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Electronic Information Resource Sharing among University Libraries in Southern Nigeria: Opportunities and Challenges

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Abstract

The study explored the state of electronic information resource sharing among university libraries in Southern part of Nigeria, highlighting the prospects and the challenges. The study was an empirical research which adopted the descriptive survey as the design. The questionnaire was used to collect data from the population comprising university librarians of the 37 public universities in Southern Nigeria. It was found that the university libraries had diverse kinds of electronic information resources and some ICT facilities but lacked web-based OPAC and library management software, which are fundamental for e-resource sharing. They could not engage in any meaningful form of structured resource sharing initiative as a result of lack of institutional policies and standards. This implies that access to information is endangered where the libraries are unable to collaborate to bridge the gap between the information-rich and information – poor libraries -– a scenario which conversely would affect the relevance and image of the poor libraries. It was recommended that the management of the universities and the Nigerian Library Association should advocate for government support in formulating standard policies and development of standard software that would drive effective consortium formation among libraries for a more effective resource sharing.

Key Words: Electronic information resources, Electronic resource sharing, Access to information, University libraries.

Introduction

Experiences from the new information order have shown that a library's collection is no longer confined within the library's building, rather they are found across states, nations and the virtual information world epitomized by the World Wide Web. Perhaps, Calhoun (2006) had this in mind when he argued that libraries of the future will be evaluated based on their ability to provide their users with technologies that allow applications to communicate across platforms and programming languages using standard protocols based on Extensible Make-up languages (XML) to connect catalogues and other library resources to search engines, e-learning systems, portals, etc. This is in line with the opinion of Ejedafuru (2010) and Parent (2012), who, taking cognisance of the changes brought to bear on libraries by information communication technology (ICT) revolution, asserts that emphasis on today's library is on its effectiveness in providing universal access to information, rather than the traditional services which are no longer serving the needs of the users. Parent concluded that transformational and sometimes radical changes are required in order for libraries to adapt to changing conditions, as well as seize the opportunity to make greater positive impact on society. This change is epitomsied in one of the basic functions of the library (resource sharing/library cooperation) which has been in practice through such activities as inter-library loan,

cooperative acquisition, cooperative cataloguing, cooperative resource s, etc.

Electronic Information Resource (EIR) sharing has been identified as the critical factor for effective functioning of libraries in this present ICT dispensation (Kaul, 2001 and Manjunath and Shivalingaiah, 2003). This is complemented by the ownership of structures that will facilitate the process. The above assertion has a strong bearing on an earlier report made by the United States National Inquiry on Scholarly Communication in 1979. This report argued that research libraries can no longer function as autonomous entities each striving for self-sufficiency. This assertion is based on the fact that even in the years of rapidly expanding budgets, libraries find it difficult to achieve this goal. The report further identified two forms of resource sharing which have direct bearing in this era. These are the development of national collections accessible to all research libraries and the linking of libraries through computerised bibliographic networks into a national system. In the opinion of the authors, the resources that could be shared through the platforms could include e-books, e-journals, resources from online databases, e-reports, e-newspapers/ magazines, government documents in electronic formats, electronic theses/dissertations and other ephemeral resources that exist in electronic formats. Engaging in e-resource sharing could provide libraries with a number of opportunities which are related to having easy access to global information by individual libraries; equal opportunities for contribution of a library's local content to the universal information pool, thereby showcasing the potentials of the libraries and their parent institutions globally and reducing the pressures on library budget on acquisition of print resources.

The foregoing shows that the report of the US National Inquiry on Scholarly Communication (1979) though dated is still apt and cannot be swept under the carpet, especially in developing countries such as Nigeria. This is more so as the identified two forms of electronic information resource sharing mechanisms presently do not exist in Nigerian university libraries. A pre-research survey made in these libraries show that the only existing form of resource sharing remains the traditional referral services whereby individual users make request through their institutional libraries to use the resources available in other institutions. The National Universities Commission (NUC) is trying to make alternative arrangement through the recently commissioned Nigerian Research and Education Network (NgREN) which is supposed to be a consortium arrangement for providing e-resources and services for Nigerian tertiary education (Atah, 2014); it could be that the absence of a national network for resource sharing, individual libraries should strive to be part of the global information dissemination system by developing technological application that would enable them to exchange information with other systems in a networking platform using ICT. Hence this study is designed to ascertain the state of e-resource sharing among university libraries in Southern Nigeria.

Research Questions

This research is designed to examine the following questions:

- What are the types of e-information resources available in the university libraries?
- What ICT facilities are available for e-resource sharing in the university libraries?
- What are the modes of access provision of e-resources to users through e-resource sharing?
- What is the extent of providing access to information resources through e-resource sharing?
- What challenges are encountered by the university libraries in e-resource sharing?
- What strategies are to be put in place for enhancing e-resource sharing in university libraries?

Review of Literature

Electronic information resources (EIR) have been variously defined by Harridan and Khan (2008) and Swain and Panda (2008), Obaseki, Oye and Mamman (2012) and Ekwelem, Okafor and Ukwuoma (2009). From the definitions, EIR are "soft" copy of available print information resources which are accessible electronically through computers and associated technologies. The format of these resources could be book, journals, magazines, music, films, newspapers, or realia. Electronic

resources will include scholarly materials contained in online databases, sources from web pages, electronic journals, electronic articles, electronic mail messages, online newsgroup postings and newsletters, government publications in electronic formats, electronic theses and dissertations, electronic newspaper, electronic-books, CD/DVD (Bavakenthy, 2003; Swain and Panda, 2008; Haridasan and Khan, 2008).

Electronic information resources have diverse kinds of benefits. These include but are not limited to providing quick global and convenient access to and exchange of information with experienced and expert personnel in the knowledge fields, easy dissemination of research findings, enhanced collaborative research, enabling the library to provide seamless information for their patrons irrespective of geographical location; helping in better management of information and space conservation and enhanced interlibrary collaboration (Obaseki, Oye and Mamman, 2012 and Igwebuike, 2012). Generally, the principle of e-resource sharing is based on give and take. As libraries engage in acquiring, processing, preserving and dissemination of information from various sources, it behooves on them to contribute their own local content to the universal pool of information (Aina, 2013). This exercise would enhance the global image of the libraries and their parent institutions. Commenting on the prospects of e-resource sharing, Aina (2013) argued that full automation of library processes and digitsation of resources are achieved when libraries strive to apply web 2.0 principles and technologies in information service delivery and engage in various kinds of cooperative possibilities with respect to their OPAC. Aina added that library's ability to engage in e-resource sharing should enhance the development of digital library software that would make possibilities of resource sharing easier. Also, Ezra and Ukachi (2011) noted that the Internet World Statistics 2011 asserts that over 44million Nigerians use the internet. The users according to them prefer using digital resources and services to conduct their academic research. The majority of these users are students, academic and research staff of universities. Consequently, academic libraries involved in e-resource sharing will not lack customers, but will rather face a lot of challenges to cope with the demands of these users.

Application of ICT has made resource sharing possible. Libraries now find it easy to engage in various kinds of cooperative possibilities using OPACs and the development of digital library software like Greenstone, CDSware, and the CERNdocument server software (Ekoja, 2011). Also, web 2.0 tools like blogs, instant messenger, online communities, video sharing, web conferencing, face book, RSS feeds, Wikis, Podcasts, flicker, tagging and MySpace have been identified as facilitating resource sharing electronically (Ekoja, 2011, O'Reilly, 2005 and Aina, 2013). In the opinion of the authors, libraries can use these tools to create their own content on the web which can be used to contribute/share resources with others to serve the information needs of users. For this reason, it is important that attention be paid on the current situation in Nigerian university libraries with emphasis on how they meet users' needs for information through e-resource sharing.

Accessibility of EIR is possible through various means. However, the most important to Nigerian academic institutions is the World Wide Web (www). This has become a major source of EIR for study, learning and research (Adeniji, 2012 and Igwebuike, 2012). There are certain other EIR that are usually accessed through such offline channels such as CD/DVD databases, library intra network systems, online databases, etc. (Obaseki, Oye and Mammam, 2012, Swain and Panda, 2008, Harridasan and Khan, 2008 and Bavakenthy, 2003). These e-resources have become a convenient source of current information for academic staff and students in Nigerian universities. Engaging in EIR also requires some ICT facilities. These have been listed by Siddike (2012) to include broad band internet connectivity, personal computers (desktop, laptop, iPADS, etc), computer server, library management software, antivirus, library/organisational website, scanners, photocopiers, CD-ROM readers, printers, multimedia/digital projectors, digital cameras. The foregoing shows that EIR has become a convenient information source of current information for academic staff and students in Nigerian universities. Therefore, efforts made by libraries to make them available to their user community would be regarded as a worthwhile venture.

University libraries' engagement in electronic resource sharing in Nigeria has experienced a number of challenges. These have been discussed by Anasi,

Akpan and Adedokun (2012), Nwalo, (2012), Obaseki, Oye and Mamman (2012), and Nwose and Jiagbogu (2011). The challenges identified include: lack of relevant ICT skills and awareness of the existence of knowledge sharing platforms, inadequate ICT facilities, unstable power supply and low level of conversion of local content for national and international access, among others. From the above review, it is evident that the majority of the literature dwelt generally on electronic resources and e-resource sharing. With the exception of Aina's (2013) work, none of the works investigated the prospects and the challenges of e-resource sharing. In addition, none of the studies focused on the state of e-resource sharing in the three southern geopolitical zones of Nigeria. This work is therefore designed to fill this gap.

Methodology

The descriptive survey method was adopted for the study. The population was made up of all the university librarians (or their representatives) of the government-owned universities, numbering 37 (18 federal and 19 state universities) in southern part of Nigeria (South- East, South -West and South-South geopolitical zones) as published by the National Universities Commission (2012). The justification for using the three zones in southern part of Nigeria. The choice of the university librarians is based on the fact that the study was a policy one that requires input from the library administration. The questionnaire was used for data collection. Because the small population, all the university librarians were surveyed.. The questionnaire has five sections with 83 items that address the subject of study with close-ended questions. The questionnaire was distributed at the Annual General Meeting and National Conference of the Nigerian Library Association held in Enugu in June 2014,out of the 37 copies distributed 23 copies (14 from federal universities and 9 from state universities as listed in Appendix) which represented 62% were filled, returned and found useful for the analysis. The use of this response rate was justified by the prescription given by Punch (2003) which indicated that response rate of 60% and above is acceptable, as it is representative of the population and diminishes the chance of bias. The data were analysed using percentages for all the research questions.

Result and Analysis

Demographic Information

The demographic data of the respondents show that 18 of the respondents representing 78% were male while 5 representing 22% were females. In terms of qualification, 3 (13%) had first degree, 15 (65%) had Master's degree while 5 (9%) had Doctor of Philosophy degree. Lastly, 2 representing 9% were aged 31 -35 years; 6 (26%) were aged 36 – 40 years,; 7 (30%) were aged 41 – 45 years; 5 (22%) were 46 – 50 years; while 3 (13 %) were aged above 50 years.

Types of Electronic Information Resources Available in the University Libraries

Two lists were provided from which librarians were requested to indicate the availability or non availability of internet resources and online databases for electronic resource sharing in the libraries. The results are presented in Tables 1 and 2.

Table 1: Electronic Information Resources (Internet Information) Available for Electronic Resource Sharing N=23

S/No	Items (Information Resources)	Available		Not available	
		No.	%	No	%
1	Electronic Books	20	87	3	13
2	Electronic Journals	18	78	5	22
3	Web-based OPAC	7	30	16	70
4	Electronic Dictionaries, Encyclopedias, etc	17	73	6	27
5	Electronic Theses and Dissertations	20	87	3	13
6	Electronic Newspapers	18	78	5	22
7	Electronic Magazines	17	73	6	27
8	Electronic abstracts	16	69	7	31
9	Electronic Indexes	15	65	8	35

With respect to the availability of internet information resources as shown in Table 1, only web – based OPAC scored a low percentage response with 30%. Other resources such as electronic books (78%), electronic theses and dissertation (87%), electronic journals (78%), and electronic newspapers (78%), were available as indicated by their high percentage scores of respondents. Other available resources include electronic magazines (73%), electronic dictionaries, encyclopedias Z etc, (73%), electronic abstracts (69%) and electronic indexes (65%).

Table 2: Online Databases Available for Electronic Resources Sharing N=23

S/No	Items (Online Databases)	Available		Not available	
		No.	%	No.	%
1	Web page sources	16	70	7	30
2	News group postings (Web 2.0)	14	61	9	39
3	Nigerian virtual Library	16	70	7	30
4	EBSCOHOST	14	61	9	39
5	UNESCO archive portals	7	30	16	70
6	Directory of Open Access Journals (DOAJ)	16	70	7	30
7	Online access to Research in the Environment (OARE)	17	73	6	27
8	Journal Storage (JSTOR)	18	78	5	22
9	Access to Global Online Research in				
	Agriculture (AGORA)	19	83	4	17
10	Biomedical and Life Sciences	14	61	9	39
11	Health Internetwork Access to Research Initiative (HINARI)	18	78	5	22
12	Encyclopedia of Life Support System (EOLSS)	14	61	9	39

Data in Table 2 shows that the percentage availability of online databases in the libraries surveyed. Revelation from the data indicates that the available databases were AGORA (83%), HINARI (78%), JSTOR (78%), OARE (73%) and Nigerian Virtual Library (70%). Others are DOAJ (70%), Web page sources (70%), Biomedical Life Sciences (61%), and EOLSS (61%). The availability of UNESCO Archive Portals was low with a percentage response of 30.

ICT Facilities Available for E-Resource Sharing in the University Libraries

Librarians were asked to indicate either the availability or non availability of a list of ICT facilities for e-resource sharing in the libraries. Data in table 3 shows the responses.

Table 3: Availability of ICT Equipment for Electronic Information Resource SharingN=23

S/No	Items (Equipment)	Available		Not Available	
		No.	%	No.	%
1	Personal computers (Desktops, Laptops, IPods, etc.)	20	86	3	14
2	Computer servers	17	74	6	26
3	Library Management Software	8	35	15	65
4	Library Website (or University Website)	16	70	7	30
5	Subscribed Systems Antivirus (not free antivirus)	18	78	5	22
6	Scanners	21	91	2	9
7	Free antivirus downloaded from the internet	15	65	8	35
8	CD-ROM Readers	18	78	5	22
9	Multimedia/Digital Projectors	17	74	6	24
10	Projector Screens	17	74	6	24
11	Printers	16	70	7	30
12	Photocopiers	21	91	2	9
13	Digital cameras	18	78	5	22
14	Internet connectivity	19	83	4	17
15	Subscribed Broad Band Internet Connectivity	18	78	5	22
16	Electronic Mail facilities	19	83	4	17

Data in Table 3 shows that all except one of the identified ICT equipment were available as indicated by the high percentage response of between 60 – 91%. A low percentage response was recorded for the item on availability of library management software (35%). This implies that all the libraries under study were equipped with ICT equipment ranging from personal computers, computer servers, library website, subscribed system antivirus, scanners, CD-ROM readers, multi-media projectors, printers, digital cameras, internet connectivity, etc.

Modes of Access Provision of E-Resources to Users through E-Resource Sharing

A list of identified modes of providing access to e-resources through e-resource sharing was provided from which the librarians were to make a selection of the modes they used. Data in Table 4 represents the percentage responses.

Table 4: Mode of Providing Access to Electronic Information Resources through Resource Sharing N=23

S/N	Mode of Providing Access	No.	%
1	Co-operative collection development with other university libraries	0	0
2	Co-operative subscription (acquisition) with other university libraries	0	0
3	Stand alone subscription to EIR by the library from database producers	23	100
4	Downloading EIR from various Open Access Website and creating folders in the library portal	22	96
5	Through the National Universities Commission (NUNET)	13	57
6	Individual user oriented request through other academic institutions in a network arrangement	15	65
7	Through a structured consortium arrangement with other institutions	0	0

Revelation from the data in Table 4 shows that the mode of providing access to e-resource sharing that was common to all the libraries is the stand - alone subscription to electronic information resources by libraries from database producers (100%). This is followed by downloading of EIR from various open access websites and creating folders in library portals (96%), individual user oriented request through other institutions (65%) and access provision through the NUNET project of the National Universities Commission (57%). None of the libraries engaged in cooperative acquisition, cooperative collection development and other structured consortium arrangement with other libraries.

Extent of Providing Access to Information Resources through E-Resource Sharing

The respondents were requested to assess the extent to which access to information resources was provided through e-resource sharing. The items were rated to as: very high extent, high extent, low extent, and no extent as indicated in Table 5.

Table 5: Extent of Providing Access to Information Resources through E-Resource Sharing among the Libraries N=23

S/N	Electronic Resources	Very High Extent		High Extent		Low Extent		No Extent		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
1	Electronic books	8	35	8	35	4	17	3	13	23	100
2	Electronic journals	10	43	7	30	5	22	1	14	23	100
3	Databases (AGORA, OARE,										
	HINARI, JSTOR DOAJ, EOLSS, etc)	4	17	9	39	7	30	3	13	23	100
4	Electronic theses and dissertations	4	17	3	13	13	57	3	13	23	100
5	Electronic newspapers	12	52	4	17	3	13	4	17	23	100
6	Electronic magazines	6	26	6	26	4	17	7	30	23	100
7	Electronic abstracts	4	17	2	9	11	48	6	26	23	100
8	Electronic indexes	5	22	2	9	9	39	7	30	23	100
9	Web page resources	2	9	2	9	14	61	5	22	23	100
10	Newsgroup postings (web 2.0)	2	9	3	13	10	43	8	35	23	100
11	Electronic mail resources	4	17	3	13	13	57	3	13	23	100
12	Nigerian virtual library resources	3	13	2	9	14	61	4	17	23	100
13	UNESCO archive portal resources	5	22	2	9	9	39	7	30	23	100

Data in Table 5 presents the extent of access to information resources through e-resource sharing by the libraries. The result shows that the libraries could provide access to electronic journal as: very high extent by 10 (43%) librarians and high extent by 7 (30%). E-books were rated as: very high extent and high extent by 8 (35%) librarians respectively. Electronic newspapers were rated to a very high extent by 12 (52%) and high extent by 4 (17%) librarians. Databases were rated to a very high extent by 4 (17%) librarians and high extent by 9(39%). Lastly, electronic magazines were rated as: very high extent and high extent by 6 (26%) respectively. Access provision of other resources was either provided to a low extent or not provided at all as indicated by the high negative percentage responses. These include e-theses and dissertation, e-abstracts, e-indexes, web-page resources, web 2.0 resources, e-mail resources, Nigerian Virtual library resources and UNESCO archival portal resources. It is clear from the foregoing that the libraries did not provide access to all the requisite resources that were useful to the patrons. Hence, the inference to be made from the above data is that the extent of providing access to information resources among the libraries is generally low.

Challenges of E-Resource Sharing among the University Libraries

From a list of challenges to e-resource sharing, the librarians were to indicate their level of agreement or disagreement by the data in Table 6.

Table 6: Percentage Challenges of Electronic Information Resource sharing N=23

S/N	Challenges of electronic resource sharing	Strongly Agree		Agree		Disagree		Strongly Disagree		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
1	Lack of awareness of the existence of resource sharing platforms	14	61	7	30	2	9	0	0	23	100
2	Inadequate ICT facilities for resource sharing/ networking	12	52	6	26	4	17	1	4	23	100
3	Absence of institutional repositories	7	30	14	61	2	9	0	0	23	100
4	High cost of Internet connectivity	10	43	9	39	3	13	1	4	23	100
5	Lack of electronic resource sharing policies/standards in the institutions	14	61	9	39	0	0	0	0	23	100
6	Declining budgets for e-resources acquisition/licensing	9	39	8	35	5	22	1	4	23	100
7	Slow rate of building local content for national/ international access	11	48	10	43	0	0	2	9	23	100
8	Uneven development of libraries in EIR acquisition/ licensing	8	35	12	52	3	13	0	0	23	100
9	Inability of libraries to meet the minimum commitment required to join consortia	9	39	7	30	1	4	1	4	23	100
10	Nationally and internationally poor bibliographic control of available e-resources by university libraries	6	26	14	61	3	13	0	0	23	100
11	Insufficient bandwidth for easy access to the internet	12	52	9	39	2	9	0	0	23	100
12	Lack of government support to universities on e-resource sharing	12	52	7	30	4	17	0	0	23	100
13	Inadequate number of librarians with web technology skills	7	30	13	57	2	9	1	4	23	100

Evidence from the percentage responses in Table 6 shows that all the identified factors posed challenges to electronic resource sharing among the libraries studied. The most serious issue was the lack of institutional policies and standards. Slow rate of building local content for national/ international access scored 11 (48%) strongly agreed, 10 (43%) agreed, with only 2 (9%) of the librarians recording strongly disagreed Absence of institutional repositories in most of the libraries was rated strongly agree by the 7 (30%) librarians and 14 (61%) agree. Other challenges include inadequacy of librarians' technological skills, uneven development of libraries for electronic information resource acquisition and

licensing, high cost of internet connectivity, inability of libraries to meet minimum requirements for joining consortia, lack of government support to universities for e-resource sharing and poor bibliographic control of available e-resources by libraries.

Strategies for Enhancing E-Resource Sharing among the University Libraries

A number of factors were identified as strategic for enhancing electronic resource sharing among the university libraries. The respondents rated them as very important, important, neutral and unimportant as captured in Table 7.

Table 7: Strategies for Enhancing Electronic Information Resource Sharing

S/N	Strategies	Very important		Important		Neutral		Unimportant		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
1	Creating awareness of the existence of EIR sharing platforms among libraries	17	74	6	26	0	0	0	0	23	100
2	Provision of ICT facilities for creating EIR in libraries	18	78	5	22	0	0	0	0	23	100
3	Building institutional repositories as core part of services provision for library users.	17	74	5	22	1	4	0	0	23	100
4	Making internet accessibility affordable to both libraries and users	16	70	7	30	0	0	0	0	23	100
5	Formulating EIR sharing policy in the libraries	19	83	4	17	0	0	0	0	23	100
6	Increasing budget allocations for acquiring EIR	18	78	5	22	0	0	0	0	23	100
7	Promoting professional development of librarians in electronic resources sharing through workshops, conferences and seminars	17	74	6	26	0	0	0	0	23	100
8	Improving on bibliographic control of available electronic information resources	15	65	8	35	0	0	0	0	23	100
9	Creating a coordinating agency tasked with creating and maintaining standards for EIR	16	70	7	30	0	0	0	0	23	100
10	Increasing the internet bandwidth for faster accessibility to the internet	18	78	4	17	1	4	0	0	23	100

Deduction to be made from the data in Table 7 is that all the identified factors were strategic for enhancing electronic resource sharing among libraries. Apart from the items on "building institutional repositories as core part of service provision for library users" and "increasing internet bandwidth" which were rated neutral by 1 (4%) respondent all the other items were rated together as very important and important by 100% of the respondents. These items are formulating electronic resource sharing policies in libraries, making internet connectivity affordable to libraries and users, increasing budgetary allocation for acquiring electronic information resources and provision of ICT facilities for creating electronic information resources. Others include creating awareness of the existence of electronic resource sharing platforms among libraries, promoting professional development of librarians on electronic resource sharing skills, creating a coordinating agency for developing and maintaining standards for electronic resource sharing and improving on bibliographic control of available electronic resources in libraries and

Discussion of Findings

The findings of the study show that the university libraries studied had diverse kinds of electronic information resources. Availability of these resources could be linked to the presence of internet connectivity in almost all the libraries. This has made it possible for them to have access to web-based resources and databases through which access to e-books, e-journals, e-theses and dissertations, e-newspapers and magazines are guaranteed. The findings indicated a limited availability of web-based OPAC in the libraries which is one indication that the libraries were not yet in a state of engaging in e-resource sharing.

With respect to availability of ICT facilities for e-resource sharing, the findings show that the requisite facilities were available in the libraries with the exception of library management software in majority of the libraries. The non availability of library management software in these libraries negates the prescription given by Siddike (2012), which identifies it among the essential facilities required for e-resource sharing. According to Siddike, engaging in e-resource sharing requires some ICT equipment that includes broadband internet connectivity, personal computers, computer server, library management software, antivirus, scanners, photocopiers, CD-ROM readers, etc. Without a good and reliable library management software, e-resource sharing cannot be possible as the processes involved in migrating to e-resource sharing platform including automation, digitisation, development of institutional repositories all depend on the application of management software.

The findings on mode of providing access information resources through e-resource sharing show that the libraries engaged in stand-alone subscription to electronic information resources from database producers, download resources from websites and create folders in library portals, link with the NUNET for information resources (when it was still functional) and through individual-oriented request. A consideration of these modes of providing access shows that but for the later mode, the identified modes are not actually addressing the issue of resource sharing among the libraries. The efforts may be to increase the information base of the individual libraries with which to attend to local users and other researchers from other universities on individual request bases and not necessarily to engage in any form of networking. This shows that the libraries did not engage in any form of standard/ structured e-resource sharing.

The extent of providing access to resources through e- resource sharing was generally low. The reason for this is obvious since the libraries were not engaged in any formalised resource sharing arrangement as noted with respect to the finding on lack of library management software and on the mode of providing e-resource sharing services among the libraries.

Lack of institutional policies/standards, inadequate ICT facilities, lack of awareness of e-resource sharing platforms and insufficient internet bandwidth were major challenges of e-resource sharing/networking. Other challenges include, lack of government support, absence of institutional repositories, inadequate technological skills of librarians, etc. This finding corroborate the findings of Anasi, Akpan and Adedokun (2012), Nwalo (2012), Nwose and Jiagbogu (2011) and Obaseki, Oye and Mamman (2012), who in different studies indicated that those factors were challenges to e-resource

sharing. All these indicate that the challenges of e-resource sharing are mostly administrative-oriented.

The identified strategies for enhancing e-resource sharing include: formulating resource sharing policies in libraries, making internet connectivity with increased bandwidth affordable, increasing budgetary allocation for acquiring e-resources, provision of ICT facilities, creating awareness of existing e-resource sharing platforms and creating a coordinating agency for e-resource sharing, in addition to building institutional repositories in the universities. All these would go a long way in placing the university libraries at a vantage position of engaging in collaborative service delivery that would boost the image of the individual parent universities, especially now that the NUC has established/commissioned the NgREN to meet the information needs for research and education through a connectivity platform that links participating institutions for sharing e-services (Atah, 2014).

Conclusion

This paper tried to establish the prospects and the challenges of engaging in e-resource sharing among university libraries in Nigeria. It has noted that no library can harness/contribute to the universal pool of information in the present knowledge society without the application of technology with which the capturing and projection of its local content for global visibility are made possible. In the prevailing low budgetary allocation and high cost of acquiring the diverse kinds of information resources available in the world wide web, electronic resource sharing is seen as an effective means of bridging the gap between the "haves" and "have not's" among the libraries for effective service delivery.

Recommendations

With respect to the findings of the study, the following recommendations are made:

- The university management need to facilitate full development of ICT infrastructures/ facilities such as web-based OPAC and library management software that would drive/ facilitate e-resource sharing in libraries.
- The library management need to enter into a more structured/standard networking arrangement that would provide a common platform for e-resource sharing among libraries in Nigeria.
- The Nigerian Library Association should advocate for government interest/support in formulating standard policies and programmes that would encourage consortium formation for resource sharing among university libraries in Nigeria.

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APPENDIX

LIST OF THE 23 UNIVERSITIES INVOLVED IN THE STUDY

S/N	Location	Name of University	Type	Year of Est.
1	South-East	University of Nigeria, Nsukka	Federal	1960
2	South-East	Nnamdi Azikiwe University, Awka	Federal	1992
3	South-East	Michael Okpara University of Agriculture, Umudike	Federal	1992
4	South-East	Federal University of Technology, Owerri	Federal	1980
5	South-East	Enugu State University of Science and Technology	State	1982
6	South-East	Ebonyi State University	State	2000
7	South-East	Anambra State University, Uli	State	2000
8	South-South	University of Calabar	Federal	1975
9	South-South	University of Port-Harcourt	Federal	1975
10	South-South	University of Benin	Federal	1970
11	South-South	University of Uyo	Federal	1991
12	South-South	Federal University of Petroleum Resources, Effrun	Federal	2007
13	South-South	Rivers State University of Science and Technology	State	1979
14	South-South	Ambrose Ali University, Ekpoma	State	1980
15	South-South	Cross River State University of Science and Technology	State	2004
16	South-West	University of Ibadan	Federal	1948
17	South-West	University of Lagos	Federal	1962
18	South-West	Obafemi Awolowo University, Ile-Ife	Federal	1962
19	South-West	Federal University of Technology, Akure	Federal	1981
20	South-West	University of Agriculture, Abeokuta	Federal	1988
21	South-West	Ekiti State University	State	1982
22	South-West	Ladoke Akintola University of Technology, Ogbomosho	State	1990
23	South-West	Osun State University, Oshogbo	State	2006