# Assessment of Bibliographic Control Practices Available and Adopted By the National Library of Nigeria in the Digital Age

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## Abstract

*The study investigated the bibliographic control practices available and adopted by the National Library of Nigeria (NLN) in the digital age. Three objectives and one hypothesis guided the study. Descriptive survey design was adopted for the study.* The population of the study was 736 staff of the National Library of Nigeria. *The sample size was 178 comprising staff in the five departments purposively selected. The sampling technique used comprised a combination of purposive sampling and complete census of the sampled size. Structured questionnaire and checklist were the instruments used for data collection. Descriptive and inferential statistics, using mean and standard deviation, were the methods adopted for data analysis, while simple percentage was used for the checklist. The findings revealed that majority of the bibliographic control practices studied, 29 (65.9%) were available, while 15 (34.1%) were not available. In addition, out of the 14 items studied on ICT tools available for effective bibliographic control practices, 11 (78.6%) were available, while 3 (21.4%) were not available. The findings also revealed that the NLN highly adopts bibliographic control practices, with a cluster mean of 2.69 (.85. The hypothesis tested at 0.05 level of significance, using ANOVA showed f-value of .153, which indicated that there is no significant difference in the mean responses of the three categories of respondents on the bibliographic control practices adopted in the NLN. The study made some recommendations and concluded that it is imperative for the NLN to improve on her bibliographic control practices by making it to be ICT driven. This will enhance her effectiveness in providing adequate access to Nigeria's national intellectual output and contribute effectively to universal bibliographic control as well as universal availability of publications.*

**Keywords:** **Bibliographic control, Practices, Available, Adopted, National Library of Nigeria, Digital age.**

## 1. Introduction

Bibliographic control is a term that 'encompasses all the activities involved in creating, organising, managing, and maintaining the file of bibliographic records representing the items held in a library or archival collection or the sources listed in an index or database to facilitate access to the information contained in them' (Reitz, 2004 and Pandey, 2015). Bibliographic control practices involve all the activities carried out by bibliographic agencies to ensure adequate and comprehensive collection or acquisition, organisation, management, preservation of information resources, and also creating means of availability, accessibility and utilization of such information resources. This is consequent upon the understanding that information resources are valueless if users are not aware of their availability and thereby stimulate their accessibility and utilization. Bibliographic control practices therefore facilitate easy accessibility and utilization of information resources.

The bibliographic control practices of bibliographic agencies according to Akidi (2017), include collection of legal deposit, cataloguing and classification of information resources, maintenance of cataloguing standards, compilation and production of national bibliography, indexing and abstracting services. Others include, production of bibliographic tools, establishment and maintenance of authority files, compilation and maintenance of national union catalogue of monographs and serials, and maintenance of publishing standards. Bibliographic control practices in the digital age can also be viewed as one of the avenues of bridging the digital divide between the information rich and information poor countries and engendering an information and knowledge society.

National Library of Nigeria is the bibliographic agency of the country and is responsible for bibliographic control practices in Nigeria. The Agency therefore ensures availability and adoption of bibliographic control practices among others, so as to remain relevant in bibliographic control network. Omolayole (2003), in corroboration noted that the National Library of Nigeria by her statutory functions is charged with the responsibility of bibliographic control thereby being responsible for the development of the national bibliography of Nigeria and national bibliographic services either in a national bibliographical centre or elsewhere. Lasisi and Oyelude (2013) opined that the National Library of Nigeria plays a vital role in the bibliographic control of the country's intellectual output, and therefore established infrastructures to enhance effective national bibliographic control practices.

Digital age is the era noted for extensive use of computer, as the exponential growth of literature, which could be best described as getting beyond the control of the manual system by man, require the use of machine. According to Idea Group Inc (IGI) Global (2015), digital age is the present development epoch in which economic, social and political activities or processes are driven by application of information and communication technologies. It is therefore expected that bibliographic control practices in this era will involve application of information and communication technologies to the practices.

Adoption in the context of this study refers to implementation of bibliographic control practices. As bibliographic control practices are statutory obligations of bibliographic control agencies, its level of implementation may vary from country to country owing to peculiar circumstances. Thus, it is imperative to investigate the adoption of bibliographic control practices by the Nigerian bibliographic Agency in order to ascertain the level of implementation of these practices, and also find out if the digital era has any significant impact in the practices of the apex library. This quest is also borne out of the acknowledgement of the exponential growth of literature and the demand for greater comprehensiveness, standardization of bibliographic records and control of same. The preponderant and ubiquitous

information resources brought about by the digital age require bibliographic agencies to effectively adopt standards that ensure comprehensive collection, management and control of information resources. It equally requires ensuring compatibility of the adopted standards so as to ensure universal availability and access, which the digital age provides opportunity.

Furthermore, there have been controversies over whether National Library of Nigeria has lived up to expectations in producing the desired result in her efforts in bibliographic control; and whether the scope, or degree of the apex library's effectiveness in carrying out the bibliographic control practices is measuring up to expectations and standards. However, although the National Library of Nigeria, according to Lasisi and Oyelude (2013), has established infrastructures to enhance effective national bibliographic control, authors have argued that the National Library of Nigeria does not effectively carry out her bibliographic control practices, which could be attested to by assessing the bibliographic control practices adopted by the National Library of Nigeria in this digital age, with emphasis on the availability and adoption of these practices.

## 1.1. Research Objectives

The following objectives guided the study:

1. To ascertain the bibliographic control practices available in the National Library of Nigeria in the digital age;
2. To identify the ICT tools available in the National Library of Nigeria for effective bibliographic control practices in the digital age? and
3. To determine the bibliographic control practices adopted by the National Library of Nigeria in the digital age.

## 1.2. Hypothesis

One null hypothesis was adopted for the study and tested at 0.05 level of significance:

$HO_1$: There is no significant difference in the professionals, para-professionals and non-professionals (support staff) mean ratings on bibliographic control practices adopted by the National Library of Nigeria in the digital age.

## 1.3. Review of Related Literature

Bibliographic control practices in the digital age have a lot to offer in information availability, accessibility and utilization, which are fundamental in any bibliographic control

effort. This is buttressed by the Australian Library and Information Association (2014), which stressed that "getting information from the internet is like trying to drink from a fire hydrant''. The author further stated that librarians are therefore ''the people who filter information down to a manageable flow; and that the future for libraries is exciting and vibrant with endless opportunities shaped by changing technology'' (p.79). The digital age offers opportunities and tools to enhance bibliographic control of information resources, so as to enhance their easy identification, accessibility and utilization. Technological developments have also ensured automatic access by individuals to information resources through computer networks, thereby making users rarely use libraries since the digital age has offered alternatives. Cabonero and Dolendo (2013) averred that information resources are useless when access is not provided, and access can only be provided when there is availability. Thus, bibliographic control practices adopted in the digital age can be viewed fundamentally within the concepts of legal deposit of print and electronic resources, which ensure wide availability; cataloguing and classification (including adopting the use of e-tools), which guarantees faster processing and easy accessibility; regular production of national bibliography; compilation of online national union catalogue, and maintenance of publishing standards, among others.

Lariviere (2000) averred that the emergence of information technologies as means of publishing and or disseminating recorded knowledge makes it necessary for legal deposit legislation to ensure that the original objective of recording, preserving and making available the content of the resources deposited is maintained despite technical, organisational and legal issues related to electronic resources owing to their complexity. Consequently, in the digital age, the fundamental issue for consideration is the definition of the resources to deposit, which Lariviere emphasized, must be as comprehensive as possible in order to ensure that electronic resources are covered in spite of the kind of carrier. He therefore listed the two major categories of e-resources as offline or tangible publications, made available on a physical data carrier like CD-ROMs, and diskettes, and which should be deposited along with allied software manuals and accompanying material required to enhance its use. The other category, which is the online resource, is a unique copy stored in a computer host system or internet. It includes e-journals, 'multi-media resources accessed online and e-books ordered only from a master copy available from the publisher's database' (p.4).

Iwuji (2000) study on survey of bibliographic control in Nigeria revealed lapses in bibliographic apparatus, as legal deposit provisions are adequate but the law is poorly managed by the NLN; Nigerian publishers do not make proper inventory of their products, resulting in lack of adequate publicity of Nigerian publication output; and national bibliography of Nigeria (NBN) is not current and comprehensive. Kakpor (2011) study revealed that the National

Library of Nigeria had made some efforts at achieving bibliographic control of non-print information resources by adopting some strategies, which according to the him, have been evaluated to be ineffective. Vijayakumar, Hosamani and Murthy (2003) study on 'Bibliographic control of Indian PhD Theses: INFLIBNET's contribution', revealed that Indian universities have been major contributors to the generation and dissemination of knowledge within and outside India with an estimate of "nearly 8000-10,000" PhD theses produced by Indian Universities. Consequently, INFLIBNET has made effort to collect, organize and make them available over the network. The study also revealed that the INFLIBNET is developing bibliographic databases of books, and serials available in Indian Universities, and non-bibliographic databases of Indian projects and experts in various fields; making all the databases accessible through their website http:// www.inflibnet.ac.in.  This study is a wakeup call to the National Library of Nigeria to improve on her bibliographic control practices.

Cataloguing, which is one of the bibliographic control practices is an important process that provides easy access to all acquired information resources of the library, as it provides a mechanism that allows people to find information needed. It also provides access points to information resources in the library. This practice is important in this digital age as Calhoun in Cerbo 11 (2011) noted that "Today, a large and growing number of students and scholars routinely bypass library catalogue in favour of other discovery tools, and that the library catalogue represents a shrinking proportion of the universe of scholarly information' (p.1). Thus, Gorman in Cerbo 11 (2011) viewed the digital age as a great opportunity for cataloguers, with the library of the future having an integrated catalogue into all facets of its programs and practices. Thus, Burman (2007) study reported that many libraries and particularly in their cataloguing practices, being grossly affected by dwindling budgets and increasing services and technology demands over the years, have resorted to adoption of business approach measures to catalogue additional library resources (backlogs), which among others involve outsourcing.

Nwosu (2014) study further revealed that cataloguers are facing, and will continue to face, new technical challenges in this 21st century, which involve understanding of metadata schemas, machine readable catalogue (MARC), and the implementation of Resource Description and Access (RDA), among others. These require working knowledge of such technical challenges, as online cataloguing and classification on the web have improved cataloguers' work output, and made library resources to be processed faster with appropriate software. Thus, computerization of cataloguing and classification practices becomes a necessity for all libraries, especially bibliographic control agencies. In addition, as cataloguing tools are regularly updated, cataloguers are required to update their skills and knowledge so as to keep abreast of the innovations in their practices. Furthermore, Marcum in Akidi (2017)

revealed that cataloguing practice is expected to advance from that of "creating MARC records" to something more parallel to "creating metadata in different environments''.

Nwalo (2006) revealed major phases of computerization of subject cataloguing, which include: CIP data copying, online cataloguing, cataloguing on the web, and searching thesaurus, as a number of thesauri are available on the web for subject cataloguing, with terms of availability involving payment of subscription fee. The digital age according to Akidi (2017), also calls for the cataloguing community, especially in bibliographic agencies to adopt Resource Description and Access (RDA), which replaces the Anglo-American Cataloguing Rules 2nd ed. (AACR2). Cerbo 11 (2011) reported that RDA is designed to improve flexibility in rules for dealing with the changing landscape in resource description and access, and thereby provide the user with accurate and usable records in order to ensure that the resources that are sought are actually found.

National Bibliography of Nigeria 2012 Edition (2014) reported that the National Library of Nigeria engages in sales of printed catalogue cards and Machine-Readable Catalogue (MARC) to ensure effective universal bibliographic control and universal availability of publications, and also develops, maintains and sustains Online National Union Catalogue; and creates a databank of national bibliographic control services to facilitate resource sharing and free flow of information. The author also revealed that the practices involve providing indexing services, indexes indigenous literature like journals and newspapers; creates and maintains the database of indexes; ensures compatibility of indexes nationally and globally; and periodically evaluates the database. However, the extent these practices are carried out in this digital age is not certain.

Effective bibliographic control practices boost resource sharing and networking among bibliographic agencies, and guarantee universal availability of information resources to the general public and global community. Nwalo (2013) maintained that universal access to information is geared towards meeting the information needs of users, which is enhanced by rapid developments in information and communication technologies. Thus, application of ICT to bibliographic control practices will ensure national and universal access to information. However, Okoroafor (2013) study revealed that most of the resources allocated for ICT application in the National Library of Nigeria are available but not functional, and that the extent of application of ICT is low. In addition, Akintude (2013) study revealed the National Library of Nigeria lacks adequate bandwidth, whereas the institution as a bibliographic agency and hub of national union catalogue deserves a priority status in allocation of bandwidth by the Federal government in order to improve bibliographic control practices.

## 2. Methodology

The study adopted descriptive survey design. The population of the study was 736 staff of the National Library of Nigeria. However, the study purposively selected five departments charged with the responsibility of bibliographic control at the NLN. This gave rise to a further breakdown of the population to arrive at 178, which was totally sampled. This gave a sample size of 178. Consequently, the sampling technique used for the study involved purposive sampling of five professional departments, and total enumeration. The respondents include professionals, para-professionals and non-professional/support staff. Instruments for data collection consisted of a researcher made questionnaire, comprising 30 items and observation checklist, comprising 44 items. The instruments were validated by two experts in Library and Information Science and an expert in Measurement and Evaluation, Faculty of Education, University of Nigeria, Nsukka. The reliability of the questionnaire was trial-tested on 15 staff of the Enugu State Branch of the National Library of Nigeria, using Cronbach Alpha reliability method to ascertain the internal consistency. The result however, showed a correlation of 0.86, which indicated that the instrument was suitable for the study. Thereafter, I78 copies of the questionnaire were distributed, but 162 copies were returned, giving 91% response rate. The data collected were analysed using a combination of descriptive and inferential statistics, involving mean and standard deviation. The mean scores were ranked. Real limit of numbers was used in decision making, which presents that mean scores of 1.00-1.49 denotes Not Adopted (NA); 1.50-2.49 denotes Less Adopted (LA); 2.50-3.49 denotes Highly Adopted (HA); and 3.50-4.00 denotes Very Highly Adopted (VHA). Furthermore, the null hypothesis adopted for the study was tested at 0.05 level of significance using analysis of variance (ANOVA). The decision rule was to reject the null hypotheses when $p < 0.05$, and to accept the alternative hypothesis. Data collected from observation checklist was analysed using tables and percentages, with Available (A) and Not Available (NA) as parameters.

## 3.    Presentation of Results and Discussion of Findings

**Table 1: Statistical Distribution of Questionnaire**

| Category of Staff | Questionnaire Distributed | Questionnaire Returned | Percentage Response |
|---|---|---|---|
| **Professionals** | 76 | 76 | 42.7% |
| **Para-professionals** | 11 | 08 | 4.5% |
| **Support Staff/ Non-professionals** | 91 | 78 | 43.8% |
| **Total** | 178 | 162 | 91% |

Table 1 presents the statistical distribution of the questionnaire administered for the study. The results indicate that 178 copies of questionnaire were distributed, and that the categories of respondents used comprised professionals, para-professionals and support staff/non-professionals. Out of the 178 copies of questionnaire distributed, seventy-six (76) copies, 42.7% were given to professionals; eight (8) copies, 4.5% were given to para-professionals; while seventy-eight (78) copies, 43.8% were given to non-professionals / support staff of the National Library of Nigeria, Abuja Headquarters. The table also portrays that a total of 162 copies were returned, giving 91% response rate.

**Research Question 1: What are the bibliographic control practices available in the National Library of Nigeria in the digital age?**

**Table 2: Bibliographic control practices available in the National Library of Nigeria in the digital age**

| S/N | Item Statements | A | NA |
|---|---|---|---|
| 1 | Collection of legal deposit of books | √ | - |
| 2 | Collection of legal deposit of serials | √ | |
| 3 | Collection of legal deposit of government publications | √ | |
| 4 | Collection of legal deposit of electronic books (e-books) | - | √ |
| 5 | Collection of legal deposit electronic serials (e-serials) | √ | - |
| 6 | Collection of legal deposit of theses and dissertations | - | √ |
| 7 | Establishment of effective clerical routine of registration and receipt of legal deposit materials | √ | - |
| 8 | Checking records and following-up publishers and authors that did not deposit complete copies or did not deposit at all. | √ | - |
| 9 | Ensuring effective utilization of published information resources | √ | - |
| 10 | Maintaining periodic legal deposit drive to ensure timely delivery of the publications | √ | - |
| 11 | Assignment of international standard book number (ISBN) and international standard serial number (ISSN) to books and serials (print and electronic) | √ | - |
| 12 | Providing enlightenment campaign on legal deposit obligations during ISBN/ISSN assignment | √ | - |
| 13 | Distribution of national bibliography to allied institutions | √ | - |
| 14 | Establishment, compilation and maintenance of authority files for authors and subjects listed in the NBN | √ | - |
| 15 | Providing sensitization programmes for the stakeholders like publishers and authors. | √ | - |
| 16 | Cataloguing and classification of information resources | √ | |
| 17 | Maintenance of cataloguing standards in the country | √ | - |
| 18 | Use of Anglo-American Cataloguing Rules, 2nd ed. (AACR2) | √ | - |
| 19 | Subscribing to e-LC for classification of information resources | - | √ |
| 20 | Subscribing to web Dewey for classification of information resources | - | √ |
| 21 | Application of ICT to all bibliographic control functions | - | √ |
| 22 | Producing NBN on annual basis | √ | - |
| 23 | NBN is regularly published | √ | - |
| 24 | NBN is up-to-date | - | √ |
| 25 | Timely production of NBN | - | √ |
| 26 | Producing supplementary editions of NBN | √ | - |
| 27 | Having NBN in print and CD-ROM formats | √ | - |
| 28 | Ensures wide distribution of NBN to libraries | - | √ |
| 29 | NBN is hosted in the national library Website | - | √ |
| 30 | Abstracting services are carried out by the NLN | √ | - |
| 31 | NLN adopts automated indexing | - | √ |
| 32 | NLN adopts manual indexing in the digital age | √ | - |
| 33 | Maintenance of publishing standards | √ | - |
| 34 | Produces bibliographic tools like catalogues, indexes and abstracts | √ | - |
| 35 | Creating online public access catalogue (OPAC) | - | √ |
| 36 | Ensuring resource sharing via distribution of machine-readable catalogues (MARC) | - | √ |
| 37 | Implementation of IFLA and UNESCO programme for universal bibliographic control (UBC) and universal availability of publications (UAP) | √ | - |
| 38 | Conversion of 10-digit ISBNs to 13-digit. | √ | - |
| 39 | Preparation of cataloguing-in-publication (CIP) data | √ | - |
| 40 | Compilation of national union catalogue of monographs and serials | √ | - |

| 41 | Maintenance of national union catalogue of monographs and serials | - | √ |
|----|-------------------------------------------------------------------|---|---|
| 42 | Conversion of national union catalogue (NUC) from analog to digital | - | √ |
| 43 | Maintains database of the participating libraries in NUC programme | √ | - |
| 44 | Use of Resource Description and Access for cataloguing information resources | - | √ |
| | **Total** | **29(65.9%)** | **15(34.1%)** |

Table 2 presents the bibliographic control practices available in the National Library of Nigeria in the digital age. The Table shows that out of the forty-four (44) bibliographic control practices studied, an aggregate of 29(65.9%) are available, while 15 (34.1%) are not available. The practices available include, collection of legal deposit of books, collection of legal deposit of serials, collection of legal deposit of government publications, collection of legal deposit of electronic serials (e-serials), establishment of effective clerical routine of registration and receipt of legal deposit materials, checking records and following-up publishers and authors that did not deposit complete copies or did not deposit at all, ensuring effective utilization of published information resources, maintaining periodic legal deposit drive to ensure timely delivery of the publications, assignment of international standard book number (ISBN) and international standard serial number (ISSN) to books and serials (print/electronic), providing enlightenment campaign on legal deposit obligations during ISBN/ISSN assignment, distribution of national bibliography to allied institutions, establishment, compilation and maintenance of authority files for authors and subjects listed in the NBN, providing sensitization programmes for the stakeholders like publishers and authors, cataloguing and classification of information resources, maintenance of cataloguing standards in the country, use of Anglo-American Cataloguing Rule 2nd ed., producing NBN on annual basis, NBN is regularly published, producing supplementary editions of NBN, having NBN in print and CD-ROM format, and abstracting services are carried out by the NLN.

Other practices available include, NLN adopts manual indexing in the digital age, maintenance of publishing standards, produces bibliographic tools like catalogues, indexes and abstracts, implementation of IFLA and UNESCO programme for universal bibliographic control (UBC) and universal availability of publications (UAP), conversion of 10-digit ISBNs to 13-digit, preparation of cataloguing-in-publication (CIP) data, compilation of national union catalogue (NUC) of monographs and serials, and maintains database of the participating libraries in NUC programme.

The findings are supported by Nwosu (2013) study which revealed that each country takes the responsibility of bibliographic control of her intellectual output, which requires the availability of the afore-mentioned practices. They are also in line with Nwosu (2013) study, which reported that the instrument of bibliographic control includes most of the items in the bibliographic control practices. The findings are equally supported by Lasisi and Oyelude

(2013) who maintained that the National Library of Nigeria has established infrastructures to enhance effective national bibliographic control.

However, the findings revealed the non-availability of the following bibliographic control practices: collection of legal deposit of electronic books (e-books), collection of legal deposit of theses and dissertations, subscribing to e-LC for classification of information resources, subscribing to web Dewey for classification of information resources, application of ICT to all bibliographic control functions, NBN is up-to-date, and timely production of NBN. The findings revealed that though NBN is published regularly on annual basis as demanded by the guideline, it is neither timely published nor up-to-date, as editions of NBN do not reflect being published the exact year, which denies it the attribute of timeliness. Other practices not available include, ensures wide distribution of NBN to libraries, NBN is hosted in the National Library of Nigeria website, NLN adopts automated indexing, creating online public access catalogue (OPAC), and ensuring resource sharing via distribution of machine-readable catalogues (MARC), maintenance of national union catalogue of monographs and serials, and use of Resource Description and Access for cataloguing information resources. The findings could be attributed to lack of application of ICT to most bibliographic control functions. The findings are also in conformity with Okoroafor (2013) study, which revealed that the extent of application of ICT is low in the National Library of Nigeria (NLN), as some of the ICT infrastructures are available but not functional.

**Research Question 2: What are the ICT tools available for effective bibliographic control practices in the digital age?**

Table 3: ICT Tools Available for Effective Bibliographic Control Practices in the Digital Age

| S/N | Items | A | NA |
|---|---|---|---|
| 1 | Computers | √ | - |
| 2 | Internet connectivity | √ | - |
| 3 | Adequate bandwidth | - | √ |
| 4 | Network Facilities (like sever, modem) | √ | - |
| 5 | Online Databases | √ | - |
| 6 | Machine Readable Catalogue (MARC) for data /resource sharing | - | √ |
| 7 | Printers | √ | - |
| 8 | Scanners | √ | - |
| 9 | CD-ROM Technology | √ | - |
| 10 | Online Public Access Catalogue | - | √ |
| 11 | Library Software Packages like CDS/ISIS, DSpace, Liberty 3 | √ | - |
| 12 | Local Area Network | √ | - |
| 13 | Wide Area Network | √ | - |
| 14 | Website | √ | - |
| | Total | **11(78.6%)** | **3(21.4%)** |

*Key: A= Available; NA= Not Available*

Table 3 shows ICT tools available for effective bibliographic control practices in the digital age. The result reveals the availability of majority of the items studied, which include computers, internet connectivity, network facilities, online databases, printers, scanners, CD-ROM technology, library software packages, local area network, wide area network and website, with an aggregate of 11(78.6%). However, only 3 (21.4%) of the items studied were not available, which include adequate bandwidth, Machine readable catalogue records for data/ resource sharing, and online public access catalogue (OPAC).

The finding on available ICT tools indicates the preparedness of the bibliographic control agency to provide effective bibliographic control practices, though in contrast with Okoroafor (2013)'s study, which recorded that the extent of application of ICT is low owing to the challenges of lack of OPAC, MARC, and inadequate bandwidth. However, lack of adequate bandwidth supports Akintude (2013) study, which revealed inadequate bandwidth and therefore recommended priority status in allocation of bandwidth by the Federal government, in order to improve National Library of Nigeria's bibliographic control practices.

**Research Question 3: What are the bibliographic control practices adopted by the National Library of Nigeria (NLN) in the digital age?**

Table 4: Mean Responses of Respondents on the bibliographic control practices adopted by the NLN in the digital age

| S/N | Item Statement | Status | | | | | | Overall | | R | D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | P | | PP | | NP | | | | | |
| | | Mean | SD | Mean | SD | Mean | SD | Mean | SD | | |
| **1.** | Assignment of international standard book number (ISBN) and international standard serial number (ISSN) to books and serials | 3.77 | .48 | 3.87 | .34 | 3.89 | .32 | 3.83 | .41 | 1st | VHA |
| 2 | Cataloguing and classification of information resources | 3.32 | .85 | 3.55 | .58 | 3.44 | .86 | 3.36 | .79 | 2nd | HA |
| **3.** | Use of Anglo-American Cataloguing Rules, 2nd ed. (AACR2) | 3.42 | .74 | 3.23 | .79 | 3.36 | .80 | 3.35 | .77 | 3rd | HA |
| 4 | Preparation of cataloguing-in-publication (CIP) data for publishers and authors | 3.32 | .73 | 3.35 | .77 | 3.39 | .60 | 3.34 | .71 | 4rd | HA |
| **5.** | Maintenance of cataloguing standards in the country | 3.28 | .70 | 3.45 | .58 | 3.28 | .70 | 3.33 | .67 | 5th | HA |
| **6.** | Regular production of national bibliography | 3.31 | .71 | 3.37 | .64 | 3.25 | .73 | 3.31 | .69 | 6th | HA |
| 7 | Establishes, compiles and maintains authority files for authors and subjects listed in the NBN | 3.37 | .82 | 3.36 | .76 | 2.97 | 1.08 | 3.28 | .88 | 7th | HA |
| **8.** | Maintenance of publishing standards | 3.33 | .94 | 3.34 | .92 | 3.00 | 1.17 | 3.26 | .99 | 8th | HA |
| 9 | Collection of legal deposit (books, serials, e-serials, government publications) | 3.24 | .72 | 3.28 | .65 | 3.06 | .79 | 3.21 | .72 | 9th | HA |
| **10.** | Conversion of 10-digit ISBNs to 13-digit. | 3.06 | .88 | 3.15 | .69 | 3.31 | .79 | 3.14 | .81 | 10th | HA |
| 11 | Maintaining periodic legal deposit drive to ensure timely delivery of the publications | 2.99 | .80 | 3.04 | .79 | 3.00 | .86 | 3.01 | .80 | 11th | HA |
| 12 | Implementation of IFLA and UNESCO programme for universal bibliographic control (UBC) and universal availability of publications (UAP) | 2.95 | 1.02 | 2.91 | 1.01 | 2.97 | .86 | 2.94 | 1.06 | 12th | HA |

| # | Statement | P Mean | P SD | PP Mean | PP SD | NP Mean | NP SD | Mean | SD | R | D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 | Ensuring effective utilization of published information resources | 2.87 | .87 | 2.93 | .90 | 2.83 | 1.13 | 2.88 | .94 | 13th | HA |
| 14 | Providing enlightenment campaign during ISBN/ISSN assignment | 2.85 | 1.01 | 2.59 | 1.00 | 2.56 | 1.16 | 2.71 | 1.04 | 14th | HA |
| 15 | Manual indexing of information resources | 2.83 | .93 | 2.78 | .96 | 2.28 | .88 | 2.69 | .95 | 15th | HA |
| 16 | Providing sensitization programmes for the stakeholders like publishers & authors, | 2.79 | .78 | 2.50 | 0.52 | 2.71 | .97 | 2.67 | .76 | 16th | HA |
| 17 | Abstracting of information resources | 2.71 | .89 | 2.60 | .90 | 2.26 | .92 | 2.58 | .91 | 17th | HA |
| 18 | Production of bibliographic tools like catalogues, indexes and abstracts | 2.72 | .95 | 2.50 | .89 | 2.33 | 1.01 | 2.57 | .96 | 18th | HA |
| 19 | Establishment of effective clerical routine of registration and receipt of legal deposit materials | 2.48 | .75 | 2.55 | .97 | 2.59 | .67 | 2.51 | .80 | 19th | HA |
| 20 | Checking records and following-up those publishers and authors that did not deposit complete copies or did not deposit at all. | 2.34 | .80 | 2.98 | .64 | 2.41 | .69 | 2.50 | .74 | 20th | HA |
| 21 | Distribution of national bibliography to libraries | 2.44 | 1.07 | 2.59 | 1.15 | 2.48 | 1.18 | 2.49 | 1.11 | 21st | LA |
| 22 | Maintenance of national union catalogue of monographs and serials | 2.62 | .95 | 2.28 | .72 | 2.46 | 1.14 | 2.48 | .93 | 22st | LA |
| 23 | Distribution of national bibliography to allied institutions | 2.46 | .96 | 2.46 | .98 | 2.40 | 1.12 | 2.44 | 1.00 | 23rd | LA |
| 24 | Application of ICT in all bibliographic control functions | 2.49 | .89 | 2.45 | .97 | 2.25 | 1.05 | 2.43 | .95 | 24rd | LA |
| 25 | Compilation of national union catalogue of monographs and serials | 2.35 | .99 | 2.20 | .86 | 1.91 | 1.06 | 2.21 | .98 | 25th | LA |
| 26 | Ensuring resource sharing via distribution of machine-readable catalogues (MARC) | 2.19 | 1.13 | 2.13 | 1.08 | 1.86 | 1.20 | 2.10 | 1.13 | 26th | LA |
| 27 | Having necessary ICT infrastructure for the sustenance of e-cataloguing | 2.00 | .82 | 2.00 | .67 | 1.61 | .64 | 1.91 | .76 | 27th | LA |
| 28 | Subscription to Web-Dewey for classification of Information resources | 1.61 | .91 | 1.40 | .83 | 1.53 | .94 | 1.53 | .89 | 28th | LA |
| 29 | Subscription to e-LC for classification of information resources | 1.53 | .83 | 1.40 | .83 | 1.44 | .81 | 1.50 | .82 | 29th | LA |
| 30 | Use of Resource Description and Access for cataloguing of information resources | 1.05 | .27 | 1.06 | .32 | 1.00 | .00 | 1.04 | .26 | 30th | NA |
| | **Cluster Mean** | **2.72** | **.84** | **2.71** | **.80** | **2.59** | **.87** | **2.69** | **.84** | | **HA** |

VHA = Very Highly Adopted (4), HA= Highly Adopted (3), LA = Less Adopted (2), NA= Not Adopted (1).
P = Professionals; PP =Para-professionals; NP = Non-professionals/ support staff. R = Ranking; and D = Decision.

Table 4 presents the mean ratings of respondents on the bibliographic control practices adopted by the National Library of Nigeria (NLN) in the digital age. Using the real limit of numbers, the results revealed that item statement 1 was rated very highly adopted with mean score of 3.38 and standard deviation of .41; while item statements 2-20 were rated highly adopted with mean scores and standard deviation ranging from 3.36 (.79) - 2.50 (.74) respectively. Item statements 21-29 were rated less adopted with mean scores and standard deviation ranging from 2.49 (1.11) -1.50 (.82). Item statement 30 was rated not adopted at all, with mean score of 1.04 and standard deviation of .26. The overall mean shows that assignment of International Standard Book Number (ISBN) and International Standard Serial Number (ISSN) (mean = 3.83) ranked highest, while use of Resource Description and Access (RDA) (mean = 1.04), was ranked lowest as regards to bibliographic control practices adopted by the

NLN in the digital age. The cluster mean was 2.69 and cluster standard deviation of .85, which indicated that majority of the bibliographic control practices are highly adopted by the NLN.

It was however noted that most of the bibliographic control practices that are ICT-inclined were less adopted as the institution has not fully adopted the application ICT to its functions and particularly bibliographic control practices. The NLN has not adopted the use of RDA because it is only when cataloguing practices are automated, and ICT is applied in cataloguing and classification that one will expect that the RDA toolkit will be harnessed by the apex library, equally involves training of staff and ensuring that the cataloguers are digitally driven.

The findings are in line with the study of Nwosu (2013), which revealed the instruments by which the National Library of Nigeria seek to achieve bibliographic control. This is also in conformity with Fourie and Burger (2007) study, which reported that for bibliographic control to be effective, there need to be: legal deposit legislation; a regulatory, controlling and advisory body; supporting committees and investigations; a wide selection of bibliographic tools covering various facets of the national recorded heritage; compliance with national and international standards; literature reporting on national bibliographic control, among others.

However, the findings are in contrast with the National Bibliography of Nigeria 2012 Edition (2014) which stated that the National Library of Nigeria engages in sales of printed catalogue cards and Machine-Readable Catalogue (MARC) to ensure effective Universal Bibliographic Control and Universal Availability of Publications, and also develops, maintains and sustains Online National Union Catalogue; and creates a databank of national bibliographic control services to facilitate resource sharing and free flow of information. Without bibliographic control being ICT-driven, these efforts will not be effectively carried out.

The findings further revealed that the digital age does not have much impact on bibliographic control practices of the National Library of Nigeria, as the Agency has not adopted the use of Resources Description and Access (RDA), which is gradually replacing Anglo- American cataloguing Rules, second edition (AACR2) in cataloguing of information resources in the digital age; did not sustain subscription to the Web-Dewey and e-LC for classification of information resources in the digital age; does not have adequate and functional ICT infrastructure for adoption and sustenance of e-cataloguing; has not fully automated her functions; has not ensured wide distribution of National Bibliography of Nigeria (NBN) to libraries and allied institutions in Nigeria; does not host the NBN on her website for global access; maintenance of National Union Catalogue (NUC) is ineffective and National Library

of Nigeria has not effectively ensured resource sharing through the creation and distribution of machine-readable catalogue (MARC).

The implication of the findings is that the National Library of Nigeria as the apex library of Nigeria should be ICT-driven in in order to achieve effective bibliographic control practices and equally contribute effectively to universal bibliographic control and universal availability of publications, which are the ultimate goals of bibliographic control practices.

**H0$_1$: There is no significant difference in the professionals, para-professionals and non-professionals' mean rating on bibliographic control practices adopted by the NLN in the digital age**

Table 5: ANOVA Analysis of the Mean Ratings of Responses of professionals, para- professionals and non-professionals on bibliographic control practices adopted by the NLN in the digital age

|  | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | .076 | 2 | .038 | .153 | .859 |
| Within Groups | 23.557 | 95 | .248 | | |
| Total | 23.633 | 97 | | | |

Dependent variable: level of bibliographic control practices

The ANOVA analysis presented in Table 5 shows f-value of .153 at $p>0.05$ level of significance, and indicates that the result is not significant. Therefore, the null hypothesis of there is no significant difference in the professionals, para-professionals and non-professionals' rating on extent of adoption of bibliographic control practices by the NLN in the digital age was accepted. The findings, which indicated that the difference in the mean ratings of the three categories of respondents were not significant also portend that all the categories of staff of the National Library of Nigeria in the area studied are fully involved in bibliographic control practices at different capacities.

4. **Conclusion**

The study assessed the bibliographic control practices available and adopted by the National Library of Nigeria in the digital age in view of enhancing better performance in areas found to require improvement. It is evident from the study that bibliographic control practices are highly available and adopted at the National Library of Nigeria, but not satisfactory in view of the digital age, as the digital age has not deeply impacted on the National Library of Nigeria bibliographic control practices. The findings also revealed that it is imperative for the apex library to be ICT-driven in her bibliographic control practices for more effective bibliographic control practices. When the bibliographic control practices available and adopted are improved upon, the National Library of Nigeria would be positioned to offer effective bibliographic

control practices in the digital age, and equally contribute effectively to IFLA/UNESCO core objectives of universal bibliographic control and ultimately universal availability of publications.

The findings therefore, have far-reaching implications, which therefore make it imperative for the National Library of Nigeria to improve on the bibliographic control practices available and adopted, so as to be able to provide adequate access to the national intellectual output of the nation for effective contribution to universal bibliographic control and universal availability of publications, which are key outcomes of bibliographic control efforts.

## 5. Recommendations

Based on the findings of this study, the following recommendations are made to the Management of the National Library of Nigeria, relevant authorities and other stakeholders to enhance effective bibliographic control practices in Nigeria in the digital age:

- Bibliographic control practices available and adopted at the apex library though empirically revealed to be on high extent should be digitally inclined so as to be more effective and have positive impact in this digital age. In this regard, the National Library of Nigeria should apply ICT in all bibliographic control practices and also have adequate, necessary and functional ICT infrastructure for the sustenance of bibliographic control practices.

- Collection of electronic information resources of our national publication output as legal deposit and publishing them in the national bibliography of Nigeria (NBN); and collection of theses, dissertations, and all other scholarly publications like inaugural lectures, conference proceedings, among others will guarantee effective bibliographic control of such resources. NBN should also be widely distributed to libraries and allied institutions so as to enhance its use and bring about added value to its production. Furthermore, there should be regular legal deposit drives and also regular sensitization programme on legal deposit and ISBN/ISSN for all the stakeholders especially the publishers and authors; which should equally be extended to universities and rural communities in order to ensure better results on compliance of the stakeholders.

- National Library of Nigeria should ensure that all bibliographic control practices less adopted are improved upon like sustaining subscription to the Web-Dewey and e-LC for classification of information resources; having adequate, necessary and functional ICT infrastructure for sustenance of e-cataloguing, among others; creating and distributing of MARC records; creation of OPAC; and spear-heading the adoption of RDA for cataloguing in Nigeria. Others involve ensuring full automation of her functions; ensuring

wide distribution of National Bibliography of Nigeria (NBN) to libraries and allied institutions in Nigeria; and hosting the NBN on her website for global access; ensuring effective compilation and maintenance of national union catalogue (NUC) of monographs and serials; and making NUC to be ICT driven so as to enhance better access to resources and resource sharing opportunities among libraries and particularly bibliographic agencies.

- It is also recommended that the National Library of Nigeria should continually create awareness on her bibliographic control practices to the public via electronic and social media just like other federal government parastatals and agencies. This will encourage government appreciation of the value of bibliographic control and further improve on her budgetary allocations to the National Library of Nigeria, and invariably engender effective bibliographic control practices in Nigeria.

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