

RDA in Europe: Implementations and perceptions

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Abstract

This research explored the implementations and perceptions of the Resource Description and Access (RDA) cataloguing standard in Europe. It refers to the development and implementation of the standard among Anglo-American libraries and draws comparisons between them. It examines the spread and application of RDA throughout Europe both by analysing the available literature and by conducting interviews with professionals at 12 European national libraries.

The results highlight the issues faced by the European institutions and the unique perspectives that emerge from implementing RDA in different languages and cultures. European institutions demonstrate a higher level of involvement and interest in the development of RDA and a stronger desire to work towards RDA interoperability and alignment with the cultural heritage sector. The European implementation drives forward the internationalisation of RDA by actively seeking solutions to the issues in the new standard arising from the cultural and linguistic diversity.

Keywords

RDA; national libraries; European libraries; RDA implementation; cataloguing; library collaboration

Introduction

In cataloguing, similar to other domains, changing user expectations and data structures have necessitated fundamental changes aimed at reflecting current demands and practices. Such changes came from the International Federation of Library Associations and Institutions' (IFLA) conceptual model called Functional Requirements for Bibliographic Records (FRBR), published in 1998, which redefined the creation of bibliographic records and introduced the entity-relationship (E-R) model within bibliographic description (IFLA, 1998). That model provided a basis for reviewing the Anglo-American Cataloguing Rules (AACR2) through the prism of FRBR concepts (Riva and Oliver, 2012: 565).

AACR2 was already under revision to accommodate rapid changes in data formats and access as well as the spreading internationalisation of the rules. It was eventually agreed that aligning AACR2 with the FRBR model would require more than a revision and instead a new set of rules should be developed (Riva and Oliver, 2012: 566; Tillett, 2016: 9). After input from the international cataloguing community, in 2005, the revision that started as AACR3 turned into RDA: Resource Description and Access. The Joint Steering Committee for the Development of RDA (JSC) hoped the change of name and direction would encourage the intended international applicability and international input in developing the new rules (Tillett, 2016: 9). Although the JSC devised the standard as a replacement for AACR2, various international institutions

have become involved in its development and implementation over the years. The accession of the German National Library (*Deutsche Nationalbibliothek* - DNB) to the JSC in 2012 has been considered a pivotal moment in the advancement of RDA as a widely adopted standard (Tillett, 2013: 7).

RDA was adopted by the Library of Congress (LC) in 2013 after a testing phase among US libraries and various institutions across the world have continued to implement RDA ever since. The number of libraries that are considering adopting the new standard or planning an implementation has progressively grown over the past few years. This is evidenced both by the growing literature in the US on the matter as well as the larger number of actions taken toward RDA implementation by European institutions presented at the last European RDA Interest Group (EURIG) meeting (EURIG Seminar, 2016) in comparison to the 2013 EURIG survey (Gryspeerd, 2013). The wide support that RDA has received in Europe is arguably due to the formal formation of EURIG in 2011, almost two years before the Library of Congress' implementation of RDA. Most of the European national libraries are members of the group and devoted to collaboration with their international colleagues when it comes to issues with RDA and RDA implementation (EURIG Documents, 2014). With more and more organisations joining the group, the stage has been set for a European-wide adoption of RDA.

The objective of this research was to examine the spread and application of RDA throughout Europe. In doing so, the paper examined the decision-making process of European national library staff and their attitudes towards RDA by looking at the available literature and conducting interviews with professionals in the field. The aim was to form a comprehensive picture of the perception of the standard among European countries and their reasons for adopting it. A further objective was to compare the adoption and use of the standard by European institutions to those in the US and other Anglo-speaking institutions, and explore how language translation features in the implementation process. A brief overview of RDA's implementation in the rest of the world provided wider context to that objective. Underlying these processes was the examination of the undergoing internationalisation of RDA in its implementation. The international cooperation among the developers of RDA has transferred itself to operational issues surrounding RDA and its implementation. There is a setting for a similar European cooperation as shown above. Thus, a final objective was to explore the collaboration on RDA between European institutions and examine how this collaboration influenced implementation decisions and processes.

RDA is on a definite path of internationalisation aided by the growing interest in the past few years along with a burst of implementation efforts among the European countries. Since many institutions are looking to adopt RDA because of its potential implications for international resource sharing, the standard is said to have become an

international one with a local application rather than a national one with international application (Dunsire, 2016b: 313). It is therefore relevant to provide an overview of what else is driving European institutions to consider the implementation of RDA and the lessons learned by institutions that have already implemented it. The results contribute to a better understanding of the need to implement RDA and serve as a showcase for the various circumstances under which different organisations have implemented RDA.

Literature Review

RDA development

Some efforts towards the development of RDA include the call for a better alignment with the Archives and Museums sector (Aliverti and Behrens, 2016) as well as better support for the description of rare materials (Caro Martin and Prada, 2016; Fabian, 2016). The relations between RDA and the FRBR Library Reference Model (FRBR-LRM) are also being explored (Dunsire, 2016a; Sprochi, 2016). Although most of the literature expresses positive attitudes about RDA and its development (Bianchini and Guerrini, 2016), there are also criticisms. In a recent essay, Gorman (2016: 105-106) maintained that there are few differences between AACR2 and RDA-based records and that development of the new standard was too expensive to justify the minimal change it has on bibliographic description. However, regardless of the widely

documented issues within RDA, the more institutions that choose to implement, the more institutions are inclined to follow (Sanchez, 2011; Turner, 2014).

RDA implementation in the United States

This section of the literature review provides a point of comparison for the European context and situates RDA in its North American origins. The implementation of RDA has naturally received the most attention in the United States, partly because of the provenance of RDA and partly because of the US RDA Test which went on for six months in 2010 (Loesch, 2013: 5). In 2011, a special issue of *Cataloging and Classification Quarterly (CCQ)* brought together case studies about libraries' experiences during the testing period in the US. In his analysis of these articles, Mitchell (2013) revealed a common criticism of the structure of the RDA Toolkit and the unclear language of the instructions. The author further highlighted the universal agreement that MARC encoding is not adequate for RDA because it does not allow for the optimum utilisation of the new standard. Regarding training, an approach involving as many cataloguers as possible in order to foster a collaborative learning environment seemed preferable. In addition, training should include familiarisation with FRBR concepts and vocabulary, since FRBR is the basis of RDA (Mitchell, 2013).

After the testing phase, a few libraries reported following with the implementation immediately after, while others waited for the Library of Congress'

decision. All of them, however, agreed that an implementation by the national libraries is a strong incentive for their institutions to follow suit (Cronin, 2012: 628; Hanford, 2014: 152). Some case studies iterated more detailed reasoning behind the implementation, such as the use of relationship designators to pave the way towards FRBRised catalogues and linked data (Maurer and Panchyshyn, 2014; Jin and Sandberg, 2014; Wu *et al.*, 2016). Surprisingly, from the surveyed case studies, there were few similarities with the Library of Congress' reasons to adopt RDA, the common one being better linking between resources. LC placed an emphasis on the international sharing of data and better suitability to digital resources (Morris and Wiggins, 2016: 226). LC's national library status could be a reason for these differences.

When it came to the implementation process, many variables depended on organisational structure and culture (Wacker and Han, 2013: 27). Most institutions reported that a lot of attention was dedicated to the creation of policies to go with the new instructions and that those were mostly based on the LC/PCC Policy Statement (Wacker and Han, 2013; Wu *et al.*, 2016). Other aspects mentioned were the process of gradually transitioning to RDA, by giving cataloguers plenty of time to adjust to the change without setting deadlines (Hanford, 2014: 162) and the formation of specialised working groups to work on different aspects of the implementation (Morris and Wiggins, 2016). One aspect was the training, which all implementers considered very important (Kuhagen, 2011; Cronin, 2012; Park and Tosaka, 2015). The value of

practical training was emphasized, but the best approach was considered a mix of theoretical and practical learning with the many implementers using LC training materials (Park and Tosaka, 2015; Cronin, 2012). Some implementers mentioned ongoing training and the availability of online platforms to aid the learning process (Hanford, 2014; Jin and Sandberg, 2014; Park and Tosaka, 2015). Moreover, it was considered particularly useful for cataloguers who might feel isolated in the training process to have Virtual Learning Environments (VLEs) where they can receive support from the wider community (Maurer and Panchyshyn, 2014: 269).

The case studies pointed out various issues and concerns around RDA. Many of the implementers did not believe RDA could reach its full potential within current integrated library systems (ILS) because they are not able to reflect the E-R model (Park and Tosaka, 2015; Wacker and Han, 2013; Cronin, 2012). Even greater seemed to be the frustration with the MARC format, which they viewed as restrictive to implementing the underlying relational FRBR concepts of RDA (Jin and Sandberg, 2013: 234). This also relates to the lack of difference between AACR2 and RDA records, since the flat structure of MARC does not allow for a truly different record (Hanford, 2014: 161). Most of the other issues mentioned related to the practical cataloguing and challenges the cataloguers encountered during record production. The increased emphasis on the cataloguer's judgement has been mentioned by many, since it was regarded as challenging to the traditionally sought consistency of treatment (Maurer

and Panchyshyn, 2014; Cronin, 2012). When it comes to the issues surrounding RDA, a quote from Cronin (2012: 642) very aptly summarises that there might not be such a clear cut rule about what works and what does not in RDA:

The lines get blurry and it is important to realize when something presents an issue with RDA, an issue with MARC, or an issue that reflects choices we have made in configuring the local systems.

Some of the case studies touched upon collaborative work, where most of the focus was on cooperation between the different institutions and the wide support cataloguers could receive when working with other institutions (Maurer and Panchyshyn, 2014). In general, all implementers felt that working collaboratively on RDA could only enhance the experience and help with the successful implementation of RDA. Young (2012: 191-192) argued that the collaborative learning experience of RDA could lead to the formation of “communities of practice” that would eventually create models of professional practice among the library profession.

International implementation of RDA

Following the US Test and the Library of Congress’ decision to implement RDA, many countries around the world started paying closer attention and considering an implementation as well. Canada, which is one of the developers of RDA, implemented in its two official languages, English and French, making it the first

adoption of RDA in another language. Consequently, the translation team became the authoritative body on RDA training and implementation for the French version, owing to their acquired knowledge and experience of RDA during the translation process. The biggest challenge was bringing RDA from that community of experts to the cataloguers, which was also an issue in the US RDA Test (Cross *et al.*, 2014). Other countries that have traditionally used AACR2 were also keen to adopt RDA. Three case studies with an Anglo-American cataloguing tradition from around the world show little difference in the implementation process. The National Library Board of Singapore (NLB), the National Library of Israel (NLI) and the RMIT University Library in Australia all decided to implement RDA shortly after its adoption by the LC. All three institutions exhibited similar experiences as their American colleagues, relating to the reasons for implementation, training and the challenges encountered (Choi *et al.*, 2014; Goldsmith and Adler, 2014; Parent, 2014). The NLI needed to address some further specifics; they catalogue primarily in English, but staff may also catalogue certain resources in Hebrew, Arabic or Russian, which means cataloguing in multiple scripts. The implementers mentioned the need for specific instructions, as well as translation of the new RDA terminology and certain terms in the three languages mentioned above to facilitate the learning process. In doing that, the NLI produced the first translations of RDA guidelines in Hebrew, Arabic and Russian (Goldsmith and Adler, 2014).

Other libraries that did not have Anglo-American-based cataloguing traditions had also shown interest in RDA because of its focus on internationalisation and flexibility. The Chinese, Malaysian, Philippine, Iranian and Brazilian cataloguing communities have all performed different levels of examination on the suitability of RDA to their countries' cataloguing traditions (Luo *et al.*, 2014; Mansor and Ramdzan, 2014; Acedera, 2014; Pazooki, 2014; Mey *et al.*, 2014). Of these, the national libraries in Malaysia and the Philippines have been most actively seeking for implementation solutions, which eventually led to subsequent implementation. In Brazil, however, RDA was deemed unsuitable to its cataloguing tradition (Mansor and Ramdzan, 2014; Acedera, 2014; RDA Toolkit, 2016; Mey *et al.*, 2014). Chinese scholars report the greatest amount of RDA study of all non-Anglo countries. In fact, a Chinese translation of RDA is available (RDA in Translation, 2014) and the Shanghai Library applies RDA to its Western language resources (Luo *et al.*, 2014: 591). However, the applicability of RDA to the Chinese cataloguing tradition is still in question and a revision of the national rules and their adaptation to RDA is more feasible than adopting RDA fully (Luo *et al.*, 2014).

RDA implementation in Europe

The literature on adoption of RDA in Europe is somewhat constrained in the sense that much of it is, naturally, in the national language of the adopting institutions and thus it does not allow for a European-wide overview by one researcher. Research on RDA seems to exist among Italian and UK publications, although it is conceivable that much nation-specific research was beyond the researchers' access. In Italy, the majority of articles discuss the development and applicability of RDA as an international standard, and some draw comparison with other international initiatives in cataloguing (Buttò, 2016; Rodriguez, 2016). One of the more practical studies is a comparison between the Italian cataloguing rules – *Regole italiane di catalogazione* (REICAT), published in 2009 and based on FRBR – and RDA. The author of that study pointed to the better potential that RDA provided for the description of resources in a linked data environment (Forassiepi, 2015). A brief article about the Italian translation of RDA points to the desire of the Italian cataloguing community to study and analyse the new standard and its underlying principles (Guerrini, 2015). A further article presents a new ILS capable of accommodating the E-R model and thus enabling a seamless bibliographic description according to RDA standards (Lambroni, 2015).

Most European literature on RDA implementation stems from the UK, where libraries have been following the development of the new standard since at least 2010. Most of the publications come from CILIP, which apart from being one of the three publishers of RDA (RDA RSC, 2016) is also, together with the British Library,

representing the UK on the RSC (CILIP-BL Committee on RDA, 2016). Most prominently, CILIP's Cataloguing and Indexing Group (CIG) dedicated their 173rd issue of the *Catalogue and Index* periodical on the implementation of RDA among UK libraries. Five academic libraries contributed case studies of their implementation experience, along with the case study from the British Library. Alongside these, there was a presentation of a survey among UK libraries, looking at implementation plans and reasons. The respondents were mainly academic libraries but the survey did highlight a high rate of implementations or planned implementations (Danskin, 2013c). A universal observation was that community support, especially within the CIG, has been of great benefit, while at the same time the documentation and training materials of either the British Library or the LC have been a first point of reference (O'Reilly, 2013; Wright, 2013; Nicholson, 2013).

From the rest of Europe, most notable are the articles detailing the implementation of RDA in the German-speaking countries. This project was in itself unique because it involved the joint implementation of RDA among three countries – Austria, Germany and Switzerland – and three library networks (Behrens *et al.*, 2014), being to date the only RDA project with such an international scope. The project is indeed still ongoing; on an annual basis, the Toolkit is updated and policy decisions affecting the German-speaking cataloguing community are made (Behrens *et al.*, 2016). The German National Library (DNB) is leading the project, which had decided to

implement RDA in 2008 after first considering to change the traditional German rules (RAK) to AACR2 and a MARC21 format (Behrens *et al.*, 2014: 690; Caesar and Eichel, 2009). The German-speaking community decided to implement RDA in order to facilitate the sharing of international records data and thus reduce costs in the long term. A full translation was produced, and it was made freely available for a limited period on the RDA Toolkit website (Behrens *et al.*, 2014; Behrens *et al.*, 2016). For Switzerland, which is a multilingual country and uses a variety of cataloguing standards, the implications of the RDA implementation are viewed as a step toward a more unified catalogue among the Swiss libraries, achieving a better national sharing of data (Aliverti and Müller, 2013: 12). The training process, which was a central part of the project, consisted of seminars on basic concepts and continued with advanced training that dealt with the cataloguing of specific resources (Behrens *et al.*, 2016). The German-speaking community is looking into aligning RDA more closely with the rules in the Archives and Museums sector, and it recommends a development of RDA implementation scenarios for the cultural heritage sector (Behrens *et al.*, 2014; Behrens *et al.*, 2016).

Another comprehensive case study from Europe is that of the National Library of Latvia (NLL) which began an implementation project in 2013. This is the first European implementation that reflects the experience of a national library, which is also the centralised cataloguing body for the country, meaning that a decision of the National Library is applied on a national level. Latvian cataloguing has been performed

according to AACR2, which was translated in 2005, so it was a matter of continuity to adopt RDA. NLL deemed RDA more beneficial for the cataloguing of digital resources as well as for international data exchange. The training programme was based on the LC training materials and consisted of theoretical and practical seminars. One of the biggest challenges was the translation, which was considered too expensive to be realised in full and thus, it was decided that only terms and core terminology would be translated. There were still issues, such as the translation of relator terms for persons where the gender form had to be taken into account. In general, the case study reflected the desire of the NLL for international cooperation and the dedication to work alongside colleagues from other European institutions on issues of the RDA implementation (Goldberga *et al.*, 2014).

Articles from Spain, Portugal and Bavaria in Germany that discussed RDA and its applicability to rare materials also provided general observations on RDA cataloguing (Caro Martin and Prada, 2016; Silva *et al.*, 2016; Fabian, 2016). Fabian pointed out that the development of RDA has evolved to be “a continuous exchange of ideas” which could be used as a basis for cooperative work when developing other kinds of international library standards (Fabian, 2016: 339). Other articles that provide a broader context include an examination of the awareness of RDA of academic libraries in Turkey (Atilgan *et al.*, 2014) and an overview of the current cataloguing rules in

Slovenia where a wait-and-see approach was taken until more international institutions start following the standard (Kanic, 2014).

In summary, the published literature about RDA from Europe focuses predominantly on the theoretical concepts and the suitability of RDA to the cataloguing traditions of the respective institutions. The most practical case studies come from the UK, which is natural, as most of the European implementers are UK institutions. The few case studies about European institutions that have emerged provide an overview of the implementation process in addition to resonating with many of their international colleagues' observations.

Research Methodology

This research examined case studies on RDA implementation from around the world, with a focus on European countries, in order to form a comprehensive picture of RDA perceptions and implementation practices in different cultural and linguistic environments. Since most of the European national libraries act as the bibliographic agencies for their countries, meaning a national decision applies to most of the libraries in the country, this analysis of European institutions concentrated on national libraries. Although this presented some limitations for the comparison with US institutions, as most of them were academic libraries, it allowed for a manageable scope.

The research included multiple data sources. A preliminary literature review had shown that there were only a few case studies pertaining to RDA implementation in Europe, so it was deemed necessary to conduct interviews with staff at European national libraries. Furthermore, in order to ensure that enough data had been analysed, a fair amount of openly available resources were sought out online. The data underwent a thematic analysis, using thematic coding for each data source, which is shown below.

Literature review

The initial research consisted of a literature review of the case studies published about the RDA implementation process in various institutions. An initial library database search with the terms ‘RDA’ and ‘RDA implementation’ resulted in several hundred results. A review of the search results revealed several journals that had published special issues dedicated to the topic of RDA and its implementation. Therefore, similar to Mitchell (2013) in his analysis of case studies from the United States RDA Test phase, the attention was first turned to the articles published in the special issues of four journals, all covering aspects of the RDA implementation.

In the analysis, the articles were grouped into three categories, depending on the nationality of the institution the article was about – US institutions, European institutions, or the rest of the world. An initial attempt at analysis was based on implementation at Anglophone versus non-Anglophone institutions. The North

American, British and Australian libraries share a common cataloguing tradition and practices and thus they have more similarities than differences. However, considering how RDA's development and implementation are organised through RSC and EURIG, the British libraries are much more involved on a European level and in the future, more collaborations are expected to ensue among the European RDA adopters. The US had its own category because most of the case studies published are about US libraries, while there were only a few case studies from the rest of the world. Looking at the case studies from other non-European countries provided a wider background context for cultural and linguistic issues.

Once the case studies were sorted into the three groups, the US articles were analysed by thematically coding them in six themes based on the preliminary literature review and the research objectives: reasons for implementation, implementation process, training, implementation issues, attitudes towards RDA, and cooperation during implementation. During the coding, these six themes merged in the four broader themes of Perceived Issues, Reasons for Implementation, Implementation Process and Training, and further sub-topics emerged.

Online sources

Although there were not many case studies published about European institutions, there were plenty of materials published freely online by some institutions,

which outlined interest in RDA or concerns about the new rules. There was documentation on the RDA Toolkit, the EURIG and the RSC websites, which was helpful in compiling data about current trends of implementation among the European institutions. Some institutions' websites offered brief general descriptions of their cataloguing rules and traditions and those were helpful in providing an overview of the spread of RDA in Europe. At times, when information about RDA adoption was vague or ambiguous, it was helpful looking through recent records in national catalogues to determine those countries' state of RDA cataloguing. The online documents and materials were compiled and used either as a basis for further analysis or as a snapshot of the current situation in some countries.

Interviews

The interview questions were devised to reflect the themes encountered in the literature review to ensure useful and relevant comparability. The aim was to gather data from countries with various cultural traditions and economic backgrounds. Ideally, it was desirable to have respondents from all of Europe. However, a more practical approach was to have respondents representing different cultural and linguistic traditions. For instance, countries in south-western Europe are more culturally similar to each other than they are to countries from north-western Europe. Considering the cataloguing traditions was also important in order to reflect on the different challenges and issues stemming from various cataloguing traditions. For instance, most northern

countries have been using AACR-based rules, while central, eastern and southern countries have been using ISBD-based rules or long-standing rules based on the country's cataloguing tradition.

Participants were approached via email, either through employing academic contacts or through using the contact information on various websites. Some participants preferred to send their answers back via email while interviews were arranged with others. Admittedly, these two methods yielded somewhat different results. For instance, the interviews contained much more indication of the different attitudes towards RDA within the organisations and provided more observations than the email responses. However, somewhat similarly to Park and Tosaka's study (2015), it was thought that the email option would ensure a better response rate, as participants could reply on their own time. The interviews were devised to be semi-structured with similarly outlined questions. However, there were also questions specific to each institution and certain differences depending on the nationality of the institution and implementation plans; thus, the questions varied between 10 and 15 with most of them being open-ended. The questions revolved around similar topics to those encountered in the literature review and as such centred on the following major themes: reasons for change; training and preparation; issues, challenges and concerns before, during and after the implementation; perception of international cooperation. Five verbal interviews were conducted in total, with four face-to-face and one over Skype, with representatives

from the UK, France and Finland. The interviews took from 45 minutes to an hour and were recorded and then transcribed. Eight respondents, from the Netherlands, Austria, Slovakia, Poland, Italy, Slovenia, the Czech Republic and Croatia, returned responses via email. Additional information was gathered through email conversations with respondents from Serbia. Despite the small sample, the respondents were from diverse cultural and linguistic backgrounds, from four different parts of Europe, allowing for comparability.

Similarly, to the literature review, the transcriptions together with the email responses were coded thematically using NVivo. The four main themes from the literature analysis were employed, and another three were added, reflecting the interview questions – Cooperation, Translation and FRBR. After coding the first couple of interviews, another two themes developed – Future Developments and Observations. As with the literature analysis, those themes were sub-coded to reflect certain aspects of each theme. Finally, combining the analysis of the case studies in the research literature, the analysis of the openly available documentation and materials and the data analysis from the interviews allowed for an insightful discussion, achieving the fulfilment of the research objectives.

Findings and Analysis

Overview of RDA in Europe

European countries' plans for RDA were first summarised (RDA in Europe: Making it happen, 2010) when the European RDA Interest Group was formed at a seminar in Copenhagen, Denmark. There the development and implementation of RDA on a European level was first outlined (News and Announcements, 2016). EURIG has provided a platform for discussion of RDA in Europe and has facilitated a collection of indicative attitudes towards RDA over the years. It was observed that in 2010 most European countries considered RDA with caution and a 'wait-and-see' attitude (Danskin and Gryspeerdt, 2014), similar to reports from the US around the same time (Tosaka and Park, 2013). A report from a survey in 2013 shows already significant changes with more than half of the respondents having definite implementation plans and the rest performing some kind of analysis or review of the standard (Gryspeerdt, 2013). As of 2016, RDA has been implemented at institutions across ten European countries, with another three in the process of implementing (Who's Cataloging in RDA, 2015; Nicholson, 2015; Cullen, 2015; EURIG Seminar, 2016) (Table 1).

^apartly

Table 1. Summary of the state of RDA implementation in Europe – 2016.

When examining the reasons for implementation, it becomes clear that the emphasis is on the need to change outdated national rules in order to support the description of digital resources, as well as the need to improve standardisation on both

national and international levels. Everyone shared this view. This was regardless of whether they are early adopters, such as Germany and the Netherlands, have only expressed interest, such as Bulgaria and Serbia, or have chosen an alternative to an RDA implementation, such as Poland and France. Some of the countries, such as Turkey, Latvia and Germany, have either catalogued in AACR2 or considered the adoption of AACR2 prior to the development of RDA, thus an adoption seemed to be a natural progression (Atilgan *et al.*, 2014; Goldberga *et al.*, 2014; Behrens *et al.*, 2014). Table 2 shows what rules were used in Europe prior to RDA (Behrens *et al.*, 2014; Goldberga *et al.*, 2014; Kanic, 2014; Willer and Barbaric, 2012; Kieffer, 2012; O'Dwyer, 2013).

^abased

^bpartly

^cwere considering AACR prior to RDA

Table 2. Use of AACR2 among European countries.

A common barrier to the adoption of RDA is the high cost, in terms of time, finances, and other resources. In Denmark, for instance, RDA advocates have had a difficult time justifying the expenses of implementing RDA (Cato *et al.*, 2015; Cato, 2016). The costs are the reason that Poland has opted out of full implementation (Śnieżko, 2016) and that is also partly true for Croatia where cost-wise it was considered more beneficial to develop their own rules (Buzina, 2016, personal communication). For some of the interested countries, such as Bulgaria, Serbia and

Ukraine, the implementation costs are the biggest hurdles. There were, however, other issues noted, such as the lack of supporting structures and human resources (Milanova, 2016; Savic, 2016, personal communication), outdated information systems (Strishenets, 2016) and the lack of understanding and opposition to change (Makke, 2016). Still, there are some countries, such as Belgium, Portugal, Turkey and Ukraine, that although they have not decided on an implementation, are preparing informative and training sessions for their cataloguing communities (Verhegge, 2015; Silva *et al.*, 2016; Atilgan *et al.*, 2014; ÜNAK, 2016; ULA, 2014).

Interestingly, although one of the advantages of RDA is commonly considered to be its flexibility, there are still concerns about its applicability in various cultural contexts. In Denmark, for instance, an analysis has revealed issues relating to the authorised access points, numbering and dating of works, and the danMARC2 (Cato *et al.*, 2015; Cato, 2016). At the time of this research, National Library of Spain had not made a decision yet because of the many differing points between RDA and the national cataloguing tradition. The BNE has since created a “BNE RDA profile” for the library’s cataloguing profile (Caro Martin and Prada, 2016: 6). It will be implemented in 2019 (National Library of Spain, 2016). The alignment to RDA has been seen as a solution in other countries, such as Poland and Serbia (Śnieżko, 2016; Savic, 2016, personal communication). Translation has been another prominent issue since for many of the countries it has been a big part of the process, while presenting as a cost barrier to

others. Some countries, such as Sweden, Iceland and Latvia, have opted only for a partial translation, mostly for the reasons of cost-effectiveness (Säfstrom, 2016; Steinarsdóttir, 2016; Goldberga *et al.*, 2014). For others, such as Norway and Spain, a full translation is considered a prerequisite for a successful implementation since the cataloguers need to be able to work within the standard in their own language (Berve, 2016; Caro Martin and Prada, 2016).

Interview results

By virtue of the interview questions, most responses fell into seven distinct topics, the most prominent being the process of implementation and the training. The other four – implementation reasons, issues and concerns, cooperation, and translation – are more or less equally discussed. Other themes that emerged are the future development of RDA as well as its wider applicability. A final topic encompasses various observations about both general and specific issues. Most universally talked about was the topic of collaboration, followed by the reasons and training.

The reasons for implementation included data exchange and interoperability, RDA's foundation in FRBR, and a need to replace outdated rules. Other reasons included the international aspect of RDA and its applicability to e-materials. Some institutions considered it easier to adopt RDA rather than create their own rules; others cited reasons like the desire to move towards linked data and unify the cataloguing rules

on a national level. Some perceived the benefits of RDA to be its increasing international adoption, which together with other initiatives was considered a move towards more international cooperation. Being part of the modern librarian world was another response that echoed the above sentiments.

Despite these reasons, in France and Italy, RDA is considered too contradictory to the respective national cataloguing traditions, and too many compromises needed to adopt RDA fully are required to be sustainable in large cataloguing communities. Croatia determined that the costs of implementing RDA would amount to the costs for developing a new set of national rules and thus it would be more beneficial to create its own rules. In Poland, a complete change to RDA was considered too expensive. It was noted, however, that RDA instigated a revision of the old cataloguing rules and drove forward the need to change the rules in Poland. However, all of these countries are planning for future alignment with RDA in order to achieve interoperability with international catalogues.

Regarding the implementation process, the most commonly talked about aspect was the difference between RDA and the previous or current rules, whether AACR2 or nationally developed rules (see Table 2 above). A universally mentioned difference was terminology and in particular the WEMI (Work, Expression, Manifestation, Item) entities. The increased time for producing authority records, the relationship designators

and cataloguer's judgement were also mentioned by a few. Differences in recording the authorised access points were mentioned mainly by non-AACR2 cataloguers along with the description of place names. The different structure of the text was a major difference mentioned predominantly by AACR2 cataloguers.

A few respondents mentioned the formation of Working Groups to work on the implementation, although it was surmised that in general all implementers had some kind of a project team. At the same time, however, none of the institutions had teams exclusively dedicated to working on the implementation project, which had to be run alongside the daily tasks. Some comments pertained to the attitudes towards RDA and the implementation process; some reported that cataloguers were generally happy with the changes in RDA, while others were at times both confused and angry, although they also found the new rules interesting and exciting.

In most interviews, the training approach that was employed at their institutions related to most of the topics discussed. Naturally, most of the comments came from the institutions that have already implemented. Some institutions indicated that they have created online spaces or wikis where questions and problems could be discussed as a source of ad-hoc support. The case at the National Library of Finland was a bit different; the platform for online questions became a major part of the training due to little available time and resources to conduct extensive face-to-face workshops and

seminars. Relating to the preparation of the trainers, the point was made that at institutions such as the British Library and the NLS, the lengthy exposure to RDA years before its implementation had a positive influence on the subsequent training and implementation process. The use of the Library of Congress' training materials as either examples or a basis for the training programmes was another common aspect. The English-speaking institutions used them as their basis for training, while the rest used them mainly for the trainers. When it came to the training process, generally a mixed approach of theoretical and practical sessions was viewed as best. Most institutions expressed the sentiment that the biggest challenge of training was executing it as part of the daily working process without disturbing usual workflows much. Training appears to be an ongoing affair in which wikis are utilised and cataloguing issues are discussed in the course of the work. For instance, the British Library has had a very good experience in using workflows, which were implied to be the "bridge between MARC21 and RDA" within the Toolkit both as a continuous cataloguing aid and as a training tool.

Some respondents mentioned the use of RIMMF (RDA in Many Metadata Formats), which is a tool developed to help visualise the underlying FRBR-concepts in RDA (RIMMF Home, 2016). Most notably, at the BnF it is actively used in training and considered very valuable as a "proof of concept" relating to FRBR-based cataloguing. At the British Library, although it was not used extensively at the time of

implementation as RIMMF was still in early development, it was considered a good module to include in future training. The BNE has actively worked on the Spanish translation of RIMMF (Martin Caro and Prada, 2016) and many countries, such as Finland and Serbia, are planning an 'X-athon' in the near future, an event where RIMMF is used to create RDA records of works by a specified creator. RIMMF was extensively discussed during the EURIG seminar where it became clear that many libraries have already organised or are planning the so-called 'X-athons' (Hennelly, 2014; Phipps *et al.*, 2016).

The translation of RDA was naturally an important part of the process. Regardless of their implementation decisions, all countries considered a translation of RDA beneficial. The countries that opted for a full translation did it to ensure the approachability of the standard and to facilitate learning. Those that chose a partial translation did so for economic reasons. For the Netherlands, it was mentioned that people in general are quite proficient in English, so a translation of the main terms and vocabulary seemed sufficient. The Czech Republic implemented by translating only certain terms and elements, but it is considering a full translation later when the high amount of change in RDA will slow down. The most common issues related to the translation included the complexity of the text as well as what was regarded as its confusing language; less of an issue was the Anglo-American bias, although for languages that have gender-specific designations, it was a challenge. In France,

similarly to Spain with the Latin American translation (Caro Martin and Prada, 2016: 6), the French-Canadian translation is not considered entirely adequate to the needs of the French cataloguing community so other solutions are being sought.

In terms of encountered issues, one of the great concerns was the lack of viable systems and formats to accommodate RDA and the perception that much more needs to be done towards enhancing metadata if RDA is to have any effect. Another sentiment was that RDA could only be fully efficient if it is implemented into databases that make full use of the WEMI distinction. When it came to practical cataloguing, the issues most commonly echoed the differences between RDA and the previous rules. Several respondents found that 'cataloguer's judgement' policies needed to be adjusted post-implementation. Some found more options were needed, while others wanted to limit the options. Most respondents seemed to regard the constant updates in the Toolkit as one of the major issues of RDA. Although the developments in the standard were appreciated, these were critiqued both for coming around too slowly and for being too frequent. It was viewed as highly unlikely that records would be re-catalogued to accommodate those changes, thus ending up with too much variety in the catalogues. The updates also presented further issues for the countries that have a full translation of RDA. In Finland, cataloguers have been advised to refer to the English version for the most up-to-date instructions, which is similar to the experience among the German-speaking countries (Behrens *et al.*, 2014). In France and Italy, where RDA is not being

fully implemented, the changes were still a major concern as they were thought to cause “managing problems in cataloguing activities” and difficulties when working on the adaptation of the standard. Nevertheless, all of the respondents considered it important to follow up with the updates, translate and incorporate them in their cataloguing policies.

With respect to collaboration there were three broad themes – support during the implementation process, providing advice to others and collaboration on the RDA development. With respect to the last one, EURIG has been the platform that has facilitated this work. For many institutions, the involvement in EURIG was a way to keep updated and follow the development of RDA. While the German-speaking countries were the only ones that opted for a collaborative implementation, many examples were cited of discussions among the rest of the institutions that helped with advice on specific issues. It was mentioned that such discussions were also a kind of “mental support”, especially for implementers who felt like lone project managers, and this resonated with similar observations by the US implementers cited above. Apart from EURIG meetings, visits to other institutions and other countries were also considered very useful. Almost all respondents mentioned consulting the available documentation of other institutions. However, when it came to providing advice, unsurprisingly, most of it was on the national level. There have been various degrees of support among the library networks, since in most cases, the national institution was

spearheading the project and as such held the greatest expertise. It could be argued that the reason for that was the same as in the French-speaking Canadian context, where one institution, due to its familiarity originating from the translation work on RDA, became the support centre for the other institutions (Cross *et al.*, 2014). Nevertheless, early adopters like the British Library have been delivering training sessions both nationally and internationally for the past few years. Finland, as the first Scandinavian adopter, has provided advice to neighbouring countries. Overall, however, most of the respondents reflecting on the international collaboration between implementers did not find that there was much of it, and did not find that to necessarily be a drawback. In other words, it was regarded as a good thing when discussions ensued but it was not something that was purposefully sought out.

There were some general observations about RDA and the perspectives on its future development. One aspect was the international sharing of data; most of the respondents agreed that RDA was the way forward on this. However, there was doubt as to how much influence RDA would have on that process. Furthermore, various implementers observed that RDA did not have any current influence on international catalogue record sharing, as data has continued to be shared among the same institutions as prior to RDA. When talking about the future of RDA, all respondents expressed similar sentiments about the need to utilise and enhance metadata as well as make it more flexible in order to offer better discovery systems and to work towards linked data.

Respondents agreed that RDA was part of that process but was not enough, as it was just one strand of that process. Some put the emphasis on more global cooperation and opening up the metadata to make it shareable. Another important consideration was the interoperability of the library standard with other cultural heritage description standards. Several of the respondents shared their observations on RDA and its development. This included the perception that the input from the European bodies has increased, and that there were greater ties on the international level between institutions, which they hope will lead to more cooperation.

Discussion

The majority of countries examined in this research demonstrated varying degrees of familiarity with RDA. There was a fairly equal division between the ones that have adopted/are adopting RDA, and the ones that are either not adopting or still deciding. Generally, it was observed that countries which are more uncertain about RDA, such as Spain or Slovenia, have been using their national cataloguing rules as opposed to countries that have been using AACR2, such as the Czech Republic and Latvia. Furthermore, southern and Romance-language countries were less inclined to adopt RDA and more inclined to be doubtful about it. Culture and language might play an important role when it comes to choosing cataloguing rules.

Despite cataloguing and cultural differences, when it came to the reasons for considering RDA, all countries had similar goals in mind. Working in a digital world where data could be easily shared, there is the need for a descriptive standard that could support the sharing of data on a global level. Being part of the international library community was important to all, and RDA was perceived as one of the bridges between the various cataloguing communities. The fact that some European countries are not adopting RDA but are still working towards an alignment with RDA is evidence of the international importance of the new standard. Those reasons echo the ones provided by the global community, where Asian and Latin American countries have put emphasis on internationalisation of their cataloguing. There are, however, fewer similarities with the North American adopters, whose emphasis was on following with the national bodies, especially the Library of Congress. However, that is probably due to the different types of institutions that were examined – mostly academic libraries in North America versus mostly national bodies in Europe and the rest of the world. An oft-cited reason that was common to everyone was the interoperability that RDA was expected to provide when sharing records, whether nationally or internationally.

When it came to RDA implementation and issues, there was little difference between institutions globally. Training, and the benefits of extended exposure to RDA, topics were considered important by all, and Library of Congress' materials were often consulted when devising the training. The utilisation of an online tool, such as a wiki,

for training and communication purposes was universal among the implementers. The issues of unclear text and structure of the RDA Toolkit were commonly discussed. All expressed the concern that there were still no viable solutions in encoding formats and information systems to accommodate RDA. The bias towards Anglophone cataloguing was observed among most European implementers, but some of the English-speaking adopters (Park and Tosaka, 2015) also pointed it out. Interestingly, when it came to cataloguing challenges, most Europeans mentioned the publication statement and very rarely referred to the content, carrier and media type, while the opposite was true for North American institutions. That could be because the content, carrier and media fields are now commonly found in MARC records, regardless of whether they are RDA records. In fact, most libraries tend to implement these fields before the actual RDA implementation and their use is considered a good interim or hybrid solution (Śniezko, 2016).

One issue that was barely touched upon by the US implementers was that of the continuing updates in the Toolkit, which for the European adopters was a major concern. Perhaps that is because most of the US case studies were written just at the verge of the implementation process, while most of the surveyed European implementers have been using RDA for a couple of years, which would allow them to have more insights about the actual work within RDA. Another thing that was observed by many after implementation was that there were no significant changes in the record

output. Although that has been considered frustrating by most, all implementers expressed positive attitudes for the future of RDA and its importance to cataloguing. This could be taken as an indication that the adoption of RDA is considered an investment in the long-term future of cataloguing.

One of the major differences between the European and US implementers was that the former were much more prone to discuss the future development of RDA. Most of the European institutions are either closely involved in working on the development of RDA or dedicated to following this development. This is undoubtedly because they are national bodies and therefore invested in international developments. However, with the growing internationalisation of RDA and its continuous development, it is feasible that more institutions of different types and nationalities will become interested in the standard's development.

Another noticeable difference was the greater consideration that European adopters have given to the archives and museums sector, and how RDA could be utilised to bring the sector closer to the libraries sector. The most recent case study on the German-speaking countries discussed this extensively (Behrens *et al.*, 2016) and a presentation from May 2016 discussed the importance of cooperation between libraries and other cultural institutions and the utilisation and sharing of authority data among those institutions (Aliverti and Behrens, 2016). Articles on rare materials had

contributors mainly from European institutions, emphasising the point that the discussion on describing cultural heritage is led by Europe. On the one hand, this could be explained by European countries' stake in their vast cultural heritage materials. On the other hand, it is a discussion that will continue to evolve, especially as more and more institutions are now past the RDA implementation stage.

A final discussion point relates to the different aspects of and perceptions on collaborative work between institutions. Among US implementers, cooperation on the RDA implementation was considered a major benefit. One of the main reasons was the expertise that other institutions might already have on encountered issues; another related to having the support of a community. While there was evidence of the latter among European institutions and a couple mentioned benefitting from the former, in general, there was less emphasis on collaboration among different European institutions. On the other hand, European institutions seemed much keener on international collaboration for future developments. In any case, on both sides of the ocean, it was observed that the discussions about and implementation of RDA have led to more cooperation, both nationally and internationally. Young (2012) noted the formation of communities of practice among US cataloguers relating to learning and sharing knowledge about RDA, and it could be argued that a similar process has been going on among the European libraries. Among interview respondents, it was observed that there has been more communication between institutions while international

working groups have carried out collaborative work on RDA issues. Thus, what could be said is that although so far RDA has not influenced the internationalisation of the catalogues in any practical or noticeable way, the work on the standard has brought the international library community closer. Although work on RDA is considered important, there are other issues that could benefit from an international cooperation, as one respondent aptly described them:

We have to change our library systems; we have to change our data models to be able to share our data with each other; we have to have open source systems; we have to find the way to cooperate in metadata productions on a global level.

The development of RDA could be the premise for developing and nurturing closer working relationships on the above-mentioned issues among international institutions, on both European and global levels. In the end, even though RDA might not be the solution to all issues of description and access, it has an effect both as an international standard and as a catalyst for future developments.

The interview results illuminated an understanding of the common issues European institutions face in the consideration and implementation of RDA. As discussed above in the literature review, the case study approach is the most common method of research on RDA as it examines in most detail the experiences of a certain

institution. In contrast, this research incorporated a wider analysis and comparison among several institutions. This led to a limitation: it precluded an in-depth look into the inner workings of the institutions' processes regarding RDA, which a more focused case study approach might have yielded. The value of the open-ended interview questions is clear, however, as it allowed for a greater inclusion of institutions. It also provided more insight into the reasoning behind certain issues and the perceived value of RDA than a survey method would have provided. That said, a more detailed study with fewer time and financial restrictions might be able to provide a more comprehensive understanding of the issues and challenges around the decision and implementation process.

Possible Directions for RDA Practice and Research

The use of RDA has not altered much the daily cataloguing practices or outcomes as many of the implementers have noted. Nevertheless, changes in working practices are rarely smooth or universally accepted. Institutions undertaking such an implementation project might consider using a change management approach to foster better acceptance among the staff (van der Voet, 2014). In fact, it was evident that some of the early adopters engaged in some kind of change management, whereby they would keep the wider organisation informed about developments and changes years before the

implementation. Institutions that are considering an RDA implementation might also find it beneficial to start discussing that early on with their staff, even before a decision has been made.

Implementation case studies on RDA have been published by various institutions, albeit mostly Anglo-American, over the past four years. They contain invaluable lessons in what might work and what should be avoided, even though each organisation has its own specific contexts that need special consideration. Something that could be of interest for future research is a glimpse of how those organisations that have already implemented are managing their work with RDA. For instance, it has been shown in this research that the frequent updates of the Toolkit are causing concern both among RDA cataloguers and among future implementers. Further research into the challenges of working within RDA and issues that need resolving could be beneficial. With a greater variety of institutions implementing RDA, issues come to the front that have not been thought of before. How that is influencing the future development of RDA could be another research point.

In the US and the UK, public libraries are far from considering RDA due to costs and minimal resources for cataloguing activities (Lambert *et al.*, 2013; Danskin, 2013b). A few of the European implementers have touched upon the topic of public libraries and their perception of RDA. Seeing how in some of the European countries

the public libraries are part of the national implementation scenario, there is a possibility to explore this topic in the future. Unique challenges lie ahead of public libraries when it comes to utilising description standards, and that has not been explored widely, as the focus has been mostly on academic and national libraries.

The more international the standard becomes, the better it will suit the needs of the various cataloguing communities. Now, there is hardly any research about the global perception of RDA. The RDA Board is discussing adding representatives from six global regions but only three have been defined so far (Governance Review, 2016). However, approaching global research carries all the difficulties mentioned here about researching materials from different cultures and languages, and adding to that is the lack of sources for certain regions of the world. A utilisation of the already available tools and materials in the form of an open global platform could provide a grounding for initiating research or a starting point in seeking out research from other countries.

Conclusion

In exploring the state of RDA adoption among European countries, this paper compared the implementation of RDA in US libraries to that in European libraries and examined the perceptions of RDA concepts. The research further looked at the internationalisation efforts in the development of RDA and the way different national traditions influenced the perception and implementation of RDA. Further, translation

issues were considered and examined as part of the implementation process unique to most of the European countries. The paper explored the perceptions of collaboration and dedication to working cooperatively with colleagues from other institutions and countries either on the implementation of RDA or on its development.

In general, there was little difference between RDA implementation in the US and Europe. While the former implemented for reasons of interoperability on a national level, and the latter were more focused on the international aspect, the implementation processes and the outcomes were relatively similar. Implementers have also demonstrated similar attitudes – frustration when it came to the differences and changes, especially pertaining to the new concepts and terminology, and optimism about future developments. Some differences coming from the national status of the European implementers were greater involvement in the development of RDA and a greater interest in the interoperability between RDA and other descriptive rules for cultural heritage objects. The latter is a topic that is expected to be further developed and explored, especially as more European libraries are finishing their implementation projects and turning their attention to the cooperation with cultural heritage institutions.

RDA adoption tends to become more and more widespread, as more institutions opt for implementation (Turner, 2014). The European libraries are not different in that aspect. Their cautious attitudes are being replaced with the need to ensure better

interoperability and cooperation on the international level. RDA is considered by many to be the standard that will bring the library resources closer to realising the Semantic Web, as well as for resources from all other types of institutions (Cronin, 2012; Guerrini, 2015). Those reasons, along with the prospect of internationalising their catalogues, are the main drivers for libraries to implement RDA. In the end, the future of RDA is to remain firmly on the path of internationalisation and to both contribute to and prompt the development of interoperable metadata standards. There is also the need for information systems that accommodate such interoperability and enable discovery and access that are in line with the expectations and varying proficiencies of users operating in an online environment. The implementation of RDA is a step towards those goals but as various implementers mentioned repeatedly, it is not enough.

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References

- Acedera, A.P. (2014) 'Are Philippine Librarians Ready for Resource Description and Access (RDA)? The Mindanao Experience'. *Cataloging & Classification Quarterly*, 52 (6-7), pp.600-607.
- Aliverti, C. & Behrens, R. (2016) Alignments and cross-references between RDA and other standards: Authority data as linking point for cultural heritage. Available: <http://www.lnb.lv/en/eurig-seminar-rda-baltics-and-eastern-europe-presentations> (Accessed: June, 2016).
- Aliverti, C. & Müller, A. (2013) 'RDA at the Swiss National Library: Challenges and New Opportunities'. *Alexandria*, 24 (2), pp.11-20.
- Atılgan, D., Özel, N. & Çakmak, T. (2014) 'Awareness, Perceptions, and Expectations of Academic Librarians in Turkey about Resource Description and Access (RDA)'. *Cataloging & Classification Quarterly*, 52 (6-7), pp.660-676.
- Behrens, R., Aliverti, C. & Schaffner, V. (2016) 'RDA in Germany, Austria and German-speaking Switzerland - a new standard not only for libraries'. *JLIS.it*, 7 (2), p.253-278.
- Behrens, R., Frodl, C. & Polak-Bennemann, R. (2014) 'The Adoption of RDA in the German-Speaking Countries'. *Cataloging & Classification Quarterly*, 52 (6-7), pp.688-703.
- Berve, N. (2016) 'RDA in Norway - oral presentation'. EURIG seminar "RDA in the Baltics and Eastern Europe". National Library of Latvia, Riga: unpublished.

Bianchini, C. & Guerrini, M. (2016) 'RDA: a content standard to ensure the quality of data'. *JLIS.it*, 7 (2), pp.83-98.

Buttò, S. (2016) 'RDA: analyses, considerations and activities by the Central Institute for the Union Catalogue of Italian Libraries and Bibliographic Information (ICCU)'. *JLIS.it*, 7 (2), pp.279-298.

Caesar, I. & Eichel, D. (Year) Published. 'Challenges for the Implementation of Resource Description and Access (RDA): Case Study Germany'. 17th BOBCATSSS Symposium, 2009/01/28/ 2009.

Caro Martín, A. & Gómez Prada, R. (2016) 'RDA and Rare Materials at the National Library of Spain'. *Cataloging & Classification Quarterly*, 54 (5-6), pp.305-316.

Cato, A. (2016) Status report on RDA in Denmark. Available:
<http://www.lnb.lv/en/eurig-seminar-rda-baltics-and-eastern-europe-presentations>
(Accessed: June, 2016).

Cato, A., Fog, H. & Thorborg, S. (2015) 'RDA in Denmark'. *Scandinavian Library Quarterly*, 48 (1-2), pp.22-23.

Choi, K., Yusof, H.M. & Ibrahim, F. (2014) 'RDA: National Library Board Singapore's Learning Journey'. *Cataloging & Classification Quarterly*, 52 (6-7), pp.608-620.

CILIP-BL Committee on RDA (2016). Available:
<http://www.slainte.org.uk/aacr/index.htm> (Accessed: July, 2016).

- Cronin, C. (2011) 'From Testing to Implementation: Managing Full-Scale RDA Adoption at the University of Chicago'. *Cataloging & Classification Quarterly*, 49 (7-8), pp.626-646.
- Cross, E., Andrews, S., Grover, T., Oliver, C. & Riva, P. (2014) 'In the Company of My Peers: Implementation of RDA in Canada'. *Cataloging & Classification Quarterly*, 52 (6-7), pp.747-774.
- Cullen, M.G. (2016) 'RDA Implementation in Ireland: A Survey of CONUL member libraries and Institute of Technology libraries'. Available: https://libraryassociation.ie/sites/default/files/groups/CataloguingMetadata/RDA_Implementation_in_Ireland180216.pdf (Accessed: July, 2016)
- Danskin, A. (2013b) 'RDA implementation case study: British Library'. *Catalogue and Index*, 173, pp.24-29.
- Danskin, A. (2013c) 'RDA in the UK: implementation survey'. *Catalogue and Index*, 173, pp.2-12.
- Danskin, A. & Gryspeerdt, K. (2014) 'Changing the Rules? RDA and cataloguing in Europe'. *Liber Quarterly: The Journal of European Research Libraries*, 24 (2), pp.112-123.
- Dunsire, G. (2016a) IFLA FRBR-Library Reference Model and RDA. Available: <http://www.lnb.lv/en/eurig-seminar-rda-baltics-and-eastern-europe-presentations> (Accessed: June, 2016).
- Dunsire, G. (2016b) 'Towards an internationalization of RDA management and development'. *JLIS.it*, 7 (2), pp.307-330.

- EURIG (2016). Available: <http://www.slainte.org.uk/eurig/index.htm> (Accessed: March, 2016).
- EURIG Documents (2014). Available: <http://www.slainte.org.uk/eurig/documents.htm> (Accessed: March, 2016).
- EURIG Seminar (2016). Available: <http://www.slainte.org.uk/eurig/events/2016meeting.html> (Accessed: June, 2016).
- Fabian, C. (2016) 'RDA as a New Starting Point for International Cooperation: Retrospective National Bibliographies and Medieval Manuscripts'. *Cataloging & Classification Quarterly*, 54 (5-6), pp.338-349.
- Forassiepi, S. (2015) 'Towards a Semantic Web. A comparison between RDA and REICAT descriptive solutions'. *JLIS.it*, 6 (1), pp.33-51.
- Goldberga, A., Kreislere, M., Sauka, J., Stürmane, A. & Virbule, I. (2014) 'RDA: From Strategy to Experiments and Implementation in Latvia (Including an Overview of the Situation in the Baltic States)'. *Journal of Library Metadata*, 14 (3-4), pp.205-221.
- Goldsmith, M. & Adler, E. (2014) 'RDA in Israel'. *Cataloging & Classification Quarterly*, 52 (6-7), pp.677-687.
- Gorman, M. (2016) 'RDA: The Emperor's New Code'. *JLIS.it*, 7 (2), pp.99-107.
- Governance Review (2016). Available: <http://www.rda-rsc.org/node/437> (Accessed: July, 2016).

- Gryspeerd, K. (2013) EURIG survey on adoption of RDA – 2013: report. Available: http://www.slainte.org.uk/eurig/docs/EURIG_Survey-2013_v1_0.pdf (Accessed: March, 2016).
- Guerrini, M. (2015) 'RDA in Italian: An Opportunity to Join the International Context'. *JLIS.it*, 6(3), pp.1-4.
- Hanford, D. (2014) 'A Look at How We Got Here: RDA Implementation at Central Connecticut State University'. *Journal of Library Metadata*, 14 (3-4), pp.152-165.
- Hennelly, J. (2014) Fun with Dick and Jane (and RDA): Creating linked data for Jane Austen and Blade Runner | www.rdatoolkit.org. Available: <http://rdatoolkit.org/janeathon> (Accessed: June, 2016).
- Jin, Q. & Sandberg, J.A. (2014) 'Implementing RDA at the University of Illinois at Urbana-Champaign Library'. *Technical Services Quarterly*, 31 (3), pp.217-236.
- Kanic, A. (2014) 'CATALOGUING RULES AND THEIR CHANGES - CURRENT SITUATION IN SLOVENIA'. *Organizacija Znanja*, 19 (2), pp.49-53.
- Kieffer, M. (2012) 'The National Library of Luxembourg'. *Alexandria*, 23 (1), pp.24-35.
- Kuhagen, J.A. (2011) 'Training for the US RDA Test'. *Cataloging & Classification Quarterly*, 49 (7-8), pp.572-581.
- Lambert, F.P., Panchyshyn, R.S. & McCutcheon, S. (2013) 'Resource Description and Access and Ohio Public Libraries'. *Public Library Quarterly*, 32 (3), pp.187-203.
- Lambroni, G. (2015) 'RIMMF and Olsuite/WeCat by @cult, or how to implement RDA'. *JLIS.it*, 6 (3), pp.175-180.

- Loesch, M.F. (2013) 'RDA in Perspective: How to Use the Library Literature to Your Advantage'. *Technical Services Quarterly*, 30 (1), pp.1-14.
- Luo, C., Zhao, D. & Qi, D. (2014) 'China's Road to RDA'. *Cataloging & Classification Quarterly*, 52 (6-7), pp.585-599.
- Makke, J. (2016) 'RDA in Estonia - oral presentation'. EURIG seminar "RDA in the Baltics and Eastern Europe". National Library of Latvia, Riga.
- Mansor, Y. & Ramdzan, E. (2014) 'RDA perceptions among Malaysian catalogers'. *Library Review*, 63 (3), pp.176.
- Maurer, M.B. & Panchyshyn, R.S. (2014) 'Understanding the Why: A Case Study in Managing the RDA Implementation'. *Cataloging & Classification Quarterly*, 52 (3), pp.259-284.
- Mey, E.S.A., Grau, I.A. & Biar, F.S. (2014) 'RDA's Pros And Cons: One Point Of View From Brazil'. *JLIS.it*, 5 (2), pp.5-17.
- Milanova, M. (2016) 'Cataloguing rules: national or international? / Правила за каталогизация: национални или международни?'. XXVI BLIA National Conference: Dynamic libraries - access, development, change. Sofia, Bulgaria. Available at: http://www.lib.bg/konferencii1/nk2016/prezentacii/33-Milena_Milanova.pptx (Accessed: July, 2016).
- Mitchell, E. (2013) 'Is RDA Ready? An Analysis of Case Studies on RDA Testing'. *Technical Services Quarterly*, 30 (1), pp.70-82.

Morris, S.R. & Wiggins, B. (2016) 'Implementing RDA at the Library of Congress'.
JLIS.it, 7 (2), pp.199-228.

News and announcements (2016). Available: <http://www.slainte.org.uk/eurig/news.htm>
(Accessed: March, 2016).

Nicholson, N. (2013) 'RDA at the National Library of Scotland'. Alexandria, 24 (2),
pp.21-26.

Nicholson, N. (2015) 'Implementing RDA at The National Library of Scotland, and,
The CILIP/BL Committee on RDA'. RDA for Implementers – Sharing Experience.
Edinburgh: CIG Scotland. Available at:
<http://www.slideshare.net/CIGScotland/cigs-rda-for-implementers-20150527-neil-nicholson> (Accessed: June, 2016).

O'Dwyer, C. (2013) 'Do Library Schools Adequately Prepare Students for Cataloguing
in Irish Law Libraries: An Investigation'. Legal Information Management, 13 (3),
pp.178-202.

O'Reilly, B. (2013) 'RDA at Oxford University'. Catalogue and Index, 173, pp.50-56.

Parent, M. (2014) 'Implementing RDA in a Time of Change: RDA and System
Migration at RMIT University'. Cataloging & Classification Quarterly, 52 (6-7),
pp.775-796.

Park, J.-r. & Tosaka, Y. (2015) 'RDA Implementation and Training Issues across United
States Academic Libraries: An In-Depth E-Mail Interview Study 1'. Journal of
Education for Library and Information Science, 56 (3), pp.252-266.

Pazooki, F., Zeinolabedini, M.H. & Arastoopoor, S. (2014) 'RDA Implementation Issues in the Iranian National Bibliography: An Analysis of Bibliographic Records'. *Cataloging & Classification Quarterly*, 52 (6-7), pp.621-639.

Phipps, J., Hillmann, D., Fritz, D., Fritz, R. & Dunsire, G. (2016) R-Balls | X-athons. Available: <http://rballs.info/xathons/> (Accessed: August, 2016).

RDA in Europe: Making it happen (2010). Available: <http://www.slainte.org.uk/eurig/docs/RDA2010/OtherEURIG2010.pdf> (Accessed: March, 2016).

RDA in Translation - Chinese (2014). Available: <http://www.rdatoolkit.org/translation/Chinese> (Accessed: June, 2016).

RDA RSC (2016). Available: <http://www.rda-rsc.org/> (Accessed: June, 2016).

Records, I.S.G.o.t.F.R.f.B. (1998) IFLA -- Functional Requirements for Bibliographic Records. Available: <http://www.ifla.org/publications/functional-requirements-for-bibliographic-records?og=8708> (Accessed: June, 2016).

RIMMF Home (2016). Available: <http://www.marcofquality.com/wiki/rimmf3/doku.php?id=rimmf> (Accessed: June, 2016).

Riva, P. & Oliver, C. (2012) 'Evaluation of RDA as an Implementation of FRBR and FRAD'. *Cataloging & Classification Quarterly*, 50 (5-7), pp.564-586.

Rodriguez, E. E. (2016) 'RDA and ISBD: history of a relationship'. *JLIS.it*, 7 (2), pp.49-82.

- Sanchez, E. (2011) 'RDA, AACR2, and You: What Catalogers Are Thinking'. In: Sanchez, E. (ed.) Conversations with catalogers in the twenty-first century. Santa Barbara, California: Santa Barbara, California: Libraries Unlimited, pp. 53.
- Silva, A.C.S., Ferreira, T.D. & Martins, L.d.A. (2016) 'Development and Challenges in Old Manuscripts Cataloging: The Experience of the National Library of Portugal'. *Cataloging & Classification Quarterly*, 54 (5-6), pp.350-358.
- Sprochi, A. (2016) 'Where Are We Headed? Resource Description and Access, Bibliographic Framework, and the Functional Requirements for Bibliographic Records Library Reference Model'. *International Information & Library Review*, 48 (2), pp.129-136.
- Steinarsdóttir, R. (2016) RDA in Iceland. Available: <http://www.lnb.lv/en/eurig-seminar-rda-baltics-and-eastern-europe-presentations> (Accessed: June, 2016).
- Strishenetes, N. (2016) 'RDA in Ukraine - oral presentation'. EURIG seminar "RDA in the Baltics and Eastern Europe". National Library of Latvia, Riga.
- Säfström, M. (2016) RDA-progression Sweden. Available: <http://www.lnb.lv/en/eurig-seminar-rda-baltics-and-eastern-europe-presentations> (Accessed: June, 2016).
- Tillett, B. (2013) 'The International Development of RDA: Resource Description and Access'. *Alexandria*, 24 (2), pp.1-10.
- Tillett, B. (2016) 'RDA, or, The Long Journey of the Catalog to the Digital Age'. *JLIS.it*,7(2), pp.7-24.

Tosaka, Y. & Park, J.-r. (2013) 'RDA: Resource Description & Access -- A Survey of the Current State of the Art'. *Journal of the American Society for Information Science and Technology*, 64 (4), pp.651-662.

Turner, A.H. (2014) 'RDA Training and Implementation at Duke University Libraries: Minimizing the Distraction'. *Journal of Library Metadata*, 14 (2), pp.69-76.

ULA - Ukrainian Library Association (2014). Available:

<http://ula.org.ua/ua/news/2872-zasidannia-robochoi-hrupy-uba-z-rda-pravyla-katalohizatsii-10-07-2014> (Accessed: August, 2016).

van der Voet, J. (2014) 'The effectiveness and specificity of change management in a public organization: Transformational leadership and a bureaucratic organizational structure'. *European Management Journal*, 32 (3), pp.373-382.

Verhegge, K. (2015) Opleiding RDA binnenkort in België! Available:

<http://kenniskantoor.be/forum/topics/opleiding-rda-binnenkort-in-belgi?groupUrl=nieuws-en-debat> (Accessed: August, 2016).

Wacker, M. & Han, M.-J. (2013) 'RDA Planning, Implementation and Use: A Comparison of Two Academic Libraries'. *Alexandria*, 24 (2), pp.27-48.

Who's Cataloging in RDA (2015). Available:

http://www.rdatoolkit.org/RDA_institutions (Accessed: July, 2016).

Willer, M. & Dunsire, G. (2014) 'ISBD, the UNIMARC Bibliographic Format, and RDA: Interoperability Issues in Namespaces and the Linked Data Environment'. *Cataloging & Classification Quarterly*, 52 (8), pp.888-913.

Wright, J. (2013) 'BDS implementation of RDA'. *Catalogue and Index*, 173, pp.13-15.

Wu, A., Guajardo, R. & Rodriguez, S. (2016) 'Large-Scale RDA Enrichment of Legacy Data at the University of Houston System Libraries'. *Cataloging & Classification Quarterly*, 54 (3), pp.159-178.

Young, N.K. (2012) 'Effective Learning and Teaching of RDA: Applying Adult Learning Theory'. *Journal of Library Metadata*, 12 (2-3), pp.188-198.

ÜNAK (2016). Available: <https://www.unak.org.tr/tr/etkinlikler/unak-egitim-millikutuphane-kataloglama-ve-rda-uygulamalari> (Accessed: July, 2016).

Śnieżko, L. (2016) RDA and NUKAT. Available: <http://www.lnb.lv/en/eurig-seminar-rda-baltics-and-eastern-europe-presentations> (Accessed: June, 2016).

Further reading

Aburrow-Jones, N. (2013) 'RDA: Analysing the Impact of a New Cataloguing Standard on SUNCAT, the UK's Serials Union Catalogue'. *Alexandria*, 24 (2), pp.63-81.

Aliverti, C. & Behrens, R. (2016) 'RDA, Cooperation in the Cultural and Heritage Sector – First Approaches in the German-Speaking Countries'. IFLA Satellite Meeting: RDA in the Wider World. Columbus, Ohio: IFLA.

Ayres, L. (2008) 'Thematic Coding and Analysis'. In: Given, L.M. (ed.) *The SAGE Encyclopedia of Qualitative Research Methods*. Thousand Oaks, CA: SAGE Publications, Inc.

Berney-Edwards, S. (2016) RDA Strategy and Governance. Available:
<http://www.lnb.lv/en/eurig-seminar-rda-baltics-and-eastern-europe-presentations>
(Accessed: June, 2016).

Clifford, K. & Wilson, N. (2013) 'RDA: an alternative set of definitions to reflect the Kingston experience'. *Catalogue and Index*, 173, pp.20-23.

Cooperation Agreement (2011). Available:
http://www.slainte.org.uk/eurig/docs/EURIG_cooperation_agreement_2011.pdf
(Accessed: July, 2016).

Danskin, A. (2013a) 'Linked and open data: RDA and bibliographic control'. *JLIS.it*, 4 (1), pp.147.

Declercq, J.-F., Callewaert, R. & Vermaut, F. (2013) *Vlaamse Openbare Bibliotheken - Digitale Bibliotheek Systemarchitectuur Studie*. Available:

<http://www.cultuurconnect.be/sites/default/files/atoms/files/2014-02-04-DigitaleBibliotheekSysteemArchitectuurStudie.pdf> (Accessed: August, 2016).

Delsey, T. (2016) 'The Making of RDA'. *JLIS.it*, 7 (2), pp.25-47.

EURIG Members (2016). Available: <http://www.slainte.org.uk/eurig/members.htm> (Accessed: August 20, 2016).

Fick, H., Fredriksson, A. & Lindblom, H. (2015) 'RDA exposing the archival secrets'. *Scandinavian Library Quarterly*, 48 (4).

Garcia, A. (2014) 'RDA in Spanish: Translation Issues and Training Implications'. *Cataloging & Classification Quarterly*, 52 (6-7), pp.723-732.

Hallett, E. (2013) 'The Surrey experience of RDA'. *Catalogue and Index*, 173, pp.41-45.

Harden, J. (2012) 'Inadvertent RDA: New Catalogers' Errors in AACR2'. *Journal of Library Metadata*, 12 (2-3), pp.264-278.

Kluttz, K. (2013) 'Early RDA impacts at University of the Arts London Libraries'. *Catalogue and Index*, 173, pp.16-19.

Leresche, F. & Bourdon, F. (2011) 'RDA in Europe: Report of the work in progress in France; proposal for a EURIG technical meeting in Paris'. EURIG meeting 2011. Copenhagen: National Library of France Bibliographic and digital information department. Available at: [http://www.slainte.org.uk/eurig/docs/BnF-ADM-2011-066286-01_\(p2\).pdf](http://www.slainte.org.uk/eurig/docs/BnF-ADM-2011-066286-01_(p2).pdf) (Accessed: March, 2016).

Magnusdottir, M. (2016) Community of cataloguers in Iceland. Available: <http://slq.nu/?article=volume-49-no-1-2-2016-22> (Accessed: July, 2016).

- National Library of Spain. (2016). La BNE adoptará RDA como estándar de catalogación. Available: http://www.bne.es/webdocs/Prensa/Noticias/2016/comunicado_bne_adopcion_rda.pdf (Accessed: January, 2017).
- Mejia, J.A., Garcia, C., Ramos, A. & Hernandez, O. (2014) 'Implementation of RDA to Bibliographic and Authority Records from the LIBRUNAM Catalog at the Universidad Nacional Autonoma de Mexico'. *Cataloging & Classification Quarterly*, 52 (6-7), pp.733-746.
- Panchyshyn, R.S. & Park, A.L. (2015) 'Resource Description and Access (RDA) Database Enrichment: The Path to a Hybridized Catalog'. *Cataloging & Classification Quarterly*, 53 (2), pp.214-233.
- Prada, R.G. (2016) RDA in Spain: an overview. Available: <http://www.lnb.lv/en/eurig-seminar-rda-baltics-and-eastern-europe-presentations> (Accessed: June, 2016).
- Press Release (2011). Available: http://www.slainte.org.uk/eurig/docs/Launch/EURIG_Press_Release_2.pdf (Accessed: July, 2016).
- RDA Blog (2016). Available: <https://resourcedescriptionandaccess.blogspot.co.uk/> (Accessed: August, 2016).
- RDA-Info (2016). Available: <https://wiki.dnb.de/display/RDAINFO/RDA-Info> (Accessed: June, 2016).
- Sanner, E.M. (2012) 'Preliminary Training for RDA: A Survey of Cataloging Department Heads'. *Journal of Library Metadata*, 12 (2-3), pp.213-241.

- Savic, A. (2012) 'New International Cataloguing Code or Toward an Abstract Cataloguing'. *Citaliste / Читалиште*, 21. Available: http://citaliste.rs/casopis/br21/savic_ana.pdf (Accessed: July, 2016)
- Seppälä, M.-L. (2016) RDA in Finland. Available: <http://www.lnb.lv/en/eurig-seminar-rda-baltics-and-eastern-europe-presentations> (Accessed: June, 2016).
- Seppälä, M.-L., Furu-Kallio, L. & Herrala, M. (2016) 'RDA based Data Model of the Finnish Memory Organizations'. IFLA Satellite Meeting: RDA in the Wider World. Columbus, Ohio.
- Synnermark, K. (2014) 'RDA in Sweden'. *Scandinavian Library Quarterly*, 47 (3), pp.6.
- Welsh, A., Carty, C. & Williams, H. (2012) 'Mind the [Trans-Atlantic] Gap, Please': Awareness and Training Needs of UK Catalogers'. *Journal of Library Metadata*, 12 (2-3), pp.242-263.
- Young, J.B. & Bross, V. (2011) 'Results of the CRCC Informal RDA Testing Task Force'. *Cataloging & Classification Quarterly*, 49 (7-8), pp.600-606.