

## RESEARCH ARTICLE

RDA training and implementation  
looks and perspectivesPaulo Marcelo Carvalho Holanda<sup>1</sup>  <https://orcid.org/0000-0002-8351-0430>Cíntia de Azevedo Lourenço<sup>2</sup>  <https://orcid.org/0000-0002-2172-7300><sup>1</sup>Federal University of Goiás, Goiânia, GO, Brazil / e-mail: [pholanda515@gmail.com](mailto:pholanda515@gmail.com)<sup>2</sup>Federal University of Minas Gerais, Belo Horizonte, MG, Brazil / e-mail: [cintia.eci.ufmg@gmail.com](mailto:cintia.eci.ufmg@gmail.com)

## ABSTRACT

**Introduction:** The RDA announces major changes in the cataloging process and a new way of representing information resources. The training and implementation of RDA in libraries requires great efforts from cataloguers. This article presents part of the results of a master's thesis. **Objective:** Point out the main training actions for the implementation of the RDA developed by member countries that participated in its development and by libraries in other countries, and identify the main preferences for programs, methods and content topics for training the RDA by UFMG cataloguers. **Method:** It was used the methodology of exploratory and descriptive objectives and quantitative aspects, the bibliographical research, and also, as an instrument for data collection, the semi-structured interview. **Results:** They point out that face-to-face training is the preferred method by cataloguers and the preferred content for training are changes in relation to RDA and AACR2. **Conclusion:** It is noteworthy that training is an important step for the implementation of the RDA and that the identification of training preferences by the institutions is an essential step to define well which training instruments will be used and introduced to the staff of their communities of information.

## KEYWORDS

Cataloging. AACR2. RDA. Training. Implementation.

Treinamento e implementação da RDA  
olhares e perspectivas

## RESUMO

**Introdução:** A RDA anuncia grandes mudanças no processo de catalogação e uma nova maneira de representar os recursos informacionais. O treinamento e a implementação da RDA em bibliotecas requerem grandes esforços dos catalogadores. Este artigo apresenta parte dos resultados de uma dissertação de mestrado. **Objetivo:** Apontar as principais ações de treinamentos para implementação da RDA desenvolvidos pelos países membros que participaram do seu desenvolvimento, pelas bibliotecas de outros países e identificar as principais preferências de programas, métodos e tópicos de conteúdo para treinamento da RDA pelos catalogadores da UFMG. **Método:** Utilizou-se a metodologia de objetivos exploratórios e descritivos e de aspectos quantitativos, a pesquisa bibliográfica, e também, como instrumento para coleta de dados a entrevista semiestruturada. **Resultados:** Apontam que o treinamento presencial é o método preferido pelos catalogadores e o conteúdo preferido para treinamento são as mudanças em relação a RDA e AACR2. **Conclusão:** Ressalta-se que o treinamento é uma etapa importante para a implementação da RDA e que a identificação de preferências de treinamentos por parte das instituições é um passo primordial para definir bem que instrumentos de treinamentos serão utilizados e introduzidos ao pessoal de suas comunidades de informação.

**PALAVRAS-CHAVE**

Catálogo. AACR2. RDA. Treinamento. Implementação.



**JITA:** IA. Cataloging, bibliographic control.

## 1 INTRODUCTION

Since ancient times, the library has appeared as a guardian institution of the informational legacy of humanity, seeking to provide adequate access to any type of information for its audience and always adapting to new cutting-edge technologies and new informational environments, as a result of the rapid outdated technologies past.

Recent information and communication technologies (ICT's) have brought changes in informational environments that have contributed to the appearance of new types of documents, formats, supports, contents and new forms of access to information, and with it a new way of registering resources. Thus, the cataloging standard emerged, which will replace the Anglo American Catalog Rules (AACR2), the Resource Description and Access (RDA), which is a reality already used by several libraries in other countries.

As a result of the evolution of these new informational environments, mainly digital environments, and the increase of new formats, supports and ways of access, there is a need to adapt rules and standards to adjust to this new reality where there is a more improved descriptive representation of resources. In this case, a new demand for theoretical and conceptual foundations molded in FRBR's models (FRBR, FRAD, FRSAD) were subsidies to structure new instructions and guidelines for these environments, which consequently triggered revisions and updates of the AACR2R.

The transition from AACR2R to the current standard, the RDA, heralds major changes in the cataloging process and a new way of representing information resources.

Training and implementing RDA in libraries implies knowing its history, objectives, principles, structure, rules, the online availability tool (the RDA Toolkit) and its relationships, in addition to its direct impact on resource cataloging and in the way how their leaders will need to proceed for its implementation.

The adoption of the RDA is already a reality in the member countries of the committee that participated in its development, and in large part in other countries that have started to think about its implementation. Even before the official launch of the RDA in 2010 through the ferment RDA Toolkit, the Joint Steering Committee for Development of the RDA (JSC) composed of Australia, Canada, Great Britain and the United States, had already carried out perception studies in their libraries for outline the training needs and an implementation plan of the RDA standard, initially, from their national libraries and consequently taken to other academic, public and school libraries as mentioned below:

[...] several studies have been published in many cases by national library organizations to measure the current state of knowledge about the RDA and examine training needs since the new cataloging code was officially released in June 2010. Data for these studies conducted before the full implementation of the RDA were collected through surveys of various stakeholder communities in various countries that have adopted the new standard. (PARK; TOSAKA, 2015, p. 253, our translation).

This article presents part of the results of a master's thesis that deals with the implementation of the RDA and aims to point out the main training actions for the implementation of the RDA developed by member countries that participated in its development and by libraries in other countries, and to identify the main preferences for programs, methods and content topics for training the RDA by the catalogers of the Federal University of Minas Gerais (UFMG).

## 2 THEORETICAL FOUNDATION

For a better understanding of the topic addressed and to provide adequate support for this article, it is important that some concepts are clarified. Thus, in the following sections, some concepts about cataloging will be discussed, about the conceptual models that underlie the RDA standard, about its characteristics and some aspects about training and implementation of the RDA.

### 2.1 Cataloguing

Cataloging is the "study, preparation and organization of coded messages, based on existing items or items that can be included in one or several collections, in order to allow the intersection between the messages contained in the items and the users' internal messages", acts in description, as a subsidy for the informational organization (MEY, 1995, p. 05).

One of the functions or specifications of the librarianship professional is the organization, treatment and dissemination of registered knowledge to its user audience. The practice of cataloging consists of a set of information that represents a record of knowledge, implying a survey of the characteristics of this record and the cognition of the user's characteristics.

The first event towards the international standardization of cataloging was the International Conference on Cataloging Principles (ICP), in Paris, in 1961. The conference established the Declaration of International Cataloging Principles, which established the principles that integrate bibliographic description. Barbosa (1978, p. 41) mentions the ICP, from 1961, as the forerunner of the standardization of entrances (later access points) and headings of existing works that can be catalogued.

After the Paris conference, several cataloging codes emerged, and among them, the Anglo American Cataloging Rules (AACR), in its first publication in 1967, its second edition in 1978, the AACR2, which was translated in Brazil by FEBAB (Federation Brazilian Association of Librarians) from 1983 to 1985. Afterwards, the AACR2 was updated, giving rise to a second revised edition, the AACR2R, in 1988 and several amendments and revisions until 2005. (MEY; SILVEIRA, 2009, p. 78).

According to Oliver (2011, p. 46), the AACR was originally developed in an environment of mostly printed materials and catalogs in forms, becoming a set of international rules that subsidize the treatment of information, which aim at the representation of the information through the preparation of bibliographic descriptions for attributing access points, headings of people, geographic locations and corporate bodies, as well as uniform and cross-referenced titles.

The AACR2R was revised in 2002 by the International Committee, called the Joint Steering Committee for Revision AACR (JSC), with representatives from the following institutions: American Library Association (ALA); Library of Congress (LC); Australian Committee on Cataloging (ACC); British Library (BL) and Canadian Committee on Cataloguing (CCC), responsible for reviewing and implementing the AACR2 (OLIVER, 2011, p. 54).

However, with the changes that have taken place in society and with the influence of ICTs, there was a need for another review of the AACR2R in 2004, by the Joint Steering Committee for Revision of AACR (MEY; SILVEIRA, 2009, p. 90)

The 60's are also marked by the development of computational resources. The Library of Congress (LC), from 1960 onwards, began studies for the development of a format that

would transform the information written in a manual catalog into an automated one. These studies resulted in the MARC format, “[...] acronym for Machine Readable Cataloging”, according to Barbosa (1978, p. 199), which was adopted by libraries in their databases.

According to Simionato (2012, p. 87) “MARC is a standard for the entry and handling of bibliographic information on a computer with a data exchange protocol for data export and import”. The MARC 21 format is used as “[...] machine-readable structure, and can support the description of informational resources, whose field content is determined by cataloging rules.

Frame 1, below, presents the main tags or fields used in MARC 21:

Frame 1. Main fields of MARC 21

FIELDS	DESCRIPTION
02X-09X	Number and Code fields
1XX	Main entrance
20X-24X	Title and related title
25X-28X	Editing, printing, etc..
3XX	Physical description
4XX	Series
5XX	Grades
6XX	Matters
70X-75X	Secondary entrance
80X-84X	Secondary entry - series
9XX	Intended for use by local decisions

Source: Marçal (2016)

Due to the creation of the RDA standard and its new proposal for the description of resources and definition of elements necessary for description and access, it offers instructions on how to formulate the data to be registered in each element. The standard indicates how this transition can occur more smoothly and the possibility of encoding RDA data with MARC 21 and the preservation and permanence of the same display of bibliographic data.

2.2 FR family

The Functional Request for Bibliographic (FRBR) was designed as a conceptual model of the entity-relationship type. This model comes from concepts about database modeling as characterized by Chen (1990, p. 2), “the records in a database are interconnected, so that relevant data items in different records can be retrieved without difficulty”. This model defines a representation of information based on entities, attributes and relationships between entities.

According to Fusco (2011, p. 11):

“FRBR's aim is to improve the construction of bibliographic records, cataloging and, consequently, catalogues. They were created to establish concepts about many types of materials described in databases belonging to a library or information unit and to make automated catalogs more usually simplified in the eyes of the user and to promote international compatibility on their uses, in order to make retrieval of bibliographic records increasingly efficient and universal, helping to re-examine the fundamental principles of the descriptive treatment of information" (FUSCO, 2011, p. 11).

The FR family comprises the Functional Request for Bibliographic (FRBR) (based on three distinct groups: Group 1 - intellectual/artistic product, Group 2 - responsibility and Group 3 - subject); by the Functional Request for Authority Data (FRAD), which are configured as an

extension of the FRBR, which include all the additional entities specific to the control of authority; by the Functional Requirements for Subject Authority Data (FRSAD), created for the purpose of fully assuming the entities and relationships pertinent to the subject authorities; and more currently the IFLA Library Reference Model (LRM) which is the high-level conceptual reference model that consolidates the previous models.

### *2.3 Resource Description and Access (RDA)*

In 2004 there was a revision of the AACR2R to adapt it to this new informational reality. This review was managed by the Joint Steering Committee (JSC) and proposed a new edition of the AACR2R, the AACR3, with considerable changes. However, such changes were so comprehensive that it led the JCS in 2005, to start the development of a new standard that they called the RDA (MEY; SILVEIRA, 2009, p.90).

The RDA was developed in a collaborative process between four countries (Australia, Canada, Great Britain and the United States), led by the Joint Steering Committee for Development of RDA – JSC. The JSC is made up of representatives from six major Anglo-American cataloging communities, the American Library Association (ALA), the Australian Committee on Cataloging (ACOC), the British Library (BL), the Canadian Committee on Cataloging (CCC), the Chartered Institute of Library and Information Professionals (CILIP), and the Library of Congress (LC) (CAVALCANTI, 2013, p. 53).

The RDA is the cataloging standard that is replacing the Anglo-American Cataloging Rules, 2nd edition (AACR2R). Despite maintaining a strong relationship with the AACR2R, the RDA differs in many aspects, as its construction was based on a theoretical framework, and was designed for the digital environment, in addition to its scope being broader than that of the AACR2R ( OLIVER, 2011, p. 01).

The RDA is a content standard and its function is to create a robust group of information that feeds current databases, in addition to creating a structure for the new challenges of collecting and consulting information in the future. This standard offers a series of instructions; tells you what data to store and how to do it. These data are analyzed and distributed in order to be used in a pertinent way. They are like a web of information that works by relating elements in an intelligent way in a network environment (SILVA; SERRA; CASSARES; VALENCIA, 2012 p. 115).

One of the great differentials of the RDA, which distinguishes it from other cataloging codes, is its scope. It is a standard that is not only intended for libraries, but is broadened in scope to meet the needs of other information communities. The RDA makes it possible to describe all types of resources, whether they are traditional from libraries or resources from other communities linked to cultural heritage, such as archives, museums or institutional repositories.

Another feature present in the RDA is its international context. The standard chose to set aside the Anglo-American perspective, adjusting the application of its rules to meet the diversity of different writing systems, numbering, calendars and measurement units. (OLIVER, 2011, p.5).

To fulfill this “internationalization” objective, the standard was first published in English, but it already has translation initiatives in other languages: Catalan, Chinese, Finnish, French, German, Italian, Norwegian and Spanish. The RDA Toolkit website provides tracking of these translations, as well as the recommended translation policy, and in the case of the French and German versions, some preliminary files are already available. Unfortunately, to date there is no public information about a Brazilian translation.

The structure of the RDA standard was developed in parallel with the 2009

International Conference on Cataloging Principles (ICP) and therefore maintains a strong alignment between them, as evidenced in the draft of the introduction of the RDA, released in November 2008, where “[. ..] appears in the Declarations of Principles and informs the cataloging principles used throughout the RDA”. [...] “This makes the new code seek to satisfy the expectations of the international community”. (ASSUMPCÃO; SANTOS, 2009, p.3-4).

Understanding the RDA configuration a priori is not an easy task. It is necessary to detach from the whole structure so far understood when using the AACR2R, from its organization to its content, and mainly, be very familiar with the concepts of the FR family and more currently with the IFLA Library Reference Model (LRM). Although it becomes repetitive to talk about them, the models, in addition to being fundamental for the understanding and application of the standard, permeate the structure and terminology of the RDA texts.

#### 2.4 RDA Toolkit

The RDA standard is available for access in two ways: print and online. The great advantage of purchasing online is that it is constantly updated in real time, that is, the librarian does not need to buy the new edition. He already has access to updates as soon as changes and improvements are made.

In addition, in the online version, which is accessed through a tool called the “RDA Toolkit”, the librarian also has access to rich material for the understanding and training of information professionals.

Accessing the standard online requires a subscription and disbursement of a reasonable amount of money. This access is provided through the RDA Toolkit toolkit (we'll talk later) and the subscription can be made for an individual user or for an institutional user, which provides one access at a time and if the institution wants simultaneous access, it will have to pay an additional fee for each user. The value can be quoted in US Dollars, Canadian Dollars, British Pounds, Australian Dollars, Euros, and Singapore Dollars, depending on the subscriber's region (CAVALCANTI, 2013, p. 57).

Thus, the individual or institutional user who is interested in subscribing to the online tool will have to pay an amount of \$195 (one hundred and ninety-five dollars), with a discount for a larger number of users. For example, 2 to 4 users would pay \$185, for a total of \$370, while 5 to 9 users would pay \$181, for a total of \$905 the account (RDA Toolkit, 2021).

The RDA Toolkit is an integrated, browser-based online product that allows users to interact with a collection of documents and resources related to cataloging, including the RDA standard. Other resources available through the Toolkit include:

- Full text document of the RDA;
- The AACR2 document to help you know where to start;
- Library of Congress Policy Statements (LCPS);
- Workflows and other procedural documentation created by subscribers that can be shared within an organization or with the entire subscriber community;
- RDA mappings to various coding schemes, including MARC 21.

There are several ways to browse or search the RDA Toolkit, as well as change the display. The Toolkit includes workflows and mappings (matching tables), features that can support the integration of RDA into everyday work, allowing the freedom to create and add custom files and documents. Implementing the RDA entails training and learning the content of the standard and learning to use the new networking tool. (OLIVER, 2011, p. 91).

## 2.5 Training and Implementation

The content of the RDA was developed as an international initiative with the formal participation of representatives from the four authoring countries of the standard: Australia, Canada, Great Britain and the United States, being the coordination of plans and decisions distributed among the four authoring countries (OLIVER, 2011, p. 109).

Prior to the US RDA tests, national library organizations in other English-speaking countries such as Australia, New Zealand, Canada and Great Britain also conducted surveys to gauge practitioners' opinions about the new cataloging code. These surveys provided a little more insight into "catalogers' needs" and "preferred methods for training." (PARK; TOSAKA, 2015, p. 252, our translation).

According to Hanford (2014, p. 156, our translation), the formal test consisted of three phases: (a) the training phase for RDA participants, which took place from early 2010 until September 30, 2010; (b) the record production phase from October 1, 2010 to December 31, 2010, during which records and surveys of the creation process were created; and (c) the review phase from January 1, 2011 to March 31, 2011, during which the United States RDA Test Coordinating Committee approved the survey results and prepared a report for the administration of the three national libraries.

The awareness-raising activity on the RDA in Canada has started since 2008, as reported by Oliver (2009, apud MANSOR; RAMDZAN, 2014, p. 178, our translation) in the Canadian Committee on Cataloging (CCC) report. CCC members have played an important role in keeping the Canadian cataloging community informed about the development, changes and presentations of the RDA.

Cross; Andrews; Grover; Oliver; Riva (2014, p. 02, our translation), point out that training, whether formal or informal, is the starting point for the implementation of a new standard. When looking at the implementation of the RDA in Canada, there is a notable difference in the way training took place in the English and French-speaking cataloging communities. In Canadian English, training was not coordinated from a central point. There was some training organized and delivered by an ad hoc peer group, but there were also grassroots individual initiatives for self-training using resources available on the web and elsewhere. In French-speaking Canada, the Canadian portion of the team that translated the RDA into French became an authoritative source for the French-speaking cataloging community, and this team organized and delivered training in French.

In this age of the Internet and Web services, distance shouldn't matter. Given library funding, requirements and budget cuts, many library staff relies on web documents and web presentations to gain theoretical and practical knowledge. However, as seen during the implementation of the RDA, there remains a firm preference for peer-to-peer knowledge transmission, whether through conferences, pre-conferences or training workshops. (CROSS; ANDREWS; GROVER; OLIVER; RIVA, 2014, p. 04, our translation).

The results of the English language survey in Canada indicated a strong reliance on web documentation, but also on face-to-face presentations such as conference sessions, workshops, guest speakers, etc. Canadian libraries took advantage of both Canadian resources and those made available by other countries.

Second Cross; Andrews; Grover; Oliver; Riva (2014, p. 08, our translation) In 2009-2010, some members of the Technical Services Interest Group (TSIG) of the Canadian Library Association (CLA) began to discuss the implementation and training of the RDA. During this period of time, a small group within TSIG conducted a survey of Canadian libraries to assess the level of awareness in the RDA and gather information on preferences for training methods.

A training outline was created and shared via Google Docs, which was new at the time and is unfortunately also blocked by some institutions such as government libraries. A call was made to the volunteers and the response was encouraging.

The working group developed some original modules, but also made use of work already done by the Library of Congress. The Library of Congress (LC) had created several series of modules as they went through the testing period and then began implementing and training all of their employees. They provided free access to these modules on their website. It was the first definitive set of training materials and was a key element in RDA training as it demonstrated how to implement RDA in a MARC 21 environment. (CROSS; ANDREWS; GROVER; OLIVER; RIVA, 2014, p. 08, translation Wow).

In the case of Australia, a schedule for applying the standard was established, in line with the testing schedule carried out in the United States, with implementation starting in mid-2011 and ending in 2013. The National Library of Australia (NLA) also promoted changes in the Australian National Bibliographic Database (ANBD) reviewed existing cataloging policies; proceeded with the conversion of access points; and implemented changes to accommodate the RDA to the local collective catalog (United States RDA Test Coordinating Committee, 2011, p. 25, our translation).

The Australian Committee on Cataloguing (ACOC) defines on its website, from the National Library of Australia (NLA), some possible tasks to be adopted by libraries for the implementation of the RDA (NLA, 2019, our translation):

- **Access to the RDA Toolkit:** Access the RDA instructions will be needed for implementation in the libraries. The RDA Toolkit is available as an online, web-based product. While the preferred way to access RDA is online through the RDA Toolkit, print copies of the RDA instructions are also available for purchase. Before subscribing to the product online, libraries should determine the most appropriate license agreement based on the number of concurrent users they expect to be using the RDA Toolkit.
- **Training:** Libraries will need to arrange for their staff to be trained in the RDA. The training required by cataloguers will differ in content and duration from the training required by other library staff, such as reference librarians. Additional training may also be needed by cataloguers for specific types of material, such as serials, music, or movies. Libraries have the option of hiring an external trainer or training their own staff. If libraries decide to train their own staff, it is important to allow sufficient time to adapt training materials in line with local policies and practices.

The *British Library* (BL) announced the implementation of the RDA in 2008, although it did not actually take place until April 2013 when it started using the RDA, mainly due to delays in publishing North American test results around the RDA. From 1981 to 2013, it was using AACR2R, so switching to RDA was a natural evolution as it replaced AACR2R. (MORILLO CARELO; GÓMEZ PRADA, 2015, p.192, our translation).

Expert groups were created, and drawn from experienced cataloguers and team leaders to provide the cutting edge of trainers and professionals. Training was the most intensive aspect of the implementation. Different plans have been developed to meet the needs of different groups of employees, as shown below:

- **RDA trainers:** received training in how to deliver training. They also received introductory training in RDA based on training modules developed by the Library of Congress. They were given the time and encouragement to go and practice and come

back with questions and problems, which you would then try to resolve and provide training material feedback.

- **Processing team:** Pickers, procurement staff, copy cataloguers, finishers, and shelf markers received on-the-job training. Training was delivered primarily in the team environment, with some classroom sessions. The managers of these teams received training from the cataloguer.
- **Catalogs:** the training plan for cataloguers was more complex. Awareness and understanding of the FRBR and RDA was fostered through our continuing professional development (PDC) program while the RDA was being developed. Update sessions were delivered prior to the start of training.

The training was complemented by a comprehensive review and review of existing documentation. Application decisions and policies have been documented in workflows. Workflows also act as a mediation layer that guides catalogers through the workflow of creating records for different content streams. Creating and maintaining the workflows is a burden, but they have reinforced training and continue to be used heavily. The British Library (LC) workflows have been published in the RDA Toolkit for the wider community. (DANSKIN, 2014, p. 191, our translation).

Also according to Morillo Calero and Gómez Prada (2015, p. 193), training modules provided by the Library of Congress (LC) were used for personnel training, but an internal course was also developed, for example, to enable the cataloging of records in RDA without using MARC, using the RDA in Many Metadata Formats (RIMMF) tool developed by The MARC of Quality.

After going through some of the implementation and training actions of the RDA in the member countries responsible for coordinating and organizing the standard, and pointing out, below, in Frame 2, the training actions resulting from the initiatives proposed by other countries that already have implementation strategies.

Frame2. Training actions in libraries in other countries.

COUNTRY	TRAINING ACTIONS
France	<ul style="list-style-type: none"> <li>• “The libraries transition requires national training to make institutional leaders aware of the organizational and functional impacts of strategic data changes and issues. To provide good territorial coverage, a network of trainers provides knowledge to higher education and public reading. The actions of the Formation Group, responsible for designing the training courses, developing the teaching materials and leading the network of trainers, is available on the page of the National Library of France (BNF) with the link to the “Bibliographic Transition” website at “Training” section. Among the actions for the transition is the offer of training in two modules available online. One on awareness and general information on the evolution of catalogs and cataloging rules (context and change issues, web data, FRBR, RDA cataloging code, RDA news), and another on the application of RDA cataloging rules. RDA-FR published in 2015. At the end of each module, participants are asked to assess their understanding of the actions”. (BNF, 2020, our translation).</li> </ul>
Germany	<p>“Before the start of the RDA implementation in 2015 at the National Library of Germany (DNB), a Workshop was held for system providers with the aim of passing on information about the technical implementation project and also an introductory course on the main topics of the standard that will be adjusted in the library system. The training courses on the standard RDA in German-speaking countries were developed and jointly presented by all partners of the RDA working group, they have a modular design and six modules</p>

	were developed. The training modules start with a general introduction to the basics of the RDA and its structure and end with training units for special features of different types of materials. The modules are built together, but are designed so that they can also be used individually. Upon completion, all training content will be made publicly available in a system-independent, formulated PDF version, and serve as a collection of materials for teachers to prepare and for students to browse. The reuse of all training documents and extracts from them is possible by searching the RDA information and application wiki available on the DNB website." (DNB, 2020, our translation).
Netherlands	"The Dutch language RDA committee is responsible for its coordination and application. It maintains a link on the page of the National Library of the Netherlands (KB/NBN) where they are directed to other links to courses, Einars and trainings in English (Workshops and courses). The courses are offered by a service provider company called "Ingressus", which is made available to both individuals and institutions. Courses range from initial drafting and development of the RDA with FRBR practices without in-depth knowledge of cataloging, to courses specifically focused on the processes of cataloging various materials such as multipart books, periodicals, sheet music, antique prints, images and articles. Participants can register on the "Ingressus" page and the training material will be made available as soon as payment of the course fee is confirmed. The webinars available on the "Ingressus" page offer several videos directed at RDA concepts, the RDA Toolkit Toolkit and new, new practices arising from the RDA 3R Project". (KB/NBN, 2020, our translation).
Sweden	"As of 2017, the National Library of Sweden (KB/NLS) established an editorial team that would be responsible for monitoring the development of the RDA and for developing, maintaining and managing Swedish practices in Libreis and in the Database cataloging of media of Sweden (SMDB). The editorial team maintains a page on the BNS website dedicated to cataloging in RDA with educational and informative material for training cataloguers. The material available for download is divided into six parts, ranging from basic content about the RDA, identification of entities and relationships, videos and PDF texts on current information about the RDA. It also maintains workflows with practical instructions to be applied to each type of material available in Libres, SMDB and also in the RDA toolkit in the Resources Guide". (KB/NLS, 2020, our translation).
Finland	"The National Library of Finland (NLF) is responsible for coordinating cooperation in developing the description, implementing and amending the RDA. There are groups of experts involved in describing and commenting on the translation of rules into RDA that create guidelines (specification rules) and examples, as well as training and guidance. On the National Library of Finland page you will find a link that directs you to the information wiki about "Descriptive Rules Services", which presents the main events and training for libraries. Online seminars with slides and videos on the basics of the RDA are available; slides and links to in-person training since the first training offered in 2015; Workshops in RIMMF with various instructions on RDA themes; Events commented on the main current changes in the RDA and a question period available on the page with a pre-defined period of questions on the topics covered in other trainings". (NLF, 2020, our translation).
Italy	"The first introduction to RDA, at Casalini, was in 2011, which received a month of in-house training from Mr. George Prager, Head Cataloging Law at New York University. In March 2013, Barbara Tillett, recently retired from the Library of Congress, taught a three-day course on the RDA to graduate students in Library Science at the University of Florence, in which the Casalini team participated. They were also extremely well assisted by the online training material available at the Library of Congress. As a member of the Cooperative Cataloging Program (PCC), the implementation of the RDA in Casalini began on April 1, 2013, initially producing authority records in RDA". (ALDI, 2018, p. 25, our translation).
Turkey	"Training activities started with workshops in 2012. In these workshops plans were made to create RDA terminology, develop subject headings and authority name, design educational materials, and organize education to make catalogers more aware of the RDA. In addition, two meetings were organized at the National Library of Turkey with the

	participation of academics, cataloguers and librarians and decision makers to decide on an action plan for implementation". (Çakmak, 2018, p. 32, our translation).
Spain	"From the decision of the BNE, in 2016, to adopt the RDA, and according to the first estimates and the implementation schedule drawn up, from January 1, 2017 to mid-2018, work was proposed in the preparation of materials training, staff training and making the material available to all interested parties on the BNE website. Training resources are made available in RDA hands-on exercises as a means of disseminating and facilitating understanding and use of the RDA Application Profile for modern BNE monographs; Workshops with two practical sessions on cataloging and general presentation of the main news and changes in cataloging practice, its possible influence on work and authorities and the new RDA text after the 3R project; and Training sessions for members of the Council for Cooperation between Libraries (CCB) and the Network of Spanish University Libraries (REBIUN). Webinars are also made available as "External sources of RDA training" where links to videos for instruction in the use of the RDA Toolkit and links to RDA training resources prepared by other institutions are provided". (BNE, 2020, our translation).

Source: BNF (2020); DND (2020); KB/NBN (2020); KB/NLS (2020); NLF (2020); ALDI, (2018); Çakmak (2018); BNE, (2020)

It is noticed that in some cases the national libraries of these countries are the managing bodies responsible for the dissemination of these trainings, and mainly for the dissemination of information about the RDA in their pages.

### 3 METHODOLOGY

This research is characterized as applied, as it seeks to improve the understanding of problems within a specific institution, in this case the libraries of the Federal University of Minas Gerais (UFMG); create solutions to problems; and develop conclusions of practical relevance for solving these problems.

The investigation paradigm that underlies the scientific approach of this research is the inductive discovery process, where the advance of the investigation details starts from fragments to a connected view of the situation.

In relation to the proposed objectives, this study is characterized as being exploratory and descriptive. Regarding the approach to the problem, this research presents aspects of mixed methods, which are an investigation approach that combines or associates qualitative and quantitative forms.

The research universe is the population of cataloguers from the Library System of the Federal University of Minas Gerais (BU/SB), currently consisting of 25 libraries, and there was a return to the interview, a sample of 17 libraries with respectively one cataloguer of each, that is, 17 cataloguers who participated in the interviews.

Bibliographical research was used, which consisted of getting to know the subject under study in a more in-depth way. For this, it was necessary to search information sources and databases and others, such as: books, scientific articles, theses and dissertations, which deal with the subject. They were researched in national databases in the area of information science: in the Reference Database of Articles and Journals in Information Science (BRAPCI); Peri base; SciELO base; and searches were also made in the Capes Journal Portal in the Library and Information Science Abstracts (LISA) databases; Web of Science, Scopus and also on Google Scholar.

It is noteworthy that the data collection of the first part that reports the implementation actions of the member countries responsible for the development of the RDA (Australia,

Canada, Great Britain and the United States) were carried out during the period from June 2018 to September 2019, and the second part, referring to Frame2, were collected during the period of July 2020.

The study also used, as an instrument for data collection, the semi-structured interview based on a list of questions with closed and open questions (comments), and the thematic block, and its respective questions, were constructed according to the theoretical foundation of the research as per Frame 3.

Frame 3. Outline of the theoretical foundation with the thematic blocks.

THEMATIC BLOCK	QUESTIONS	THEORETICAL FOUNDATION
Preference of topics for RDA training	Preferred programs and methods for training	Cross; Andrews; Grover; Oliver; Riva, 2014, p. 04
	Content Preference Topics for Training	Mey e Silveira, 2009, p. 90; Cavalcanti, 2013, p. 53; Oliver, 2011, p. 01; Cavalcanti, 2013, p. 60; Mering, 2014, p. 29; El-Sherbini, 2013, p. 241; Carton, 2014, p. 01; Fusco, 2011, p.37

Source: prepared by the author, 2019.

In the context of the proposed analysis of this study, the data of this research were analyzed first by the quantitative method, according to the analysis of closed questions, and in a second moment by the qualitative method, according to the analysis of the closed and open questions proposed in the interview comments will appear cited according to the greatest preference of the programs, methods and training content presented, and for their analysis and discussion.

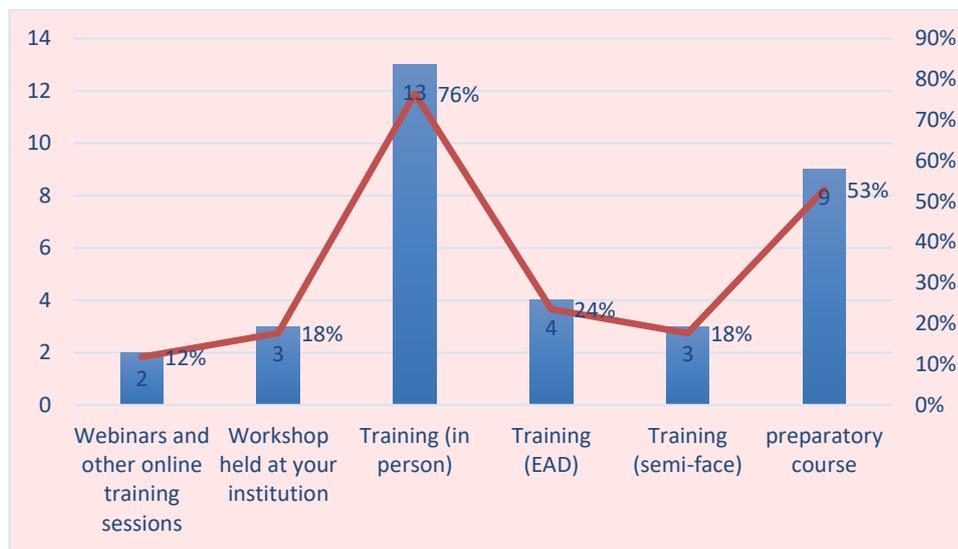
## 4 RESULTS AND DISCUSSION

It is proposed to identify the preferred needs of programs, methods and content topics for training in the RDA. The questions are available with alternatives that confirm the best or most consistent preferences of the interviewees according to their choice and according to the question suggested in the thematic block. Therefore, the analysis, representation and interpretation of the data collected according to the interview are presented below.

### 4.1 Preferred programs and methods for training

It is suggested to identify the preferences of programs or methods for training on the most relevant topics or interests of choice for cataloguers. Each cataloguer was asked to select up to two alternatives according to their preference.

**Graph 1.** Preferred training programs and methods



Source: prepared by the author, 2020.

According to Graph 01, 76% (13 cataloguers) prefer in-person training as a training method according to their preferences, while 53% (09 cataloguers) indicated the preparatory course program as their preference for training, 24% (04 cataloguers) reported that training (EAD) would be the best choice as a preference for RDA training, equally, 18% (03 cataloguers) declare the Workshops held at their institution, and 18% (03 cataloguers) declare the blended training as preference of methods for training and only 12% (02 cataloguers) say they choose webinars and other online training sessions as a preference for RDA training.

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For a better understanding of the analysis that took place, in Frame 4, below, the comments made by the cataloguers (C1, C2, C3,...) confirm the choice identified.

**Frame 4.** Comments on training programs or methods

C1	I put on-site training because it's my preference. When I start using a new tool, I like to be trained, right?.
C4	I put on-site training which I think is something that has to be more complete as I understand it. Not distance training or something like that done virtually, it has to be face-to-face training, with an expert, a person who really understands what he's talking about.
C5	I put on-site training because in an environment where there are many people, a face-to-face environment, the advantage is that at first people will be there for it, and sometimes the colleague has a question that comes up at the time, is there for this, for this purpose, than if he were at home.
C7	I scheduled on-site training and preparatory courses.
C8	I think at first as everyone is very raw it would still have to be in person.
C9	No comments
C10	In my experience I think face-to-face training is even better.
C11	And I said that I prefer face-to-face training because I really like distance training, but in the case of the RDA, face-to-face training would be interesting, because then you ask questions, because I think it will generate many doubts for us, I would prefer form of on-site training.
C12	but I prefer it here, this is even a personal thing, I prefer preferential training, because when talking about online I disperse, I do not follow these trainings to the letter, I would prefer a face-to-face one.

C13	And face-to-face training, I think it could even be blended training, but I think face-to-face training in cataloging and something else, I took an online authority course, I took a normalization course, it's good for normalization... by what was done in the MODS, it was good, but MARC's when it's MARC's, of whoever catalogs, the good thing is in person, you go cataloging together, with the practical part, in person and with the practical part, and you practice to see where you have the difficulty.
C14	I think the issue of face-to-face training and distance learning is important as well.
C16	The face-to-face training and preparatory course for me I think is more effective, but all the ways are interesting and will suit different types of people, and it has to focus a lot on this whole mentoring process because I believe that people in general, the UFMG cataloguers are more or less at the same level in relation to the understanding of the RDA, and it would be an initial, superficial understanding to move on to the cataloging process that still needs a lot of training.

Source: prepared by the author (2020).

Among the methods for training the RDA, most cataloguers demonstrate their preference for face-to-face training as analyzed in the comments.

Mering (2014, p. 112) points out that catalogers will need training for everything from recognizing an RDA record to creating an RDA record from a blank form. At the basic level, catalogers will need to be able to identify aspects of an RDA record. In addition, catalogers can find incomplete records in RDA and hybrid records in AACR2/RDA.

In other words, perhaps at this point, presented by Mering, the cataloguers in their comments prefer face-to-face training because they are more intimate, because they have a specialist who will address the topic, because they involve people in person. In this case, the knowledge will be passed on equally to everyone and the doubts will be taken out at the present time, there will be no convenience of online training and the exercises can be done together.

Face-to-face training and preparatory courses were chosen by cataloguers as program preferences and training methods. This is justified because cataloguers suggest that in-person training be more complete in terms of content, in an environment where you will have contact with people who will be there sharing questions and doubts about the subject, and there will be no oversights, lack of interest, or dispersion of those involved as in an online environment, and also because there can be a follow-up of practical parts at the time of training where difficulties can be removed at that time.

In addition, as reported by cataloguers, this preference is even justified by the fact that it is a habit of the UFMG library system, when new things appear to be passed on they use in-person training and preparatory courses where there is a meeting of cataloguers and delivery of handouts as accompanying material. Some cataloguers also suggest that the more types and forms of guidance and training, the better it will be for them to learn, and a specialist who is available at that time will be a differential for clearing common doubts.

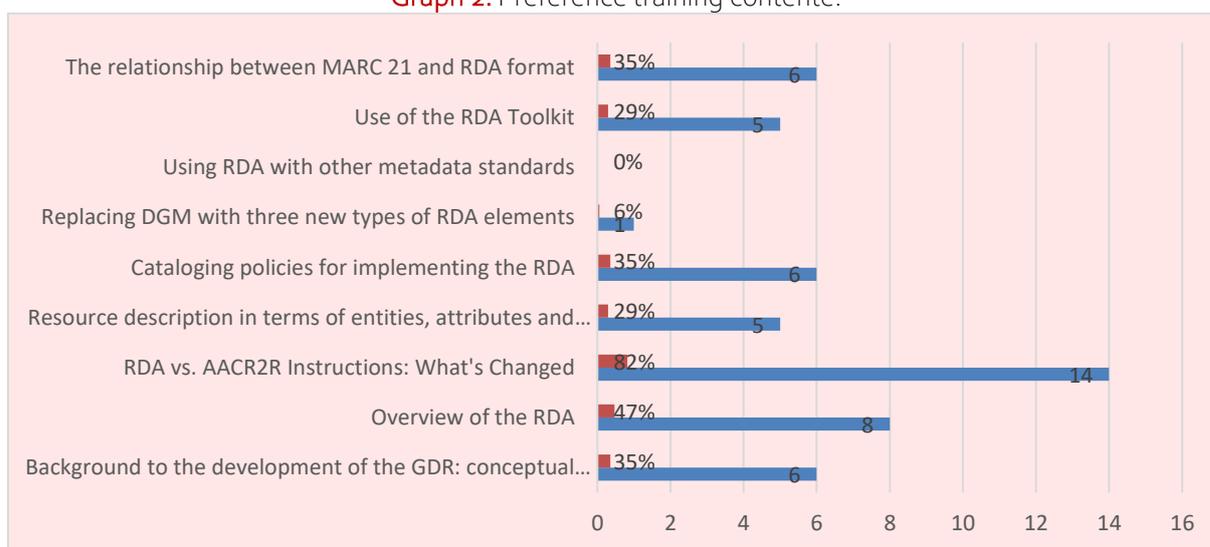
As identified in the studies by Choi, Yusof, Ibrahim (2014, p. 613) on the implementation of the RDA at the National Library of Singapore, the training method was a combination of classroom, study group and Webinar training. While the classroom training and Webinars were intended to provide a good introduction and solid overview of the RDA there was a need to continue the hands-on training; constant review of newly created RDA records and ongoing discussion of new rules, their interpretation and application.

Also according to studies by Hitchens and Symons apud Long (2018, p. 99) the need to use various educational formats to provide training content is emphasized, including online education and in-person conferences and workshops. Numerous national-level surveys and reports from libraries that participated in the initial RDA testing program reinforced the assessment of Hitchens and Symons apud Long (2018, p. 99) generally agreeing that a wide variety of training methods should be made available.

4.2 Content Preference Topics for Training

In this section it is intended to identify topics of preference of content for training of the most relevant RDA or of interests of choice of cataloguers as proposed. Each cataloguer was asked to select up to three alternatives according to their preference.

Graph 2. Preference training contente.



Source: prepared by the author (2020).

As identified in Graph 02, the majority, 82% (14 cataloguers) chose as content preference for RDA training the topic RDA Instructions versus AACR2: what changed, 47% (08 cataloguers) chose the topic Overview of the RDA, the content preference topics The relationship between the MARC 21 format and the RDA and Cataloging Policies for the implementation of the RDA was equally with 35% (06 cataloguers) for each topic, equally also, the content preference topics Use of the RDA Toolkit, Description of Resources in terms of Entities, Attributes and Relationships and Background to RDA Development: Conceptual Models (FRBR, FRAD and FRSASD), obtained 29% (05 cataloguers) of choice as a content topic for training, while the topic Replacing the DGM with three new RDA elements obtained 6% (only 01 cataloguer). Only the topic Using RDA with other metadata standards did not obtain any choice from cataloguers regarding the proposed statement.

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As shown in Graph 02, it was identified that cataloguers elected as their preferred topic of content for training the alternative Instructions RDA versus AACR2: what has changed. Below, in Frame 5, some comments from cataloguers (C1, C2, C3,...) regarding the choice of theme.

Frame 5. Comments on Preference Content for Training.

C1	[...] RDA versus AACR2 instructions what has changed because I think it's important for you to see what the differences are [...].
C4	[...] I put this comparison of what has changed, I think it is interesting for us to visualize what is changing as a whole [...].
C5	[...] This here I think is cool, but RDA versus AACR2 would be very interesting [...].
C8	[...] I put RDA Instruction versus AACR2 which changed for us to realize this change [...].
C11	[...] Instructions of the RDA versus AACR2 that I think would be the biggest question to identify, for an agent who is already working with this, what will change in the AACR2 in relation to the RDA [...].

C13 [...] I think the first thing is to work the RDA with AACR2, because everyone is addicted to AACR2, you see, we've been using AACR2 for many years [...].

Source: prepared by the author (2020).

Confirming the results from the quantitative perspective, in the comments of cataloguers regarding the preference of content for training, they point out their brief motivations for the choice of content, “I think this is important for you to see what the differences are (C1)”; “I find it interesting for us to visualize as a whole, what is changing (C4)”; “it would be very interesting (C5)”; “for us to notice this change (C8)”; “I think the biggest question would be to identify, for an agent who is already working with this (C11)”; “everyone is addicted to AACR2, you see, we've been using AACR2 for many years (C13)”.

Among the three content preference topics indicated by catalogers are the "RDA instructions versus AACR2: what has changed", this preference is justified because currently, still, AACR2R is the code used by catalogers, so from it, understand what they would be differences related to the RDA, and identifying what is changing, would facilitate understanding to understand the RDA.

Then, “RDA overview” was pointed out because catalogers understand that it would be interesting, even, due to the lack of general knowledge of cataloguers about the standard, to bring an introduction to begin to understand the process of change.

In third are the themes: "Antecedents of the development of the RDA: conceptual models (FRBR, FRAD and FRSAD)", due to the importance of understanding the base structure of the RDA to use it, the "Cataloging policies for the implementation of the RDA ” because they are of great importance to guide, give guidance, to all cataloguers in relation to everything that is done, so that there are no convenient executions for each one, and the “The relationship between MARC 21 and RDA format” because as the AACR2, MARC is the current cataloging scheme, so it would be interesting to build on it to better understand this transition to RDA.

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## 5 FINAL CONSIDERATIONS

This article allowed us to understand how the member countries of the committee responsible for the development of the RDA and, in large part, other countries that started to think about its implementation, developed their training actions, and that research studies in countries that have already adopted the RDA contributed significantly to more accurately examine the training needs of libraries.

The training actions perceived by the countries that have already implemented and those that are implementing the RDA are as diverse as possible, and their National Libraries are directly involved in the activities and processes of preparation and dissemination of training in their countries, together with the committees, councils and groups responsible for implementation, mainly through the availability on the pages on the websites of these National Libraries, which bring all types of training and resources related to this stage of implementation.

Studies and prior knowledge of library and administration personnel regarding programs, methods, as well as content, greatly contribute to the creation of a training plan that is more focused and directed to everyone's interests and with themes that are more assertive to their needs of RDA's learning process, in addition to saving time and effort in deciding what to introduce in a training.

Despite the choice of cataloguers for in-person training methods and preparatory courses, distance learning may be a reality that is here to stay due to the Covid-19 pandemic that spread in 2020 and brought changes in behavior that affect the coexistence diary, communication and access to information.

It is essential that there are training practices that reaffirm the awareness of knowledge of the RDA by the administration of libraries, learning and the continued study of the standard by the cataloguers. In addition, currently, it is necessary to learn about the RDA 3R Project, which promoted the restructuring and redesign of the RDA Toolkit, as well as the RDA standard, and to improve the alignment of changes in cataloging practices, understanding and examine the content of the new structure and organization of the RDA, and its familiarity with, and consonance with, the Library Reference Model (LRM) proposed by IFLA..

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