

**PROBLEMS AND CHALLENGES OF DIGITAL COLLECTION
DEVELOPMENT IN UNIVERSITY LIBRARIES IN
AKWA-IBOM STATE, NIGERIA**

By

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ABSTRACT

The Study was conducted to evaluate the problems and challenges of digital collection development in University Libraries in Akwa-Ibom State of Nigeria. A validated structured questionnaire was utilized to collect information from subjects of the study. Survey research design was used in carrying out the study. A total of 58 members of University Library staff drawn from 3 universities in Akwalbom State took part in the study. The data collected was analyzed using tables and simple percentages. From the analysis of the data collected, it was found that Digital (ICT) technologies are readily available and members of staff indicated sufficient skills to use the technology. However, problems such as poor funding, erratic supply of electricity and system breakdown among others were identified as problems facing digital collection development. Among the challenges facing the exercise are; poor resource sharing arrangement and non-availability of compactible software, among others. It was recommended that University library should provide adequate funding for the use of digital technologies in collection development, improve the state of infrastructures, put in place a better resource sharing arrangement and utilize online shops as source of acquisition.

Keyword: Problems, Challenges, Digital collections, Development, University Libraries

Introduction

The library has become the nerve centre of the civilized society, and an important medium of continuing self-education. The Library is now seen as the sign and symbol of incentive to become dynamic and regarded as the rich springs from which knowledge flows out to irrigate the wide fields of education and culture. The establishment of more institution of learning has led to increase in the demand for more libraries. There arose the concept of collection development. The recent development in the field of information technology in particular has vastly influenced the concept of collection development and have brought in sweeping changes in information collection, storage and dissemination. Factors like information explosion, budgetary constraints, complex requirements of users, rising cost of publications and other related factors as well as development of digital libraries, internet, e-mail, CD-ROM, electronic publishing etc., have forced the libraries and librarians to change the style and approach of their functioning. Libraries have slowly started giving importance to "accessing the other Libraries collection" rather than mere possessing almost all documents on a given subject i.e., shifting from „owning“ to „access“ and „sharing“.

Collection development in libraries is tilting towards electronic documents and information sources using network facilities (Thornton, 2000). The trend of printed materials is decreasing and the need for accessing electronic information resources is increasing slowly day by day and the concept of collection development which implies building, growing, dealing with selection and acquisition of library materials is changing towards collection management.

Digital library initiatives at levels are contributing to the provision of access to legacy as well as current information in electronic format. Hence, it is expected that libraries will develop the required manpower to manage existing digital libraries and to further expand the digital library initiatives. Above all, library collection is the pool of achievements of the past preserved for the benefit of present and future generations. The digital documents with plenty of new attractive features as detailed below has brought about a revolution in our lives. The features of the 21st century information as highlighted by Satija, (2003) are:

- (a) High compact storage;
- (b) Ease of reproduction, multiplication and manipulation and transmutation;

- (c) Contents can be very easily detached from its media Or container;
- (d) Ease of migration of contents from one medium to another;
- (e) Ease of transmission, communication and storage;
- (f) Hypertext and multimedia;
- (g) Seamless integration of print and electronic resources;
- (h) Sophisticated and multipronged searches through keywords, free text, Boolean operators, lass numbers and natural languages processing; and
- (l) Convergence of technology, which is getting more powerful each day.

The unique features of digitization cannot be overemphasized; the potential to store much more information, the universal access, the cost implication, up-to-date collection, access to full-text materials and databases among others. However with all the features, collection process in some academic libraries are yet to utilize the technologies, the questions is, what are the factors responsible for this?

It is against this background that this paper sought to evaluate the problems and challenges facing digital collection development in in selected university libraries in Akwa-Ibom State, Nigeria.

Objectives of the study

The main objective of this research is to assess the Problems confronting digital collection development in University libraries, in Akwa-Ibom State Nigeria. Specifically, the study was carried out to:

- (i) Assess the availability of digital technologies (ICT) used in digital collection development in the University Libraries.
- (ii) Examine the various library services that are being carried out through the use of the digital technologies (ICTs)
- (iii) Identify problems that are confronting the deployment of digital technology for digital collection development, and
- (iv) Identify the challenges of digital collection development in the University libraries.

Literature Review

Collection as defined by the Webster Dictionary is a "publication containing a variety of works". However, in the connotations of library science, the term collection refers to book selection, library acquisition, building the collection and developing it (i.e. collection development). All these terms are used to describe the process of building a collection in the library, following certain canons and principles and to add library materials to the existing holdings of the library annually or periodically.

Law (1991) cited by Hunter and Day (2005), noted that collection development is a term that is used by the library community to refer to "the selection and acquisition of materials for an expanding collection and decisions on the materials to be included in that collection". Ifidon and Ifidon (2007) asserts that collection development is the systematic process of building a library's collection of information materials. Collection development is now viewed as being a part of the wider activity of collection management, which includes collection policy development, materials budget allocation, selection, collection analysis, collection use and user studies, training and organisation of collection development staff, preservation, and cooperative collection development (Hunter and Day (2005).

According to Guthrie and Housewright, (2011), the availability of new network services, such as digital content resources, a variety of new kinds of discovery tools, new services for information organization and use, and scholarly and pedagogical interaction and collaboration tools, have been the most important factors in motivating these changes. In the past, research writing was only relying on access to physical materials held in a library and locally implemented library-provided tools for discovery of these materials but today there are numerous alternative avenues for information discovery and libraries cannot afford to restrict its collections to the physical collections. This has led to a situation where libraries have to create access to information available online.

In a study conducted by Ameen (2009) to discover perceptions of university librarians regarding the needed competencies for collection managers in Pakistan in the emerging digital paradigm. The mixed-method approach was followed using a questionnaire and interview to collect data. The self-completion questionnaire was sent to central libraries of 40 major, accredited universities of Pakistan and 30 responses were obtained. Then, semi-structured interviews were conducted with 20 librarians using interview-guide. Interviews were transcribed to analyze and categorize

according to the thematic approach. The interpretation and comments of the interviewees have also been reported to strengthen the arguments. It was found that the university libraries of Pakistan are gradually adopting a digital paradigm and providing access to hybrid collections. But, collection managers would not perceive fully the competencies needed to manage hybrid collections. It also appeared that there were meager opportunities for university librarians to develop their competencies through regular and continuing education.

Bin, Feng and Miao (2005) posited that a large number of Chinese libraries keep some sort of electronic publications, mainly formal publications on CD-ROM and online, the usage is quite different from one library to another. While the hardcopy business process is mature, the rules and regularities of electronic publications in libraries are under development; many business models are on a trial basis. The paper investigated how many of these electronic materials should be bought and brought to the users, as well as how they should be used. The authors made an inquiry into the current status of formal electronic publications, including e-books and e-journals at the two major library groups: public and university libraries, as found out from the explanation of the gap by literature analysis and review. Nevertheless, the authors contended that the collection development of the library in the 21st century should therefore look beyond the acquisition of hard copies of books and journals to subscription to online databases such as HINARI, EBSCOHOST, AGORA, SCIENCEDIRECT, etc. The emphasis in collection development should shift from physical collections to access to variety of information sources. In this case a library may have few physical holdings but with access to online databases; the library can still offer effective information services.

According to Heidorn (2011) computers and telecommunications have revolutionized the methods for collecting, storing, analyzing, and disseminating information. It is therefore important that librarians in academic libraries look beyond the traditional systems of collection development. Ogogua, Emerole and Egwin (2007) posited that with the application of ICT in collection development there will be less emphasis on expanding library space as emphasis will be on paperless or electronic information services.

Mohsenzadeh and Isfandyari-Moghaddam (2009) conducted a study to define the status of the application of information technology in academic libraries in Kerman, Iran. Results showed that the level of application of information technology in Kerman academic libraries was acceptable, but

efforts should be made to improve their status to match with the ever-increasing demand for better library services at universities. The most important problem and serious difficulty according to them, was lack of educated librarians, which requires suitable investment and planning.

Ramzan and Singh (2009) equally investigated the levels of information technology in academic libraries across Pakistan and found a low level of IT availability, especially the absence of computers, e-mail and internet. It was revealed that the respondent libraries needed to be fully automated using standard library software. However, access to online resources was found to be extensive and comprehensive.

Haneefa (2007) carried out a study to examine the application of information and communication technologies (ICT) in special libraries in Kerala, India. The results indicated that library automation in special libraries in Kerala was largely commenced during 1990-2000. The author found out that CDS/ISIS was used more in libraries than any other software. The library catalogue was found to be the most popular area for automation. Most of the libraries were hampered by lack of funds, Lack of infrastructure, and lack of skilled professionals to embark on automation of all library management activities and application of ICT.

Alexander, Blumenthal, Downing, MacAdam, Rana, Reiman-Sendi, Scholtz, Sutcliffe (2011) noted that changing patterns of faculty and student information needs prompt libraries to continually examine their library services. In view of this, as users' needs are changing with the current realities of ICT, libraries all over the world have to revisit their collection development methods to reflect the integration of ICT in collection development in order to meet the ever rising current challenges of information provision. Whereas access in a print environment requires bringing the user and the book together physically in the same space at the same time, but through the marvel of electronic access, the content may reside anywhere in the world, all and the user needs are only a reading device and telecommunication tool. This wider flexible access provided by ICT has led to the increased demand for the application of ICT in collection development. Jones (2011) noted that a well planned ICT programme in collection development will result in a system that provides immediate patron-driven access to e-books. In addition, users will be able to find an e-book record in the library catalog as part of a standard search using their preferred search engine. With the use of digital technology or ICT in collection development, academic libraries can now engage in effective cooperation and consortium building. Cryer and Grigg (2011) defined

library consortia as associations that have been established to develop and implement resource sharing among participating members. Using ICT helps to make such cooperation very effective and this leads to a wider range of collections. Neal (2011) posited that cooperation is part of the professional DNA of libraries. This much needed consortium building is only possible in a situation where ICT has been duly deplored. (where digital collection development has been made operational).

The collection development process in University libraries can only survive in the 21st century if the changes brought about by ICT are duly integrated. ICTs are not only used in the collection development process but used in managing the collections especially the online collections. It has been established that with an increasingly digital environment, abundance is replacing scarcity; digital ubiquity is replacing physical locality.

Methods and procedures

Descriptive research design was used for this study. The study adopted a survey method in sampling and data collection. A survey is typically conducted to determine the present states of a given phenomenon (Ifidon and Ifidon, 2007). A validated questionnaire designed to address the objectives of the study was administered on purposively selected members of library staff from Universities in Akwa-Ibom State. The research instrument utilized was a likert four point rating scale that enable the subjects to indicate their views (RA=Readily Available, A= Available, NA=Not Available, and NRA = Not readily Available), or (SA= Strongly Agree, A=Agree, D-Disagree, and SD=Strongly Disagree) on each of the different issues raised. Two out of the three universities covered by the study were relatively new and smaller than the well-established federal University (University of Uyo). Two research assistants who were course mates and members of University Library staff from two of the Universities assisted the researcher in the collation of data. A total of fifty-eight (77%) out of the seventy five copies of questionnaire distributed were retrieved and found treatable. The data was analyzed using frequency tables and simple percentages.

Results

Information gathered from the subjects of the study revealed the availability of the following in the University libraries: Computers (72%); Scanners (78%); and spine labeling machine (81%) among others. They were reported to be readily available for collection development at the University libraries in Akwa –Ibom State Nigeria. Other ICT items such as telephone, internet connectivity and printers were equally available in the libraries.

Detailed information on availability of ICT from collection development in University libraries in Akwa-Ibom State are contained in table 1.

Table 1: Availability of ICT technologies for collection development

S/N	ICT Technologies	Readily available (%)	Available (%)	Not Available (%)	Not readily Available (%)
1	Computer	72	22	6	0
2	Printer	80	14	6	0
3	CD-ROM workstation	60	24	0	16
4	Telephone	64	20	10	6
5	Internet Connectivity	66	28	6	0
6	Spine Labeling Machine	81	18	16	6
7	Scanner	78	17	5	0

On the various aspects of services/programmes under digital collection development, the study revealed that; searching publishers catalogue (80%); Online Ordering (78%); Production of lists of books on order (81%); Bibliographic searching (55%) among others, were carried out through the use of ICTs in the Libraries. More information on the aspects of digital collection development where ICTs are used are contained in table 2.

TABLE 2: Aspects of collection development carried out with ICT Technologies

S/N	Activity	Strong agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)
1	Online Ordering of Materials	78	17	5	0
2	Checking publishers Catalogues	80	21	3	0
3	Online payment	40	35	22	3
4	Subscription to Electronic Journals	52	38	6	4
5	Correspondence with suppliers	60	35	5	0
6	Monitoring/tracking the progress of books on order	55	45	0	0
7	Bibliography searching	58	39	3	0
8	Online acquisition	69	15	12	4
9	Production of lists of books -on-order	81	19	0	0
10	Invoice clearing	54	36	10	0
11	Acquisition record keeping	72	22	6	0

While responding to the identification of the various problems confronting digital collection development in University libraries in Akwa-Ibom State, majority of the subjects for the study (94%) identified lack of funds to implement. Other problems identified by the subject include: Lack of suitable working environment (88%), Technological know-how (84%) and erratic supply of electricity (100%). Additional information on the problems confronting digital collection development are contained in table 3:

Table 3: Problems confronting digital collection development in the Libraries

S/N	Items	Strong Agree %	Agree (%)	Disagree (%)	Strongly Disagree (%)
1	Lack of funds to implement	76	18	6	0
2	System/Application Failure	74	14	10	2
3	Cost of staff training	80	10	7	3
4	Non-availability of Application Softwares	27	31	29	13
5	Technical Know-how	69	15	12	4
6	Lack of suitable working environment	76	16	6	2
7	Cost of maintenance	78	17	5	0
8	Erratic supply of Electricity	81	19	0	0

Among the challenges facing the subjects of the study in respect of digital collection development are: problems of internet connection (70%), frequent computer breakdown (88%), inadequate funding of ICT (94%), and irregular power (electricity) supply (100%). It is however interesting to note that majority of the subjects of the study (84%) have adequate ICT skills, while seventy percent (70%) of them no longer support manual acquisition procedure. More details on the challenges facing collection development through the use of ICT are contained in table 4.

TABLE 4: Challenges facing the use of ICT in collection development

S/N	Variables	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly disagree (%)
1	My ICT skill is not enough	4	12	15	69
2	Manual system of acquisition is better than the use of Digital technology (ICT)	20	10	7	63
3	The ICT needed for collection development are not accessible	12	8	18	62
4	Technical Problems always occur	10	15	28	47
5	Internet connection has remained a serious problem	54	16	8	22
6	Some of the software are not available	28	16	6	50
7	Power supply has remained irregular always	80	20	0	0
8	There is problem of frequent system breakdown	70	18	10	2
9	The funding for collection development has remained inadequate	78	16	6	0
10	Resource-sharing arrangement is good	6	2	17	75

Discussion

Digital libraries were seen essentially as repositories of digital texts accessible through a search service that operates by indexing information stores in a centralized metadata catalogue. The construction of digital library is highly resource-consuming since for each new digital library, both the content and software providing the digital library functionality require been built from the scratch. Digitization can effectively be better understood when viewed as appropriate deployment of ICT technologies into providing services that are carried out by the academic libraries. The ICT technologies under focus include computers, internet connectivity, telephone, and scanner among others. Therefore, availability and functionality of these technologies are basic and fundamental materials required for successful digital collection development.

The study revealed that most of the aspect of ICT technologies required for digital collection development in University libraries in Akwa- Ibom state of Nigeria are readily available. Items such as computers, printers, CD-ROM workstation, telephone and printers among others are available in the libraries. However, problems such as erratic electricity supply, lack of funds to implement, system/application failure, technical know-how, and cost of maintenance are well pronounced and seriously militating against effective

digital collection development in the institutions. Curiously however, the study established that services such as: checking publishers, catalogue; bibliographic searching; online acquisition, electronic journal subscription; invoice clearing; and ordering are carried out with the use of ICT technologies. It can therefore be inferred that the level of such services can only be rudimentary in view of the aforementioned problems identified. Resource sharing arrangement put in place was report as not good enough.

Additionally, the study revealed that various challenges facing digital collection development from the point of view of trained manpower and experts are relatively minimal. Majority of the subjects agreed that manual approach to collection development is not as good as the digital approach. They equally confirmed that they possess sufficient skills to utilize the ICT technologies. However, challenges of irregular power supply, funding for collection development, systems breakdown and poor internet connections are the major ones confronting digital collection development in University libraries in Akwa-Ibom State of Nigeria.

Conclusion

Based on the findings of this study the following conclusions are drawn: ICT technologies are readily available for collection development in the University libraries in the state. Some of the available ICTs are computers, internet, printers, telephone, spine labeling etc. These ICTs are used for carrying out different aspect of collection development such as; Bibliographic searching, online ordering, checking publishers catalogue and correspondence with supplier among others in the libraries. Among the problems and challenges facing digital collection development in the University Libraries in Akwalbom State of Nigeria are; poor funding, irregular supply of electricity, poor access to the internet and system breakdown. Additionally, the study revealed that members of staff are facing challenges such as non-availability of relevant software, poor resource sharing arrangement and poor technical know how

Recommendations

Based on the conclusion of this study, the following recommendations are made;

1. Collection development should be given a priority of place because it remains a crucial factor in determining the effectiveness of the library system.
2. The funding of ICT (Digital technologies) in collection development in University libraries should be improved upon, if the libraries are to

participate effectively in the acquisition and dissemination of information resources in the 21st century.

3. University libraries should provide supporting infrastructure for the use of ICT. Incessant power outages will equally aggravate the condition of the ICT technologies made available, it is therefore important for the library to make provision for stand-by power generators.
4. Resource sharing arrangement should be made better and more functional because it will lead to a wider range of collections.

REFERENCES.

- Alexander, L., Blumenthal, J., Downing, K., MacAdam, B., Rana, G.K., Reiman-Sendi, K., Scholtz, N. & Sutch, L.A. (2011). Library: concepts for redefining reference. *Journal of Library Administration*, 51, 326–342.
- Ameen, K. (2009) Needed competencies for collection managers and their development. *Library Management* 30 (4&5), 2009 266-275 Emerald Group Publishing Limited.
- Bearman, D. (2007), Digital libraries. *Annual Review of Information Science and Technology*, 41 (1), 223-72.
- Behera, J.K. & Singh, S.P. (2011). Problems and challenges of collection development of Indian libraries in digital era: an assessment. *Journal of Arts Science & Commerce*, 2(1), 133-143. Available at www.researchersworld.com
- Bhatt RK and Singh K P (2004) Digital libraries: emergence features, challenges and opportunities.
- Bin, Feng. and Miao, Qihao. (2005) Electronic publications for Chinese public libraries: challenges and opportunities. *The Electronic Library*. 23 (2), 181-188
- Cryer, E. & Grigg, K.S. (2011). Consortia and journal package renewal: evolving trends in the “big package deal” *Journal of Electronic Resources in Medical Libraries*, 8(1), 22-34. Retrieved 26th August 2015 from <http://dx.doi.org/10.1080/15424065.2011.551488>
- Elisha, M.J. (2006). The application of information and communication technologies (ICT) in Nigerian academic libraries: prospects and problems. *The Information Manager*, 16(1&2), 35-39.
- Guthrie, K. & Housewright, R. (2011). Repackaging the library: what do faculty think? *Journal of library administration*, 51, 77–104.
- Heidorn, P.B. (2011). The emerging role of libraries in data curation and e-science. *Journal of Library Administration*, 51, 662–672.
- Hunter, P & Day, M. (2005). Institutional repositories, aggregator services and collection development ePrints UK supporting study. 2. Retrieved 26th Sept., 2015 from <http://www.ukoln.ac.uk/>

- Ifidon, S.E. & Ifidon, E.I. (2007). *Basic principles of research methods*. Benin: Goodnews Express.
- Ifidon, S.E. (2006). *Modern theory and practice of library collection development*. Benin: Justice Jeco Press
- Jones, D. (2011). On-demand information delivery: integration of patron-driven acquisition into a comprehensive information delivery system. *Journal of Library Administration*, 51, 764–776.
- Kavitha, R. (2009) "Collection development in digital libraries: trends and problems" *Indian Journal of Science and Technology*, 2 (12)
- Law, D. (1991). *The organization of collection management in academic libraries*. In: Jenkins, C., & Morley, M. (eds.), *Collection management in libraries*. Aldershot: Gower, 1-20.
- Neal, J.G. (2011). Advancing from kumbaya to radical collaboration: redefining the future research library. *Journal of Library Administration*, 51:66–76
- Nwalo, K. I. N. (2000). Managing Information for Development in the 21st Century: prospects for African libraries, challenges to the world.. IFLA Jerusalem, 8, 14. Retrieved from www.ifla.org. On 12th June, 2014.
- Ogugua, J.C., Emerole, N.E & Egwin, F.C. (2007). Virtual library in Nigerian universities: averitable tool for research, teaching and learning. *Communicate: Journal of Library and Information Science*. 7(1).37-47.
- Satija MP (2003) Digital information systems and services. *Laslic Bull.* 48 (1), 10-13.
- Thornton, G. A. (2000) Impact of Impact of Electronic Resources on Collection Development, the Roles of Librarians, and Library Consortia Cleve-land, *Library Trends*, 48, (4) 842-856
- Heery, R. (2000), Information gateways: collaboration on content. *Online Information Review*, 24,(1) 40-45.
- McCarthy, J.P. (2005) "The print block and the digital cylinder" *Library Management* 26 (1&2), 89-96
- Jordan, J. (2011). Climbing out of the box and into the cloud: building web scale for libraries. *Journal of Library Administration*, 51, 3–17.