Resource Description and Access (RDA) handbook for facilitating the understanding of RDA rules by librarians and catalogers in English Speaking countries in sub-Saharan Africa

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Abstract

The organization of library resources to meet the information seeking needs of users, such as find, identify, select and obtain the needed information resources within a limited time by the patrons, is the prime goal of every librarian and cataloger, including those in sub- Sahara Africa. In order to meet this demand, they have to be equipped with the necessary professional tools, resources and skills to enhance their ability to create quality cataloging records for their library resources for easy search and retrieval of library resources by their library users. With the implementation of the Resource Description and Access (RDA) on April 4th 2013 in the United States and other countries, catalogers in the developing countries, particularly in sub-Saharan Africa face challenges in gaining access to the necessary training and preparation. This project

acknowledges that many catalogers in this area have other challenges such as inadequate technological skills, limited Internet access, and unreliable electricity in the libraries where they serve. Since the RDA toolkit is published electronically, access to it by librarians and catalogers in Sub-Sahara Africa may be very difficult. Awareness of these challenges led to this CAS project work to prepare for the creation of an RDA handbook for facilitating the understanding of RDA rules by librarians and catalogers in English speaking countries, in sub-Sahara Africa. The project report will discuss how the researcher determined desirable content for the handbook, and provide some examples from the handbook.

Introduction

The organization of information about library materials has long been the work of catalogers. The first cataloging rules were produced in United Kingdom in 1841 for the British Museum's library catalog (Stephens 2010). In the United States, the cataloging rules were first published in 1876 (Dunsire 2007). But from 1902 to 1949 the United Kingdom (UK) and United States of America (USA) decided to develop a separate set of rules. The consideration for developing international standardization in cataloging came in 1961 with the formulation of the Paris Principles of cataloging that were endorsed during the International Conference on Cataloging, organized by the International Federation of Library Associations (IFLA) in 1961 (Institutions 2012). This led to the collaboration between the National Cataloging Agencies from the UK and North America to produce the Anglo-American Cataloging Rules in 1967 with the intention to eradicate the differences that now existed within cataloging rules. Despite that, some differences were still left unsolved within the cataloging rules. The pressure to eliminate the remaining differences resulted in the development of a more internationally uniform content standard called

Anglo-American Cataloguing Rules second edition (AACR2) in 1978 by IFLA (Dunsire 2007). At that time computers were not commonly used and the World Wide Web wasn't even invented yet (Stephen 2010). The information world then was basically composed of print resources (books), and the rules were designed around creating catalog cards (Blythe, Gunther and Spurgin 2013). Since then, there has been a continuous improvement in the rules in accordance with the Paris Principles to meet the needs of the cataloging community in providing information for library resources to meet the users' information needs.

However, the present information environment is now largely composed of digitally available materials, due to the rapid evolution of web technologies, thus creating an online information world. There is an ever-increasing flow of information resources published electronically, and these resources require new kinds of access. This issue prompted serious concern in the cataloging community as the libraries have to remain relevant in creating effective catalog records for those online resources. The digital environment has also changed the formats of publishing information resources, and that makes the treatment of non-book formats using the model meant for cataloging print materials less useful. The fact that the publication of information resources are appearing in multiple formats (print, eBook, audio, video etc.) in the market shows clearly the impact of the digital age in the way information is been published.

 By the mid-1990s it became obvious that there were substantial problems with AACR2, hence the increase in calls for fundamental revisions of this cataloguing standard (Stephens 2010).The above concern on how the libraries will continue to maintain their relevance in providing appropriate cataloging records for all types of library information resources for easy access and retrieval by patrons and in facilitating the management of those resources, led the Joint Steering Committee (JSC) for developing AACR2 to host the International Conference on the "Principles

and Future Development of AACR" in Toronto, Canada in 1997. At the meeting, they addressed numerous cataloging issues, with emphasis on the present and future trends in information resources and their management. After the deliberation, it was agreed that the fundamental principles and structure of AACR2 should be analysed. The recommendations made in the conference led to some amendments to AACR2, but in 2002, it was discovered that in order to overcome the AACR2's limitations, there was a serious need for an extensive re-organisation of at least Part I of AACR2, if not every part of the standard.

In 2004 the JSC and its governing body, the Committee of Principals (CoP), decided to produce the third edition of AACR called AACR3. They started with an extensive reorganisation of Part 1 to give a greater emphasis to content and allow more flexibility with regard to format as the rules had to align with the concepts and terminology used in Functional Requirements for Bibliographic Records (FRBR), a new model developed by IFLA in the 1990s

However, the responses to the first draft of AACR3 indicated that the underlying AACR structure did not allow for changes that could fully address the challenges posed by digital resources. From there, it became obvious that a completely new approach was needed. So in 2005, it was decided that the structure (AACR3) be abandoned and a new code that has direct alignment with FRBR be made. As a result, the JSC decided to develop an entirely new standard that provides proper structure and guidelines to catalogers so that the bibliographic records they produce can meet the challenges posed by digital information resources. The newly developed standard is referred to as **Resource Description and Access** (RDA).

RDA was designed as a content standard for the digital world to replace AACR2 which was mainly meant for the print environment (Association, et al. 2010). It was developed so that catalogers could better describe and provide access to various types of content and media.

RDA is not a standalone metadata standard. It is based on the foundations established by (AACR2), which is the most-used standard for bibliographic metadata content in the world. Also, the rules contain a set of practical instructions based on FRBR (Functional requirement for bibliographic records) and FRAD (Functional Requirements for Authority Data) conceptual models (Olive 2010). FRBR is a conceptual model of the bibliographic universe that assists in connecting user tasks of access and retrieval of resources to the elements and relationships of resource description. So, it is a document that illustrates a framework for accessing and retrieving records from bibliographic databases. FRAD, on the other hand, is a conceptual model designed to describe the authority side of the library catalog. It provides a clearly defined structured frame of reference for relating the data that are documented in the authority records to the needs of the users of those records. Also, helps assessing the potential for international sharing, and using of authority records within and outside the library. In short, FRAD is an extension of FRBR, and both models are internationally recognized as effective ways to conceptualize the structure for retrieving information.

The main objectives of RDA are to assist in the creation of efficient metadata that will better support resource discovery in linked-data environments. This new cataloging standard is meant for multinational use across digital environments (Gordon 2007).

RDA rules provide instructions and guidelines on formulating data for resource description and discovery. This standard is unique because it is carefully modeled on FRBR; and uses most of its

vocabulary. RDA is structured to match the arrangement of FRBR entities, attributes and sub-attributes. Also, its elements are related to the FRBR user tasks of finding, identifying, selecting and obtaining intellectual and artistic works, realizations of those works (expressions), embodiments of those realizations (manifestations), and exemplars of those embodiments (items) (Gordon 2007).

Furthermore, RDA intends to have a great impact on the design of catalogs and other information discovery tools by developing metadata content standards. The rules will enable users to find a substantial improvement in the consistency and coherence of the content of the catalog records, and greater efficiency in searching for related resources (Tilett 2007). RDA aids in simplifying cataloging rules, and transforming cataloging by bringing it in-line with 21st–century web technologies. RDA Main goal is to provide opportunity for all librarians to be involved in the evolution of cataloging practice, especially in terms of who does the cataloging and how it is done (Hart 2010).

Global use of RDA will have an important effect on union catalogs as it enhances and supports the creation of consistent metadata content among metadata organizations and library consortia responsible for sharing cataloging services, copying local metadata to a central catalog, or harvesting metadata from local repositories, or who contribute cataloging to union catalogs. This is because RDA provides instructions and guidelines for descriptive catalog records that meet the needs of centers that provide any kind of resource cataloging whether locally or internationally.

Understanding the basic RDA rules is essential because RDA reaches beyond the earlier cataloging codes by providing guidelines for cataloging digital resources, and puts more emphasis on helping patrons find, identify, select and obtain the information they need (Maxwell

2009). The fact that it is meant to support the creation of well-formed data that can be managed using both current technologies and technologies of the future shows the importance of this tool for cataloging library resources of any kind. It also defines the elements needed for description and access as well as provides the instructions on how to formulate the data that is recorded on each element (Oliver 2010). The most interesting thing about RDA is that it can be used for the description of both the traditional and nontraditional, analog and digital resources within or outside library collections. RDA records can be encoded using existing schema such as MARC 21, Dublin Core, and MODS. They can also be mapped to another schema current or future, which makes RDA a powerful cataloging standard that every library in this technological era, including libraries in Africa would like to implement

This RDA handbook will help those who can't afford access to the toolkit, those who have limited Internet access, and those who wish to learn about RDA. This project acknowledges that many catalogers in sub-Sahara Africa have other challenges such as inadequate technological skills, limited Internet access, and unreliable electricity in the libraries where they serve. Also, since RDA toolkit is primarily published electronically, access to it by librarians and catalogers in sub-Saharan Africa may be quite limited. Therefore, the importance of an RDA handbook that facilitates better and quicker understanding of the rules by these librarians and catalogers cannot be overstated.

Justification and Literature Review

According to B. Tilett (Tilett 2007), the purpose of RDA is to:

 Simplify cataloging rules:

Serve as a content standard for metadata schema;

Provide more consistency in cataloged records;

Address current problems with content metadata;

Encourage international applicability of the rules;

Encourage application of FRBR and FRAD; and to build cataloger's judgment (in taking decision in providing additional information regarding the resource where necessary)

This makes RDA a useful tool for libraries and facilitates the understanding of the rules for every cataloger.

The production of this RDA handbook to facilitate understanding of RDA rules will be useful to all catalogers. This is because the handbook will simplify RDA "core", and "LC core" elements; stress the differences between AACR2 and RDA rules in a tabulated form for easy understanding; include the new RDA elements that replaced the GMD (General Material Designator); provide short explanation of RDA rules and instructions on how to use them, including the elements and terms to use. The manual will also include workflows for monographic cataloging with examples etc.   This idea is supported by (Vere 2013) in the article "RDA Workshop1: Cataloging Books (print & electronic), Booklet." This resource has been organized to train catalogers on how to catalog print and electronic books using RDA rules, by showing the similarities and differences in cataloging using AACR2 and RDA rules for quick understanding of the new cataloging standard.

The aim of the proposed handbook is to facilitate the understanding of the new cataloging standard as well as serve as a handy resource guide for catalogers when they are in doubt during creating original cataloging records for their library resources using RDA rules. This will be most useful especially for the catalogers in African libraries, such as those at libraries that have

already implemented RDA, for example, the National library in South Africa. This is so because in some African countries where the libraries have good access to Internet, the high cost still puts barriers to its usage. This fact has been supported by Sharma's article (Sharma 2012) which pointed out that despite the fact that Internet access has improved for many academic libraries in sub-Saharan Africa, the high cost of access still remains the major limiting factor in its utilization, which could also be a barrier to the implementation of RDA or easy access to RDA toolkit and other related resources. The challenges for implementation of RDA in Africa go beyond the cost. Frequent power failure and poor Internet connectivity, low Internet bandwidth, etc. could limit Internet access for those librarians and catalogers whose computer and technological skills should in principle facilitate the online search for those resources. This point was stressed by Sharma's article (Sharma 2012). The author indicates that the results of research carried out in four African countries (South Africa, Zambia, Egypt and Algeria) in 2009 to find out about the World Internet Statistics, shows 6.7% of Africa's Internet access, compared to the World average of 24.7%. Similarly, the number of users of Internet in Africa averaged 3.9% of the nearly one billion people. This is due to low bandwidth which limits Internet connectivity and in consequence affects the quality of access to online information. The article gave the example of university libraries in Malawi which showed that despite the university's wide variety of electronic resources that are available through some programs, the quality of the Internet connectivity remains a great hindrance. In South Africa, research was conducted in 2010 to determine the growth of Internet usage. The findings show that there was a constant growth in the use of Internet yearly but at a very slow rate, which was due to challenges such as lack of infrastructure for the Internet, and high cost of computer technology (Naidoo 2010). Ezchona and Ugwuanyi (Ezchzona and Ugwuanyi 2010) pointed out that "in Africa, access to

adequate Internet bandwidth presents a great challenge for University management". Grace and Alfred also state in "Challenges of managing information and communication technologies for education: Experiences from Sokoine National Agricultural, Library" that low bandwidth is a common problem in many African universities, of which Sokoine National Agricultural is no exception. The authors stressed that for more than five years, the bandwidth at Sokoine University of Agriculture, Tanzania has remained 256/128 kps, making the Internet connectivity in the university extremely low. The effect of the low bandwidth is felt more in the university library than other sections of university because of the need to download information resources from the Internet. The authors further emphasize the unreliability of power supply facing the Sokoine National Agricultural University. The authors indicated that Information and Communication Technology (ICT) facilities rely on electricity for their functioning, while frequent power cut is a persistent problem in Tanzania, and that is causing great problem in the management and utilization of ICT facilities and service in the university and the library in particular (Emmanuel and Alfred 2008).

The problem of Internet connectivity has made the production of RDA handbook more important for catalogers in developing countries, especially in Sub-Sahara Africa. In (Anyaoku, Ezejiofor and Orakpor 2012) article, the authors' findings in determining the level of knowledge and use of Web 2.0 by librarians in Anambra State, Nigeria, indicated that there was low knowledge and use of Web 2.0 tools by the librarians in that part of the country due to lack or inadequate Internet connectivity in most of the libraries and library schools from where the librarians were sampled. This was supported by Arif and Mahmood (Arif and Mahmood 2012) who are of the opinion that instant messaging, blogs, social networking and wikis are the most popular Web 2.0 technologies in which librarians should be knowledgeable and which they should use in carrying out their

professional functions. The authors expressed that lack of computer literacy and very poor availability of computers and Internet facilities were unfortunately the major hindrances" of the adoption of Web 2.0 by Pakistani librarians.

Baby and Mathew (2012) pointed out in their findings published on "Developing technology skills for Academic librarians: a study based on the universities in Kerala, India" that the utmost common problem of computer usage among librarians at the university library in Kerala, India was due to librarians' inadequate computer skills, electric power failure, inadequate computers in the libraries and frequent breakdown of system. These mentioned challenges also could hinder the understanding of RDA rules in India, which is a common phenomenon in most developing countries. According to (Safahieh and Aseni 2010) article, many librarians at the University of Isfahan library in Iran have limited computer skills, and their levels of computer literacy have not improved over time, even among those librarians with long term computer experience. In most cases, this is due to the fact that library administration has not provided formal computer training for their library staff. Librarians in most developing countries, especially in sub- Sahara Africa are facing similar problem.

In (Adeleke and Olorunsola 2007) article, the authors carried out research at a private university library in Nigeria to determine the use of Information and communications Technology (ICT) by catalogers. Their findings revealed the effectiveness and efficiency of online searches for the purpose of cataloguing and classification. However, the study shows that the potential offered by the use of ICT has not been fully embraced by catalogers in developing nations, particularly in Nigeria due to low level of ICT literacy among library staff.

Another important set of challenges is the RDA toolkit. The RDA Toolkit is an integrated, browser-based, online product that allows users to interact with a collection of cataloging-related documents and resources, including RDA. The Toolkit consists of:

- AACR2 (to help a cataloger knows where to begin)

- Library of Congress Policy Statements (LCPS)

- Workflows and other procedural documentation that is created by subscribers and can be shared within an organization or with the entire community of subscribers

- Mappings of RDA to various schemas, including MARC 21 (American Library Association, 2010).

The RDA toolkit can be difficult even for experienced users to navigate. As Kevin wrote, "Familiarizing oneself with RDA and learning to navigate the RDA Toolkit can be one of the more challenging aspects of using this new standard" (Kishimoto 2013). This is because the arrangement of the RDA is totally different than that of AACR2. It may be even more difficult and especially acute issue for those librarians and catalogers in Africa who have less experience with technology even if their libraries could afford to purchase the RDA tool kit. The provision of RDA handbook will also help prepare those catalogers in African libraries that are yet to implement RDA by facilitating their understanding of the new cataloging rules. They will be less confused when they see RDA records with, for example new MARC fields created for the implementation of RDA such as 336, 337 338 and 264 , 040 $e rda etc.

Therefore, all the above mentioned challenges could definitely hinder easy access to RDA rules and other resources that catalogers in some developing countries can use to facilitate their understanding of the new cataloging standard.

In sum, the RDA handbook will simplify RDA terminology, provide a basic overview of the RDA rules; provide cataloging workflows and different cataloging record samples to guide catalogers in their creation of RDA records for their library materials. By tailoring this handbook for this audience, the author hopes it will assist catalogers in the target libraries to overcome the above mentioned challenges.

Methodology

This study used a survey method to collect data from a stratified sample of the selected population (librarians / catalogers in public, colleges and academic libraries in Nigeria in West Africa, and Kenya in East Africa). A questionnaire instrument was designed to generate important information, such as:

- Catalogers' computer skills.

- Possession of a personal computer

- Power supply and Internet connectivity situation

- Access to electronic resources online

- Use of online cataloging resources

- Knowledge of RDA

- Implementation or non-implementation of RDA rules by libraries

- Subscription to RDA toolkit

- Access to RDA toolkit online

- Possession of materials to help them learn about RDA.

- Availability of a copy of the RDA rules in the library

- Level of understanding of the RDA toolkit / rules

- Section of the RDA toolkit where the Catalogers need more explanation.

- Examples of the RDA records they like to see. (See appendix).

Responses from the survey will help determine the content of the RDA Handbook to facilitate the understanding of RDA rules by catalogers/ librarians in the English Speaking countries in sub-Saharan Africa.

Research Questionnaire Distribution Method

The questionnaire was distributed to the selected population via e-mail and by hand delivery.

Nigeria: The Research questionnaire was distributed by hand through friends to libraries in two Nigerian states (Kaduna and Benue States). The decision to solicit assistance in distributing the survey instrument was made as the last option after several failed attempts to reach Nigerian librarians, catalogers and school media specialists via email. The questionnaire was administered to each senior cataloger or librarian (accessible in the libraries at that time due to the strike) in twenty libraries in both Kaduna and Benue States. Only six libraries from Benue State were able to turn in their completed questionnaire and ten from Kaduna State. Retrieving the questionnaires from the academic libraries was complicated by the fact that the Nigerian Universities and colleges were on strike at the time of this study.

Tables of Names of Libraries surveyed in Kaduna and Benue States, Nigeria.

Table 1: Category and names of libraries that submitted their completed questionnaire in Kaduna State, Nigeria

No_	Benue State / Library Names
1	University of Agriculture, Makurdi
2	Benue State University library, madurdi
3	College of Advance and Professional Studies' Library, Makurdi
4	National Lib Library, Madurdi
5	School of Nursing Library, Gboko
6	Benue State Library, Okukpo
7	CAP library, madurdi
8	College of apply Science library, Makurdi
9	Veterinary Teaching Hospital /university of Agriculture, Makurdi
10	College of Agriculture Library, Gboko

Table 2: category and names of libraries that submitted their completed questionnaire in Benue State, Nigeria

No_	Kaduna State / Library Names
1	National library of Nigeria, Kaduna
2	Kashim Ibrahim library, **Ahmadu Bello**

	University, Samaru - Zaria
3	Federal College of Education Library, Zaria
4	President Kennedy Library, Kaduna

Table 3: category and names of libraries that submitted their completed questionnaire in Kenya,

#	Kenya / Library Names
1	Kenya National Library Service
2	Technical University Of Mombasa Library
3	Fluorspar School Library
4	Pwani University Library, Kilifi

Kenya: The questionnaire were sent to eighty-five catalogers via their e-mail addresses found online, unfortunately many of the e-mails bounced back as the delivery failed. Only four libraries were able to complete their questionnaire and returned.

Table *4: Comparison of result (This table shows the categories of libraries in Benue State, Kaduna, Nigeria and Kenya that submitted their completed questionnaire and their locations).*

Library Name	Library category			Location 1 (Kaduna)	Location (Benue)	Location (Kenya)
	Academic	Public	School	Kaduna		
National Library of Nigeria		1				
Kashim Ibrahim University library	1			Samaru, Zaria		
Federal College of Education Library,	1			Zaria		
President Kennedy Library	1			Kaduna		
University of Agriculture library	1				Makurdi	

Benue State University library	1				madurdi	
College of Advance & Prof. Studies Library	1				Makurdi	
National Library,		1			Madurdi	
School of Nursing Library	1				Gboko	
Benue State Library,		1			Okukpo	
College of apply Science library,	1				Makurdi	
Veterinary Teaching Hospital Library	1				Makurdi	
College of Agriculture Library	1				Gboko	
Kenya National Library Service		1				Nairobi
Technical University Library	1					Mombasa
Fluorspar School Library			1			Kerio Valley
Pwani University Library	1					,Kilifi
Total	**13**	**4**	**1**	**2**	**3**	**4**

I was hoping to get large numbers of school, public and academic libraries in the filled survey questionnaire received, unfortunately only one school library was able to send in their filled questionnaire, four from public library, while 13 from academic library(see table 4 above for detail). Communication between the catalogers in the two countries and me was very difficult because of distance and difference in time. Also, the constraint in the time for completing this research work was another factor that limited long waiting for more respondents to send in their filled questionnaire. As a result, majority of the respondents that completed and sent the questionnaire given to them within the time limit were from academic libraries in both countries.

Results

Table 1: Survey responses from libraries in Nigeria (two states, Benue and Kaduna) and Kenya on the potential use and limitations to use of the RDA toolkit for cataloging by librarians in sub-Saharan Africa

Information Item	Response option	Nigeria (%)		Kenya[3]
		Benue[1]	Kaduna[2]	(%)
Power Supply				
	Yes, very stable power supply	30.0	50.0	75.0
	Stable some times	50.0	0.0	25.0
	Unreliable	20.0	50.0	0.0
Internet connection				
	Stable Internet connection	20.0	75.0	75.0
	Non-stable Internet connection	50.0	25.0	25.0
	No Internet	30.0	0.0	0.0
Computer skills				
	Yes	70.0	100.0	100.0
	No	30.0	0.0	0.0
Computer usage				
	Office only	20.0	50.0	0.0
	Home only	20.0	0.0	0.0
	Both	60.0	50.0	100.0
Type of Computer Access				
	Personal	60.0	50.0	0.0
	Personal Office computer	30.0	50.0	100.0

	Access to general office computer	10.0	0.0	0.0
Computer Usage Frequency				
	Regularly	60.0	50.0	100.0
	Occasionally	40.0	50.0	0.0
Work dependent on Internet Usage				
	A lot	10.0	25.0	50.0
	Some times	60.0	50.0	50.0
	No	30.0	25.0	0.0
Internet Use frequency				
	Regularly	50.0	50.0	100.0
	Occasionally	40.0	50.0	0.0
	Never	10.0	0.0	0.0
Heard About RDA before?				
	Yes	50.0	25.0	75.0
	No	50.0	75.0	25.0
Library using RDA?				
	Yes	0.0	0.0	25.0
	Thinking/planning to implement RDA	40.0	75.0	50.0
	No	60.0	25.0	25.0
Is library part of a Network?				
	Yes	50.0	75.0	50.0
	Working towards joining one	30.0	0.0	0.0
	No	20.0	25.0	50.0
Seen RDA Records?				

	Yes, my library creates RDA records	0.0	0.0	25.0
	Yes, through other library in my consortium	50.0	0.0	50.0
	No, not yet	50.0	100.0	25.0
Read the RDA toolkit Online?				
	Yes, using it online	10.0	0.0	25.0
	Yes, but access limitations did not allow me go through	0.0	0.0	25.0
	No, haven't thought of it yet	90.0	100.0	50.0
Area of RDA toolkit found difficult				
	Group 1 entities (products of intellectual or artistic endeavor)	20.0	0.0	25.0
	Group 2 entities (entities responsible for intellectual or artistic content person or corporate body).	0.0	0.0	0.0
	Group entitles (entities that serve as subjects of intellectual or artistic endeavor)	40.0	0.0	0.0
	No response/don't know	40.0	100.0	75.0
Read other resources about RDA?				
	Yes, online resource on FRBR and FRAD and RDA toolkit etc.	30.0	0.0	0.0
	Yes, print resources on FRBR and FRAD and RDA toolkit etc.	0.0	0.0	25.0

	Yes, other	0.0	0.0	0.0
	No, haven't yet	70.0	100.0	50.0
	No response/don't know	0	0.0	25.0
Kind of RDA records for which more examples needed				
(a) Monograph and accompanying material (print and electronic)	Only a	10.0	0.0	0.0
	Only b	0.0	25.0	25.0
(b) Serial and continuing resources (print and electronic)	Only c	0.0	0.0	50.0
	Only d	0.0	25.0	0.0
(C)Audio, Video (analog and digital) and Cartographic materials (print and electronic)	ab	10.0	0.0	0.0
	abc	20.0	0.0	0.0
	ac	10.0	25.0	0.0
(d) Others	ad	20.0	0.0	0.0
	bcd	20.0	0.0	0.0
	db	10.0	0.0	0.0
	No response/don't know	0.0	25.0	25.0
Level of Education in Library & Information Science (LIS)				
	Bachelors in LIS	50.0	50.0	75.0
	Masters in LIS	10.0	25.0	0.0
	Ph.D. LIS	10.0	0.0	0.0
	Other (e.g. Diploma LIS)	30.0	25.0	25.0
Position in the Library				
	librarian /cataloger	40.0	50.0	50.0
	cataloger	40.0	0.0	25.0

School media specialist/ cataloger	10.0	50.0	0.0
Other	10.0	0.0	25.0

[1]Sample size received and used in the analysis= 10 Libraries

[2]Sample size received and used in the analysis = 5 Libraries

[3]Sample size received and used in the analysis = 4 Libraries

Discussion of results

The result of the survey in the table above confirmed clearly the justification for the significant need to produce the RDA handbook to facilitate the understanding of RDA rules by librarians and catalogers in the English Speaking countries in sub-Saharan Africa.

Both the RDA toolkit and most of the published and unpublished resources meant to help catalogers and librarians understand the RDA toolkit and RDA rules are mostly in electronic format. This means catalogers / librarians need to have stable power supply and good Internet connection, in addition to adequate technological skills to access the RDA toolkit and those useful electronic resources on RDA.

However, the result obtained from the survey indicated that majority of the libraries in Benue and Kaduna States, Nigeria and Kenya have no stable Internet connection and neither of the two countries have stable power supply (see the result table 1 above for more detail). For example, at the time I sent this research questionnaire for distribution in Nigeria, it took the person in Benue state three days to print the questionnaire. The first reason for the delay in printing them was that there wasn't power supply in the city for two day. When they got back the power, unfortunately, there was limited Internet access that prevented access to e-mail in order to print

the questionnaire for a day. The situation could be worse than that in some parts of the country. . This means, catalogers / librarians in these countries could expect to experience difficulty in accessing RDA toolkit and other useful electronic resources on RDA online using Internet.

Furthermore, the cost of the RDA toolkit is another envisaged problem for small libraries in the two countries. The price of the RDA toolkit is on the high side when the amount is converted to both Nigeria and Kenyan local currency, especially considering annual budgets for libraries in these counties. Efforts were made to get the exact annual budget for the libraries surveyed in the two countries, but obtaining this confidential information proved very difficult. None of the librarians was ready to release such information to an outsider. They were willing to give an estimated annual library budget for purchasing of library resources in Nigerian Federal universities. This amount is " sixty million naira (NGN60, 0000.00)", which is equivalent to approximately $379, 748.84). The mentioned amount is meant to be shared among all the departmental libraries within the Universities, and must be utilized for all the kinds of library resources supposed to meet the information needs of the students and faculty in the university. This estimated annual budget could be far less in some public and school libraries in the country

Table 2 below shows the current price of RDA toolkit, effective January 1, 2014.

Number of Users	Cost Per User

			USD	CAD	GBP	EUR	AUS
1			$180	$213	£ 142	€161	$220
2	to	4	$171	$203	£ 137	€154	$210
5	to	9	$167	$199	£ 134	€151	$206
10	to	14	$162	$194	£ 131	€147	$200
15	to	19	$158	$191	£ 128	€144	$196
20	to	39	$153	$185	£ 125	€140	$191

Table 3: This table shows examples of the price of RDA toolkit in US dollars with   numbers of user

User #	Price in US dollars	Total price in US dollars
1	$180 × 1	**$180**
2	$171 × 2	**$342**
5	$167 × 5	**$835**
20	$153 × 20	**$3060**

Table 4: shows examples converting the prices in the US dollars into Nigeria Local currency

(Using a dollar = 158 Nigeria local currency)

Users' #	Price in US dollars	Total price in US dollars	Price in NGN Naira	price in NGN Naira with number of users	Total price in NGN Naira
1	$180 × 1	$180	$180 x NGN158	NGN28440 x 1	**NGN28, 440**

2	171×2	$342	$171 x NGN158	NGN27018 x 2	**NGN54, 036**
5	167×5	$835	$167 x NGN158	NGN26386 x 5	**NGN131, 930**
20	153×20	$3060	$153 x NGN158	NGN24174 x 20	**NGN483, 480**

Table 5: shows examples converting the prices in the US dollars into Kenya local currency

(Using a dollar = 86 Kenya local currency)

Users' #	Price in US dollars	Total price in US dollars	Price in KSH	price in KSH with numbers of user	Total price in KSH
1	180×1	$180	$180 x 86	15,480 x 1	**KSH15, 480**
2	171×2	$342	$171 x 86	14706 x 2	**KSH29, 412**
5	167×5	$835	$167 x 86	14362x 5	**KSH71, 810**
20	153×20	$3060	$153 x 86	1315 x 20	**KSH263, 160**

The price illustrations above indicated that for twenty users to have access to RDA toolkit online, a library has to pay subscription cost of NGN483,480.00 in Nigeria local currency, and KSH263,160.00 in Kenya local currency per year which is about ¼ of an annual library budget for some small universities in Nigerian and Kenya. While the RDA print version, which is updated every year has a lower cost $150.00 equivalent to NGN23, 700.00, Nigerian currency and KSH12900.0, Kenya local currency, this amount is still significant. Therefore, the production of this RDA handbook will help catalogers and librarians in some of the small libraries in the two countries to still obtain a basic understanding of the new rules, even if their library could not afford to either subscribe to RDA toolkit online or buy RDA print immediately because of cost.

 The result of the survey also revealed that majority of the librarians / catalogers possessed basic computer skills, which include skills to check, send e-mails, and create word documents.

Obviously, it is very important for all catalogers and librarians to have sufficient computer skills that will enable them to effectively perform their tasks and assist their library patron using computer. The results indicated that this isn't always the case. In the case of computer usage, only 50 % of the respondents from Kaduna State (see result table 1) used a computer both at home and office, this increased to 60% in Benue State, Nigeria and 100% in Kenya (see result table 1). But as few as 20% of the respondents from Benue State used computer only at the office. This amount climbed to 50 % in Kaduna, Nigeria (see result table 1). The percentage was high in Kanye because library management provides catalogers and librarians with an office computer to carry out their library duties; while the reverse was the case in Nigeria, as not all librarians have access to a personal office computer. The survey results indicate that 20% of the respondents from Benue State use a computer only at home (see result table 1). The necessity of every catalogers having daily access to computer in carrying out library functions could not be over emphasized. Computer usage enables one to become more conversant with computer technology and helps one improve constantly through self-discovery and constant usage of a computer. The survey did indicate that a majority of librarians in Nigeria libraries are not using a computer to perform their daily library duties. This fact was confirmed through the survey result as 40% and 50% respectively from Benue and Kaduna States in Nigeria occasionally use computer to carry out their duties in their offices. It was really surprising to discovered that up to 10% of respondents in Benue State, never used computer to carry out any library task in their libraries. The respondents from Kenya responded that they use computer to perform their library duties which was due to the fact that they are provided with computer to do their work. In the case of Internet dependability, only 10 % of respondents from Benue State and 25% from Kaduna State, Nigeria responded that their duties depend on Internet, this increased to 50% in

Kenya. However, 30% of catalogers from Benue and 25 % from Kaduna States, Nigeria never use Internet to perform their library duties (see result table 1).

Some specific questions were asked to retrieve information about RDA rules and their usage, the graph below show the results.

Figure 1: Comparative bar Chart showing RDA in Libraries in Benue and
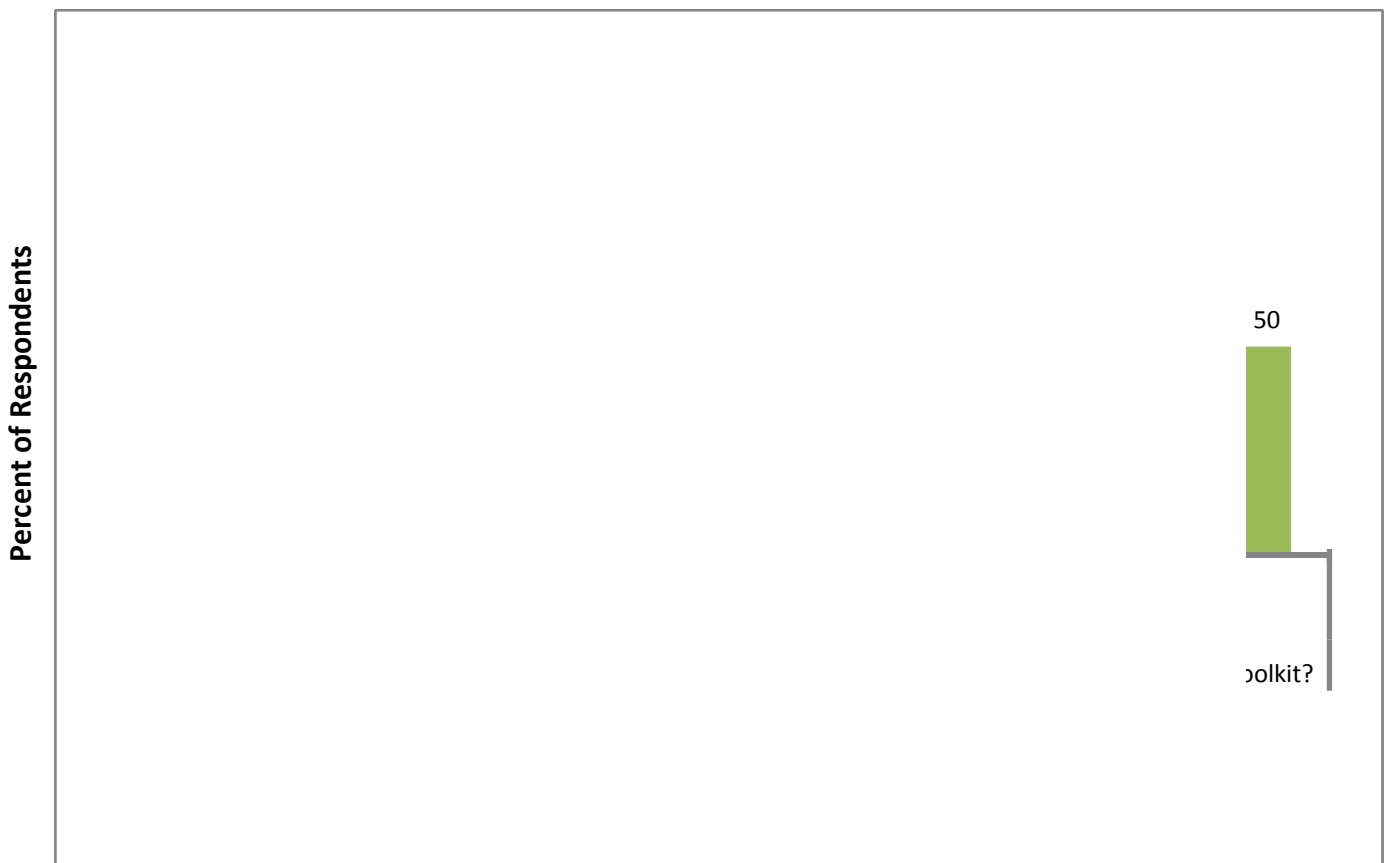
New cataloging standard (RDA Rules)

The survey results indicate that the new cataloging standard is still relatively unknown to many catalogers in some of the English speaking countries in sub-Sahara Africa .The result of the survey interpreted in (Figure 1) confirms this fact. In Nigeria, only 25% of the 4 respondents in the 4 libraries from Kaduna State have heard about RDA, the percentage increased to 50% of the 10 respondents in Benue State and 75% of the 4 respondents in Kenya. In the case of using RDA rules in cataloging library resources, the percentage was tremendously low in both countries, with only 25% in Kenya, and 0% in both Benue and Kaduna States in Nigeria (see figure 1) While only a few respondents said they are using the new rules in Kenya. One of the possible reasons may be that this represents the experience of catalogers who were allowed to use RDA records created by other Network libraries in their copy cataloging, even though they are not using the rules in creating bibliographic records for their own libraries.

Some of the respondents from libraries in the two countries have heard about RDA and have seen RDA records based on the survey result, mainly because some of them are part of a library network / consortium that creates RDA records as confirmed in survey questions; about whether or not their library is part of a library network. In response, 50% of the of the 10 and 4 respondents respectively said yes to the question from   Benue State, Nigeria and Kenya, while 75% of the 4 respondents from Kaduna State Nigeria also said yes.

Most surprising was the percentage of respondents that responded to the question, "haven't thought about using RDA toolkit online" from the two countries were very high, with 100% from Kaduna State, 90% from Benue State, Nigeria and 50% from Kenya. Also from the result, many of the respondents haven't read other resources about RDA as well.

The result from the survey also provided very vital information regarding the kind of RDA samples records the catalogers would like to see in the handbooks. This is very important, because I couldn't have figured that out easily on my own. There were variety of responses to that, which include records on monographic and/ or accompany material, serials, sound recording, cartographic resources etc.

Summary and conclusion

The survey indicates clearly a sincere need to produce a carefully tailored RDA handbook for catalogers in English Speaking countries of the sub-Sahara Africa to read and understand the basics of the new cataloging standard in order not to be left behind. For librarians to be competent enough to meet the demand for their patrons' information needs, they need regular training to acquire more technological skills, have familiarity with the necessary tools and software, have access to up-to-date computers, stable Internet connection, and adequate power supply. Having adequate technological skills and good access to the Internet will help these librarians function effectively and be prepared to cope with the challenges associated with this new cataloging era; and to keep abreast with new trends in librarianship. Also, providing the right RDA sample records, will make the handbook very useful to its intended users.

This study exposed the challenges facing librarians in sub-Sahara Africa, especially in the English speaking part where this survey was carried out. There is no doubt that libraries are meant to serve their patrons in the present challenging digital and economic environment.

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Appendix
RDA handbook

The RDA handbook will be divided in to the following five parts:

Part 1: Introduction
This section gives a brief summary of the evolution of cataloging rules since1876 and describes

the context in which RDA came about. It also presents the aim/purpose of RDA, its advantages

over the preceding cataloging standard, notably AACR2, and the complexity of its structure. The

section ends with a brief justification of why a handbook is needed to facilitate the understanding

of RDA for catalogers in Africa who do not have the financial and/or technological means to access RDA Toolkit. This handbook will be available both in print and electronic format for easy access by the catalogers.

Part 2: RDA rules

This section presents RDA rules (RDA elements, their structure and organization), and provides a description of important similarities and differences that exist between RDA rules and AACR2. Also, it shows how to use MARC encoding system for certain fields when creating RDA cataloging records for library resources.

Part 3: RDA Workflow

This part contains RDA workflow for monographic resources. A workflow provides a step-by-step process for cataloging a specific set of items/ materials according to a standard, such as AACR2 and RDA. A workflow is the best and quickest way to assist people in understanding how to use new model.

Part 4: Examples of RDA records of different library resources

The section consists of examples of cataloging records of various kinds of library resources created using RDA rules, including records of African information resources. These examples will serve as a check for African catalogers when they create original cataloging records using RDA rules or when they come across RDA records containing MARC fields during copy cataloging.

Part 5: Links to useful electronic resources on RDA

This part provides links to useful resources on RDA and related resources that will enhance deep understanding of RDA.

Research questionnaire

Due to distance and time constraints, twenty questionnaires were administered to selected

academic, public and school libraries in both countries (Nigeria and Kenya).

Target population

The population consisted of librarians and catalogers in the selected academic, public and school

libraries in the two countries, Kenya and Nigeria.

The method of reaching target population

Questionnaire was distributed via e-mail (Kenya) and hand delivery (Nigeria) to target

population in each of the countries.

Accompanying Letter/e-mail

To whom it may concern.

My name is Antonia (Alogo) Ahonsi, a graduate student of Library and information Science, at

the University of Illinois at Urbana-Champaign, USA. I hold MLIS from the University of

Illinois and now working towards a Certificate of Advanced Study (CAS) specializing in Library

Technical Services.

I am working on creating an RDA handbook that will provide quick understanding of the

cataloging rules by librarians and catalogers in sub-Saharan Africa. This is my research project

in fulfillment of my CAS degree requirement.

The handbook is intended to assist the librarians and catalogers who are presently using the rules

or are planning to use the rules in creating RDA records for their library resources.

In order to accomplish this goal, I'm sending out this questionnaire to librarians and catalogers in two sub-Saharan African countries (Kenya in East Africa and Nigeria in West Africa). I will much appreciate your contribution by answering the questions as honestly as possible, and do not hesitate to contact me if you have any questions about this study. Your answers will assist me in developing an RDA handbook that will help you in cataloging your library resources using the rules of the new standard.

Please, find attached a copy of the questionnaire.

I look forward to receiving the completed questionnaire from you as soon as possible.

Thank you for your time and your help.

Please if you have any question, contact me at this e-mail:

ahonsi1@illinois.edu

Thanks

Yours Sincerely,

Anthonia Ahonsi

Candidate for CAS, University of Illinois at Urbana-Champaign

Research Survey Questions

Name of your library ……………………………………………………………

Please, cycle the option that matches your answer

Please, what is your level of education in Library and information Science?

a) Bachelors in Library and Information Science

b) Masters in Library and Information Science

c) Ph.D. in Library and Information Science

d) Other ……………………………………………………….

Please, what is your position in your library?

a) Librarian /cataloger

b) Cataloger

c) School media specialist/ cataloger

d) Other ………………………………….

Does your library have constant power supply?

a) Yes, has a very stable power supply

b) Stable some times

c) Unreliable in nature

Does your library have Internet connection?

a) Yes

b) No

If yes, how good or stable is Internet connectivity?

a) Yes, the Internet is very stable

b) Not very stable

c) No, not stable

Do you have computer skills?

    a) Yes, I have computer skills

    b) No, I'm no computer skills

If yes, what is your level of computer skills

    a) Word Processing

    b) Graphics

    c) Multi-media

    d) Internet and e-mail

    e) Other …………………………………………

Where do you use a computer?

    a) Office only

    b) Home only

    c) Both at home and office

Is the computer you use a:

    a) Personal computer

    b) Office, but given to me for my office work

    c) Access to a computer given to all the staff in the unit

    d) Somewhere else …………………………………

How often do you use a computer

a) Regularly

b) Occasionally

c) Do not use a computer

Does your work depend on Internet usage?

a) Yes! a lot

b) Some time

c) No, it doesn't

How often do you use the Internet?

a) Regularly

b) Occasionally

c) Never

Have you heard about the new cataloging standard, Resource Description and Access (RDA) that replaced AACR2 in April 4th, 2013?

a) Yes

b) No

If yes, is your library using RDA rules in creating cataloging records?

a) Yes

b) Working towards RDA implementation

c) No

If no, is your library planning to implement the RDA rules for cataloging its library resources?

a) Yes

b) Thinking about it

c) No

Is your library part of a consortium or network?

a) Yes

b) Working towards joining one

c) No

Have you seen RDA records?

a) Yes, my library creates RDA records

b) Yes, through some of the library consortium

c) No, haven't see any RDA records

Have you read through the RDA toolkit online?

a) Yes, I'm using the toolkit online

b) Yes, but not able to go through the whole toolkit due to problem of instability of power /access failure

c) No, haven't thought about it.

If yes, what area of the RDA toolkit do you have difficulty in understanding?

a) The group 1 entities (products of intellectual or artistic endeavor): work, expression, manifestation and Item

b) Group 2 entities (entities responsible for intellectual or artistic content person or corporate body).

c) Group3 entities (entities that serve as subjects of intellectual or artistic endeavor: concept, object, event, and place

Have you read other resources about RDA rules, which and type?

a) Yes, online resource on FRBR and FRAD and RDA toolkit etc.

b) Yes, print resources on FRBR and FRAD and RDA toolkit etc.

c) Other resources …………………………………………..

d) No, I haven't yet

What kind of RDA records would you like to see more examples on? Record all that apply to you:

a) Monograph and accompanying material (print and electronic)

b) Serial and continuing resources (print and electronic)

c) Audio, Video (analog and digital) and Cartographic materials (print and electronic

d) Others not included in the list, but needed ……………………………..