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Assessment of Electronic Collection Development in Nigerian University Libraries

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Abstract

The study assessed the state of electronic collection development (ECD) in Nigerian university libraries. The study employed a descriptive survey design. The study was carried out in three university libraries in Nigeria. The total population of library respondents (Professionals and Paraprofessionals) used for this study was 208. Questionnaire and interview schedule were the instruments used to collect the data for this study. The result of the study revealed that ECD is not yet very effective in Nigeria university libraries. The major factors militating against ECD in this study were inadequate funding of automation which is also at infancy level, poor technical knowhow, lack of higher bandwidth in Internet connectivity and lack of sound administrative policies and guidelines. The major strategic measures for enhancing ECD include improved funding, constant evaluation of automation facilities, adequate and regular systems upgrade, provision of skilled manpower and periodic and regular training of librarians and paraprofessionals in the use of modern ICT facilities.

Keywords: Professional librarians, paraprofessionals, electronic collection development, university libraries.

Introduction

Library collection development is one of the basic library services aimed at meeting the information needs of the people (a service population) in a timely and economical manner using information resources locally held, as well as from other organizations (Evans, 2000). Librarians develop collections by buying or otherwise acquiring materials over a period, based on assessment of the information needs of the library's users.

Professionals (librarians) who work in the modern day libraries need continuous grooming or training in order to acquire core competencies and new skills that will make them not to be obsolete in this fast changing environment (Singh and Pinki, 2004). As a result of this, they (librarians) need to shift their attention from traditional library activities of collecting, processing, storing and accessing information, to offer or deliver customer-centred automated information services; generated by using online/offline databases, e-resources, e-journals, networks, consortia, etc.

Electronic Collection Development (ECD) vis-à-vis electronic library refers to collection of electronically formatted information resources from a variety of sources such as the Internet and the Web (Kovacs and Elkordy, 2006). In electronic or digital library collection development, librarians tend to make digitization recommendations rather than purchasing recommendations. They (librarians) do not evaluate what has been published, but rather evaluate what is within their collection that is most valuable and unique to users. To achieve this goal, librarians must be aware of the digital resources provided by other libraries or organizations. The emerging technological development of the past years, such as the electronic databases, online services, CD-ROMs and the introduction of Internet has radically transformed collection development and access to information in university libraries.

In any university library, a written collection development policy is an important tool for guiding all activities related to planning, building, selecting and acquiring library

materials (Magrill and Hickey, 1984). It is one of the first pieces of evidence in determining whether a library is engaged in true collection development. University libraries are becoming increasingly aware of the benefits of having a strong and constantly updated written collection development policy (Bostic, 1988). Collection development policies provide guidelines in the selection of materials and the allocation of funds. A written policy provides the rationale for the selection of individual items and ensures consistency and balance in the growth of collections.

At present, no known studies have been done on the state of Electronic Collection Development in Nigerian university libraries. This paper aims to fill this gap through a thorough assessment of the state of electronic collection development in three Nigerian university libraries in order to promote an effective electronic collection development in university libraries.

Research Questions

Four research questions were formulated to guide this study.

1. What is the state of electronic collection development in university libraries in Nigeria?
2. What are the appropriate methods for facilitating electronic collection development in university libraries in Nigeria?
3. What are the major impediments that are associated with electronic collection development in the university libraries in Nigeria?
4. What are the strategies for enhancing ECD in Nigeria University Libraries?

Methodology

The study employed a descriptive survey design. This type of research design seemed to be appropriate for this study because of the large body of data, with many

variables which the target population of library respondents (Professionals and Paraprofessionals) were expected to tick as they applied to them.

The study was carried out in three university libraries, made up of two federal and one state –owned universities in Nigeria. The concerned university libraries were as follows:

- a. Nnamdi Azikiwe Library (NAL), University of Nigeria, Nsukka.
- b. Professor Festus Aghagbo Nwako Library (FANL), Nnamdi Azikiwe University Library, Awka, Anambra State
- c. Enugu State University Library (ESUL), Enugu State University of Science and Technology, Enugu.

The total population of library respondents (Professionals and Paraprofessionals) used for this study from the three university libraries was 208; with the population of professional librarians and paraprofessionals standing at 90 and 118 respectively. No sampling was done in this study as the population size of 208 (Professionals and Paraprofessionals) was considered manageable enough.

Questionnaire and interview schedule were the instruments used to collect the data for this study. The questionnaire was structured using a-four-point rating scale of VAD (Very Adequate), AD (Adequate), FAD (Fairly Adequate), NAD (Not Adequate); VHE (Very Highly Employed), HE (Highly Employed), ME (Moderately Employed), NE (Not Employed); SA (Strongly Agreed), A (Agreed), D (Disagreed), SD (Strongly Disagreed), and VA (Very Appropriate), A (Appropriate), FA (Fairly Appropriate) and NA (Not Appropriate). The university librarians, Heads of Collection Division and one digital librarian from the three studied university libraries were interviewed.

With the help of two librarians in each of the three studied university libraries, copies of the questionnaire (n = 208) were distributed among the professional and

paraprofessional respondents to elicit their responses on the specific questions raised. An audio play back cassette recorder was used to conduct the interview.

Analysis of data collected for this study was based on each research question using frequency count and mean. SPSS version 16.0 software was used to calculate the mean of each item in each research question. Frequencies of each item and means of the items in each question were calculated and presented in tables.

RESULTS

Research question 1: What is the state of electronic collection development (ECD) in university libraries in Nigeria?

Table 1: Mean Responses of Respondents in the Libraries on the State of ECD

S/N	Item	NAL	FANL	ESUL	Overall Mean	SD	Rank	Decision
1	Equipped with computers and their accessories for the collection development staff	2.21	2.48	2.53	2.41	1.07	1 st	FAIRLY ADEQUATE
2	Always subscribe to e-resources (online journals/books) from major publishers worldwide.	2.37	2.05	2.74	2.39	1.09	2 nd	FAIRLY ADEQUATE
3	Has wireless Internet connection	2.46	2.05	2.58	2.36	1.10	3 rd	FAIRLY ADEQUATE
4	Adequately funded by the state/federal government	1.98	1.88	3.11	2.32	1.04	4 th	FAIRLY ADEQUATE
5	The library has access to online selection tools, such as British and American BIP.	2.31	1.90	2.26	2.30	1.05	5 th	FAIRLY ADEQUATE
6	Has a WAN (Wide Area Network) connection from accessing publications from local/university based authors	2.17	2.11	2.26	2.18	1.02	6 th	FAIRLY ADEQUATE
7	Has a LAN (Local Area Network) connection for in house processes.	2.07	2.24	2.05	2.12	1.06	7 th	FAIRLY ADEQUATE

8	The acquisition unit has strong Internet connectivity to link up with publishers in Nigeria and outside Nigeria.	1.99	1.86	2.11	1.99	1.01	8 th	FAIRLY ADEQUATE
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Table 1 showed that the overall mean responses of respondents from the three studied university libraries on the state of ECD fell below 2.50. The item “equipped with computers and their accessories for collection development staff” scored an overall mean of 2.41 while the items “always subscribe to e-resources (online journals/books) from major publishers worldwide” and “Has wireless Internet connection” had overall mean ratings of 2.39 and 2.36 respectively. On the other hand, “Adequately funded by the state/federal government”, “The library has access to online selection tools; such as British and American BIP” and “Has a WAN” recorded overall mean ratings of 2.32, 2.30 and 2.18 respectively. The items “Has a LAN” and “The acquisition unit has strong Internet connectivity to link up with publishers in Nigeria and outside Nigeria” scored overall mean ratings of 2.12 and 1.99 respectively. This result is an indication that library staff respondents did not agree on all the eight listed items in Table 1 on the state of ECD in Nigeria university libraries.

Research question 2: What are the appropriate methods for facilitating electronic collection development (ECD) in university libraries?

Table 2: Mean Responses of Respondents in the Libraries on the Appropriate Methods that will Facilitate ECD

S/N	Item	NAL	FANL	ESUL	Overall Mean	SD	Rank	Decision
1	Use of Internet	3.42	3.52	3.74	3.56	0.74	1 st	VERY HIGHLY EMPLOYED
2	Provision of good Internet facilities	3.49	3.40	2.68	3.52	0.78	2 nd	VERY HIGHLY EMPLOYED
3	Subscribing to electronic journals	3.35	3.40	3.63	3.46	0.85	3 rd	HIGHLY EMPLOYED
4	World Wide Web (WWW)	3.36	3.53	2.21	3.37	0.80	4 th	HIGHLY EMPLOYED

5	Formulation of adequate digital collection development policy	3.16	3.35	3.53	3.35	0.88	5 th	HIGHLY EMPLOYED
6	Online book in prints	3.18	3.35	3.21	3.25	0.90	6 th	HIGHLY EMPLOYED
7	Use of Online Public Access Catalogue (OPAC)	3.31	2.99	3.37	3.22	1.03	7 th	HIGHLY EMPLOYED
8	Use of Online Publishers' Catalogue	3.11	3.15	3.21	3.16	0.99	8 th	HIGHLY EMPLOYED
9	Subscribing to electronic reference resources	3.10	3.22	3.05	3.12	0.98	9 th	HIGHLY EMPLOYED
10	Subscribing to Full-Text databases	3.22	3.20	2.74	3.05	0.94	10 th	HIGHLY EMPLOYED
11	Subscribing to Indexing databases	3.22	3.28	2.58	3.03	0.91	11 th	HIGHLY EMPLOYED
12	Subscribing to E-book and video streaming collections	3.09	3.11	2.79	3.00	1.01	12 th	HIGHLY EMPLOYED
13	Subscribing to individual e-book and video streams	2.97	3.00	2.79	2.92	1.07	13 th	HIGHLY EMPLOYED
14	Teleconferencing	2.73	2.59	3.05	2.79	1.15	14 th	HIGHLY EMPLOYED

The respondents from the three studied university libraries identified all the fourteen items in Table 2 as the appropriate methods that will facilitate ECD in Nigeria University Libraries. “Use of Internet” (3.56), “Provision of good Internet facilities” (3.52) and “Subscribing to electronic journals” (3.46) stand out as the top three identified appropriate methods that will facilitate ECD in Nigeria University Libraries. The library staff respondents also identified other appropriate methods that will facilitate ECD such as “World Wide Web (WWW)” (3.37), “formulation of adequate digital collection development policy” (3.35), “online book in prints” (3.25), “use of Online Public Access Catalogue” (3.22), “use of online publisher’s catalogue” (3.16), “subscribing to electronic reference resources” (3.12), “subscribing to full-text databases” (3.05), “subscribing to Indexing database” (3.03), “subscribing to E-book and video streaming collections” (3.00), “subscribing to individual e-book and video streams” (2.92) and “teleconferencing” (2.79).

Research question 3: What are the major impediments that are associated with electronic collection development (ECD) in the university libraries in Nigeria?

Table 3: Mean Responses of Respondents in the Libraries on Factors that Militate Against ECD

S/N	Item	NAL	FANL	ESUL	Overall		Rank	Decision
					Mean	SD		
1	Inadequate funding	3.75	3.78	3.58	3.70	0.51	1 st	STRONGLY AGREED
2	Epileptic power supply	3.51	3.49	3.68	3.56	0.69	2 nd	STRONGLY AGREED
3	Automation at infancy level	3.38	3.50	3.37	3.42	0.66	3 rd	AGREED
4	Lack of higher bandwidth in Internet connectivity	3.19	3.53	3.16	3.29	0.70	4 th	AGREED
5	Poor access materials for acquisition	2.88	3.18	3-16	3.07	0.95	5 th	AGREED
6	Lack of proper commitment by the university management	2.88	3.39	2.79	3.02	0.96	6 th	AGREED
7	Lack of technical know how	3.15	3.09	2.79	3.01	0.90	7 th	AGREED
8	Lack of sound administrative policies and guidelines	2.96	3.35	2.53	3.95	0.95	8 th	AGREED
9	Lack of skill/in competencies	3.01	3.00	2.58	2.86	0.97	9 th	AGREED
10	Inadequate competent personnel	2.79	3.11	2.47	2.79	0.98	10 th	AGREED
11	Academic Librarian/paraprofessional reluctance to use ICT	2.46	2.96	2.58	2.67	1.04	11 th	AGREED

The respondents from the three university libraries clearly identified “inadequate funding” (3.70) as the major factor that militates against ECD in Nigeria university libraries. ‘Epileptic power supply” (3.56), “automation at infancy level” (3.42), and “lack of higher bandwidth in Internet connectivity” (3.29) ranked 2nd, 3rd and 4th respectively as the positively identified factors that militate against ECD in Nigeria university libraries.

“Poor access to materials for acquisition” (3.07), “lack of proper commitment by the university management” (3.02), “lack of technical know how” (3.01), “lack of sound administrative policies and guidelines” (2.95) “lack of skill/in competencies” (2.86) and “Academic librarian/paraprofessional reluctance to use ICT” (2.67) were also identified by library staff from the three studied university libraries as militating factors against ECD in Nigeria university libraries.

Research question 4: What are the strategies for enhancing ECD in Nigeria University Libraries?

Table 4: Mean Responses of Respondents in the Libraries on Strategies for Enhancing ECD

S/N	Item	NAL	FANL	ESUL	Overall Mean	SD	Rank	Decision
1	Adequate funding from State and Federal Government	3.65	3.10	3.89	3.55	0.93	1 st	VERY APPROPRIATE
2	Computerization/full automation of the university library	3.64	3.19	3.58	3.47	0.94	2 nd	APPROPRIATE
3	Constant and uninterrupted power supply	3.49	3.13	3.53	3.38	0.89	3 rd	APPROPRIATE
4	Training of librarians and paraprofessionals in the use of modern ICT facilities	3.60	3.10	3.16	3.29	0.90	4 th	APPROPRIATE
5	Creation of higher Internet bandwidth for effective Internet connectivity	3.59	3.04	3.16	3.26	0.91	5 th	APPROPRIATE
6	Constant evaluation of automation facilities	3.36	3.10	3.32	3.26	0.84	5 th	APPROPRIATE
7	Adequate system upgrade	3.49	3.05	3.21	3.25	0.87	6 th	APPROPRIATE
8	Liaising with relevant related groups such as staff of integrated Libraries and Technology service Department, various acquisitions and public service department, the catalogue department	3.45	3.11	3.05	3.20	0.90	7 th	APPROPRIATE
9	Development and support of the Electronic Resource Management tool (ERM) and other e-services tool	3.39	3.04	3.11	3.18	0.87	8 th	APPROPRIATE
10	Formation of sound administrative policies and guidelines	3.42	3.15	2.95	3.17	0.89	9 th	APPROPRIATE
11	Provision of skill manpower	3.41	3.20	2.84	3.15	0.92	10 th	APPROPRIATE
12	Employing or Training Electronic Resource Officer(s) (EROs)	3.36	3.03	3.00	3.13	0.96	11 th	APPROPRIATE

13	Employing electronic collection librarian(s) (ECLs) in the university library	3.26	3.11	2.53	2.97	1.00	12 th	APPROPRIATE
14	Nurturing effective and productive vendor relationships with producers and providers of e-resources	3.26	2.94	2.68	2.96	0.93	13 th	APPROPRIATE
15	Electronic resource activities, such as troubleshooting problem reports, reviewing and negotiating license agreement	3.22	2.99	2.37	2.86	0.94	14 th	APPROPRIATE

In Table 4, the respondents from the three studied university libraries identified the items that read “Adequate funding from State and Federal Government” (3.55), “Computerization/full automation of the university library” (3.47), “Constant and uninterrupted power supply” (3.38) and “Training of librarians and paraprofessionals in the use of modern ICT facilities” (3.29) which ranked 1st, 2nd, 3rd and 4th respectively as major strategic steps that should be adopted by Nigeria university libraries in enhancing ECD. Other strategic steps for enhancing ECD that were identified by the library staff in this study include “Creation of higher Internet bandwidth for effective Internet connectivity” (3.26), “Constant evaluation of automation facilities” 3.26), “Adequate system upgrade” (3.25), “Liaising with relevant groups such as staff of the integrated libraries and technologies service department, various acquisitions and public service department, the catalogue department” (3.20), “Development and support of the Electronic Resource Management (ERM) tool and other e-services tool” (3.18), “Formation of sound administrative policies and guidelines” (3.17), “Provision of skill manpower” (3.15), “Employing or training Electronic Resource Officers (EROs)” (3.13), “Employing Electronic Collection Librarians (ECLs) in the university libraries” (2.97), “Nurturing effective and productive vendor relationships with producers and providers of e-resources” (2.96) and “Electronic resource activities, such as troubleshooting problem reports, reviewing and negotiating license agreement” (2.86).

A cross section interview with the University Librarian, Head of Collection Development Division and a Digital Librarian in the three studied university libraries revealed that ECD is being practiced in the three libraries. According to the interviewees, none of the studied university libraries has been fully computerized. One of the libraries (Nnamdi Azikiwe Library, UNN) has six hundred and seventy-five (675) computers which were connected to the Internet through Local Area Network (LAN)/Wide Area Network (WAN). Professor Festus Aghagbo Nwako library has five hundred and eight-two (582) desk top computers which have not been connected online. A situation where 582 desktop computers were left unconnected online in a university library does not speak well of electronic collection development.

The digital library at Professor Festus Aghagbo Nwako library has one hundred and twenty (120) laptop computers that have been fully connected to the Internet (strictly meant for academic staff). ESUT library has only forty-eight (48) computers that are connected to the Internet. From this observation, ESUT library cannot boast of many computers and this again does not speak well of electronic collection development in the university library.

According to the Head of Collection Development Division at Nnamdi Azikiwe library, various sections/some library functions (special collection, collection development, serials, reference etc) are gradually receiving automation attention. The interviewees from the three studied university libraries were able to point out some of the challenges of ECD in Nigeria University Libraries which include low Internet bandwidth, erratic power supply, computer illiteracy by some library users and staff, poor funding etc. This agrees with the result obtained from the questionnaire.

In their own view, university libraries in Nigeria should be adequately funded and library staff properly trained on modern ICT equipment. They emphasized the need for university management in collaboration with library management to train library staff and organize conferences and workshops. This also agrees with the result obtained from the questionnaire.

Discussion

Electronic collection development in any university library requires adequate funding, modern ICT facilities, and staff training. According to Olajojo and Akewukereke (2006), collection development/electronic collection development (ECD) is a planned, continuous, and cost effective acquisition of quality, relevant materials to meet the needs of users and the objectives of the library. With inadequate or poor funding, the provision of ICT infrastructure for effective ECD in university libraries would more or less be a mirage; as money is required to procure computers, provide reliable Internet connectivity or make subscription to e-resources (online databases) (Nkoyo et al., 2011). Accordingly, Ifidon (2002) asserted that the quality and adequacy of the resources and services available in Nigerian university libraries are functions of the level of financial support which the libraries received from their governing authorities and advocates the need to evolve appropriate policy on funding of university libraries in Nigeria for better state of ECD.

Based on the findings of this study, one would not say that ECD has come of age in the three studied university libraries. In any discussion on application of modern technology in academic library vis-à-vis ECD, the first thing that comes to mind is procurement of computers and Internet connectivity. The connectivity can be through Local Area Network (LAN) or Wide Area Network (WAN), depending on the choice of the university library management.

According to Alasa and Kelechukwu (1999), the adoption of Local Area Network (LAN)/Intranet and other computer networks in university libraries will be a boost to ECD and knowledge management processes. This implies that librarians can provide the needed information from the libraries to academic staff in their offices for knowledge generation and transfer without waiting for them to come to the library for information patronage. This informed the rationale for the proposition by Ani et al., (2005) for adoption of information technology (ICT) in Nigeria university libraries as a strategy for library networking, electronic collection development and knowledge management.

Ogunsola, (2004) made it clear that the librarian does not have to be literate in the various technologies before employing them for effective electronic collection development. In other words, he/she does not have to be a technical expert before using any form of technology or programmer or before using a computer. However, he/she is still required to possess some technological knowledge, albeit at an abstract or intellectual level. Nonetheless, computers have had a great impact on acquisition processes in academic libraries in relation to electronic collection development in developed countries of Europe and America and in some developing countries globally, especially Nigeria (Jegade and Towolawi, 2010). Books-in-print (BIP) are now available not only on microfiche but online. In a similar vein, many Publishers' catalogues and bibliographies can be accessed via online computers (i.e. through the use of CD-ROM and Internet).

Results show that methods such as “use of Internet”, “provision of good Internet facilities”, “subscribing to electronic journals”, and “World Wide Web (WWW)” were the top four appropriate methods for facilitating Electronic Collection Development (ECD) among all the other identified appropriate methods. Rosenberg (2005) revealed that an adequate ICT infrastructure with a sufficient number of networked and Internet connected workstations is essential if a library is to offer access to e-resources and develop e-resources for effective ECD. Any Nigeria university library that affords to embrace a number of these appropriate methods of ECD will no doubt have access to publisher packages. The PERI (Programme for the Enhancement of Scientific Publications) programme offers access to over 14,000 journal titles from 11 publishers plus approximately 20 databases, with country licenses available in some African countries (Ethiopia, Ghana, Kenya, Malawi, Mozambique, Tanzania, Uganda, Zambia and Zimbabwe) (Rosenberg, 2005). Once these appropriate methods of facilitating ECD are put in place in Nigeria university libraries, university libraries in Nigeria will be able to access not only locally published materials but materials published elsewhere which the various university library users will find useful. Such materials will include what has been produced within Nigeria universities; such as theses and dissertations, research reports,

papers presented at conferences and journal articles written by members of the academic staff, as well as what has been more formally published.

Today, emerging technologies offer libraries new and efficient methods for performing ECD task (Adesoji et al., 2013). According to Jegede and Towolawi (2004), through some methods of ECD, electronic publishing is fast changing the role of librarians in building and acquiring library resources as well as providing access to such resources. The Internet and the World Wide Web (WWW) have expanded and made available resources that were unimagined in earlier years to be accessible in these present days without any difficulty.

Adequate collection development policy implies formulation of a collection development policy that will always establish ground rules for planning, budgeting, selecting and acquiring library materials (Vohra, 2003). These documents provide a framework for coordinated collection development programme throughout university libraries. A digital library tries to provide a seamless environment where the co-operative access, filtering, manipulation, generation, and preservation of these documents will be supported as a continuous cycle (Castelli, 2006). Collection development policies also function as a guide to library resources for faculties, library users and other libraries by describing the scope and nature of the collection. In any written collection development policy, the e-resources should be considered alongside printed resources, such as e-journals, books and databases.

Teleconferencing as an identified appropriate method of facilitating ECD in this study entails meeting through a telecommunications medium. It is more or less a generic term for linking people between two or more locations by electronics (Carla, 2014). Computer teleconference uses telephone lines to connect two or more computers and modems. Anything that can be done on a computer can be sent over the lines.

Results in Table 3 revealed that “inadequate funding”, “epileptic power supply” “automation at infancy level”, “lack of higher bandwidth in Internet connectivity” and

“poor access to materials for acquisition”, were among the identified factors that militate against ECD. Electronic collection development cannot be achieved in any university library without proper digital technology which revolves around Information and Communication Technology (ICT). The identified militating factors of ECD in this study are not different from the findings of Haliso (2011) who cited Hann (1995) and stated that organizational (e.g. inadequate existing ICT resources, lack of commitment by institutional management, lack of updated ICT strategy, lack of adequate budget/fund, erratic power supply etc), cultural (e.g. academic librarian reluctance to use ICT, difficulty in training the academic librarians/paraprofessionals etc), human factors (e.g. lack of ICT qualified staff/personnel, skill level of academic librarians etc) are key factors that can affect the use of ICTs in relation to electronic collection development.

Another scholar whose work or study supported the findings of this study is Chisenga (2004) who carried out a study on the use of ICT in ten Anglophone African public libraries. His findings reported that lack of funds, lack of qualified ICT personnel, erratic power supply led to the non-availability and under-use of ICT facilities resulting in low ECD standard. The verbal reports of the interviews from the three studied university libraries also revealed that low Internet bandwidth, poor funding, inability of most library staff to use computers and epileptic power supply were some of the factors militating against ECD in Nigerian university libraries. Okiy (2005) stated that lack of fund and lack of management support were among the factors that hinder the growth of ICTs in Nigerian university libraries which invariably will affect the state of electronic collection development. Still lending credence to the views of the library staff respondents from the three studied university libraries on the militating factors of ECD are Sani and Tihamiyu (2005) who pointed out that irregular power supply, librarians’ attitude towards the use of ICT and poor funding among others stood as militating factors towards ICT availability and use as well as adequate electronic collection development in Nigerian university libraries.

The lack of higher bandwidth in Internet connectivity as militating factor of ECD in this study is not unconnected with the funding problems academic libraries face today. Academic libraries in Federal and State universities receive little or no funds from the government. As long as academic libraries in Nigeria do not have adequate bandwidth in Internet connectivity, provision of good Internet services to their clientele will always be jeopardized and this will invariably affect electronic collection development.

Haliso (2011) stressed on the importance of Information and Communication Technologies (ICTs) in enhancing service provision to library clientele. Results in Table 7a revealed that in the opinion of the library staff respondents from the three studied university libraries, some of the strategies to be adopted to improve or enhance ECD in Nigerian university libraries include “provision of adequate funds”, “computerization/full automation of the university library”, “constant power supply”, “training of librarians and paraprofessionals in the use of modern ICT facilities” and “creation of higher Internet bandwidth for effective Internet connectivity” among others.

The responses of the respondents from the three studied university libraries on strategies to enhance ECD vis-a-vis the identified militating factors of ECD bother on provision of adequate funds, skill manpower or personnel, and ICT. ICT has impacted so much on every sphere of academic library activity, especially in the form of the library collection development (electronic collection development) strategies, library building and consortia (Krubu and Osawaru, 2011). Academic libraries should strive to be computerized and automated in order to carry out vital library functions. John Harris University library (UNIBEN) and Benson Idahosa University library (BUI) are automated and the kind of software they apply in computerization/automation process is Strategic Library Automation Management (SLAM) (Krubu and Osawaru, 2011). According to these authors, the automated sections/divisions of the two libraries that have received full automation were the Readers’ Service Division, Technical Service Division, and Collection Division. Any automated library system will not only provide fast and error free service but at the same time bring about increased efficiency (Chuene, 2000). Successful

automation projects have generally been dependent on external funding, which is sourced from many international funding agencies (Rosenberg, 2005).

Funding of university libraries was identified by the respondents from the three studied university libraries as a strategic measure in enhancing ECD. With adequate funding from both the state and Federal Government and some philanthropic organizations, appropriate hardware and software infrastructure would be procured to improve the much desired ECD. When academic libraries are adequately funded, militating factors of ECD such as automation at infancy level, lack of training facilities, lack of competent search skill on librarian at both strategic and operational level will be well addressed by the library management.

The interviewees from the three studied university libraries also stated that tackling erratic power supply, increasing the Internet bandwidth, forming a consortium where academic libraries will be able to pay and buy electronic resources/materials from the Internet, and provision of adequate funds to the library management for procurement of computers and other modern ICT equipment were some of the strategic measures of enhancing ECD in Nigerian university libraries.

Constant and uninterrupted power supply identified as a strategic measure of enhancing ECD in university libraries can be achieved through the help of the government. The government can do that by replacing obsolete power cables and transformers in and around power generating stations that supply electricity to universities in Nigeria. More so, the university management, through adequate fund provision to the library management should provide change over generators to power the libraries in situations of power outage on campus.

Training of librarians and paraprofessionals, sound administrative policies and guidelines and creation of higher Internet bandwidth were also identified as strategic measures of enhancing ECD in university libraries in Nigeria. According to Haliso (2011), training the academic librarians and other paraprofessionals to appropriate skills and use of Information and Communication Technologies is very vital. Training can come in many

forms but the most important and cost effective one is training on-the-job. Unless library management has sufficient fund to send their staff to the most advanced countries, it is always advisable to have in-house training policy.

Higher Internet bandwidth in Internet connectivity is a sure way of enhancing ECD in Nigerian university libraries as evidenced from the result of this study. Haliso (2011), did a study to show the availability of bandwidth for Internet services in academic libraries in Southwestern Nigeria. The finding from that study revealed that majority of the academic libraries (65.5%) did not have a separate bandwidth connection to provide Internet services to their clientele. This development can always be traced to poor funding of those universities. Once adequate funds are provided to the university library management, it will help to procure modern ICT facilities for efficient and progressive ECD.

Employing or training Electronic Collection Librarians (ECLs), Electronic Resource Officers (EROs) and engaging in some electronic resource activities such as troubleshooting were other identified strategic measures of enhancing ECD in this study. Electronic Collection Librarians and Electronic Resources Officers will be in a position to motivate other library staff in ensuring that there is that effective vendor relationships with producers and providers of e-resources. Troubleshooting is a form of problem solving, often applied to repair failed products or processes (Persson, 1982).

Recommendations

Arising from the findings and discussion of this study are the following recommendations.

1. Nigerian university libraries should strive and embrace electronic collection development practice especially in this era of Information and Communication Technology.

2. For university libraries to fair well in the business of electronic collection development, library staff that are not computer literate should take positive steps to remedy their deficiencies so as to adapt with the changing time of ICT.
3. Generous financial support should be made available to Nigerian university libraries by Federal/State Government and philanthropic organizations for effective ECD.
4. Every division of the Nigerian academic libraries should be automated in order to facilitate and create an avenue for effective services/ECD.
5. Academic libraries should provide enough desk top computers and laptops, connected to the Internet to serve the library users.
6. Effective and sufficient electricity power supply supplemented with standby generators should be provided to check the menace of frequent electricity power failure.
7. University libraries should increase their Internet bandwidth for easy Internet access.

Conclusion

In conclusion, it must be observed that Electronic Collection Development (ECD) is part of Information and Communication Technology (ICT) which university libraries in Nigeria have started embracing for better and efficient information storage and delivery. Through ICT/ECD, there is increased speed in some library operations services such as acquisition, cataloguing and classification, processing, storage, retrieval and dissemination operations.

With sound and efficient ECD in Nigerian university libraries, staff and students will have the opportunity to access desired information more easily. Again, university libraries in Nigeria will have the opportunity to link their users to electronic databases scattered all over the Internet world wide. Finally, as the world of information continues its march towards the electronic format, librarians who work in university and public

libraries need to treat electronic content like printed content by developing a set of standards to manage electronic collections.

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