

# PRACTICAL ANALYSIS OF THE RESOURCE DESCRIPTION AND ACCESS (RDA) AND LIBRARY REFERENCE MODEL (LRM) IN KOHA IN THE CATALOGING PROCESS

## ANÁLISE PRÁTICA DO RECURSO DESCRIÇÃO E ACESSO E MODELO DE REFERÊNCIA BIBLIOTECÁRIA NO KOHA NO PROCESSO DE CATALOGAÇÃO

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### ABSTRACT

Libraries are undergoing major changes because of the increasing use of digital tools and resources. But they still need to maintain their physical collection, which requires modernization of their activities, as in the case of the cataloging process. However, most libraries adopt integrated library systems, which requires studies to verify the effectiveness of these systems to new standards such as the Resource Description Access (RDA) and the Library Reference Model (LRM). Thus, this study aims to verify the suitability of the Koha software for the use of RDA and LRM in the cataloging process, since Koha software is a free open source tool most used in the world for computerization of libraries, especially in the management of physical collections. The study has exploratory characteristics, due to the little familiarity in Brazil with the theme, with qualitative alignment. The results showed that the adoption of RDA and LRM in Koha is possible and technologically easy to implement. However, the biggest challenge is in technical issues, since the RDA and LRM involve conceptual models appropriate to technological changes. Thus, the present study verified the need for further studies aimed at verifying the use of RDA and LRM in other activities of the library, presenting an opportunity for new researches.

**Keywords:** RDA. LRM. Cataloguing. Open software.

### RESUMO

Bibliotecas passam por fase de grandes mudanças, com o uso cada vez maior do digital, mas, ainda precisam manter o legado do físico, requerendo modernização das suas atividades, como no caso da catalogação. Entretanto, grande parte das bibliotecas utilizam sistemas de gestão informatizados, requerendo estudos para verificar a adequação destes sistemas a novos padrões como o *Resource Description Access* (RDA) e o *Library Reference Model* (LRM). Assim, o presente estudo tem por objetivo verificar a adequação do software Koha ao uso do RDA e LRM na catalogação, visto ser uma ferramenta livre de código aberto mais utilizada no mundo para informatização de bibliotecas, especialmente na gestão de acervo físico. O estudo apresenta características exploratórias, visto a pouca familiaridade no Brasil com o tema, de alinhamento qualitativo. Como resultados, verificou-se que a adoção do RDA e LRM no Koha é possível e tecnologicamente fácil de implementação. Entretanto, o maior desafio se apresenta nas questões técnicas, visto que o RDA e LRM envolvem modelos conceituais adequados às mudanças tecnológicas. Assim, o presente estudo verificou a necessidade de novos estudos voltados a verificação do uso do RDA e LRM em outras atividades da biblioteca, apresentando oportunidade a novas pesquisas.

**Palavras chave:** RDA. LRM. Catalogação. Software livre.

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## 1 INTRODUCTION

To begin with, Koha is the most widely used free tool to manage libraries and computerize some of their activities, to the extent that countries like Turkey have made it the official software of public libraries. Available in 2000, Koha was developed for the *Horowhenua Library Trust*, in New Zealand, in which its name comes from the Maori language, meaning “gift” or something valuable, which is given, but it is expected something in return. Therefore, its creators offered the world a gift, possibly expecting contributions in return.

According to the independent consultant Marshall Breeding, on the page maintained about Koha, the public libraries are the main use, with more than 55% of the 3,734 libraries studied. Nevertheless, the most relevant index in this study refers to the satisfaction survey, which, despite some fluctuations from 2007 to 2019, has remained at around 7 points (maximum value is 10). Therefore, this study presents usage and satisfaction indicators, among others, revealing the good acceptance of Koha in various types of libraries.

In this path, Koha has been used in several types of libraries with successful experiences described by scholars in the university library (KOHN; MCCLOY, 2010), hospitals (BISSELS; CHANDLER, 2010), among many others, besides the public libraries. Hence, it demonstrates adaptability for uses in several types of libraries, with their specificities, regardless of the type, since it was originally developed for the public library.

Another relevant point refers to the use of Koha in less developed countries, such as Nigeria (EGUNJOBI; AWOYEMI, 2012), developing countries, such as Portugal (IZIDORO, 2017), or even developed ones, such as the United States (KOHN; MCCLOY, 2010), proving to be an appropriate tool for different contexts. In Brazil, Koha is not as used as in the other countries in South America, because according to Koha statistics, Venezuela has 213 libraries using the software, Colombia 153, Argentina 90, and Peru 85. Shintaku and Schiessl (2020) suggest that the small adherence to Koha in Brazil is related to the librarians' training, in the absence of classes that deal exclusively with this software in the library courses in the country.

The first use of Koha in Brazil was in public libraries in São Bernardo do Campo, a city in the metropolitan region of São Paulo (FERNANDEZ, 2013). Other successful experiences of using Koha in the country can be found in the Library of the National Institute for Amazonian Research (CARDOSO, 2019) and High school Dom Pedro II (FIGUEIREDO; TORQUATO, 2017), the library of research institute and school, respectively. Through the support of the Brazilian Institute of Information in Science and

Technology - Ibict, Koha has been adopted by government agencies such as the National School of Public Administration - Enap, and the Ministry of Women, Family, and Human Rights - MMFDH.

The majority of libraries, even the non-users of Koha, still use traditional standards and methods, such as the second edition of Anglo-American Cataloging Rules (AACR2), although there is a more current standard such as Resource Description and Access - RDA. The study reported by Holanda and Lourenço (2020), even without presenting a conclusive result, indicates that the adoption of RDA at the Federal University of Minas Gerais - UFMG should be a challenging process for catalogers. Other studies report the successful implementation of the RDA, such as Hubner's, Texeira's, and Baptista's study (2018), in the management of authority control, one of the pioneering studies in the use of the new standard.

Besides, there is no unanimity about the difficulties in adopting the RDA, but Silva and Serra (2017) advocate the rapid adoption of the RDA by the national libraries, as it will help them to adhere to the reality of many libraries in other countries, modernizing cataloging activities. Therefore, they reveal the need for studies on the RDA, in the most specific case, on Koha in Brazil, combining the use of a new cataloging standard in the most widely used free tool in the world.

Furthermore, the use of the Library Reference Model (LRM) in the country needs to be studied, once it is one of the worldwide trends, as far as the evolution of technology allows for a wide variety of formats and information supports. In addition, Padron, Cruz, and Silva (2020) unfold that the use of LRM becomes more effective in creating bibliographic data for other types of materials, like the ones related to popular music. Thus, the LRM becomes eligible for studies with Koha, and how a free tool, widely used in the world behaves with new standards and methods.

According to this context, the present study aims to report studies on how to implement RDA and LRM concepts in a Koha installation to verify the behavior of this tool before new realities. The study is restricted to the cataloging process since it is where the RDA and LRM have a bigger role in library activities. Contributing, consequently, to discussions on relevant topics to libraries, as the RDA and LRM with an applied approach, and the use of a free tool, which depends on the community to evolve. With that in mind, we discuss the modernization of libraries that make use of free software.

## **2 RDA AND LRM**

The RDA, published in 2010, and the LRM of the International Federation Library Association and Institutions - IFLA, published in 2017, are two emerging themes related to the treatment of information,

presenting some modernization in their activities. Nonetheless, there may be still doubts about how these two themes are implemented in a computerized system like Koha.

Coyle and Hillmann (2007) report that the RDA originated from an evolution of the Anglo-American Cataloging Rules standard, second edition - AACR2, initially conceived as a third edition. However, the need for changes surpassed the tradition of AACR to create a line for catalogers, better adapted to the evolution of technology, meeting, consequently, the need for a description of resources, aimed at various formats, such as image, audio, and video.

Therefore, the RDA is a normative set for bibliographic description, different from AACR2, as it is centered on entities, divided into work, expression, manifestation, and item. Thus, it significantly impacts the librarians' cataloging process performance. Even so, Silva and Serra (2017) consider the adoption of the RDA as inevitable, despite all the difficulties that make this process slow. For the authors, the adoption of the RDA affects the modernization and quality of cataloging, enabling exchange with international institutions that have already migrated.

As the majority of library management systems is based on the Machine Readable Cataloging - MARC format, the change from AACR2 to RDA occurs in the form of describing the attributes of the cataloged manifestations in their respective Marc fields and subfields, as presented by Schiff (2010), with the comparison between bibliographic data in each standard. Thus, the ways of describing the fields are changed, without some of the existing limitations in AACR2. Some MARC fields have changed, and others were created to support information such as the type of content, format, and support.

However, every standard requires a conceptual model to support it, giving guidelines for its use. As a consequence, IFLA developed the LRM to support and modernize the treatment of bibliographic and authoritative data, making them more suitable for current technologies as modern databases and semantic issues.

According to IFLA (2017, p. 10), the LRM “[...] is a high-level conceptual model and as such is intended as a guide or basis on which to formulate cataloguing rules and implement bibliographic systems”. Even though the LRM is younger than the RDA, its genesis is earlier, since historically this model is based on three others, namely the Functional Requirements for Bibliographic Records - FRBR (1998), the Functional Requirements for Authority Data - FRAD (2009), and the Functional Requirements for Subject Authority Data - FRSAD (2010). Although the period between the development of the FRBR and the FRAD is longer than 10 years, during the conclusion of the FRAD, as well as the FRSAD, the agents involved have already perceived that the consolidation of the FR family into a single model

would be necessary to make the clarification of the models coherent and reduce the difficulties in their adoption (IFLA, 2017).

Furthermore, it is incorrect to limit the process of consolidating the FR family in a document to a mere editorial process, because, given the contrasts between the three models, it was necessary during the preparation of the LRM to provide referrals that would guarantee conceptual consistency to the new model (IFLA, 2017). Thus, because of the magnitude and breadth of each document, the unification of these models required a close look at the emerging concepts in each one to eliminate ambiguities, maintain the structural concepts, and align the existing differences in the solution of common problems during unification.

More practically, the LRM focus on the Work, which can be expressed and have manifestations. For the description of the Work, the control of author authority and subject is used. However, the Work itself may be the subject of another Work, as in the case of reviews. The author of one work can be the author of other ones, and the same can happen with the subject that can be the subject of other works. This intricate network reveals the complexity in which the LRM operates, in which there are numerous relations between the Works.

In addition, concomitant to the conceptual pairing based on the LRM model, we have the library catalogs, which previously came from the intellectual perceptions of the structure and disposition of the data presented now and which, perhaps, need a thorough look at the possible adjustments or improvements when contextualized to current concepts. This aspect corroborates the existing mention in the LRM, by stating that:

Although the structural relationships between the work, expression, manifestation and item entities are essential for the model, the attributes and other relationships declared in the model are not essential for implementation. If some attributes or relationships are omitted because they are considered unnecessary in a specific application, the resulting system can still be considered an implementation of LRM. (IFLA, 2017, p.10)

We emphasize the importance of cataloging to ensure the relationships between the works, to enable the most effective recovery. Thus, the implementation of the concepts of the RDA and LRM is also based on the use of relation descriptors between the works described broadly, and the consequence is that the network nodes will be well-formed.

### **3 METHODOLOGY**

This study presents aspects of applied research, aligned to Gil's (2017) description of exploratory research, as it seeks to provide greater familiarity with the problem studied. An entire qualitative study,

centered on the analysis of the application of the RDA and LRM concepts in the Koha library management system, as it is a free tool, in which changes can be made without restrictions.

Besides, another point that corroborates the exploratory study is the almost inexistence of technical and scientific documentation on Koha, RDA, and LRM in vernacular, which is one of the study's guiding problems. Even in other languages, Google does not retrieve significant records when the search argument Koha AND RDA AND LRM is inserted, revealing that it is still an unexplored topic.

For this purpose, the research was divided into four phases, just to structure the studies, in order to facilitate the recording and analysis of the results, as follows:

- 1. Selection of the Work to be used in the study:** As the LRM presents a structure formed by Work --> Expression --> Manifestation-->Item, in addition to the countless possible relations; the selected Work must have more than one expression, more than a manifestation and relationships between Works to allow more complete tests.
- 2. Preparation of Koha for the study:** Installation of a Koha instance in the latest version; Import of the bibliographic spreadsheet with MARC21 fields proposed for RDA, available on the Koha Wiki. Translation of the bibliographic spreadsheet into Portuguese (Pt-Br).
- 3. RDA and LRM cataloging:** Catalog the work according to RDA rules and the LRM conceptual model, emphasizing the new fields suggested by the RDA and LRM relations.
- 4. Analysis of results:** Record the results at the end of each phase for analysis of the studies.

Besides, the study is not extensive regarding the cataloging of a large number of works, with quantitative aspects, but is restricted to treating a work that meets some of the relationships presented by the LRM. Therefore, verifying the adaptability of Koha to the precepts of the RDA and LRM, using a Work that meets most of the requirements for the cataloging of this study.

This study was developed by a team composed of librarians, information scientists, and computer scientists, due to the interdisciplinary need to work in a computerized tool. Even though the objectives of the study are more in line with Library Science, the support of other disciplines enriches and makes possible studies focused on free software.

## **4 RESULTS**

The first phase of the study, related to the selection of a Work, resulted in “The Da Vinci Code”, a detective novel; written by Dan Brown. A Work is an abstract entity, a set of ideas conceived by an

author. A Work brings together expressions, which is a functional equivalent, a way of giving materiality to the Work. Thus, a Work is an intellectual or artistic creation, according to IFLA (1998), resting on its expressions.

“The Da Vinci Code” is a Work, which takes its first expression through the printed book, published in 2004 by the Doubleday Publisher in New York. This publication is followed by two more expressions treated in this study, the Brazilian Portuguese publication translated by Celina Cavalcante, in 2004, by Sextante, Rio de Janeiro, and by the film directed by Ron Howard, in 2006, distributed in Brazil by Columbia Pictures of São Paulo. Thus, “The Da Vinci Code” is a work that rests, in this study, on three Expressions, the original book printed in English, the book translated into Brazilian Portuguese and a film, all of which can be present in a library.

An expression, in turn, can be manifested in several ways. The printed version of “The Da Vinci Code”, for instance, is a manifestation since it could be the digital version of the same Expression or even a different edition. The Expression presented by the translation embodies two manifestations identified in the study, one printed and the other an audio-book. The film, based on the book, embodies the manifestation in DVD format.

Another relevant point in LRM is the relationship between the different resources. Authorship and subject matter have traditionally been dealt with in many ways, often by using the basis of authority control. However, the relationship between works may present some novelties. In this case, the Work “The Da Vinci Code” has a relationship with the Work “Cracking the Da Vinci Code: The Facts Behind the Fiction”, by Simon Fox, with Expression in the translation by Cláudia Gerpe Duarte. Thus, the Work “The Da Vinci Code” is the subject of another work, as this is an innovation of the LRM, in which a Work or its expressions and manifestations and even items can be the subject of another work, creating other forms of relationship.

One of the first analysis aspects of the RDA and LRM application in Koha is the structure or architecture of the bibliographic data in the system. As it is a software modeled and designed at the time of the AACR2, it is based on “bibliographic records”<sup>6</sup>, without the structure modeled in Entity-Relationship, as initially foreseen by the requirements of the FR family and continued in the LRM. However, it is noteworthy that this is not an obstacle for such an implementation, be it in Koha or any other software modeled on this structure, since the Statement of International Cataloguing Principles

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<sup>6</sup> The term “bibliographic record” has been replaced by “bibliographic data” from the 2016 edition of the Statement of International Cataloguing Principles.

itself mentions that “in general, a bibliographic description should be created independent for each event” (IFLA, 2016, p.7), in line with the activity carried out for the research, which created new bibliographic data for each new event.

Before this context, the need to align the relationship designations between the resources emerge and the RDA, the norm for describing these relationships, presents a structure of designators suited to their description. This structure of designators already accompanied the RDA, while the models of the FR family served as a conceptual basis, through the appendixes:

- A. Appendix I - Relationships between Work, Expression, Manifestation or Item, and Agents associated with a resource;
- B. Appendix J - Relationships between Work, Expression, Manifestation, and Item;
- C. Appendix K - Relationships between agents;
- D. Appendix L - Relationships between Concepts, Objects, Events; and Places (still being developed);
- E. Appendix M - Subject Relationships

Nonetheless, the RDA presented changes in access and the nomenclatures of some relationships with the adoption of the LRM as a conceptual model. About access, the content once available in appendixes is now contained in an area named “Relationships”, within the guidelines of each entity. Also, changes to existing relationship designations have been added, but nothing that forces cataloging agencies to adopt new terminology in these relationships.

In the study, an RDA spreadsheet developed by the worldwide Koha community was used. However, some customizations in this bibliographic spreadsheet were necessary. Firstly, the translation of the MARC21 fields into Portuguese, as it was removed from the Koha Wiki, consequently, all fields and subfields were named in English, after importing into the Koha prepared environment for the study. Secondly, the inclusion of the fields 340 to 348, 765, 767 to 776 of the MARC Bibliographic. In fact, these fields were not visible to the cataloguer but were included in the spreadsheet, so the fields were activated through the administrative interface. Also, there were changes in the fields/subfields 338\$b and 337\$6, which were blocked for typing.

Within the application of this research, the relationship designations were indicated through the subfields ‘e’ and ‘i’ of MARC21 for Bibliographic Data and MARC21 for Data of Authorities, realizing that the system is suitable for such description, allowing, even, the creation of tables for later control of the terms used. As for the designation visualization of the relationships between the entities, it is



recommended to improve the system in the application of these designations as a future field label for viewing the data in the catalog. For example, for this case, the bibliographic data, in MARC21, of the expression translated into Portuguese and entitled “The Da Vinci Code”, with emphasis on fields 7xx (figure 1):

**Figure 1** – Designation of the relationship between Expressions, Manifestations, and Agents in Bibliographic Data

The screenshot shows a web-based interface for viewing MARC21 data. On the left is a sidebar with a menu containing: Normal, MARC (highlighted), ISBD, Exemplares, Reservas (0), Histórico de empréstimos, and Log de alterações. The main content area is titled 'Registro MARC: 1 ( O código Da Vinci )' and includes a 'Com planilha: Padrão' dropdown. Below this are tabs for MARC fields 0, 1, 2, 3, 5, 6, 7, and 9. The selected field 700 1# is expanded, showing the following MARC text: '700 1# - ADDED ENTRY--PERSONAL NAME', 'a Personal name Falck-Cook, Celina Cavalcante Autoridade', 'e Relator term tradutor'. Below this, field 765 1# is shown: '765 1# - ORIGINAL LANGUAGE ENTRY', 'i Relationship information Tradução de', 'w Record control number 3', 'z International Standard Book Number 0385513755', 't Title The Da Vinci code'. Finally, field 776 1# is shown: '776 1# - ADDITIONAL PHYSICAL FORM ENTRY', 'i Relationship information publicado também como livro online', 'w Record control number 4', 't Title O código Da Vinci'. Below this, another 776 1# entry is shown: '776 1# - ADDITIONAL PHYSICAL FORM ENTRY', 'i Relationship information publicado também como livro em áudio', 'w Record control number 2', 't Title O código Da Vinci'.

Source: Authors' elaboration (2020)

According to the data in figure 1, subfield 700 Ꞥe can serve as a source for the name of the field label in the data visualization, replacing the traditional label “Secondary entry” with real designations, meeting two of the five tasks of the user contained in the LRM, the “Identify” and the “Explore”, allowing the user to easily recognize and interpret data in the catalog and contextualize the information in the catalog during navigation. Along with this aspect, the designation of the relationship between an agent and a manifestation can be applied as an option as a facet of the relationship, for example, the person “Falck-Cook, Celina Cavalcante” can be consulted in the collection as “Translator”, “Author”, “Reader”, and among other possibilities of designating the relationship that a person may have in the manifestations belonging to the consulted collection.

Parallel to this aspect, subfields 765 Ꞥi and 776 Ꞥi allow the visualization of relationships between different expressions and manifestations of the cataloged resource, respectively. Although MARC21 fields 765 and 776 for Bibliographic Data are not new, the application of these fields has never been an element dealt with in the AACR2 description guidelines, with their use much more due to an

internal policy of cataloging agencies or, later, due to the possibilities of connection between records, resulting from the technological resources implanted in the software for cataloging.

Another relevant analysis point of this research is the application of Linked Data in structured data. Although a reciprocal linking of the data was not designed for the research, we work with the inclusion of URIs for the data of certain bibliographic attributes and authorities, using the Library of Congress Data Service as the source, as shown in Table 1 below:

**Table 1** - List of bibliographic data and URIs applied in data linking

Attribute	URI
Type of content	<a href="http://id.loc.gov/vocabulary/contentTypes/">http://id.loc.gov/vocabulary/contentTypes/</a>
Type of media	<a href="http://id.loc.gov/vocabulary/mediaTypes/">http://id.loc.gov/vocabulary/mediaTypes/</a>
Type of support	<a href="http://id.loc.gov/vocabulary/carriers/">http://id.loc.gov/vocabulary/carriers/</a>
Type of record	<a href="http://id.loc.gov/vocabulary/mrectype/">http://id.loc.gov/vocabulary/mrectype/</a>
Recording medium	<a href="http://id.loc.gov/vocabulary/mrecmedium/">http://id.loc.gov/vocabulary/mrecmedium/</a>
Transmission standard	<a href="http://id.loc.gov/vocabulary/mbroadstd/">http://id.loc.gov/vocabulary/mbroadstd/</a>
Configuration of playback channels	<a href="http://id.loc.gov/vocabulary/mplayback/">http://id.loc.gov/vocabulary/mplayback/</a>
Type of file	<a href="http://id.loc.gov/vocabulary/mfiletype/">http://id.loc.gov/vocabulary/mfiletype/</a>
Codification format	<a href="http://id.loc.gov/vocabulary/mencformat/">http://id.loc.gov/vocabulary/mencformat/</a>
Regional codification	<a href="http://id.loc.gov/vocabulary/mregencoding/">http://id.loc.gov/vocabulary/mregencoding/</a>
Topical subject	<a href="http://id.loc.gov/authorities/subjects/">http://id.loc.gov/authorities/subjects/</a>
Genre-form subject	<a href="http://id.loc.gov/authorities/genreForms/">http://id.loc.gov/authorities/genreForms/</a>
Geographical subject	<a href="http://id.loc.gov/authorities/names/">http://id.loc.gov/authorities/names/</a>
Identifiers of names	<a href="http://id.loc.gov/authorities/names/">http://id.loc.gov/authorities/names/</a>
Field of activity	<a href="http://id.loc.gov/authorities/subjects/">http://id.loc.gov/authorities/subjects/</a>
Associated group	<a href="http://id.loc.gov/authorities/names/">http://id.loc.gov/authorities/names/</a>
Associated language	<a href="http://id.loc.gov/vocabulary/languages">http://id.loc.gov/vocabulary/languages</a>

Source: Authors' elaboration (2020).

Although the bibliographic data in MARC21 format can be linked and work, it was noticed that the relationships are incomplete and not full in this environment. Therefore, the application of Linked Data in Koha is possible and functional, but it requires a technological range of application to gain in the relationship between data and navigability, by the user.

About the data of authorities, it can be noted an integration difficulty with some data, such as occupation for a Brazilian context and related dates, causing such data to be treated in this research

only as external identifiers since the targeting is made for a resource not prepared for possible data linking. Another point, as mentioned by Schreur (2020), is the difficulty of exchanging data derived from the MARC21 formats and the low representativeness of data from authorities at the international level, despite more initiatives, such as the Virtual International Authority File (VIAF), are actively contributing to a new scenario in the control of the authorities.

Concerning the use of identifiers for the developed records, for the data of authorities related to people, corporate bodies and places, external identifiers were adopted, the International Standard Names Identifier - ISNI and the Virtual International Authority File - VIAF, applying them in field 024 of MARC21 for Authority Data. It is recognized the existence of the feasibility of applying these identifiers with the subfield \$0 of fields 1xx, allowing a possible integration for Linked Data, however, for this research, field 024 was adopted as mentioned previously to have a general integration of the authority record, and not just the “name” belonging to the cataloged authority.

The fact is that with the cataloging from the RDA norms conceptually aligned to the LRM, the action of the relationship between data extrapolated the existing concept of relating bibliographic data with authority data until then to a universe of related data<sup>7</sup>. This statement corroborates the evolution of the LRM before the FR family requirements, which, although they mention that it is a model based on the Entity-Relationship structure (IFLA, 1998), do not present in the structure the possible relationship designations between the entities.

## 5 FINAL REMARKS

To sum up, the study aims to verify and report the implementation of the RDA and LRM concepts in a Koha installation to check the adherence of this tool to current trends in library science. Consequently, we used the latest version installation of the software, customizing it to meet the precepts of cataloging using the RDA standards, with the conceptual model of the LRM.

In this sense, in part, the use of spreadsheets adapted to the RDA facilitates the adoption, since many of the fields are already defined according to the model. However, the biggest challenge in adopting the RDA and LRM is not presented in the tool, but in the procedures. Koha is well suited to

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<sup>7</sup> The authors recognize the difference between “related data” in a specific bibliographic set of “linked data”, from the theoretical and practical lines of Linked Data.

the use of RDA and LRM, but it requires knowledge for its use. It reveals that the changes are more technical than technological in the cataloging process.

Besides, as the study is clearly restricted to the cataloging process, possibly other challenges may occur in other activities with the implementation of RDA and LRM in Koha. The retrieval and presentation of bibliographic records, for example, need to be studied, given the changes made in the cataloging, especially in the relationships between records. Thus, studies focused on other activities with Koha become an opportunity.

Finally, there is some interest in Koha in Brazil, with educational and research institutions adopting this tool, in addition to government agencies. Therefore, studies aimed at the adhesion of new models contribute to the discussion on this free and robust technology use, aligning the use of Koha with world trends, inserting the country in the most recent studies in libraries.

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