Report on approaches to teaching RDA in the LIS classroom

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Introduction

This report offers library and information science (LIS) educators a possible approach for incorporating the official RDA Toolkit into courses about metadata creation and cataloguing. It includes tips for teaching with RDA. This report is presented by the RDA Education and Orientation Officer (EOO) as part of her mandate on the RDA Steering Committee (RSC), which includes liaising with LIS educators and instructors across multiple regions, and helping to create an informal network of RDA educators and instructors.

This report has been made possible by the willingness of a diverse range of educators to converse with the EOO about their experiences with the RDA standard. Since October 2021, the EOO has conducted a series of informal, in-person interviews over Zoom with a variety of educators. Some interviewees were appointed faculty members, while others were adjunct

faculty (including sessional instructors or contract lecturers). Collectively the educators interviewed have taught at LIS programs at universities, colleges, or vocational schools; led courses in person or online; and represented LIS programs across Oceania, Europe, and North America. Some educators identified themselves as scholars, because they have not worked directly with metadata creation or cataloguing in recent years. Other educators, usually adjunct faculty, saw themselves as practitioners because their primary work appointment outside of their teaching contracts continue to be in metadata or cataloguing positions. The EOO also interviewed several practitioners and supervisors who have had training experience, and their viewpoints have been included only insofar as planning of RDA training programs are concerned. The EOO would like to express her appreciation for the time and care taken by those who willingly shared their perspectives.

Outreach was made through a combination of word-of-mouth recommendations, email referrals, and cold contacts through email and social media. On some occasions, rather than scheduling a Zoom call, the EOO supplied a list of standard questions to the interviewee, who returned written responses. The EOO heard from many educators who have not yet incorporated post-3R RDA into their courses, but she also heard from those who have. Each conversation provided insight into how RDA has been taught, the kinds of supports that educators are seeking, as well as insight into coverage of technical services topics within broader LIS education programs.

Although cataloguing courses within LIS curricula is a topic of perennial interest amongst LIS educators, this report focuses on the implementation of RDA after 3R and the official RDA Toolkit in LIS classrooms. As such, this report attempts to summarize the teaching approaches that educators have shared in their interviews.

In the interest of disclosure, this report is informed by the EOO's personal experience as a practitioner-educator. Since 2017, she has been teaching as a sessional instructor of cataloguing at an American Library Association-accredited master's program; a peer trainer to her colleagues at the University of Toronto Libraries; and more recently (August-September 2022), an instructor for an ALA eLearning course on practical approaches to learning RDA after 3R.

Just as multiple approaches exist for teaching metadata creation and cataloguing in LIS courses, the EOO recognizes that multiple approaches to talking about and teaching RDA exist. The suggestions presented in this report should therefore be read in the spirit of information sharing within LIS education communities, rather than interpreted as a prescriptive formula for teaching RDA.

Teaching foundational concepts and terminology

Most interviewees held the view that a cataloguing course should include a mix of theory and practice. Nonetheless, while some felt that theory provides the foundation that students need to develop cataloguer's judgement and adapt to changing standards, others preferred to allocate more time to metadata production that mimic the requirements immediately sought by local employers. The type of educational program at which interviewees taught, whether university-based or vocational, did not necessarily correlate with specific views. Across the regions, interviewees spoke about major challenges to incorporating cataloguing content into technical services courses in LIS programs, including limited curricular and financial support from high level administrators unless courses emphasized metadata and technology over cataloguing. Some interviewees felt that without personal experience working with the official RDA Toolkit, they could not learn post-3R RDA well enough to teach it meaningfully to their students. Some educators discussed inviting current practitioners to lead practical course components.

Interviewees who valued the importance of teaching theory and principles tended to be educators who were curious about – or were already – incorporating post-3R RDA into their courses. Those educators were aware of the IFLA Library Reference Model (LRM), and either required students to read parts of the LRM document, or presented to students a summary of LRM, with emphasis on the resource entities *Work*, *Expression*, *Manifestation*, and *Item*.

A few interviewees alluded to the importance of presenting RDA within the larger conversation on linked data, to explain why libraries should adopt RDA after 3R and begin using the official RDA Toolkit. They pointed out that metadata communities outside of libraries have developed their own standards; the point of teaching RDA should be to teach students how to create data that can be shared across information domains beyond the library silo. Novice cataloguers with some familiarity with Semantic Web concepts may be comfortable operating within the realm of RDA after 3R. For those who have already obtained technical training and experience in cataloguing with the original RDA Toolkit, some individuals may need to be convinced about the value of switching to the official RDA Toolkit.

Like some of the interviewees, the EOO has found teaching students about LRM to be a beneficial way of introducing RDA after 3R. The official RDA Toolkit is oriented around the basic structure of the LRM entities, attributes, and relationships. LRM also provides many examples to distinguish between entities, which students can consult. Educators may want to ensure that lessons on LRM cover the following topics:

- **LRM entities.** Except for the top-level entity in LRM (known as *Res*), all other LRM entities have their equivalents in RDA. Instructors should make clear to students that

the RDA entity known as *RDA Entity* is an entity subtype of *Res*, and an entity supertype of all other RDA entities.

- **LRM attributes and relationships.** In RDA, attributes and relationships are referred to as *elements*. Instructors should ensure students understand that relationship elements in the context of RDA refer specifically to relationships that exist between RDA entities.
- **LRM explains that a value of an attribute or relationship can either be a literal (a string or identifier) or a URI.** To be inclusive of longstanding bibliographic practices across diverse regions and institutions, RDA goes further by enabling values of elements to be recorded according to one of four recording methods:
  - Unstructured description (an example of a literal)
  - Structured description (an example of a literal)
  - Identifier (an example of a literal)
  - IRI (an extension of URI)

Teaching about navigation

Teaching students how to use a tool is as important as how to make decisions according to instructions. Instructors should not overlook the importance of showing students how to optimize use of the official RDA Toolkit as a tool. Exploring its features, through the generation of bookmarks, links, citation numbers, and documents, can enhance students' use of the Toolkit.

In the EOO's teaching experience, she has observed that some novice users of the Toolkit make the common mistake of launching into bibliographic tools without learning about the features that make navigation easier. The EOO has found that referring students to read the **Help** pages better prepares students for later interaction with the RDA Toolkit. For example:

- Getting started includes instructions on creating a profile
- Navigating RDA Toolkit explains how to optimize use of the pop-up toolbar
- Personalizing RDA Toolkit explains how creating bookmarks, notes, and documents within the Toolkit can make the Toolkit more user-friendly.

While multiple interviewees miss the chapter numbering of the original RDA Toolkit, many features for referencing specific passages and instructions are built into the official RDA Toolkit. The EOO has found these helpful to her teaching experience:

- **Each element has a unique reference label.** Instructors can reference a specific element by its official RDA element reference label. Students will be able to find that element by inputting the element reference label (or one of its alternate labels) into the search box

that is always located near the top right corner of the Toolkit. A list of elements associated with each domain entity can also be found at the bottom of each entity page.

- **Each page has a unique document URL** that can be copied and pasted into other documents and platforms.
- **Links to specific passages** within entity, element, and guidance pages can be easily created, copied, and pasted into other documents and platforms, using the pop-up menu that appears whenever a passage is highlighted.
- **Citation numbers can be generated using the pop-up menu.** Citation numbers can reference specific sections within an entity, element, or guidance page. Citation numbers can then be copied and pasted into other documents and platforms. This is a handy feature for instructors who develop paper-based handouts or printed course packs for students. Students can simply find the passage in the official RDA Toolkit by inputting the citation number into the Toolkit search box.

Recordings of a number of RDA Toolkit demonstrations also exist on the [RDA Toolkit YouTube channel](#).

Role of guidance chapters

When it comes to teaching RDA after 3R to students, many interviewees expressed uncertainty around how to begin. The official RDA Toolkit is a dynamic Web-based tool, with pages organized by entities and elements. These interviewees pointed out that the sequentially numbered, linear style of the original RDA Toolkit provided a teaching framework, and they wanted to find a narrative-based approach to teaching with the official RDA Toolkit.

The guidance chapters, located under the **Guidance** menu of the official RDA Toolkit, may provide some of the narrative that educators seek. While there is no prescribed order to how the guidance chapters should be read, new users of the official RDA Toolkit should almost certainly begin with the chapter "[Introduction to RDA](#)", listed at the top of the Guidance menu, followed by its three subchapters, "[Objectives and principles governing RDA](#)", "[Standards related to RDA](#)", and "[Data elements](#)".

The remaining guidance chapters are arranged in alphabetical order and are intended to be read when additional explanations are needed. These may include explanations of concepts, or guidance around implementation and practice. Instructors have more preparations to make at the outset, to identify and assign the appropriate guidance chapters to students at strategic moments in the course. Nevertheless, entity and element pages also refer to relevant guidance chapters when a particular instruction requires further elaboration.

Determining an order for novice learners

While RSC does not impose a specific order for reading the guidance chapters, instructors may choose to determine an order for their students, based on the schedule of topics introduced.

Table 1 presents an example of a possible order, based on recent courses taught by the EOO. Note that the sequence presented below assumes that the training begins with the description of simple textual resources – for instance, static works realized as text, and embodied in a single volume. Each metadata community, including those focused on description of non-text-based resources, will have its own set of preferences and priorities, which may impact the order in which guidance chapters are to be introduced. The example presented in Table 1 is not intended to be prescriptive.

Table 1. Sample order of guidance chapters for student cataloguers

Guidance chapters to assign to students	When to introduce the guidance

• Introduction to RDA
    o Objectives and principles governing RDA
    o Standards related to RDA
    o Data elements
• Application profiles
• User tasks
	At the start of the course unit on RDA, to explain how RDA implements LRM, and to ease students into reading RDA text.

• Terminology
• Well-formed RDA
• Resource description
    o Coherent description of an information resource
    o Minimum description of a resource entity
    o Effective description
• Data provenance
• RDA implementation scenarios
• Nomens and appellations
• Recording methods
• Transcription guidelines
    o Guidelines on basic transcription
    o Guidelines on normalized transcription
• Manifestation statements
	When entities and elements have been introduced, and prior to students creating RDA data on their own.

Guidance chapters to assign to students	When to introduce the guidance

• Aggregates
• Resource description
    o Describing a work, specifically the section "Describing aggregating works and works that are aggregated"
    o Describing an expression, specifically the section "Describing expressions of aggregating works and expressions that are aggregated"
    o Describing a manifestation, specifically the section "Describing a manifestation that embodies two or more expressions"
	When description of manifestations embodying a single expression has been mastered, and students move to the concept of aggregates.

• Diachronic works
• Resource description
    o Describing a work, specifically the sections "Describing a diachronic work" and "Describing an integrating work"
    o Describing an expression, specifically the section "Describing an expression of a diachronic work"
    o Describing a manifestation, specifically the section "Describing a manifestation of a diachronic work"
	When students are introduced to the concept of diachronic works.

Additional guidance chapters would be introduced as needed.

Teaching students to read entity and element pages

For interviewees whose preferred language of communication was not yet one of the languages available in the official RDA Toolkit, translation was cited as an issue.

For others, the technicality and precision of the RDA text was described as challenging. As such, it is important to teach students how to read entity and element pages. Most of the decision-making required of a cataloguer will be prompted by the instructions contained in entity and element pages. Showing students that there is a consistent structure to entity and element pages provides a cognitive framework for the novice learner. Explaining to students how to read conditions and options, and to determine when to apply an option by reviewing bibliographic samples as a group will help students to build their confidence. Students should also be shown how to recognize and interpret the syntax of certain instructions—for instance, instructions that tell a cataloguer to "record the value of…" a particular element as a potential value for a different element.

The following learning outcomes might require greater interaction and support from instructors. Using real examples:

- Apply general understanding of entity boundaries to correctly identify instances of work, expression, manifestation, and item
- Apply technical definitions of *Nomen*, *nomen strings*, and *appellations*
- Explain the distinction between different recording methods. For structured description, demonstrate how to apply vocabulary encoding schemes and string encoding schemes
- Practice recording values according to an implementation scenario. For intellectual understanding, it is important to explain to students that there are multiple ways of implementing RDA. Being mindful of students' cognitive load, the instructor might choose to emphasize one specific implementation scenario for application, or define a scenario for students that mimics a metadata environment new graduates might encounter.

Defining parameters and structure for students

At time of writing, there are over 3000 RDA elements. To set students up for success, instructors should consider designing a course-based application profile. The application profile would:

- Define the elements that students should record
- Indicate whether elements are repeatable
- Indicate the recording method for each element
    - Where structured description is the recording method specified, indicate the vocabulary encoding scheme and string encoding scheme to apply
- Indicate the transcription method
- Indicate policies and/or metadata guidance documents to follow when additional guidance may be required

The application profile can be structured in multiple ways, including a plain text document, tables in a word processing file, or a spreadsheet.

The instructor might choose to keep the application profile separate from specific implementation scenarios during the early stages of learning. This allows students to grow accustomed to consulting RDA Toolkit in conjunction with the requirements set out in an application profile, before students have to consider how the data will be displayed in a system or platform. After students have mastered recording decisions and practiced recording actual values of elements, instructors can guide students on how to express that RDA data through different implementation scenarios, such as application of an encoding scheme.

Mappings of RDA data to other ontologies and encoding schemes can be found in the "Element reference" card located in each element page, as well as in the RDA Registry.

Referring to documents other than RDA text

The instructor will need to determine if they will refer students to instructions existing outside of RDA Toolkit. For instance, if teaching about structured description and access point creation, students will need to be provided with instructions on the string encoding schemes to apply, and the vocabulary encoding schemes to consult. Instructions can be provided in various ways. For example:

- Create a document that is housed outside of the RDA Toolkit.
  - o If created for distribution through a learning management system, links to specific RDA entity, element, or guidance pages, or specific passages within those pages, can be embedded into the document.
  - o If created for physical distribution, citation numbers can be applied in lieu of embedded links.
- Create a document within the RDA Toolkit "Documents" space, set the access status to "local" or "global", then show students how to subscribe to the document once they have logged in with their Toolkit profile.
  - o The document itself can be set to one of these categories: application profile, local policy, map, quick reference, training material, or workflow.
  - o Documents in the RDA Toolkit can be kept private until the creator (i.e., the instructor) is ready to share the document. A document set for "local" access is only viewable by users logged into the same subscription account. A document set for "global" access is viewable by all subscribers of RDA Toolkit.

Supports for educators

LIS educators who are not active cataloguers tend to look to practitioners for guidance and support in learning RDA. Although some interviewees mentioned attending presentations about RDA as well as presentations about the official RDA Toolkit, including those given by RSC and its regional committees, interviewees expressed desire for opportunities in which they can learn to work with the official RDA Toolkit. Regional RDA committees are ideally suited to provide these supports for educators, whether through the organization of short training programs targeted at educators, or providing sample application profiles, metadata guidance

documents, or templates for reuse in LIS classrooms. Regional RDA committees are well positioned to assist with connecting LIS educators to local RDA experts. Where educators reside in a country not yet represented by a regional RDA committee, educators can reach out directly to the RSC's Wider Community Engagement Officer.

Some interviewees commented on the lack of textbooks or workbooks with built-in exercises oriented around the official RDA Toolkit; this point was a factor in their decision to delay use of the official RDA Toolkit in their courses. For these interviewees, textbooks and workbooks play a significant role in teaching and learning because these resources provide a framework for the course, and students have a tangible reference source to consult upon course completion. A few felt that until their national, state, or local bodies began implementing the official RDA Toolkit, they would not integrate it into their teaching.

In contrast, the EOO also heard from some educators who felt that it was important to teach to the most current RDA content, and that greater pedagogical value could be derived from developing their own teaching material, rather than waiting for textbooks or workbooks to be written. These educators preferred to guide students on how to read and interpret instructions by having students interact directly from the standard, customize explanations to students' needs and levels of understanding, and working with bibliographic resources that students encountered.

While not a textbook, the EOO has found *Introducing RDA: a guide to the basics after 3R* by Chris Oliver (ALA Editions, 2021) to be a helpful resource for demystifying and understanding concepts found in RDA, such as *Nomen*, *aggregates*, and *diachronic works*. In her own teaching experience, she has referred students to certain chapters of the book as supplementary reading, to enrich regular course materials and activities.

Conclusion

The interviews that have been conducted to date have shown how cataloguing is taught in LIS programs, and revealed a range of opinions from educators regarding their readiness to incorporate RDA after 3R and the official RDA Toolkit into their courses. The EOO appreciates the interviewees for their time and valuable feedback, given the diversity of backgrounds and experiences represented.

As a side note, a small number of interviewees were unaware of the process by which RSC decisions are made, presentations on the RSC website, or the practical demonstrations that can be found on the RDA Toolkit YouTube channel. These interviewees were unfamiliar with the international representation on the RDA Steering Committee, the process by which updates to

RDA content are introduced or approved, or how development of the standard is supported. These interviews suggest that RSC and its regional committees should continue to promote the ways in which RDA continues to be internationalized, the methods by which Toolkit users can provide feedback on RDA, the diverse background of RSC position holders and working group members, and the RSC website as a resource for exploring RSC's decision-making process. These interviews also suggest that opportunities should continue to be developed to bring educators and practitioners in contact with each other more frequently.

The EOO plans to continue reaching out to educators in the next year, including scheduling some follow-up interviews to find out how interviewees are responding to RDA as more resources supporting the use of the official RDA Toolkit become available.