

Who's Ready to Surf the Next Wave? A Study of Perceived Challenges to Implementing New and Revised Standards for Archival Description

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ABSTRACT

Archivists in the United States must grapple with many changes to archival descriptive standards in the next few years, including major revisions to *Describing Archives: A Content Standard* (DACS) and *Encoded Archival Description* (EAD), widespread adoption of the *Encoded Archival Context for Corporate Bodies, Persons, and Families* (EAC-CPF) standard, and harmonization of those standards with *Functional Requirements for Bibliographic Records* (FRBR) and *Resource Description and Access* (RDA). This study aims to measure the degree to which archivists are prepared to cope with this evolution in descriptive practices. Archivists were asked to complete a survey aimed at identifying and analyzing their familiarity with these standards and assessing perceptions of their readiness to adapt workflows and systems to changes in those standards. In particular, the survey targeted perceptions of possible technical challenges and pressures on current resources that may impede adoption of new and revised descriptive standards. The results of this research will help the archival community anticipate and plan for ways of addressing perceived obstacles, thus encouraging proactive management of changes in policies and procedures for archival description.

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KEY WORDS

Cataloging, Description

Archivists in the United States are in the midst of another era of adaptation as they grapple with new and revised standards for data content and exchange. While the immediate goal is improved sharing of and access to archival information about records and creators, these changes will also bring many opportunities for increased interoperability and convergence among archives, library, and museum information systems.

Yet, these new prospects for increasing access and connecting archival materials will also present critical challenges for many archivists and their institutions. The profession must strive to acclimate to a shifting landscape that requires new knowledge, skill sets, and resources. To prepare for this transition, the profession must identify and address barriers to acceptance and implementation, and provide pathways for archivists and archives to put those standards into practice.

This study hopes to provide archivists with such information, which can then be used to prepare for standards' implementation. It assesses archivists' familiarity with current descriptive standards and also gauges their perceived readiness to adapt to recent or upcoming changes in those standards. In particular, the survey findings address perceptions of possible technical challenges affecting workflows and systems. Additionally, the study enumerates many of the barriers foreseen by archivists who are considering adopting new or revised standards. Commonly cited barriers include the increased needs for human and technological resources to implement changes in archival descriptive practice. Overall, the study aims to provide a snapshot of the field at this critical moment in the history of archival description.

Many archives and archivists, particularly those with few resources to adapt to these changes, may feel overwhelmed. Thus, it is hoped that the results of this research will help the archival community anticipate and plan for ways of addressing perceived obstacles. This study may also help archivists proactively manage changes in policies and procedures for archival description.

Latest Changes in Archival Descriptive Standards

DATA CONTENT STANDARDS

In 2013, the Society of American Archivists released the second edition of the primary data content standard for description of archival materials in the United States, *Describing Archives: A Content Standard (DACS)*.¹ DACS was revised with the intention of harmonizing its rules to the standards of the International Council on Archives (ICA), which are the *International Standard for Archival Description (ISAD)* and the *International Standard for Archival Authority Records—Corporate Bodies, Persons, and Families (ISAAR-CPF)*.²

DACS revisers were also mindful of the need to make sure its rules did not clash with those of *Resource Description and Access* (RDA).³ RDA, which was first published in 2010, is the successor to *Anglo-American Cataloging Rules* (AACR2).⁴ RDA is the data content standard for library materials' description in the United States and other English-language libraries outside the United States. While most archivists will not use RDA directly in descriptive work, harmonization of DACS and RDA for certain areas of description was a priority during the revision process.⁵ The Society of American Archivists' Technical Subcommittee on Describing Archives: A Content Standard (TS-DACS) suggests that further refinement of DACS should continue these alignment efforts as DACS and RDA evolve, and convergence of information systems across cultural heritage institutions becomes more common. The DACS standard includes the statement that RDA's "reliance on entities and their linkages provides promise for informing the developing archival conceptual model and for greater cooperation between archives and libraries in the future."⁶

DATA STRUCTURE/EXCHANGE STANDARDS

Archivists are also poised to incorporate the next generation of data structure and exchange standards into their workflows and systems. The Society of American Archivists (SAA) published the first version of *Encoded Archival Description* (EAD) in 1998, with a major revision in 2002.⁷ The latest revision of EAD, currently in gamma release, will be made available to the archival community in its final form in 2014.⁸ EAD has been widely adopted in the archival community in the last 15 years, although its implementation in descriptive practice has not been universal.

Encoded Archival Context for Corporate Bodies, Persons, and Families (EAC-CPF) was adopted as a technical standard by SAA in 2011 after a decade of development and experimentation.⁹ With the release of the first stable version of EAC-CPF, the archival community is poised to move forward with full-scale implementation. Archivists who are already familiar with EAD may be most comfortable adopting EAC-CPF for archival authority records, as EAC-CPF records can be created by extracting contextual information from existing EAD records.¹⁰

Several demonstrator projects in the United States, Europe, and Australia have shown the potential of EAC-CPF to create new entry points into archival materials and provide additional contextual information about their creators.¹¹ In the United States, the Social Networks and Archival Context (SNAC) project provides a particularly good example of ways in which EAC-CPF can be used to "provide access to the socio-historical contexts (which includes people, families, and corporate bodies) in which the records were created."¹²

While progress in growing the EAC-CPF community has been modest thus far, the number of EAC-CPF implementers is due to grow significantly in the next decade with increased efforts to educate archivists about its benefits for improving creator description. For example, the Building a National Archival Authorities Infrastructure project, funded by the Institute for Museum and Library Services, has provided scholarships to 140 archivists to defray the cost of attending a continuing education workshop on creating and sharing EAC-CPF records.¹³ As more archivists become familiar with this new standard and begin to create EAC-CPF-compliant archival authority records, a comprehensive survey of EAC-CPF implementers is warranted to determine the success of these initial efforts to encourage adoption.

Review of Relevant Literature

A BRIEF HISTORY OF STANDARDS DEVELOPMENT FOR ARCHIVAL DESCRIPTION

While it is beyond the scope of this study to provide a full history of the development of archival standards, a few key events and players in this process are worth mentioning while also referring readers to the rich contemporary and historical literature on standards development for archival description. Histories of standards development for archival description often begin with an apologia for the lack of commonly accepted rules prior to the 1980s. As Jean Dryden and Kent Haworth stated in 1987, “for many reasons, archivists have neglected descriptive standards. The unique nature of archival holdings has fostered the assumption that it is neither possible nor necessary to develop and apply common standards for the description of our holdings.”¹⁴ While Dryden and Haworth were addressing the Canadian situation at that time, their words have equal applicability to circumstances in the United States just a few years earlier. Prior to the 1970s, proponents of the value of local descriptive practice argued that it was impossible to come to agreement on how best to describe archival materials. Only through the concerted efforts of a determined group of archivists did commonly accepted and implemented standards become a reality in the United States.

In the early 1980s, the SAA National Information Systems Task Force (NISTF) helped lay the groundwork for the development of formal data content and exchange standards. The *NISTF Data Elements Dictionary* was released in 1982. It formed the basis for the *USMARC Format for Archives and Manuscript Control* (MARC AMC), released in 1985.¹⁵ The dictionary was partially drawn from earlier work by the SAA Committee on Finding Aids, which found a great deal of

similarity in the types of information elements included in finding aids, inventories, and registers among the over four hundred institutions it surveyed.¹⁶ The commonalities discovered in institutional description practices meant that a shared model for data structure could be developed. The initial focus of the committee's work was to create a standard for collection-level records that could be integrated into bibliographic information systems, thus facilitating exchange of archival information. The result was the MARC AMC format. Later on, this same work also would encourage the development of another data structure standard, EAD, which could accommodate the hierarchical description common in archival finding aids and inventories.

The development of the MARC AMC format occurred parallel to the complementary work of creating a set of rules for what archival information should be included in archival surrogates such as finding aids, cataloging records, and other types of descriptions. Guides for best practices in archival arrangement and description, such as the SAA Committee on Finding Aids' handbook and David Gracy's influential basic manual, laid the foundations for the first true data content standard, *Archives, Personal Papers, and Manuscripts (APPM)*, which was published in 1983.¹⁷ The availability of APPM proved to be another critical milestone in archival description. It allowed archivists to create archival descriptions for collections, series, and items that could then be easily integrated into local institutional catalogs and bibliographic utilities such as OCLC and RLIN.

The development and widespread adoption of APPM and MARC AMC showed that the right combination of incentives could overcome predilections for local practices and propel the archival profession toward acceptance of standardized methods for such work. The success of these standards fostered significant interest in further development of new standards and consideration of the relevance of standards developed by other communities for archival materials, particularly data value standards such as the Library of Congress Subject Headings and the *Art and Architecture Thesaurus*.

ADAPTATION TO STANDARDIZATION

The literature on standards development in archival description practice provides much-needed context on how our current standards have evolved to consolidate variations in practice into a commonly accepted model for description. For this study, we were particularly interested in learning how archivists in the field have adapted to new standards, or revisions to existing standards, once they are released into the wild. Thus, articles and case studies that reported on implementations of data standards in archives were helpful. The application of two standards, MARC AMC and EAD, has generated most of the literature on this topic.

ADAPTATION TO THE MARC AMC STANDARD

When the MARC AMC format was first introduced to the archival community via numerous reports and publications, proponents of the new standards explained the importance of conforming to commonly accepted rules and standards when adopting automated systems for information storage and retrieval. They also emphasized the helpfulness of such uniformity for users of such systems, who would otherwise need to relearn how to seek information in each new archives that they visited.¹⁸ Articles appearing in publications such as *The American Archivist* and *Cataloging and Classification Quarterly* helped to explain concepts and resources potentially unfamiliar to archivists and anticipate potential conflicts between archival descriptive practice and library cataloging practice. These distinctions among varying descriptive practices were particularly helpful in the areas of constructing titles, describing physical attributes of materials, documenting contextual information about creators and collections, and creating authorized forms of headings for name and subject access points.¹⁹

By the mid-1990s, articles began to appear that reflected upon challenges faced, lessons learned, and milestones reached. Examples of such work included Frederick Stielow's case study of MARC AMC implementation at the Amistad Research Center and Ronald Zboray's report on using MARC AMC in conjunction with the database management system dBASE III Plus.²⁰ A review essay by Lyn Martin noted the overwhelming success of the MARC AMC format, as evidenced by hundreds of thousands of records contributed to OCLC and RLIN.²¹

Readers are referred to Martin's article for its comprehensive look at relevant literature about MARC AMC's launch and adoption from this critical period. However, we will highlight three articles included in that review for their discussions of implementation challenges. Jill Tatem reported in 1986 that inadequate availability of archival data, poor data quality, and inferior user-system interfaces stymied end-user access to archival information.²² She argued that for archivists to take advantage of the full potential of the MARC AMC format, such system design and implementation issues must be addressed and remedied.

As reported by Patricia Cloud in 1988, the costs associated with adoption of the MARC AMC format also proved to be significant barriers for archives.²³ Factors contributing to the costs of creating MARC-compatible cataloging records included installing a local system, participating in a bibliographic utility, and, most significantly, staff time. According to Cloud, efficiency in the creation of MARC records can be negatively impacted by problems with the source finding aid used to create the MARC record, the need for extensive and complex authority work (particularly for corporate names), and staff turnover.

MARC AMC has significant limitations for large, complex sets of archival materials, as determined by Elizabeth Yakel in her case study of the use of MARC

AMC to create multiple cataloging records for series, subseries, and files of the Vatican Archives.²⁴ Particularly problematic were the difficulties in using MARC to create links among related series and to document complicated provenance information. The brevity of the MARC AMC format also meant that critical contextual information needed to understand the nature and extent of the records could not easily be included in the description.

ADAPTATION TO THE EAD STANDARD

The release of EAD was undoubtedly a transformative moment in the history of archival description. As with the launch of MARC AMC, explanations of its value for archives and their users, and ample guidance in how to get started accompanied EAD's successful introduction.²⁵ Since 1998, numerous archives and other cultural heritage institutions have adopted the standard, and it has become a leading method for distributing and exchanging archival information.

In a 2008 implementation survey by the Archivists' Toolkit User Group, 47% of respondents (79 of 168 surveyed) reported using the EAD standard to encode finding aids.²⁶ Yet, this adoption rate is less impressive when compared to the universal acceptance of the MARC standard for sharing bibliographic data in the library world. Why have more archivists not embraced EAD as a data exchange format?

Numerous studies over the last decade have pondered this question.²⁷ The answer is complex, and the types of barriers have evolved over the last 15 years. In the early years of EAD, Tatem found that barriers included the dearth of affordable software and browsers capable of displaying EAD finding aids, and the lack of access to training in the creation of EAD-compliant finding aids. Many archives found that implementing EAD successfully meant doing significant work to "reengineer" finding aids that were incomplete or otherwise did not meet current data content standards.²⁸ Many archives with limited resources struggled to hire staff with EAD expertise and establish the technological infrastructure required to create and publish EAD-encoded finding aids.²⁹ In her usability studies of EAD interfaces, Yakel found that users' lack of familiarity with the finding aid format actually deterred them from successfully navigating EAD records.³⁰ From the literature, it is apparent that successful implementation of the EAD standard relies not just on the appropriate technical infrastructure but also on the creation of good user interfaces and proactive assistance from reference staff to help users interpret archival surrogates. The many reasons cited above provide multiple potential explanations for why EAD has not gained wider acceptance.

By the end of the first decade of EAD's availability, disenchantment with the limitations of the standard led to some strong criticism. In 2009, Elizabeth Dow reproached EAD as being only a "halfway technology" that "addresses symptoms of a problem but not the causes or long-term effects."³¹ Indeed, for many institutions, EAD's complexities and costs tend to outweigh the standard's potential benefits. While proponents of EAD continue to champion the benefits of the standard and offer suggestions for clearing hurdles of limited time and resources, it is possible that EAD may not ever achieve the level of acceptance achieved by MARC in the library world.³² It also is unclear if the next version of EAD will appropriately address many of the barriers indicated by implementers in the field. Many of the obstacles to implementation appear to be related to resource limitations rather than simply technical issues to be overcome.

THE NEXT WAVE IN ARCHIVAL DESCRIPTION

This latest period of transition to new and significantly revised standards in U.S. archival descriptive practice may be comparable to the earlier seismic shifts that first introduced archivists to data content and structure standards (APPM and MARC AMC in the 1980s, and EAD in the 1990s). This latest wave in archival description also attempts to bring several standards into alignment to increase interoperability among archives, libraries, and museums, thus requiring archivists to have some familiarity with standards that may formerly have been considered inapplicable to archives.

In anticipation of the many changes that adoption of new and revised standards brings to archival workflows and systems, this study hopes to provide information that will help the archival profession answer the following questions:

1. What types of challenges do information organizations responsible for the care of archives encounter when adopting a new standard for describing information resources in a collection?
2. What sorts of pressures, if any, are placed on the organization's a) staff and personnel; b) financial resources; and, c) technological resources and tools used for description and access to archival information?
3. What problems are perceived as barriers to successful adoption of new standards and adaptation to change in existing standards?

While experience with the introduction and adoption of new standards provides some indications of the types of stressors that archivists may face, we were particularly interested in how certain variables, such as educational background and experience with standards, may predict readiness to accommodate changes to workflows and systems for archival description.

Methodology

This study employed a survey tool to collect data on attitudes of professional archivists in the United States toward implementation of new descriptive standards for archival materials. We identified potential participants from the membership directory of the Society of American Archivists, which served as the population for the study. According to the SAA website, the association currently has approximately 5,000 individual members. While not all U.S. archivists belong to SAA, the most recent membership statistics show that the number of SAA members is comparable to the number of jobs in archives in the United States (6,500 in 2012), as documented in the Bureau of Labor Statistics' *Occupational Outlook Handbook*.³³

Individuals selected as part of this sample were invited to participate in a questionnaire consisting of 48 questions. Questions covered current descriptive practices, awareness of upcoming changes in descriptive standards, and self-evaluation of the archivist's employing institution to adopt and adapt to new standards and revisions to current standards. The survey instrument was administered using the Web-based Qualtrics service.³⁴

SAMPLE

Our sample was drawn from SAA's online directory, which consists of approximately 3,700 members.³⁵ All 50 states, plus Washington, D.C., are represented in the directory. After conducting searches to display a list of every member in each state and district, this list was organized alphabetically by the members' last names and grouped according to the state in which they work or live. In this way, we created a master list, containing every potential participant from each state. A 50% systematic sample with a random start was drawn from the list of members in an effort to have the smallest margin of error possible. After retirees, students, and invalid email addresses were omitted, $N = 1,724$. These potential participants were contacted in March 2013; two follow-up emails were sent at two weeks and three weeks after the initial contact. At the conclusion of the survey, the Qualtrics service had received 345 valid, completed questionnaires, which is a 20% response rate. The number of responses from the participants in the sample group is sufficient to infer the descriptive statistical findings with a 95% degree of confidence and a confidence interval of $\pm 5\%$.

SURVEY INSTRUMENT

The 48-question survey instrument was developed to gather several types of information about descriptive practices at the institutions where participants

work. First, participants were asked to provide data on the types of archival description work in which they and their institutions engaged, as well as the types of systems and software used. Second, respondents provided information about their familiarity with each of the 5 standards (DACS, EAD, EAC-CPF, FRBR, and RDA), sources of information that they used to learn about the standard(s), and a self-assessment of their readiness to adapt to changes to current standards and adoption of new standards. The questionnaire used in this study was similar, but considerably more substantial, than those used in two other studies examining the readiness of Ohio public and school librarians for the impending inevitable adoption of RDA.³⁶ The instrument is included in Appendix A of this article.

Findings

As noted above, the survey was organized according to each descriptive standard. Thus, this presentation of results progresses in the order that we posed questions in the instrument (see Appendix A). To provide some context regarding the population that responded to the survey, we present first some demographic data.

JOB TITLES OF PARTICIPANTS

Of the 247 job titles supplied (Question 1), 110 or just over 40 percent included the words “archivist,” “archives,” or “archival.” Because this question required respondents to make a free-text response rather than to choose from a predefined list, responses varied significantly. The following list represents the top 10 responses to this question:

- Archivist
- Assistant Archivist
- Digital Archivist
- Director or Director of Archives
- Electronic Records Archivist
- Head of Special Collections
- Processing Archivist
- Project Archivist
- Special Collections Librarian
- University Archivist

It is worth noting that many of the respondents reported that they wear more than one hat, listing job titles that reflect wide-ranging responsibilities (e.g., “Archivist, Coordinator of Records Management, and Music Librarian” or “Archivist/Interlibrary Loan Librarian”).

PARTICIPANTS’ EXPERIENCES IN CREATING ARCHIVAL DESCRIPTIONS

The vast majority of participants have had experience with all sorts of archival description activities during the course of their careers (examples provided in the question included the creation of “finding aids, inventories, MARC records, either electronically or on cards”) (see Table 1).

Table 1. Respondent Experience with Description (N = 344)

Response	Frequency (%)
Yes (has experience creating archival descriptions)	336 (97.7%)
No (does not have experience creating archival descriptions)	8 (2.3%)

Considering that the majority of respondents work in institutions where archival descriptions are created in-house (see Table 2), it appears that most archival institutions employ people who have knowledge and experience in preparing descriptions of archival materials.

Table 2. Archival Institutions Creating Archival Descriptions In-House (N = 344)

Response	Frequency (%)
Yes (descriptions created in-house)	330 (95.9%)
No (descriptions created by outside units or other providers)	14 (4.1%)

EDUCATIONAL BACKGROUND OF PARTICIPANTS

The skill levels of survey participants are reflected generally in their levels of education. Of the 313 participants who responded to the question, “What is your highest educational attainment in relation to your archives career?,” 90.7% of participants had at least a bachelor’s degree. While there were other education options (e.g., high school diploma, college diploma, and associate’s degree), no one chose them. The mode for this variable was master’s degree (N = 284, or 90.7%), with nearly equal remaining values distributed between bachelor’s degree and doctoral degree. Not surprisingly, the majority of these respondents had degrees or diplomas in library and information science, archival science, history or public history, or museum studies. Of those who responded to the question regarding these disciplines (N = 315), 79.4% possessed these types of degrees or diplomas.

Furthermore, these degrees or diplomas were earned very recently. The mode for year of graduation for respondents was 2007, resulting in 2003 as the mean year of graduation with a respective library and information science, archival science, public history, or museum studies degree or diploma. This

statistic helps explain in part why the mean number of years respondents had worked in their current archives positions was a relatively low 9.21 years ($sd = 8.254$).

Given that many of the study's participants are recent graduates of master's level education in archives or a closely related discipline, the archives profession seems reasonably positioned with a new generation of professionals prepared to take on future challenges related to descriptive standards. While many participants appear to be relatively "new" to their current positions, this may simply indicate some job mobility in archives and that many archivists are finding new (to them) professional positions.

LEVEL AND TYPE OF EDUCATION AS A PREDICTOR OF FAMILIARITY AND SKILL IN CREATING ARCHIVAL DESCRIPTIONS

We tested a variety of hypotheses to determine whether an association exists between variables that might be possible predictors of success in terms of developing the archival profession further. Thus the hypotheses tested that are relevant to this subsection of findings include:

- Level of education (H_1) is a predictor of the likelihood that the archivist has created archival descriptions such as finding aids, inventories, and so on.
- Type of education (H_2) (in library and information science, archival science, etc.) is a predictor of the likelihood that the archivist has created archival descriptions such as finding aids, inventories, and so on.

Regarding H_1 , the initial chi-square test was invalid due to the very few number of respondents reporting that they possessed doctoral degrees. When the values in relation to those with doctoral degrees were omitted, the second, valid chi-square result ($X^2 = 1.548$) was not significant, indicating no association between level of education and archivists creating their own archival descriptions (H_{1N}). However, for H_2 there is a very significant association ($X^2 = 5.601$, $p = 0.018$) between an archivist possessing a degree or diploma in library and information science, archival science, public history, or museum studies and the likelihood that they create finding aids, inventories, MARC records, and the like. Thus H_{2N} can be rejected, and it can be stated with a very high degree of confidence that those persons possessing a degree or diploma in one of the disciplines associated most with the archives profession have a much higher likelihood of creating archival descriptions for their respective archives.

The following sections examine survey findings concerning the various descriptive standards that have had and might have an impact on the archives profession.

DESCRIBING ARCHIVES: A CONTENT STANDARD (DACS)

Perhaps not surprisingly, DACS continues to be a very important tool for archivists working in the United States: 90.2% of respondents to the survey recorded that they were at least familiar with DACS. However, this finding does not mean that they use DACS for describing their respective collections. As seen in Table 3, 75.9% of respondents use DACS as a tool for archival description. While this is a majority of respondents, this finding also shows that DACS, the United States standard for archival description, is not used universally for describing archival materials.

Table 3. Respondents Using DACS (N = 294)

Response	Frequency (%)
Yes (my institution uses DACS)	223 (75.9%)
No (my institution does not use DACS)	71 (24.1%)

Those who have used DACS have been using it for quite some time. In fact, the median value from Table 4 is 4 to 6 years, meaning that at least 50% of those archival professionals have been using DACS for at least that long and perhaps longer. Thus, these data show that archival professionals who use DACS tend to have significant experience with the standard.

Table 4. Length of Time Respondents Have Used DACS (N = 221)

Response	Frequency (%)
1–3 years	74 (33.5%)
4–6 years	79 (35.7%)
7–9 years	68 (30.8%)

A majority of respondents (60.5%) believe it “very likely” that their organizations would implement the revised 2013 version within the next two years (see Table 5), with another 35% indicating that DACS 2013 adoption is “possible.” These data support the contention that DACS continues to be the preferred content standard for archival description for a large proportion of archivists in the United States.

Table 5. Likelihood of Archival Organizations Adopting DACS (2013 Version) in the Next Two Years (N = 223)

Response	Frequency (%)
Not likely	10 (4.5%)
Possible	78 (35.0%)
Very likely	135 (60.5%)

Again, to explore predictive insight regarding the use of DACS as a descriptive tool by archivists, we tested the following hypotheses:

- Level of education (H_1) is a predictor of the likelihood that the archivist will use or has used DACS.
- Type of education (H_2) (in library and information science, archival science, etc.) is a predictor of the likelihood that the archivist will use or has used DACS.

H_1 proved to be not significant ($X^2 = 0.32$), indicating no relationship between an archivist's level of education and the likelihood that he or she will use or has used DACS (H_{1N}). There was a significant association recorded with H_2 ($X^2 = 4.121$, $p = 0.042$), however. This connection between type of education and use of DACS means that there is a very high likelihood ($p < 0.05$) that U.S. archivists with formal training in one or more of the specializations noted above will use the DACS standard for archival description.

Given the large proportion of archivists who use or have familiarity with DACS, might knowledge of DACS itself be a variable that predicts knowledge of the other archival standards? In other words, if an archivist is familiar with DACS to begin with, does this mean that he or she is more likely to be familiar with other archival descriptive standards such as EAD and EAC-CPF? Additionally, does the number of years that an archivist uses DACS have some impact on knowledge of the other standards? To explore these and other questions further, we tested the following hypotheses:

- Length of time using DACS (H_1) is associated with the likelihood of one's organization adopting the updated 2013 version of DACS.
- Length of time using DACS (H_2) is associated with an archivist's greater confidence in the possibility of having to use the updated 2013 version of DACS.
- Length of time using DACS (H_3) is associated with an increased likelihood of using EAD.
- Length of time using DACS (H_4) is associated with an increased likelihood of using EAC-CPF.
- Length of time using DACS (H_5) is associated with an increased likelihood of having heard about or encountered RDA.

To test for association between variables, both Spearman's ρ (expressed as r_s for association between ordinal variables) and chi-square (for nominal variables only, and nominal and ordinal variables) tests were used. The advantage of Spearman's ρ is that it calculates a coefficient that may express the strength between the variables, something not possible using chi-square exclusively. For H_1 (length of time using DACS relating to likelihood of the archivist's organization adopting the 2013 revision), the association between variables is positively correlated yet small, with $r_s = .299$, but it is very significant ($p = 0.000$). The same

is true for H_2 (length of time using DACS relating to archivist's confidence in adopting the 2013 revision), where $rs = .303$ and is very significant ($p = 0.000$). Thus, while the null hypotheses H_{1N} and H_{2N} were rejected (meaning that we rejected the propositions that length of time using DACS is *not* associated with the likelihood of one's organization adopting the updated 2012 version of DACS and that length of time using DACS is *not* associated with an archivist's greater confidence in the possibility of having to use the updated 2012 version of DACS, respectively), it must be recognized that the strength of the relationship between variables is limited.

Chi-square tests of these same null hypotheses, H_{1N} and H_{2N} , validated both Spearman's ρ tests for the hypotheses by returning the same significance results ($p = 0.000$). Yet, it is the crosstabs calculations for the chi-square tests that are most revealing. In these analyses, those archivists with more years' experience with DACS are more convinced that their organizations will adopt the updated 2013 version of DACS. Those same more experienced archivists also have more confidence in their ability to use the new DACS standard effectively.

The chi-square test of H_3 , the hypothesis that length of time using DACS is a predictor for use or familiarity with EAD, revealed the likelihood that the longer an archivist has used DACS, the more likely it is that he or she has been or plans to use EAD.³⁷ H_3 shows a very significant association ($X^2 = 22.158$, $p = 0.000$), causing us to reject the null hypothesis. However, the same cannot be said for H_4 , which attempts to correlate DACS use with current or future use of EAC-CPF. No relationship was found between the length of time DACS has been used and the use of EAC-CPF in archives ($X^2 = 1.889$). Contrariwise, however, H_5 did reveal a highly significant association between length of time an archivist has been using DACS and knowledge of and familiarity with RDA ($X^2 = 11.538$, $p = 0.003$). Therefore, in many cases, length of time using DACS is an effective predictor of the likelihood that archivists will have confidence in adopting other standards relating to archival description, with the possible exception of EAC-CPF. These findings prove DACS to be the primary or base standard of archival description and an important component of professional education and development, given its role in predisposing archivists to accept and use other archival standards.

ENCODED ARCHIVAL DESCRIPTION (EAD)

When it comes to archival description tools other than DACS, the data start to show some different patterns. For example, only a slim majority (52%) of respondents reported that their institutions use EAD to encode finding aids for online delivery (see Table 6). Thus, some archives may have determined that it is not worth the effort to encode their finding aids, given the technical and resource barriers identified in previous studies.

Table 6. Archival Institutions Using EAD (N = 324)

Response	Frequency (%)
Yes (my institution uses EAD)	168 (51.9%)
No (my institution does not use EAD)	152 (46.9%)
I don't know (if my institution uses EAD)	4 (1.2%)

Of those who responded affirmatively, the majority stated that their organizations had been using EAD for 6 years or less (see Table 7). Thus, the majority of these archives likely started with EAD 2.0 to encode finding aids, which also coincides with the increased availability of tools and aids to create XML-encoded finding aids and style sheets necessary to present the EAD descriptions on the Web.

Table 7. Length of Time EAD 1.0 (1998) and/or EAD 2.0 (2002) Has Been Used by U.S. Archives (N = 165)

Response	Frequency (%)
1–3 years	40 (24.2%)
4–6 years	57 (34.5%)
7–9 years	21 (12.7%)
10–12 years	25 (15.2%)
13–15 years	22 (13.3%)

ENCODED ARCHIVAL CONTEXT FOR CORPORATE BODIES, PERSONS, AND FAMILIES (EAC-CPF)

While the proportions of institutions using or not using EAD is nearly even, the same rate of adoption does not apply to EAC-CPF. Only 5.1% of respondents reported that their institutions use the EAC-CPF standard (see Table 8), which reinforces current impressions in the field that adoption of EAC-CPF by archives has been slow (as noted in the literature review above).

Table 8. Archival Institutions Using EAC-CPF (N = 316)

Response	Frequency (%)
Yes (my institution uses EAC-CPF)	16 (5.1%)
No (my institution does not use EAC-CPF)	300 (94.9%)

This result leads to a seemingly logical follow-up question: do those institutions *not* using EAC-CPF have some other method of managing authority descriptions? Table 9 shows that a slight majority (52%) of institutions do have such a method. Those other methods are shown in Table 10. Computerized

authority files form the vast majority (75.3%) of such methods. However, paper-based authority files still have a place in managing authority records in archives. Roughly 20% of those responses marked as “Other” in Table 10 were reported qualitatively by respondents as “paper *and* computer files.” This common write-in response may reflect the realities of archives still dealing with conversion of legacy paper-based systems to computer-based systems.

Table 9. Does Your Institution Use (An)other Method(s) for Managing Authority Descriptions? (N = 302)

Response	Frequency (%)
Yes (my institution uses another method)	157 (52.0%)
No (my institution does not use another method)	145 (48.0%)

Table 10. Other Methods Used for Managing Authority Descriptions (N = 154)

Response	Frequency (%)
Paper-based authority file	16 (10.4%)
Computerized authority file	116 (75.3%)
Other	22 (14.3%)

Since some of the tools used for describing archives appear to affect the use of other tools, does the use of EAD in archives have a role in predicting the likelihood that archivists also use EAC-CPF? A chi-square test revealed a significant relationship between the two variables ($X^2 = 5.750, p = 0.016$). While we must reject the null hypothesis, it is interesting to see in more detail what is behind this result. The counts in the 2x2 contingency table show that those archivists *not* using EAD are much more likely *not* to use EAC-CPF, despite the fact that nearly half the participants said they use EAD in their current careers. So many respondents said they do not use EAC-CPF, however, that the chi-square result (calculated with the overall number of “No” responses for both variables) suggests that there must be an association between the two variables that is not due simply to chance. As implementation of EAC-CPF often relies heavily on the harvesting of creator information from current EAD records to populate new EAD-CPF authority records, it is not entirely unsurprising that those archivists not currently using EAD are even less likely to embrace the EAC-CPF standard. For those who are still in the process of converting from paper- to computer-based authority information, the impetus is even weaker.

FUNCTIONAL REQUIREMENTS FOR BIBLIOGRAPHIC RECORDS (FRBR) AND RESOURCE DESCRIPTION AND ACCESS (RDA)

While archival science as a discipline and a profession anticipates many changes to descriptive standards, the library and information sciences (LIS) field has encountered something similar recently with the addition of two standards that promise to change fundamentally the ways in which bibliographic data are created and shared. First, the LIS community adopted *Functional Requirements for Bibliographic Records (FRBR)*, a conceptual model for a new descriptive standard for bibliographic data published in 1998 that redefines retrieval and access in terms of user activities and requirements.³⁸ *Resource Description and Access (RDA)*, the practical realization of FRBR, was published in 2012. RDA has become the “new” primary standard for bibliographic description in LIS, replacing the second edition of the *Anglo-American Cataloguing Rules (AACR2)*. While RDA might easily be critiqued as a poor choice for archival description, the FRBR framework upon which it is based includes archival collections as a type of aggregate work.³⁹

While many archivists would reject RDA in favor of DACS as the preferred content standard for archival description, some public and smaller academic libraries with archival and manuscript collections that are not managed separately from other library materials may prefer to use RDA for description of all materials. This situation may be particularly prevalent in institutions where library catalogers have the responsibility of creating bibliographic records at the collection level for archival materials. RDA may also be used for authority control purposes. Cory Nimer suggests that, in these circumstances, use of RDA may actually lead to better management of archival materials as it is more closely aligned to DACS than its predecessor, AACR2.⁴⁰

Given that RDA may be used for description in some instances, the authors of this study wished to determine how familiar archival professionals are with RDA and its conceptual model, FRBR. In terms of FRBR, just over half of the respondents (51.9%) had not heard about or encountered FRBR in their work as archivists (see Table 11). More archivists were familiar with RDA, however; 69.3% of respondents affirmed that they knew about the standard (see Table 12). The disparity in familiarity with FRBR and RDA may be due to the gap in time between the release of the two documents and thus their respective ages. With FRBR having been available for so long without a concrete product such as RDA for practical applications, these same professionals who once might have had some exposure to FRBR may have simply forgotten about it in the interim. It is also possible that archivists feel that FRBR has limited relevance or benefit for archival description.

Table 11. Have You Heard of or Encountered FRBR? (N = 316)

Response	Frequency (%)
Yes (I am familiar with FRBR)	152 (48.1%)
No (I am not familiar with FRBR)	164 (51.9%)

Table 12. Have You Heard of or Encountered RDA? (N = 316)

Response	Frequency (%)
Yes (I am familiar with RDA)	219 (69.3%)
No (I am not familiar with RDA)	97 (30.7%)

It is worth comparing these results to those from another study, which also measured the familiarity of information professionals with the two standards. In their survey of the preparedness of Ohio school library media centers for FRBR and RDA, Frank Lambert and Meghan Harper found that an even lower proportion of Ohio school librarians knew about or had heard of FRBR (23.1%) or RDA (24.6%).⁴¹ Thus, memory effects may not necessarily be the only explanation for lack of knowledge about FRBR and RDA. Limited exposure to the standards through continuing education, in-house training, or professional publications may also explain the low rate of familiarity with these standards among this segment of the librarian population.

While a number of libraries aim to adopt RDA as their new descriptive standard over the next few years—following the lead of the Library of Congress, which officially adopted RDA in March 2013—fewer archivists appear poised to follow this trend. Table 13 shows that a distinct minority will consider using RDA for creating archival descriptions. Only 26.2% of archives that have online archival information systems are considering updating their respective systems for the RDA standard. While this number may seem low, it reflects the reality that not every archives actually creates bibliographic records for its collections, and those that do may wish to use DACS instead of RDA as their preferred content standard. Archives most interested in adopting RDA are likely to be already heavily invested in MARC-based information systems, such as university-based archives and special collections, some historical societies, and public libraries. These institutions may prefer to use one descriptive standard for all materials. For many archives, however, the descriptive standard of choice has been and continues to be DACS.

**Table 13. Archives Considering Updating Information System for RDA
(N = 313)**

Response	Frequency (%)
Yes (considering updating system for RDA)	82 (26.2%)
No (not considering updating system for RDA)	153 (48.9%)
Our archives does not have an archival information system.	35 (11.2%)
Our archives is not considering using RDA for descriptive purposes.	43 (13.7%)

To determine whether a variety of hypotheses might offer predictive insight regarding knowledge about FRBR and RDA among archivists that responded, we tested the following hypotheses:

- Level of education (H_1) is a predictor of the likelihood that the archivist has knowledge of and about FRBR.
- Type of education (H_2) (in library and information science, archival science, etc.) is a predictor of the likelihood that the archivist has knowledge of and about FRBR.
- Level of education (H_3) is a predictor of the likelihood that the archivist has knowledge of and about RDA.
- Type of education (H_4) (in library and information science, archival science, etc.) is a predictor of the likelihood that the archivist has knowledge of and about RDA.

Following the application of chi-square to test for associations between the variables highlighted above, we had to accept that only the first null hypothesis was valid. The acceptance of H_{1N} ($X^2 = 4.451$, which included doctoral degrees without affecting the test's validity) showed that level of education does not in fact predict whether an archivist has knowledge of FRBR. However, we rejected the other null hypotheses, H_{2N} , H_{3N} , and H_{4N} , because the associations between variables are very significant (H_2 , $X^2 = 6.804$, $p = 0.009$; H_3 , $X^2 = 17.004$, $p = 0.000$; H_4 , $X^2 = 17.023$, $p = 0.000$). H_2 shows that those archivists with an education in library and information science, archival science, public history, or museum studies are much more likely to have had exposure to and familiarity with the FRBR standard. While level of education has no relationship to archivists' familiarity with FRBR, the high number of archivists with master's degrees who knew about RDA led to the acceptance of H_3 's proposition that level of education relates to knowledge of RDA. Thus, level of education is indeed a predictor of familiarity with RDA. Considering the relatively recent average year that respondents received their highest degrees and the increasing amount of information about RDA appearing in core courses in information organization and LIS literature in recent years, it seems reasonable to expect that recent graduates know more about RDA than they do about FRBR. The same seems true for H_4 , which uses

type of education as a predictor of familiarity with RDA. Those archivists with an academic background in specialties relevant to archival work are also more likely to have been exposed to the RDA standard.

For questions about the best sources of information about the FRBR and RDA standards, many respondents wrote in “graduate education program,” making it the most highly ranked source after professional literature, conversations with colleagues, and professional conferences. As more and more of the archival profession receives archival education through master’s programs in the areas listed above, archivists’ initial introduction to new and recently revised descriptive standards is likely to be through such programs.⁴²

PARTICIPANTS’ SELF-ASSESSMENT OF READINESS TO ADOPT NEW OR REVISED STANDARDS

The theme of *uncertainty* kept presenting itself in the quantitative survey data, of all places. For example, we asked respondents how confident they are (using a Likert-type scale of 1–5, with 1 being “I have no confidence,” 3 being “I am unsure/don’t know,” and 5 being “I feel very confident”) about their current skills and knowledge using open source software to implement a new descriptive standard like RDA. Additionally, they were asked whether their current archival information system is technologically sophisticated enough to implement and integrate a new descriptive standard. In the case of both variables, the respective measures of central tendency for the medians and modes were “I am unsure/don’t know.” When a similar question was asked about the various actual and potential standards for archival description (e.g., “RIGHT NOW, do you feel that you have/would have sufficient skills and knowledge to implement the revised DACS/EAD/EAC-CPF/RDA standard?”), the findings were the same. In virtually every case for each standard, the mode *and* the median were the same: “I am unsure/don’t know.” (The one exception was DACS, for which the mode was the value in between “I am unsure/don’t know” and “I feel very confident that I have sufficient skills and knowledge.”) In other words, respondents feel considerable trepidation in their abilities to implement most standards, except for DACS.

Thus, while many new standards are coming to fruition in the archival profession, the greatest challenge may be to help archivists learn about them and become confident in their application. This outcome is not unlike the findings in Frank Lambert, Roman Panchyshyn, and Sevim McCutcheon’s examination of public library catalogers in Ohio.⁴³ While a large majority of these librarians had at least heard about RDA, there seemed to be little depth of knowledge about it. To remedy this situation, those survey respondents recommended highly that training be offered to librarians by their respective institutions. A similar

solution could also be offered for archivists in need of training in revised and new standards, particularly those who have not been exposed to new and recently revised standards via graduate school or other advanced training.

Conclusions

Once again, the archival profession is at a critical juncture in the history of descriptive standards. Archives and archivists currently feel pressure to adapt to numerous changes in existing standards and to adopt new standards. This pressure is due to the push toward increasing interoperability among cultural institutions and building new shared resources for understanding the contexts of records creation.

The goals of this study were to document the current state of readiness of archivists and their institutions to implement new versions of DACS and EAD, the recently endorsed EAC-CPF standard, and related bibliographic standards (namely, FRBR and RDA). The study found that archivists are most familiar and comfortable with these changes to the standards landscape if they have a firm grounding already in the purpose, nature, and implementation of standards, either through graduate education in LIS, archives, or a related field, or through previous experience in the field with a standard such as DACS. While level of education does not necessarily predict standards adoption, type of education often makes the difference. These data show that archivists with little formal archives or information science training or no previous experience with archival descriptive standards are less likely to jump on the new standards bandwagon. This finding suggests that formal educational programs in archival studies, library and information science, and related fields play a critical role that should not be underestimated. While continuing education, academic and professional publications, and professional communication venues such as conferences and listservs are invaluable for conveying essential information about the development and implementation of new and revised standards, graduate education programs may have the greatest impact on archivists' familiarity with and knowledge of how to implement those standards.

These data also suggest that archivists remain uncertain about their readiness to implement new or revised standards. While this uncertainty may be partially related to their organizations not having made a decision at the time of this survey about when or how to implement DACS 2013, the upcoming EAD 2.0, or EAC-CPF, the results show that archivists do not feel comfortable yet with their own knowledge and skills with these standards. Closing the gap in education and training may prove to be the most important step in fostering implementation among archival organizations and archivists. As education providers, particularly those in graduate education, appear to have significant

influence on archivists' confidence in implementing descriptive standards, it is particularly important that educators are sufficiently prepared to teach this subject matter. Thus, educators also need access to professional development opportunities in this area.

FUTURE STUDIES

The results of this survey provide several avenues for future research. We plan several follow-up studies to explore further how various factors could influence an institution's decision to adopt new or revised archival description standards. Some of these studies will build upon qualitative data collected through this initial survey to answer questions such as how the type of degree possessed by archivists may affect their knowledge about and work with the variety of descriptive standards available to them (i.e., comparing their background in archival studies, library science, public history, or museum studies with their readiness to apply such standards).

While an archivist's educational background and previous experience in implementing descriptive standards may be strong predictors of how receptive an archivist might be to adopting a new or revised standard, several additional factors must also be considered: the type of archives and its relation to a parent institution, which may influence what standards would be considered for adoption; technical and financial limitations that may preclude standards adoption; and the amount of support provided by the archives or parent institution for staff training. The situational aspects of standards adoption may in fact be deciding factors, even when the archivist is knowledgeable and receptive to incorporating new standards into archival information systems. Further investigation into what might constitute the tipping point for committing to adoption of new archival descriptive standards may prove helpful to archives in determining whether they are ready to jump on that next wave.

Appendix A

Adoption and Adaptation to New Standards in Archival Description in United States Archives and Manuscript Repositories

Before taking part in this study, please read the consent form below. Click on the "I Agree" button at the bottom of the page if you understand the statements and consent freely to participate in the study.

Consent Form

This study involves a Web-based self-administered survey questionnaire designed to understand the level of preparedness of archives and manuscript repositories, and the degree of knowledge and understanding possessed by archivists, in relation to anticipated changes in several archival descriptive and encoding standards. Standards to be addressed in this study include Describing Archives: A Content Standard (DACS), Encoded Archival Description (EAD), and Encoded Archival Context (EAC-CPF), as well as the new bibliographic descriptive standard, Resource Description and Access (RDA).

This study is being conducted by Drs. Karen Gracy and Frank Lambert of the Kent State University School of Library and Information Science. The study has been approved by the Kent State University Institutional Review Board. No deception is involved, and the study involves no more than minimal risk to participants (i.e., the level of risk encountered in daily life).

Participation in the study typically takes thirty (30) minutes and is strictly anonymous. Participants will answer a series of questions about their institution's experience with DACS, EAD, EAC-CPF, and RDA, and their respective personal knowledge and comfort level in working with these standards.

All responses are treated as confidential, and in no case will responses from individual participants be identified. All data will be pooled and published in aggregate form only. However, participants should be aware that this survey is not being run from a "secure" https server of the kind typically used to handle credit card transactions, so there is a small possibility that responses could be viewed by unauthorized third parties (e.g., computer hackers).

Many individuals may find participation in this study enjoyable. Participation is voluntary; refusal to take part in the study involves no penalty or loss of benefits to which participants are otherwise entitled, and participants may withdraw from the study at any time without penalty or loss of benefits to which they are otherwise entitled.

If you have further questions about this study or your rights, or if you wish to lodge a complaint or concern, you may contact either Dr. Karen Gracy (kgracy@kent.edu; 330-672-0049) or Dr. Frank Lambert (flamber1@kent.edu; 330-672-0015). Or, you may contact the Kent State University Institutional Review Board, at (330) 672-2704. If you are 18 years of age or older, understand the statements above, and freely consent to participate in the study, click on the “I Agree” button to begin the survey.

1. What is your "official" job/career title? _____
2. Select all of the task(s) that you engage in/have engaged in during your career working in archives.
 - ☐ Acquisitions
 - ☐ Appraisal
 - ☐ Collection processing (arrangement and description)
 - ☐ Cataloging and metadata creation (creation of MARC records and/or EAD-compliant finding aids)
 - ☐ Digitization and digital projects
 - ☐ Preservation
 - ☐ Records management
 - ☐ Reference

List up to three other tasks if not listed above

3. What type of archival information system does your archives have right now? Select all that apply to your institution's situation.
 - ☐ Online public access catalog (OPAC)
 - ☐ Content management system (such as CONTENTdm)
 - ☐ Archival data management system (e.g., Archivists' Toolkit, Archon)
 - ☐ Card catalogue
 - ☐ Other type of information system (please describe):

4. Have you ever created archival descriptions such as finding aids, inventories, MARC records, or other types of descriptions, either electronically or on cards, during the course of your career?
 - ☐ Yes
 - ☐ No
5. Does your current institution create archival descriptions in-house?
 - ☐ Yes → You will be directed to question 6
 - ☐ No → You will be directed to question 7
6. Please indicate which types of descriptions your institution creates in-house (check all that apply):
 - ☐ Finding aids or inventories (using word processing software, an HTML or XML editor, or both)
 - ☐ Collection-level MARC records
 - ☐ Dublin Core records
 - ☐ Other (please describe):

7. Does your current archival institution rely on description/cataloging services provided by another unit in your institution or through a cooperative arrangement with another institution or consortium to create any archival descriptions?
- ☐ Yes → You will be directed to question 8
- ☐ No → You will be directed to question 9
8. Indicate the types of archival descriptions provided by other units in your institution or cooperating institutions:
- ☐ Finding aids or inventories (using word processing software, an HTML or XML editor, or both)
- ☐ Collection-level MARC records
- ☐ Dublin Core records
- ☐ Other (please describe):
-
9. What tool or system does your archives or description/cataloging provider use to create MARC records? Please write the name of the tool or system in the space below. If your archives does not create MARC records for archival collections, write "not applicable."
-
10. To the best of your knowledge, what software does your archives or your description/cataloging provider use to create electronic finding aids? Please write the name of the software you use in the space below (e.g., XMetaL, Oxygen, etc.). If your finding aids are not encoded for online transmission or display, please provide the tool used to create them briefly in the space below (e.g., "created using MS Word").
-
11. What tool or system does your archives or cataloging provider use to create Dublin Core records? Please write the name of the tool or system in the space below. If your archives does not create Dublin Core records for archival collections, write "not applicable."
-

Describing Archives: A Content Standard (DACS)

The following questions are focused on DACS:

12. Are you familiar with the archival description standard known as Describing Archives: A Content Standard (DACS)?
- ☐ Yes → You will be directed to question 13
- ☐ No → You will be directed to question 18

13. Are you currently using DACS to prepare archival descriptions (finding aids, bibliographic records, and/or database records)?
- ☐ Yes → You will be directed to question 15
- ☐ No → You will be directed to question 17
14. For how many years have you been using DACS for the creation of archival descriptions (DACS was introduced in 2004)?
- ☐ 1–3 years
- ☐ 4–6 years
- ☐ 7–9 years
15. In 2012, the Society of American Archivists approved the revised version of DACS. How likely is your institution to implement the new version of DACS in the next two years?
- ☐ Not likely
- ☐ Possible, depending on extent of changes, adaptations
- ☐ Very likely
16. Has your archives begun discussing/considering updating your archival information system for the new version of DACS?
- ☐ Yes
- ☐ No
- ☐ Our archives does not have an archival information system
- ☐ Our archives is not currently using or considering using DACS for descriptive purposes
17. RIGHT NOW, do you feel that **you have/would have sufficient skills and knowledge to implement the revised DACS standard?**

I haven't
sufficient skills
and knowledge

1

2

I am unsure/
don't know/
doesn't apply

3

4

I feel very confident
that I have sufficient
skills and knowledge

5

18. RIGHT NOW, do you feel that **your colleagues** in your institution generally have sufficient skills and knowledge to implement **the revised DACS standard should** your institution adopt it?

They haven't
sufficient skills
and knowledge

1

2

I am unsure/
don't know/
doesn't apply

3

4

I feel very confident
that they have sufficient
skills and knowledge

5

Encoded Archival Description (EAD)

The following questions focus on EAD:

19. Are you currently using Encoded Archival Description (EAD) to encode finding aids for delivery online?
- ☐ Yes → You will be directed to question 20
- ☐ No → You will be directed to question 21
- ☐ I do not know
20. EAD 1.0 became available in 1998, and EAD 2.0 was released in 2002. For how many years have you been using EAD to encode finding aids?
- ☐ 1–3 years
- ☐ 4–6 years
- ☐ 7–9 years
- ☐ 10–12 years
- ☐ 13–15 years
21. In 2013, the revised version of the EAD standard will be released. How likely is your institution to implement the new version of EAD after its release?
- ☐ Not likely
- ☐ Possible, depending on extent of changes, adaptations
- ☐ Very likely
22. RIGHT NOW, do you feel that **you** have sufficient skills and knowledge to implement the revised EAD standard?

I haven't sufficient skills and knowledge		I am unsure/ don't know/ doesn't apply		I feel very confident that I have sufficient skills and knowledge
1	2	3	4	5

23. RIGHT NOW, do you feel that **your colleagues** in your institution have sufficient skills and knowledge to implement the revised EAD standard?

They haven't sufficient skills and knowledge		I am unsure/ don't know/ doesn't apply		I feel very confident that they have sufficient skills and knowledge
1	2	3	4	5

24. Has your archives begun discussing/considering updating your archival information system for the new version of EAD?
- ☐ Yes
- ☐ No
- ☐ Our archives does not have an archival information system
- ☐ Our archives is not currently using or considering using EAD for descriptive purposes

Encoded Archival Context (EAC-CPF)

The following questions focus on EAC-CPF:

25. Are you/your institution using Encoded Archival Context (EAC-CPF) currently to encode *archival authority descriptions* for the purposes of managing and exchanging information about records creators?
☐ Yes → You will be directed to question 28
☐ No → You will be directed to question 26
26. If you/your institution is **not using** EAC-CPF, do you currently have a method for managing archival authority descriptions?
☐ Yes → You will be directed to question 27
☐ No → You will be directed to question 29
27. Because you answered yes to question 26 (If your institution is **not using** EAC-CPF, do you currently have a method for managing archival authority descriptions?), please indicate your method of managing authority descriptions.
☐ Paper-based authority file
☐ Computerized authority file
☐ Other: _____
28. Has your archives begun discussing/considering updating your archival information system to implement the EAC-CPF standard?
☐ Yes
☐ No
☐ Our archives does not have an archival information system
☐ Our archives is not currently using or considering using EAC-CPF for descriptive purposes
29. RIGHT NOW, do you feel that you have sufficient skills and knowledge to implement a new encoding standard such as EAC-CPF?

I haven't
sufficient skills
and knowledge

1

2

I am unsure/
don't know/
doesn't apply

3

I feel very confident
that I have sufficient
skills and knowledge

4

5

30. RIGHT NOW, do you feel that your colleagues in your institution have sufficient skills and knowledge to implement a new descriptive standard such as EAC-CPF?

They haven't
sufficient skills
and knowledge

1

2

I am unsure/
don't know/
doesn't apply

3

I feel very confident
that they have sufficient
skills and knowledge

4

5

Functional Requirements for Bibliographic Records (FRBR)

The following questions focus on FRBR:

31. Have you heard about or encountered the bibliographic descriptive concept known as Functional Requirements for Bibliographic Records (FRBR)?
- ☐ Yes → You will be directed to question 32
- ☐ No → You will be directed to question 34
32. IF you answered **Yes** to #31 (Have you heard about or encountered the bibliographic descriptive concept known as Functional Requirements for Bibliographic Records (FRBR)?), where did you/have you heard about FRBR? (select all that apply to you)
- ☐ In professional literature such as periodicals, books
- ☐ At professional conferences such as the Society of American Archivists
- ☐ Through LISTSERVs I am enrolled in
- ☐ Through conversations with my colleagues
- ☐ Through official correspondence circulated by institution if applicable
- ☐ Through my archives' vendors
- ☐ Other: _____
33. IF you answered **Yes** to #31 (Have you heard about or encountered the bibliographic descriptive concept known as Functional Requirements for Bibliographic Records (FRBR)?), what was the **ONE** best source that gave you the greatest understanding of what FRBR is all about?
- ☐ In professional literature such as periodicals, books
- ☐ At professional conferences such as the Society of American Archivists
- ☐ Through LISTSERVs I am enrolled in
- ☐ Through conversations with my colleagues
- ☐ Through official correspondence circulated by institution if applicable
- ☐ Through my archives' vendors
- ☐ Other: _____

Resource Description and Access (RDA)

The following questions focus on RDA:

34. Have you heard about or encountered the new descriptive standard for bibliographic records known as Resource Description and Access (RDA)?
- ☐ Yes → You will be directed to question 35
- ☐ No → You will be directed to question 37

35. IF you answered **Yes** to #34 (Have you heard about or encountered the new descriptive standard for bibliographic records known as Resource Description and Access (RDA)?), where did you/have you heard about RDA? (select all that apply to you)
- ☐ In professional literature such as periodicals, books
 - ☐ At professional conferences such as the Society of American Archivists
 - ☐ Through LIServs I am enrolled in
 - ☐ Through conversations with my colleagues
 - ☐ Through official correspondence circulated by institution if applicable
 - ☐ Through my archives' vendors
 - ☐ Other: _____
36. IF you answered **Yes** to #34 (Have you heard about or encountered the new descriptive standard for bibliographic records known as Resource Description and Access (RDA)?), what was the **ONE** best source that gave you the greatest understanding of what RDA is all about?
- ☐ In professional literature such as periodicals, books
 - ☐ At professional conferences such as the Society of American Archivists
 - ☐ Through LIServs I am enrolled in
 - ☐ Through conversations with my colleagues
 - ☐ Through official correspondence circulated by institution if applicable
 - ☐ Through my archives' vendors
 - ☐ Other: _____
37. To the best of your knowledge, has your archives begun discussing/ considering updating your archival information system for the new descriptive standard RDA?
- ☐ Yes
 - ☐ No
 - ☐ Our archives does not have an archival information system
 - ☐ Our archives is not considering using RDA for descriptive purposes
38. Has your archival information system vendor spoken to you and/or your staff about RDA?
- ☐ Yes
 - ☐ No
 - ☐ Not applicable
 - ☐ Our archives does not have an automated archival information system
 - ☐ We do not use a vendor for cataloging services

39. RIGHT NOW, do you feel that you have sufficient skills and knowledge to implement a new descriptive standard such as RDA?

I haven't sufficient skills and knowledge			I am unsure/ don't know/ doesn't apply		I feel very confident that I have sufficient skills and knowledge
1	2	3	4	5	

40. RIGHT NOW, do you feel that your colleagues in your archives have sufficient skills and knowledge to implement a new descriptive standard such as RDA?

They haven't sufficient skills and knowledge			I am unsure/ don't know/ doesn't apply		I feel very confident that they have sufficient skills and knowledge
1	2	3	4	5	

41. RIGHT NOW, are you confident that your current vendors may provide you with sufficient support to implement a new descriptive standard such as RDA?

I have no confidence in my vendor's support			I am unsure/ don't know/ doesn't apply		I have great confidence in my vendor's support
1	2	3	4	5	

42. RIGHT NOW, are you confident and comfortable in your current skills and knowledge to use open source software to implement a new descriptive standard such as RDA?

I have no confidence in my skills and knowledge			I am unsure/ don't know/ doesn't apply		I have great confidence in my skills and knowledge
1	2	3	4	5	

43. RIGHT NOW, how confident are you that your current archival information system is technologically sophisticated enough to implement and integrate a new descriptive standard?

I am not confident			I am unsure/ don't know/ doesn't apply		I feel very confident
1	2	3	4	5	

44. What is your highest educational attainment in relation to your archives career (e.g., University Masters of Library and Information Science; College Diploma in Library/Information Science; Bachelor's/Masters/Doctorate of Arts/Science/Education/etc.; College Diploma in . . .). Select one:
- ☐ High School Diploma
 - ☐ College Diploma . . .
 - ☐ Associate's Degree . . .
 - ☐ Bachelor's Degree . . .
 - ☐ Master's Degree . . .
 - ☐ Doctoral Degree . . .
- . . . in _____
 (please record the discipline in the space provided)
45. Do you have a diploma/degree in library and/or information science, archival science, public history, or museum studies (or any combination)?
- ☐ Yes → You will be directed to question 46
 - ☐ No → You will be directed to question 47
46. In what YEAR did you receive your respective diploma(s)/degree(s) in library and/or information science, archival science, public history, or museum studies (or any combination)?
- ☐ Library and/or Information Science _____
 - ☐ Archival Science _____
 - ☐ Public History _____
 - ☐ Museum Studies _____
47. In what YEAR did you receive your HIGHEST diploma/degree in library and/or information science, archival science, public history, or museum studies (or any combination)? _____
48. How many years have you worked in your current position as an archivist (in years, rounded up to the nearest year)? _____
-

THANK YOU VERY MUCH for participating in our survey.
If you are finished, please click on the "Submit" button below.

NOTES

- ¹ *Describing Archives: A Content Standard*, 2nd ed. (Chicago: Society of American Archivists, 2013).
- ² International Council on Archives, *ISAD (G): General International Standard Archival Description*, 2nd ed. (Ottawa: ICA, 2000); International Council on Archives: *ISAAR (CPF): International Standard Archival Authority Record for Corporate Bodies, Persons and Families*, 2nd ed. (Ottawa: ICA, 2004).
- ³ *RDA: Resource Description and Access* (Chicago: American Library Association, 2013).
- ⁴ *Anglo-American Cataloguing Rules*, 2nd ed., 2002 revision (Ottawa: Canadian Library Association; Chicago: American Library Association, 2002).
- ⁵ A major change for the latest edition of *DACS* was the removal of the separate section on creating authorized forms of names (Part III of the first edition of *DACS*). The *DACS* standard now refers archivists to the *RDA* rules for this authority work, as the latter's rules now include guidance for creation of family names (something that was missing from *AACR2*). See *Describing Archives: A Content Standard*, 2nd ed., viii.
- ⁶ *Describing Archives: A Content Standard*, 2nd ed., viii.
- ⁷ Society of American Archivists, Encoded Archival Description Working Group, *Encoded Archival Description Tag Library*, version 1.0 (Chicago: SAA, 1998); Society of American Archivists, Encoded Archival Description Working Group, *Encoded Archival Description Tag Library*, version 2002 (Chicago: SAA, 2002).
- ⁸ "Documentation of the EAD Revision Gamma Schema," <http://www2.archivists.org/sites/all/files/gammaEAD3TagLibrary.pdf>.
- ⁹ See EAC-CPF website for schema and associated documentation: <http://eac.staatsbibliothek-berlin.de/index.php>. See also "Development of the EAC-CPF Standard," <http://eac.staatsbibliothek-berlin.de/about/development.html>.
- ¹⁰ EAC-CPF records can also be created by extracting information from other authority sources such as the Library of Congress Name Authority File or the Virtual International Authority File. While it is certainly possible to create EAC-CPF records from scratch, this method may be the most labor intensive.
- ¹¹ See "EAC-CPF in Use," EAC-CPF, <http://eac.staatsbibliothek-berlin.de/eac-cpf-in-use.html>, and "Finalized Projects," <http://eac.staatsbibliothek-berlin.de/eac-cpf-in-use/finalized-projects.html>.
- ¹² SNAC is a collaboration among the Institute for Advanced Technology in the Humanities at the University of Virginia, the School of Information at the University of California, Berkeley, and the California Digital Library. SNAC: The Social Networks and Archival Context Project, <http://socialarchive.iath.virginia.edu>.
- ¹³ The workshops were taught by Katherine Wisser under the auspices of the Society of American Archivists at the 2012 SAA Annual Meeting (San Diego, California) and other locations throughout the United States. Building a National Archival Authorities Infrastructure, http://socialarchive.iath.virginia.edu/NAAC_workshops.html.
- ¹⁴ Jean E. Dryden and Kent M. Haworth, *Developing Descriptive Standards: A Call to Action* (Bureau of Canadian Archivists, 1987).
- ¹⁵ The following literature offers valuable summaries of the work and contributions of the NISTF and its successor body, the SAA Working Group on Standards for Archival Description: *Standards for Archival Description: A Handbook*, compiled by Victoria Irons Walch for the Working Group on Standards for Archival Description, with contributions by Marion Matters (Chicago: Society of American Archivists, 1994); Richard H. Lytle, "An Analysis of the Work of the National Information Systems Task Force," *The American Archivist* 47, no. 4 (1984): 357–65; Working Group on Standards for Archival Description, "Archival Description Standards: Establishing a Process for Their Development and Implementation, Report of the Working Group on Standards for Archival Description," *The American Archivist* 52 (Fall 1989): 430–502; Kathleen D. Roe, "From Archival Gothic to MARC Modern: Building Common Data Structures," *The American Archivist* 53, no. 1 (1990): 56–66.
- ¹⁶ *Standards for Archival Description*, chapter 1, Society of American Archivists, <http://www.archivists.org/catalog/stds99/chapter1.html>.
- ¹⁷ Society of American Archivists Committee on Finding Aids, *Inventories and Registers: A Handbook of Techniques and Examples* (Chicago: Society of American Archivists, 1976); David B. Gracy II, *Archives and Manuscripts: Arrangement and Description* (Chicago: Society of American Archivists, 1977); Steven

- Hensen, comp., *Archives, Personal Papers, and Manuscripts: A Cataloging Manual for Archival Repositories* (Washington, D.C.: Manuscript Division, Library of Congress, 1983).
- ¹⁸ For contemporaneous introductions to the MARC AMC format, consult David Bearman, "Archives and Manuscript Control with Bibliographic Utilities: Opportunities and Challenges," *The American Archivist* 52, no. 1 (1989): 26–39; Matthew Benjamin Gilmore, "Increasing Access to Archival Records in Library Online Public Access Catalogs," *Library Trends* 36 (1988): 609–23; Lisa B. Weber, "Archival Description Standards: Concepts, Principles, and Methodologies," *The American Archivist* 52, no. 4 (1989): 504–13; *Describing Archival Materials: The Use of the MARC AMC Format*, ed. Richard Smiraglia (New York: Haworth Press, 1990).
- ¹⁹ Steven L. Hensen, "The Use of Standards in the Application of the AMC Format," *The American Archivist* 49, no. 1 (1986): 31–40; Janet Gertz and Leon J. Stout, "The MARC Archival and Manuscripts Control (AMC) Format: A New Direction in Cataloging," *Cataloging and Classification Quarterly* 9, no. 4 (1989): 5–25.
- ²⁰ Frederick Stielow, with Rebecca Hankins and Venola Jones, "From Managerial Theory and Worksheets to Practical MARC AMC; Or, Dancing with the Dinosaur at the Amistad," *The American Archivist* 58, no. 4 (1995): 464–74; Ronald J. Zboray, "dBASE III Plus and the MARC AMC Format: Problems and Possibilities," *The American Archivist* 50, no. 2 (1987): 210–25.
- ²¹ Lyn M. Martin, "Viewing the Field: A Literature Review and Survey of the Use of U.S. MARC AMC in U.S. Academic Archives," *The American Archivist* 57, no. 3 (1994): 484.
- ²² Jill M. Tatem, "Beyond USMARC AMC: The Context of a Data Exchange Format," *Midwestern Archivist* 14, no. 1 (1989): 39–47.
- ²³ Patricia D. Cloud, "The Cost of Converting to MARC AMC: Some Early Observations," *Library Trends* 36, no. 3 (1988): 573–83.
- ²⁴ Elizabeth Yakel, "Pushing MARC AMC to Its Limits: The Vatican Archives Project," *The American Archivist* 55, no. 1 (1992): 192–201.
- ²⁵ Two issues of *The American Archivist*, edited by Jackie M. Dooley, were devoted to introducing EAD to the membership of SAA: volume 60, number 3 (Summer 1997) and volume 60, number 4 (Fall 1997); the first issue contained articles by Daniel V. Pitti, Steven L. Hensen, Steven J. DeRose, Janice E. Ruth, Michael Fox, and Kris Kiesling, while the second issue's authors included Dennis Meissner, Leslie A. Morris, Nicole L. Bouché, Mary A. Lacy, Anne Mitchell, David Seaman, and Elizabeth H. Dow. In 2001, an entire issue of the *Journal of Internet Cataloging* (volume 4, numbers 3–4), entitled "Encoded Archival Description on the Internet," was devoted to articles on EAD. This issue was simultaneously published by Haworth Press: Daniel V. Pitti and Wendy M. Duff, eds., *Encoded Archival Description on the Internet* (New York: Haworth Press, 2001).
- ²⁶ Archivists Toolkit User Group, "2008 AT User Group Survey Results," <http://archiviststoolkit.org/sites/default/files/AT%20User%20Group%20SurveyResultsFD.pdf>.
- ²⁷ Jill Tatem, "EAD: Obstacles to Implementation, Opportunities for Understanding," *Archival Issues* 23, no. 2 (1998): 155–69; James M. Roth, "Serving Up EAD: An Exploratory Study on the Deployment and Utilization of Encoded Archival Description Finding Aids," *The American Archivist* 64, no. 2 (2001): 214–37; Matthew Young Eidson, "Describing Anything That Walks: The Problem Behind the Problem with EAD," *Journal of Archival Organization* 1, no. 4 (2001): 5–28; Elizabeth H. Dow, "EAD and the Small Repository," *The American Archivist* 60, no. 4 (1997): 446–65; Katherine M. Wisser, *EAD Tools Survey*, August 2005 (prepared for the EAD Working Group, Society of American Archivists), <http://www2.archivists.org/sites/all/files/EADToolsSurvey.pdf>; Elizabeth Yakel and Jihyun Kim, "Adoption and Diffusion of Encoded Archival Description," *Journal of the American Society for Information Science and Technology* 56 (November 2005): 1427–37; and Sonia Yaco, "It's Complicated: Barriers to EAD Implementation," *The American Archivist* 71 (Fall/Winter 2008): 456–75.
- ²⁸ Dennis Meissner, "First Things First: Reengineering Finding Aids for Implementation of EAD," *The American Archivist* 60, no. 4 (1997): 372–87; Nicole L. Bouché, "Implementing EAD in the Yale University Library," *The American Archivist* 60, no. 4 (1997): 408–19.
- ²⁹ Yaco, "It's Complicated," 466–71.
- ³⁰ Elizabeth Yakel, "Encoded Archival Description: Are Finding Aids Boundary Spanners or Barriers for Users?," *Journal of Archival Organization* 2, nos. 1–2 (2004): 63–77; Yakel and Kim, "Adoption and Diffusion of Encoded Archival Description."
- ³¹ Elizabeth J. Dow, "Encoded Archival Description as a Halfway Technology," *Journal of Archival Organization* 7, no. 3 (2009): 108–15.

- ³² Michele Combs, Mark A. Matienzo, Merrilee Proffitt, and Lisa Spiro, *Over, Under, Around, and Through: Getting around Barriers to EAD Implementation* (Dublin, Ohio: OCLC Research, 2010).
- ³³ U.S. Bureau of Labor Statistics, "Archivists, Curators, and Museum Workers," *Occupational Outlook Handbook*, January 8, 2014, <http://www.bls.gov/ooh/education-training-and-library/curators-museum-technicians-and-conservators.htm#tab-6>.
- ³⁴ Qualtrics, <http://www.qualtrics.com>.
- ³⁵ Not all SAA members make their contact information publicly available via the SAA Member Directory, thus we were limited to those individuals who did not block their names from being listed.
- ³⁶ Frank Lambert and Meghan Harper, "How Prepared Are School Library Media Centres for FRBR and RDA?" (unpublished manuscript); Frank Lambert, Sevim McCutcheon, and Roman Panchyshyn, "Resource Description and Access (RDA) and Ohio Public Libraries," *Public Library Quarterly* 32, no. 3 (2013): 187–203.
- ³⁷ Because H_3 , H_4 , and H_5 combine nominal and ordinal variables, chi-square was used exclusively to test for association between variables.
- ³⁸ International Federation of Library Associations and Institutes, *Functional Requirements for Bibliographic Records: Final Report*, <http://www.ifla.org/files/assets/cataloguing/frbr/frbr.pdf>.
- ³⁹ IFLA, *Functional Requirements for Bibliographic Records: Final Report*, 28.
- ⁴⁰ Cory Nimer, "RDA and Archives," *Journal of Archival Organization* 8, nos. 3–4 (2010): 239.
- ⁴¹ Lambert and Harper, "How Prepared Are School Library Media Centres for FRBR and RDA?"
- ⁴² The decade-old Archival Census and Education Needs Survey in the United States (A*CENSUS) initially identified the trend of graduate school being the primary source of archival education for younger archivists (under 35 at the time of the survey). This would bolster our suggestion that the next generation of archivists is gaining core knowledge about descriptive standards and practices first in graduate school rather than through continuing education or self-education. See Elizabeth Yakel and Jeannette Allis Bastian, "Part 4. A*CENSUS: Report on Graduate Archival Education," *The American Archivist* 69, no. 2 (2006): 351.
- ⁴³ Lambert, McCutcheon, and Panchyshyn, "Resource Description and Access (RDA) and Ohio Public Libraries."

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