops, and seminars at both nearby and worldwide levels. Since the operational performance of the Power Holding Company of Nigerian (PHCN) is unsatisfactory and inconsistent with the user's need for quality service and productivity, the alternative measure is to provide electric power generators and solar energy for Nigerian research institutes and other higher learning institutions. Arrangements must be made for its recurring maintenance to enhance access to electronic information resources use that will encourage sustainable development.

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