

Sufficiency of Cataloging Education: School Librarians Respond

Leslie A. Engelson, *Murray State University*
lengelson@murraystate.edu

No standardized learning outcomes exist for the cataloging education of school librarians in library and information science (LIS) programs. Additionally, LIS programs teach cataloging concepts in a variety of ways over various timeframes, raising the question of what it is that LIS programs should teach about cataloging and classification to prospective school librarians. The current literature offers limited guidance but does indicate that both theory and practice are important in the process of learning cataloging. A survey of school librarians was conducted to determine which cataloging and classification tools they use and which skills related to cataloging and classification are most important. Results indicate that few school librarians use descriptive cataloging tools such as *AACR2* or *RDA*. Additionally, school librarians do not rate or rank descriptive cataloging or controlled vocabulary as important skills. Since descriptive cataloging guidelines and controlled vocabulary provide support for FRBR user tasks and create a database that facilitates the many activities of school librarians, this article suggests that LIS programs adopt a curriculum that communicates the value of a standardized, quality catalog. Additionally, practicum opportunities with experienced catalogers are an important element of cataloging education and should be incorporated into the curriculum. Finally, LIS programs should be intentional about connecting students to resources such as discussion groups and professional development opportunities that will continue to support cataloging efforts after students graduate. Future research into simplifying descriptive cataloging guidelines and determining essential MARC coding will help guide curriculum development in LIS programs.

Keywords: cataloging education, curriculum, LIS program, school librarians, school library media specialists

In most states in the United States, in addition to a teaching certification, school librarians are required to hold a master's degree in library science (Jesseman, Page, & Underwood, 2015). Programs that provide this degree can be accredited by either the American Library Association (ALA) or the Council for the Accreditation of Educator Preparation (CAEP) in cooperation with the American Association of School Librarians (AASL). While accreditation standards for school librarian programs do not specifically address cataloging and classification, the ALA's *Standards for Accreditation of Master's Programs in Library and Information Science* recognizes that "the curriculum of library and information studies encompasses . . . organization and description . . . of . . . information resources" (ALA, 2015, p. 5). Likewise, AASL's *ALA/AASL Standards for Initial Preparation of School Librarians* recognize the need for school librarians to provide "equitable access to resources" (AASL, 2010, p. 6) and "organize school library collections

KEY POINTS

- With the move away from required cataloging courses toward information organization courses in LIS programs, many school librarians do not feel adequately prepared to understand and apply cataloging and classification standards.
- Practical application, in addition to theoretical knowledge, is an essential means of providing graduates of LIS programs with the ability to understand and apply cataloging and classification standards.
- LIS programs must communicate the value of cataloging and classification standards to the other tasks that school librarians perform, such as collection development and management, collaboration with teachers, information literacy, reference, and readers' advisory services in order for students to see the value of these standards.

according to current library cataloging and classification principles and standards" (p. 10).

To address the need for school librarians to be able to organize and provide equitable access to information resources, library and information science (LIS) programs offer instruction in the areas of cataloging and classification. However, there is no standard curriculum or learning outcomes for these subjects, despite Gorman's (2002) call for such. Joudrey (2008, 2014) found that a more general information organization (IO) course is replacing the cataloging course as a requirement in ALA-accredited programs.

Likewise, the length of time devoted to the subjects varies. Because cataloging and classification can be taught either in a stand-alone cataloging course or within the broader IO course, students' exposure to the topics can vary widely. Some students will experience an entire semester of cataloging and classification, sometimes in addition to the IO course, while others are exposed to more condensed material in eight-week modules or even less (Davis, 2008; Harvey, 2003; Hsieh-Yee, 2004; Joudrey, 2014; Miller, Lee, Olsson, & Smiraglia, 2012; Moss, 2007). At the other extreme, the University of South Africa actually offers instruction in cataloging that is completed over the course of four years, depending on

the level of degree that is desired (Cloete, 2006).

The school library media program at Murray State University, a medium-sized, four-year public university in Kentucky requires students completing the program to take a course called Organizing and Managing Library Resources. Content in this three-credit online course includes collection management policies, collection analysis and assessment, and selection and acquisition of resources, leaving about eight weeks of the 16-week course to cover cataloging topics

such as description, subject analysis, and classification. Competency in these areas includes the ability to understand, interpret, and apply multiple complex international standards.

Having taught the course for two semesters, I was challenged by feedback from the students to understand and provide both the theoretical information and practical training in cataloging and classification that would be of the most benefit to the preparation of school librarians whose days are filled with a variety of tasks, only one of which is cataloging. With the recognition that the students needed to be exposed to both the theoretical and the practical aspects of cataloging and classification, the challenge was how to do that in such a limited timeframe. Additionally, knowing that the timeframe would not allow for a full understanding of standards such as *RDA: Resource Description and Access (RDA)*, *MARC 21 Format for Bibliographic Data (MARC21)*, *Library of Congress Subject Headings (LCSH)*, and the *Dewey Decimal Classification System (DDC)*, and concepts such as authority control and subject analysis, I needed to determine the most essential information about cataloging and classification relevant to school librarians.

Literature review

Cataloging education

Most articles discussing cataloging education since 2000 consider whether cataloging courses should be required in graduate programs of library and information science (LIS) and if the focus of those courses should be on theory or practice (Davis, 2008; Dull, 2011; Elrod, 2008; Gorman, 2002; Harvey, 2003; Hill, 2004a, 2004b; Holley, 2002; Hsieh-Yee, 2004, 2008; Intner, 2002; Joudrey, 2014; Moss, 2007; Saye, 2002). Joudrey (2014) found that, in 2012, 88% of ALA-accredited LIS programs require a course in information organization, either a broad organization course or a basic cataloging course. This indicates the recognition by library programs of how important it is that graduates have some understanding of cataloging theories.

For instructors, finding the right balance between theory and practice is an ongoing challenge. While Carlyle affirms that the ideal would be to teach theory alongside practice, she contends that there is not enough time to do that. Instead, she believes strongly that students in cataloging classes need to be taught “how to think about cataloging, not how to catalog” (Dull, 2011, p.117). Moulaison (2012) indicates that in order for students to understand the conceptual underpinnings of the work they do and to be able to adapt to new systems and changing standards, they need to pay more than cursory attention to theoretical principles. Likewise, Intner (2009, p. 14) states that “theoretical principles are unlikely to be overturned” when applications and standards change. Additionally, Elrod (2008, pp. 6–7) finds that too much focus on the creation of bibliographic records leaves catalogers with “little understanding of their role, or how they function in an ILS.”

However, focus on theory over practice results in graduates not having the practical skills they need to perform their jobs and relying on the cataloging community to train them. Additionally, the benefits of exposure to both theory and practice, Davis (2008) found, are a reduction in the amount of time needed for on-the-job-training, improvement of overall service to patrons, and the ability of librarians to adapt existing principles to new concepts.

Researchers are clear that practical application makes abstract theoretical concepts easier to grasp. Moss (2007, p. 11) found that there was a consensus among instructors of cataloging that “the students could only comprehend the theoretical underpinnings of the discipline by actually doing it.” After 40 semesters of teaching cataloging, Intner (2002, p. 18) observed that a “direct relationship exists between the amount of hands-on cataloging done in the course through homework assignments and in-class exercises, and the ability of students to assimilate the factual material associated with cataloging practice and make it part of their personal knowledge.”

Indeed, faculty teaching these programs indicate that they would like to be able to devote more time to practical instruction. Hudon (2011, p. 343) states that “[i]t has always been considered useful that students become familiar with the tools they will be using in their first professional position.” Finally, Snow & Hoffman (2015, p. 188) found four elements that made a difference for students learning cataloging: “cataloging practice, effectiveness of the instructor, balance of theory and practice, and a real-world context.”

These findings were echoed in a recent ALCTS e-Forum on Cataloging & Metadata Education, where many respondents clearly indicated that they would have liked more practical or hands-on instruction in cataloging in their LIS program. Comments indicated that students had trouble understanding the concepts because of their lack of practical experience. One respondent indicated that “there is absolutely no substitute for doing the work” (J. Conti, ALCTS e-forum, March 20, 2018).

It is troubling for students studying to be school librarians that, according to Joudrey (2014), 65% of the courses that were taught to fulfill the IO requirement were the broader organization course, an increase of 7% from the study done in 2005. These “organization courses address the conceptual foundations of information organization in various environments and provide an introduction to a variety of metadata approaches” (Joudrey, 2008, p. 195), but both Joudrey (2008) and Davis (2008) found that these courses cover traditional library cataloging practices and tools on only a cursory level. Dull (2011, p. 116) states that “[t]he changing focus of library education to a more general theory of information organization over the practical ins-and-outs of describing bibliographic resources for retrieval and access high lights potential tensions between educators and practitioners.” These courses follow the recommendation by

Hsieh-Yee (2003) of integrating metadata topics into cataloging education. While this is intended to serve “the next generation of LIS professionals” (p. 16), it misses the mark for the unique needs of those professionals who will serve in school libraries. Students studying to be school librarians in these programs who do not take an additional cataloging course are not prepared to handle cataloging tasks with any level of confidence. Additionally, in their discussion of three studies that examine quality of cataloging, Schultz-Jones, Snow, Miksa, and Hasenyager (2012) note the low usage of cataloging tools by public librarians. They are concerned that “low utilization of cataloguing tools and resources impacts cataloguer judgment and record quality” (p. 78) and speculate that one reason for this might be a lack of education about cataloging tools, resources, or practices. The implication is that cataloging educators have not done a good job preparing students to be catalogers.

Several articles discuss the curriculum of classification or subject cataloging courses but fall short of specifying learning outcomes. Hudon (2011) surveyed instructors of classification courses in the 56 ALA-accredited master’s programs in the United States to determine the specific content taught and tools used. Taylor (2006) identifies various contexts in which the *DDC* is taught and discusses the inherent challenges as well as methods used in teaching the *DDC*. Hider (2004) examined whether the use of a particular format of the *DDC* scheme affected learning and found that there was no significant difference. Finally, Taylor and Joudrey (2002) discuss their approach to teaching subject cataloging in both the general organizing information course and advanced courses in descriptive cataloging and subject analysis.

School library programs

In all of the articles discussing cataloging education, instruction for school librarians is mentioned only tangentially, if at all. Of the articles published since 2000 that specifically address the preparation of school librarians for cataloging responsibilities, very few discuss the cataloging courses or curriculum in LIS programs except to acknowledge that cataloging and classification are part of the curriculum in school librarian programs.

Most articles that do address the preparation of school librarians for cataloging responsibilities are surveys of graduates and other stakeholders. In Shannon’s (2008) surveys of both graduates and intern supervisors, neither felt that interns or graduates were prepared well when it came to cataloging. Program completers from the University of South Carolina School of Library and Information Science school library media program gave “practical focus” the lowest satisfaction rating for their program and indicated “that they would like to have had more exposure to the ‘practical’ and ‘nuts and bolts’ aspects of the job” (p. 28). Additionally, “twelve respondents specifically mentioned that they were unprepared for cataloging media center materials” (p. 32). Internship supervisors indicated

overall satisfaction with the level of competencies and skills the students brought to the internship; however, they gave their second lowest rating to knowledge in the area of “organizing materials for access and retrieval” (p. 33). Thirteen respondents specifically mentioned that the interns lacked skills in the area of cataloging. They also indicated that the highest area of growth included library automation and cataloging/processing, tellingly demonstrating the value and effectiveness of *practica* in this area.

Practicing school librarians in Georgia also indicated that “more time spent teaching cataloging, using Dewey/Sears especially for non-print (videos, etc.)” (McCoy, 2001, p. 178) would have been valuable to their preparation. They also felt that cataloging training should be a hands-on activity.

Graduates from the Teacher Librarianship by Distance Learning (TLDL) program at the University of Alberta in Edmonton felt that the course in cataloging, classification, and organization of material was “irrelevant or needed a change of focus” (de Groot & Branch, 2011, p. 293). The respondents were not indicating that a course in cataloging was not necessary but that more time should be given to the broader issues of cataloging (including how to find and identify quality records) and less to creating the records. It can be inferred from their comments that the connection between the MARC record structure and content and search strategies should be made more explicit so that school librarians can help students understand how searching in a catalog is different from searching the Internet (de Groot & Branch, 2011, pp. 293–294). While de Groot and Branch (2011, p. 295) indicated that the organization and management of resources course was “redesigned to meet the needs of current and future students,” they did not detail those changes.

Additionally, Widdersheim & Widdersheim (2014) surveyed librarians at nine secondary school libraries in Pennsylvania to determine cataloging practices and discovered that even though almost no librarians performed original cataloging, some indicated that they were unprepared for cataloging tasks. They further felt that more research should be done to determine “what kind of education and prior experience is suitable preparation for school librarians” (p. 80).

The one article that was not about the results of a survey discussed the implementation of a boot camp to introduce students to *RDA* (Veitch, Greenberg, Keizer, & Gunther, 2013). The boot camp was a three-hour instruction session held outside of normal class time and took the place of one or two regular class sessions. This boot camp was successful in improving students’ understanding of *RDA*, with overwhelmingly positive feedback about the usefulness of the hands-on exercise.

It is worth noting that several discussions have taken place on eduCAT, a discussion list for educators in the cataloging and metadata fields, addressing the same question that this study is attempting to answer. This is an issue with which the academic community continues to wrestle.

Methodology

In setting out to answer the question of what knowledge related to cataloging concepts school librarians need, I developed a survey that asked school librarians about their use of, and the value they placed on, cataloging tools, as well as the instruction and training they received in cataloging (see Appendix). The survey asked school librarians to both rate and rank the importance of various cataloging skills and to list the frequency of the use of cataloging tools such as *AACR2*, *The Concise AACR2*, *RDA Toolkit*, *Sears List of Subject Headings (Sears)*, *LCSH*, *DDC*, *DDC Abridged*, and *MARC 21*. Also, respondents were asked about the sources of bibliographic records for their resources.

The survey was posted to two school library discussion lists, KYLMS, a statewide discussion list for school librarians and LM_NET, an international discussion list for school librarians in February 2015, with a second post in April 2015. It is likely that there is overlap in subscribers between these two lists; however, based on no responses from school librarians in Kentucky, that overlap did not prove to be an issue. One hundred and fifty-one surveys were completed. Not all questions were answered by every respondent, so percentages are based on the total number of answers for each question.

Findings

Demographics

Respondents were from 39 states in the United States, with school librarians from Texas making up the highest percentage of respondents at almost 14%, followed by New York at almost 7%. Three respondents did not indicate which state they were from, and there was at least one international respondent. This respondent brought to my attention that the survey did not provide an opportunity for international school librarians to indicate where they were from.

While most respondents (32%) had between 11 and 20 years of experience as school librarians, the other ranges of experience were well represented. See [Figure 1](#) for distribution of years of experience of respondents.

School grade levels were equally represented. The categories given were elementary (grades K–5), middle school (grades 6–8), and high school (grades 9–12), with a final option of “other” and an opportunity to write in. Some 32% of the respondents chose the “other” category. Many of the respondents serve more than one category of grade level, while some serve grade levels not represented on the list, such as pre-K and college. Two respondents indicated that they had retired. After taking into account responses for multiple grade levels, 47% of respondents represented elementary grades, 45% respondents represented middle-school grades, and 43% of respondents represented high-school grades. See [Figure 2](#) for the distribution of grade levels represented by respondents.

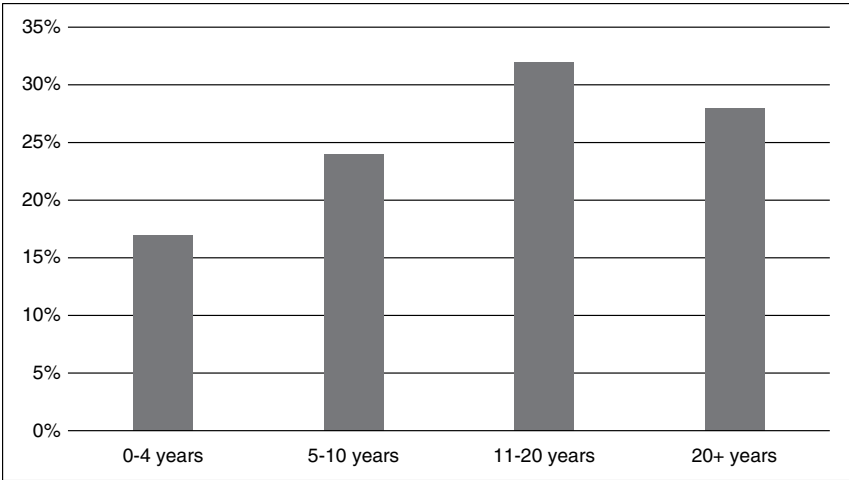


Figure 1: Distribution of respondents' years of experience as school librarians.

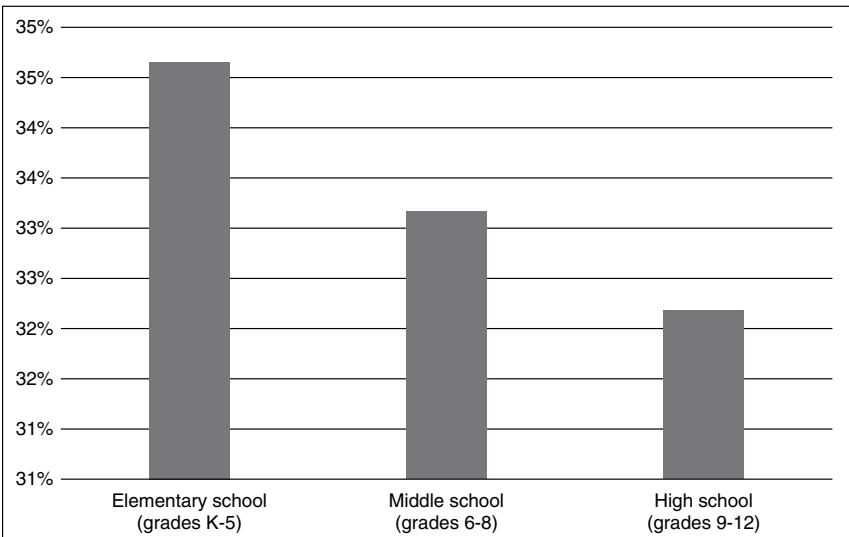


Figure 2: Distribution of grade levels represented by respondents.

Cataloging training

Only 59% of the respondents had an MLS, MLIS, or equivalent degree. Another 22% had an MS or MA in library media. The remaining 19% did not have a graduate degree in librarianship. The vast majority of the respondents had received formal training in cataloging and/or classification as part of their graduate degree program (85% and 76%, respectively). A smaller percentage had received formal training in these topics (7% in cataloging and 6% in classification) only through training offered outside of a graduate

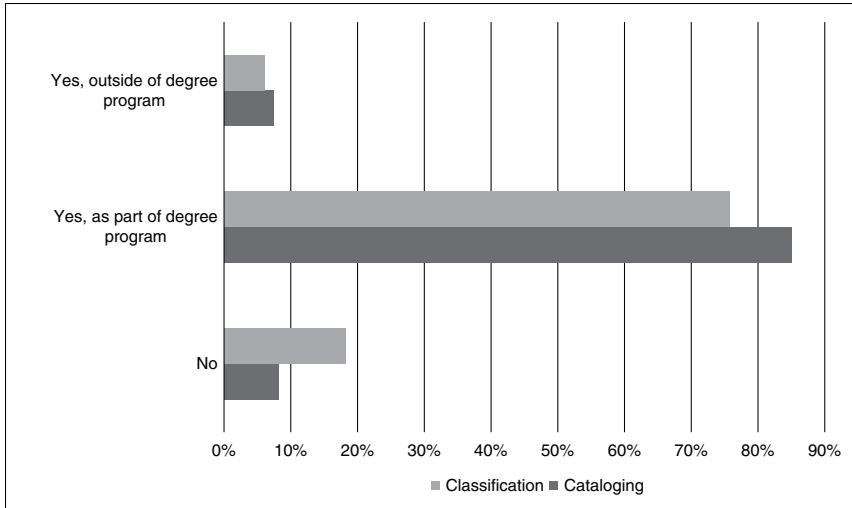


Figure 3: Comparison of training received in cataloging and classification.

degree program (workshops, webinars, and so on). Some had received no training in cataloging (8%) or classification (18%), either in their graduate program or through a professional development program. See [Figure 3](#) for a comparison of training received in cataloging and classification.

Almost three-quarters of the respondents had received formal training in cataloging and classification at least five years before they took the survey, which was prior to *RDA* implementation at the Library of Congress. Only 20% had received training within four years of taking the survey. Eleven of the respondents, when answering this question, indicated they had never received formal training in cataloging or classification. However, three of them also indicated that they had received formal training either in their graduate program or in professional development training outside of the graduate coursework when answering the previous question. It is unclear why these respondents provided such contradictory answers. See [Figure 4](#) for the distribution of currency of training.

A small majority of the respondents (59%) indicated that the training they had received in cataloging and classification in their graduate degree program was sufficient or highly sufficient to enable them to catalog and classify the library's information resources, while 34% deemed that training only adequate or somewhat sufficient. Eight respondents (7%) felt that the training was not sufficient. See [Figure 5](#) for responses related to sufficiency of training.

Sources of records

In 85% of the libraries represented by the respondents, the librarian does the majority of the cataloging and classification work. In a smaller portion

https://utpjournals.press/doi/pdf/10.3138/jelis.2018-0072 - Sunday, October 20, 2019 11:27:34 PM - EBSCO Digital Collection Services IP Address: 140.234.253.9

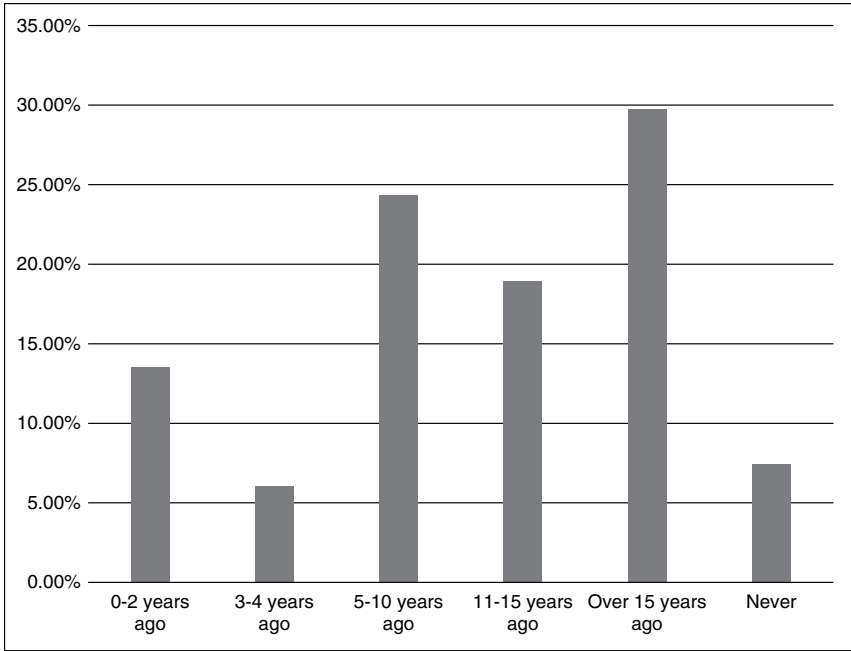


Figure 4: Distribution of currency of training.

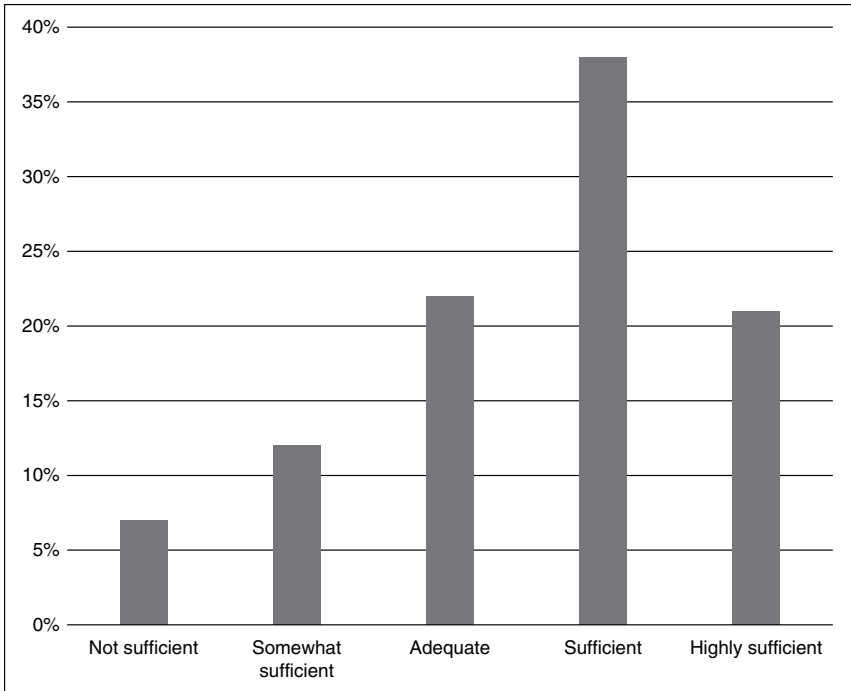


Figure 5: Responses related to sufficiency of training.

(7%), a library staff member who does not have formal library training does the work. Several libraries (3%) have the work done in a centralized cataloging department. Two libraries share the work between the library aides or non-professional library staff and the librarian, and only one library indicated that a student does that work. It was unclear from two other responses who actually does the cataloging work.

Respondents were asked to indicate which sources they used for acquiring bibliographic records from a list of seven:

- download them from a vendor's database (e.g., Follett's TitleWave);
- download them from a bibliographic utility (e.g., OCLC's WorldCat);
- receive them from the publisher when a resource is ordered;
- download them from the Library of Congress's database;
- download them from another library's database;
- create them from CIP (Cataloging in Publication) data; or
- create them from information on or about the resource other than CIP.

All but 14 of the 122 respondents to this question (89%) acquire bibliographic records from more than one source. The vast majority of librarians (87%) acquire their bibliographic records through the vendor from which they order the resource. For nine of those libraries, this is their only source of records. Other sources of bibliographic records are used equitably: CIP is a source for 61% of respondents; the publisher provides records for 55% of respondents, with two libraries using only publisher's records; and 48% create original bibliographic records. Almost half (47%) of the respondents use bibliographic records from other library databases, with one library using this as their only source of records. Another 44% use a bibliographic utility as a source for records, with this being the only source for two libraries, while 39% of respondent download records from the Library of Congress database. See [Figure 6](#) for the distribution of sources of records.

A small number of respondents (9%) indicated that they always edit the records that they do not create, with 11% indicating that they rarely or never edit those records. However, the rest either sometimes (43%), often (25%), or most of the time (11%) edit those records. Interestingly, 80% create their own records either from scratch or by using CIP data. This represents a substantial number of respondents who need to understand cataloging and classification rules and standards.

Cataloging tools

Because library school students and graduates have indicated that the practice of cataloging is an important factor in their education (McCoy, 2001; Shannon, 2008; Veitch, 2013; ALCTS eForum, March 20–21, 2018), this survey asked respondents to indicate which cataloging tools they use and the frequency of that use. The results indicate that the tools that relate

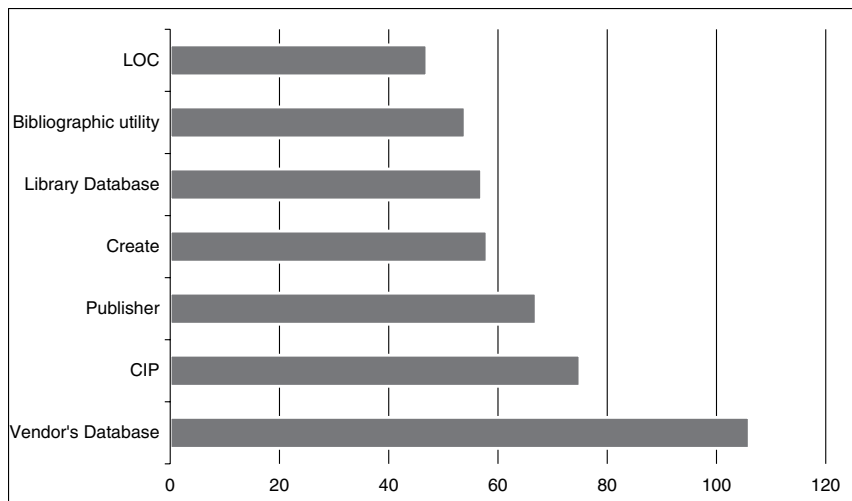


Figure 6: Distribution of sources of records.

to standards for content (*AACR2* and *RDA*) are used less frequently than either tools for help with using the bibliographic record format standard (*MARC 21*) or subject analysis tools (*Sears*, *LCSH*, and *DDC*).

According to 75% of the respondents, both versions of *AACR2* are either rarely or never used; *RDA* fares even worse, with 91% of the respondents either rarely or never using it. *MARC 21* is used at least some of the time by 69% of the respondents but is never or rarely used by 31%. Subject analysis tools are consulted at least some of the time by 68% of the respondents and never or rarely consulted by 32% of the respondents. Of the subject headings tools, *Sears* is used by 67% of the respondents at least some of the time, while only 53% of the respondents consult *LCSH* at least some of the time. *DDC* is the primary classification system used by school libraries, with 83% of the respondents consulting it at least some of the time. See [Figure 7](#) for the frequency of use of cataloging tools.

Next, respondents were asked to rate and rank nine cataloging and classification skills:

- understanding the rules for describing a resource (*AACR2/RDA*);
- knowing how to determine the subject(s) of a resource (Subject Analysis);
- understanding the *MARC* structure of a bibliographic record (*MARC*);
- knowing how to find and use authorized subject headings (Subject Headings);
- knowing how to find and use authorized name headings (Name Headings);
- knowing how to formulate a Dewey decimal number (Dewey);

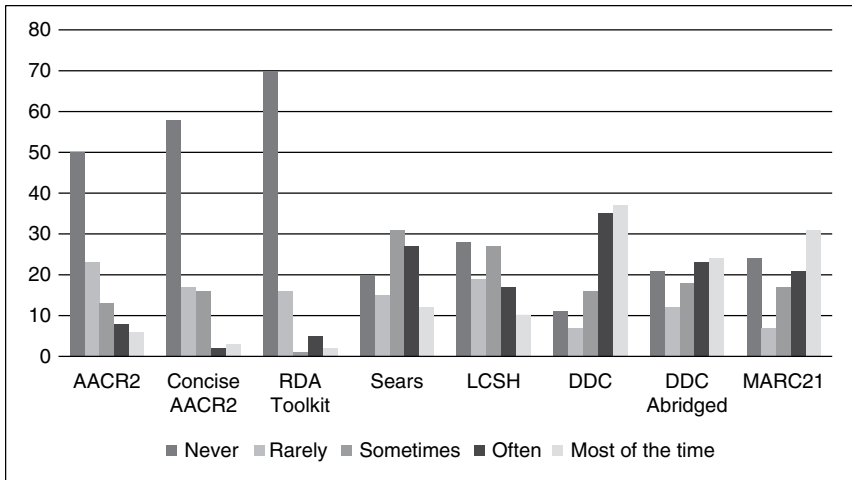


Figure 7: Frequency of use of cataloging tools

- knowing and assigning the elements of a call number (Call Number);
- understanding how to use the integrated library system to catalog and/or load records (ILS); and
- understanding how to find and download bibliographic records from a vendor or other library catalog (Download Bibs).

These skills correspond with typical cataloging and classification actions such as searching databases; using integrated library systems to import, create, and edit records; and understanding and applying cataloging and classification standards in the areas of bibliographic description, subject analysis, and metadata; and the use of controlled vocabulary.

Rating skills

Respondents were asked, for each skill, to select a number on a Likert scale of 1 to 10, where 1 indicates that this skill is “not important at all” and 10 indicates that the skill is “very important,” according to how important the skill is to being able to accomplish the responsibilities of their job as school librarians. It should be noted that of the 122 respondents to this part of the survey, some did not rate all of the skills.

Almost all skills were rated at every level of the scale, with the notable exception of finding and downloading bibliographic records. This skill was rated as a very important skill by most of the respondents (95%), who scored it at 8 or above. One respondent rated this skill with 1 (not important at all), along with all the other cataloging and classification skills. This respondent receives bibliographic records from the publisher so does not need to search for or select records. For another respondent, who rated this at 5, the next lowest score given for this skill, this was their

lowest rated skill, with all the other skills rated at a 10. This respondent indicated that cataloging is done at a central location and that they edit all records, making description, subject analysis, and call number formulation much more important skills than finding and downloading the records.

Knowing how to use the ILS to catalog or load records was rated as a very important skill (8 or above) by 83% of the respondents. It is interesting to note that, while still deemed an important skill, fewer respondents selected this skill as important than those who selected knowing how to find and download records into the ILS. This difference is likely due to the functionality of some ILSs to automatically import the bibliographic record when it is downloaded from a database (after that functionality is set up), so additional knowledge about uploading or importing records is not necessary.

Subject analysis skills were also rated relatively high in importance. Interestingly, more respondents (83%) rated the ability to understand the various elements of a call number at 8 or higher than the ability to formulate a Dewey Decimal number (79%). Perhaps this indicates that most records come with a Dewey number but school librarians still need to add Cutters and other elements to complete the call number. This importance of subject analysis was also indicated by 76% of respondents rating the skill of being able to determine the subject(s) of a resource at 8 or higher. However, knowing how to use authorized subject headings was rated at 8 or higher by only 70% of respondents. Further study to determine why there is a discrepancy between the value of the skill of subject analysis and the value of being able to assign authorized subject headings is warranted.

Unfortunately, the ability to find and use controlled vocabulary seems to be of importance to fewer respondents, as noted above concerning authorized subject headings. Of even less importance is the ability to find and use authorized name headings, which was rated at 8 or above by only 60% of respondents. This indicates that the ability to represent a subject in a bibliographic record with controlled vocabulary is less important than being able to determine the subject(s) of a work.

While understanding the structure of a *MARC* record was rated 8 or higher by 66% of respondents, 27% of respondents rated this skill in the 5–7 range. This mixed rating indicates that there is a difference in opinion about the importance of this skill. The ratings for the ability to understand the content standards (*AACR2* or *RDA*) were the most divergent, with 43% of respondents rating this skill at 8 or higher, 31% rating it in the 5–7 range, and 25% rating it in the 1–4 range. See [Table 1](#) for the complete list of ratings of importance of cataloging and classification skills.

Ranking skills

Respondents were also asked to rank this same skill set using 1 for the most important skill to 9 for the least important skill for being able to accomplish the responsibilities of the job as a school librarian. Of the 151

Table 1: Rating the importance of cataloging and classification skills

Rate	AACR2/ RDA	Subject Analysis	MARC	Subject Headings	Name Headings	Dewey	Call Number	ILS	Download Bibs
10	24	59	42	43	38	50	64	74	92
9	13	13	15	20	16	22	20	15	16
8	16	21	22	22	16	24	15	10	8
7	10	12	9	9	15	10	10	4	3
6	11	7	11	12	10	5	5	1	0
5	17	4	12	4	9	3	2	5	2
4	7	3	2	2	4	1	1	2	0
3	10	1	2	3	1	4	1	3	0
2	3	0	2	3	5	0	0	1	0
1	10	2	3	3	3	2	2	5	1
Total	121	122	120	121	117	121	120	120	122

This table shows how school librarians rated the importance of cataloging and classification skills to being able to accomplish the responsibilities of the job on a scale of 1 to 10, with 1 being “not important at all” and 10 being “very important.”

respondents to the survey, 121 respondents completed this part of the survey. Some respondents to this part of the survey ranked only some of the skills.

The results did not indicate a straightforward ranking in importance of cataloging and classification skills. Rather, combining rankings leads to the appearance of a suggested ranking of importance. For instance, utilizing the ILS received the most number of rankings (32) as the most important skill, with downloading bibliographic records receiving the second highest number of rankings (30) as the most important skill. However, when the scores for the top two ranks for these skills is combined, it clearly shows that 51% of respondents ranked downloading bibliographic records as either the most or second most important skill, while only 47% of respondents ranked utilizing the ILS as the most or second most important skill.

Knowing and assigning the elements of a call number and knowing how to formulate a Dewey decimal number, both classification skills, placed fairly high in importance, with 26 respondents ranking Dewey in third place and 24 ranking call number skills in third place. However, when second through fourth place responses are considered, Dewey was ranked higher by 59% of respondents, with call number skills ranked higher by only 45%.

The skill for understanding the *MARC* structure received the highest number of marks at the fifth-place rank (24 respondents), However, the

Table 2: Ranking the importance of cataloging and classification skills

Rank	AACR2/ RDA	Subject Analysis	Subject MARC	Subject Headings	Name Headings	Dewey	Call Number	ILS	Download Bibs
1	11	7	12	3	0	7	13	32	30
2	5	5	12	8	3	19	12	21	30
3	2	15	16	6	5	26	24	8	11
4	10	23	5	13	3	23	17	9	11
5	5	19	24	16	13	7	11	13	3
6	6	17	11	25	22	13	10	2	5
7	13	14	10	23	20	6	13	5	8
8	10	8	14	16	27	10	8	12	5
9	48	1	9	1	19	3	6	10	14
TOTAL	110	109	113	111	112	114	114	112	117

The table shows how school librarians ranked the order of importance of cataloging and classification skills to accomplishing the responsibilities of their job. The skills were ranked from 1 to 9, with 1 being the most important skill and 9 being the least important skill.

same number of respondents (24) also ranked this skill as the first or second most important skill, with other respondents' rankings for this skill being relatively evenly distributed among the rest of the rankings.

Most respondents (23) ranked subject analysis in fourth place, with rankings from third to seventh receiving a large number of responses (81%). The ability to use subject headings was ranked lower, at sixth place, by 25 respondents. This skill also had a cluster of rankings, from 84% of respondents, in the fourth through eighth places. The other skill that involves controlled vocabulary, using authorized name headings, was ranked the second lowest, in eighth place, by 27 respondents. Most rankings for this skill (90%) were in the fifth through ninth ranks.

A sizeable number of respondents (44%) ranked understanding the rules for describing a resource (*AACR2/RDA*) as the least important skill to have. However, a fair number of responses also ranked this skill in the first-, fourth-, seventh-, and eighth-place ranks. This lack of consensus correlates with the varied responses represented in the rating of this skill as well. See [Table 2](#) for the rankings of cataloging and classification skills.

Discussion

For the subjects of cataloging and classification, the literature makes it clear that theory and practice go hand-in-hand. Theory better informs practice, and practice provides a context in which theory can be more easily understood. Yet LIS programs are hard-pressed to provide the time needed to incorporate both theory and practice, let alone cover all the

knowledge and skills that a school librarian needs to know about cataloging and classification in order to be job-ready at the point of graduation. Additionally, the literature also demonstrates that there are no standard outcomes for school librarians in LIS programs related to cataloging and classification:

Educators have been so busy trying to integrate new document types and formats, technologies, standards, and so on to their courses, that they may have lost sight of what it is exactly they are supposed to teach, and more importantly, why. Although general objectives suggested by, for example, ALA and ALCTS are no doubt useful, they remain insufficient when comes the time to write specific objectives and to select elements of contents truly adapted to the twenty-first century, to the needs and behaviors of contemporary and future information creators and users, and to the more and more diverse cohorts of LIS students. (Hudon, 2010, p. 76)

Finally, while it might be ideal to require school librarians to take in-depth courses in cataloging, classification, and subject analysis, it is unrealistic, given the extent of the material that needs to be covered in any school library program.

Additionally, cataloging is just one area of responsibility that school librarians juggle in their very busy and full schedules. As delineated by Church, Dickinson, Everhart, and Howard (2012, p. 210), school librarians' roles include those of "instructional partner, information specialist, teacher, program administrator, and leader." Church et al. also state that the assumption is made that "the new school librarians will have the knowledge, skills, and dispositions that will enable him/her to manage a complex school library program from the first day on the job, usually as the only school library professional in the school" (p. 208). In addition to designing lesson plans, collaborating with teachers to provide resources and instruction, assessing the collection, selecting and purchasing information resources, staying current with technology, serving on committees, advocating for the library and its resources, serving as recess, hall, and lunch monitors, and performing countless other tasks and responsibilities, the school librarian has little time to catalog and process information resources. This is especially true if they do not see the value that cataloging and classification can provide to the other work that they do.

Not only is cataloging an additional responsibility for a librarian who is already stretched thin, it is frankly also a task that requires a different skill set from that needed to work with students and teachers. Quality cataloging requires detail-orientation, analytical and systematic thinking, as well as an aptitude for interpreting and applying rules, while the strengths of teachers are social interaction, creativity, and big-picture orientation. Despite the majority of respondents having some form of training in

cataloging, experience is the only way to master it. The combination of limited experience in cataloging practice, time constraints, and the need for a different skill set creates a situation where quality cataloging and classification become a task requiring significant effort with the perception of little benefit.

Surveying school librarians provides a glimpse into both their needs and their priorities. Widdersheim & Widdersheim (2014) found that the majority of the school librarians in their study were unaware of the standards used for descriptive cataloging, subject cataloging, and classification, despite the fact that 89% of them performed original cataloging. As they so succinctly state, “[i]t is unclear how . . . these [librarians] performed original cataloging without knowing what rules to use” (p. 75).

According to both studies, most school librarians get their records from vendors, publishers, or other libraries. They do not see the *MARC* structure, infrequently question the classification number provided in the record or provide one of their own, and rarely consider authorized access points. It appears that the editing of records or even original cataloging pays little heed to standardized guidelines and practice. It is not surprising, then, that, according to the current study, understanding the rules for describing a resource is the skill ranked lowest in importance and skills related to downloading records and utilizing the ILS ranked highest.

Nevertheless, both practitioners and educators affirm the importance of school librarians understanding and applying cataloging and classification standards. As Carlyle states, “understanding cataloging is understanding the world of library resources” (Dull, 2011, p. 199). Miller et al. (2012) write about cataloging as part of a holistic process that considers each element of the process of cataloging, classification, and collection management as a curatorial responsibility in the library’s role of disseminating culture. For instance, decisions about whether to catalog a resource as a monograph or as part of a set can affect the potential use of that resource. Additionally, both the classification number and links in the records should reflect resources’ relationships to each other. As Miller et al. state, librarians’ “responsibility goes far beyond that of the old ‘mark and park’ mentality” (p. 123).

When students study cataloging and classification, they develop a way of thinking about information that facilitates their ability to do all the other things that being a librarian involves, such as performing searches and reference interviews, making changes to records and understanding the consequences of those changes, having conversations with vendors and catalog users about the catalog, and facilitating a better user-interface display. They can determine the quality of vendor-supplied records, know when and how to create original records, and can modify records for local needs in a way that is consistent with standards and supported by the ILS.

Responsibility of LIS Programs

As LIS programs rely more and more on required IO courses to provide a rudimentary understanding of the principles behind cataloging and classification, prospective school librarians' knowledge of how to apply those principles is insufficient if this is the only exposure they have. Indeed, the current study indicates that 41% of the responding school librarians felt less than or only adequately prepared by their LIS program to perform cataloging and classification tasks. Hsieh-Yee (2008) exhorts cataloging educators to influence the curriculum of LIS programs to include principles and theories of cataloging throughout the LIS curriculum. This will expose all LIS students to the importance of these principles for search and retrieval, indexing, and interoperability and free up time in the IO and cataloging courses to focus on standards, application, and practice. Educators and practitioners alike need to recognize that, because they are solo librarians, school librarians' cataloging competency needs to go beyond an awareness of cataloging theories to an ability to understand, apply, and implement cataloging standards, schemas, and vocabularies.

Hsieh-Yee (2003) recommends three levels of cataloging education depending on the career goals of students. While she does not correlate specific jobs with those levels, the cataloging expertise of school librarians should be no less than that of beginning catalogers at Level II. LIS programs are starting to recognize the need for focused instruction in cataloging and classification for school librarians. Joudrey (2014) notes that three of the 58 ALA-accredited LIS programs taught a school cataloging course specifically designed to address the needs of school librarians. While this is an increase from his previous studies in 2005 and 2000 and a step in the right direction, it still represents only 5% of LIS schools.

Essential in this instruction but perhaps missing currently is connecting the specifics of cataloging and classification (*MARC* tagging, controlled vocabulary, collocation, differentiation, consistency, and accuracy) to the other tasks that school librarians perform, such as collection development and management, collaboration with teachers, information literacy, reference, and readers' advisory services. Once that connection is more evident to school librarians, I believe they will be more likely to pursue the practice and application of cataloging and classification standards. Without that connection, school librarians are apt to forego wrestling with the standards in order to expedite getting records into the database and moving on to the next task.

Even if a course specifically designed for school librarians is available, cataloging cannot be mastered without actually practicing the craft on a variety of resources. Of equal import are internships, shadowing, and practicum opportunities to provide hands-on, real-world practice that students and recent graduates recognize as important to the education process. Of course, essential to practice is providing access to tools such as the *RDA Toolkit* and *WebDewey*. While these opportunities take extra time,

effort, and resources, it is crucial that students be able to wrestle with cataloging challenges under the tutelage of experienced catalogers who are available to answer questions, help them use the tools, and guide the development of their cataloging judgment.

Finally, prospective school librarians need to be aware of the help available to them once they have graduated and are in a library. It is the responsibility of LIS instructors to connect students to professional publications, discussion lists, conferences, and professional development and training opportunities that are specific to cataloging so they know where to turn for help when grappling with challenging resources or obtuse guidelines. Quality cataloging is a complex endeavor with a steep learning curve. Instructors of cataloging and classification for school librarians need to acknowledge that and give their students all they need to be able to succeed at it.

While a freshly graduated librarian is not going to be an expert cataloger, given the appropriate education in theory, opportunity for practice, and awareness of where to find help, a school librarian will know the importance of quality cataloging and its impact on their work. They will also know where to find answers and support so that they can engage in tasks that challenge their skill set with confidence.

Conclusion/future research

I started out my research wondering what LIS programs need to teach school librarians about cataloging and classification, and then I discovered that this is not the real question. They need to teach it all. Most important, they need to communicate that the catalog is one of the most powerful tools that school librarians have available to demonstrate their value to the students, teachers, and administration they serve. This can and must be communicated through appropriate curriculum development, availability of meaningful practicum experience with qualified supervisors, and connecting students to resources they can access after they graduate.

If standardized description, authority control, classification assignment, and metadata schema are not a priority, the library has a glorified and expensive inventory-control database, not a catalog. This has direct negative ramifications for all users of the catalog. The results of this survey demonstrate that school librarians place little importance on descriptive cataloging and controlled vocabulary. These two elements are essential in making the catalog a tool that can support users in addition to the other activities of librarianship such as collection development and management, collaboration with teachers, information literacy, reference, and readers' advisory services.

Finally, more research can be done on effective pedagogy for teaching cataloging concepts and for determining learning outcomes that best support the work that school librarians do. Additionally, developing core competencies for school librarians specifically related to cataloging, similar

to the *Core Competencies for Cataloging and Metadata Professional Librarians* (Cataloging Competencies Task Force, 2017), would further inform the curriculum development of LIS programs. Further research could also explore which elements of the *MARC* structure have the biggest bearing on user interfaces and how to simplify descriptive cataloging guidelines for specific environments such as school libraries, perhaps resulting in *RDA* application profiles specifically for use by school librarians.

Leslie A. Engelson is the Metadata Librarian at Murray State University and taught Organizing and Managing Library Resources in the School Library Media program for five years. Her divergent research interests include cataloging education, subject headings, metadata quality, and open access publishing.

References

- American Association of School Librarians (AASL). (2010). *ALA/AASL standards for initial preparation of school librarians*. Retrieved from http://www.ala.org/aasl/sites/ala.org.aasl/files/content/aasleducation/schoollibrary/2010_standards_with_rubrics.pdf
- American Library Association (ALA). (2015). *Standards for accreditation of master's programs in library and information studies*. Retrieved from http://www.ala.org/educationcareers/sites/ala.org.educationcareers/files/content/standards/Standards_2015_adopted_02-02-15.pdf
- Cataloging Competencies Task Force. (2017). *Core competencies for cataloging and metadata professional librarians*. Retrieved from <https://alair.ala.org/handle/11213/7853>
- Church, A. P., Dickinson, G. K., Everhart, N., & Howard, J. K. (2012). Competing standards in the education of school librarians. *Journal of Education for Library & Information Science*, 53(3), 208–217.
- Cloete, L. M. (2006). The education and training of cataloguing students in South Africa through distance education. In D. D. Sun & R. C. Carter (Eds.), *Education for library cataloging: International perspectives* (pp. 53–69). New York, NY: Haworth Press.
- Davis, J. M. (2008). A survey of cataloging education: Are library schools listening? *Cataloging & Classification Quarterly*, 46(2), 182–200. <https://doi.org/10.1080/01639370802177604>
- de Groot, J., & Branch, J. L. (2011). Looking toward the future: Competences for 21st-century teacher-librarians. *Alberta Journal of Educational Research*, 57(3), 288–297.
- Dull, M. E. (2011). Cataloging education and cataloging futures: An interview with Allyson Carlyle. *Serials Review*, 37(2), 116–119. <https://doi.org/10.1016/j.serrev.2011.03.001>
- Elrod, J. M. (2008). The case for cataloguing education. *Serials Librarian*, 55(1/2), 1–10. <https://doi.org/10.1080/03615260801970709>
- Gorman, M. (2002). Why teach cataloging and classification? *Cataloging & Classification Quarterly*, 34(1/2), 1–13. https://doi.org/10.1300/J104v34n01_01
- Harvey, R. (2003). Promoting quality metadata in libraries: The role of education. *Malaysian Journal of Library & Information Science*, 8(2), 79–93.
- Hider, P. (2004). Learning to classify: Online versus printed Dewey. *Malaysian Journal of Library & Information Science*, 9(1), 15–25.
- Hill, J. (2004a). Education and training of catalogers: Obsolete? Disappeared? Transformed?—Part I. *Technicalities*, 24(1), 1–15.
- Hill, J. (2004b). Education and training of catalogers: Obsolete? Disappeared? Transformed?—Part II. *Technicalities*, 24(2), 1–13.
- Holley, R. P. (2002). Cataloging: An exciting subject for exciting times. *Cataloging & Classification Quarterly*, 34(1/2), 41–50. https://doi.org/10.1300/J104v34n01_04

- Hsieh-Yee, I. (2003). Cataloging and metadata education: A proposal for preparing cataloging professionals of the 21st century (Web version). <https://docplayer.net/476478-Cataloging-and-metadata-education-a-proposal-for-preparing-cataloging-professionals-of-the-21-st-century.html>
- Hsieh-Yee, I. (2004). Cataloging and metadata education in North American LIS programs. *Library Resources & Technical Services*, 48(1), 59–68.
- Hsieh-Yee, I. (2008). Educating cataloging professionals in a changing information environment. *Journal of Education for Library & Information Science*, 49(2), 93–106.
- Hudon, M. (2010). Teaching classification, 1990–2010. *Cataloging & Classification Quarterly*, 48(1), 64–82. <https://doi.org/10.1080/01639370903356370>
- Hudon, M. (2011). Teaching classification in the 21st century. *Knowledge Organization*, 38(4), 342–351. <https://doi.org/10.7152/nasko.v3i1.12791>
- Intner, S. S. (2002). Persistent issues in cataloging education: Considering the past and looking toward the future. *Cataloging & Classification Quarterly*, 34(1/2), 15–28. https://doi.org/10.1300/J104v34n01_02
- Intner, S. S. (2009). Teaching cataloging in the age of metadata. *Technicalities*, 29(1), 1, 13–16.
- Jesseman, D., Page, S., & Underwood, L. (2015, September). State by state certifications. School Library Connection. Retrieved from <https://schoollibraryconnection.com/Home/Display/1959400?topicCenterId=1955261&tab=1>
- Joudrey, D. N. (2008). Another look at graduate education for cataloging and the organization of information. *Cataloging & Classification Quarterly*, 46(2), 137–181. <https://doi.org/10.1080/01639370802177588>
- Joudrey, D. N. (2014). Graduate education for information organization, cataloging, and metadata. *Cataloging & Classification Quarterly*, 52(5), 506–550. <https://doi.org/10.1080/01639374.2014.911236>
- McCoy, B. S. (2001). *A survey of practicing school library media specialists to determine the job competencies that they value most* (Doctoral dissertation). Georgia State University, Atlanta, GA. Retrieved from ProQuest Dissertation & Theses Global. (3008103).
- Moss, K. W. (2007). Swings and roundabouts: The role of cataloguing and classification in the LIS curriculum. *Catalogue & Index*, 155, 3–14.
- Miller, S. J., Lee, H., Olson, H. A., & Smiraglia, R. P. (2012). Online cataloging education at the University of Wisconsin-Milwaukee. *Cataloging & Classification Quarterly*, 50(2/3), 110–125. <https://doi.org/10.1080/01639374.2011.651193>
- Moulaison, H. L. (2012). A new cataloging curriculum in a time of innovation: Exploring a modular approach to online delivery. *Cataloging & Classification Quarterly*, 50(2/3), 94–109. <https://doi.org/10.1080/01639374.2011.653096>
- Saye, J. D. (2002). Where are we and how did we get here? or, The changing place of cataloging in the library and information science curriculum: Causes and consequences. *Cataloging & Classification Quarterly*, 34(1/2), 119–141. https://doi.org/10.1300/J104v34n01_08
- Schultz-Jones, B., Snow, K., Miksa, S. & Hasenyager, R. L., Jr. (2012). Historical and current implications of cataloguing quality for next-generation catalogues. *Library Trends*, 61(1), 49–82. <https://doi.org/10.1353/lib.2012.0028>
- Shannon, D. M. (2008). School library media preparation program review: Perspectives of two stakeholder groups. *Journal of Education for Library & Information Science*, 49(1), 23–42.
- Snow, K., & Hoffman, G. L. (2015). What makes an effective cataloging course? A study of the factors that promote learning. *Library Resources & Technical Services*, 59(4), 187–199. <https://doi.org/10.5860/lrts.59n4.187>
- Taylor, A. G. (2006). Teaching the Dewey Decimal Classification system. *Cataloging & Classification Quarterly*, 42(3/4), 97–117. https://doi.org/10.1300/J104v42n03_03
- Taylor, A. G., & Joudrey, D. N. (2002). On teaching subject cataloging. *Cataloging & Classification Quarterly*, 34(1/2), 221–230. https://doi.org/10.1300/J104v34n01_13

- Veitch, M., Greenberg, J., Keizer, C., & Gunther, W. (2013). The UNC–Chapel Hill RDA boot camp: Preparing LIS students for emerging topics in cataloging and metadata. *Cataloging & Classification Quarterly*, 51(4), 343–364. <https://doi.org/10.1080/01639374.2012.736124>
- Widdersheim, M., & Widdersheim, R. (2014). The state of cataloging in northwestern Pennsylvania secondary school libraries. *Current Studies in Librarianship*, 32(1), 61–90.

Appendix: Survey questions

Definition of terms.

- Cataloging—original and copy cataloging, including using CIP data to create a bibliographic record that represents an information resource available from your library.
- Classification—assigning a call number to a resource.
- Library media specialist—teacher librarian; someone who has received formal training to work in a school library.

1. How long have you been a teacher librarian?

- 0–4 years
- 5–10 years
- 11–20 years
- 20+ years

2. At which education level is your current position?

- Elementary school (grades K-5)
- Middle school (grades 6–8)
- High school (grades 9–12)
- Other _____

3. In what state is your school located? _____

4. Do you have a graduate degree in librarianship?

- MLS, MLIS, or equivalent
- M.A. or M.S. in library media (graduate degree for library media specialist)
- No—Skip to question 6

5. Did you receive your advanced degree from a college or university in Kentucky?

- Yes
- No

6. Have you received formal training in cataloging?
- Yes, it was required as part of my course work.
 - Yes, through training offered outside of formal course work (workshops, webinars, etc.).
 - No
7. Have you received any formal training in classification (the Dewey Decimal System)?
- Yes, it was required as part of my course work
 - Yes, through training offered outside of formal course work (workshops, webinars, etc.)
 - No
8. How long ago did you receive formal training in either cataloging or classification? If you have not received formal training in either cataloging or classification, skip to question 10.
- 0–2 years
 - 3–4 years
 - 5–10 years
 - 11–15 years
 - Over 15 years
9. Do you feel the training you received as part of your degree program was sufficient for enabling you to catalog and classify the library's information resources?
- Not sufficient
 - Somewhat sufficient
 - Adequate
 - Sufficient
 - Highly sufficient
10. Who does the majority of the cataloging and classification work in your library?
- The school library media specialist.
 - A library staff person who is not expected to have any formal library training
 - A student.
 - A volunteer.
 - Other. _____

11. Which of the following tools does the person who does in-house cataloging use when cataloging a resource?

- AACR2
 - Never
 - Rarely
 - Sometimes
 - Often
 - Most of the time
- The Concise AACR2
 - Never
 - Rarely
 - Sometimes
 - Often
 - Most of the time
- RDA Toolkit
 - Never
 - Rarely
 - Sometimes
 - Often
 - Most of the time
- Sears List of Subject Headings
 - Never
 - Rarely
 - Sometimes
 - Often
 - Most of the time
- Library of Congress Subject Headings
 - Never
 - Rarely
 - Sometimes
 - Often
 - Most of the time
- Dewey Decimal Classification (print or web)
 - Never
 - Rarely
 - Sometimes
 - Often
 - Most of the time

- Dewey Decimal Classification Abridged (print or web)
 - Never
 - Rarely
 - Sometimes
 - Often
 - Most of the time
- MARC 21
 - Never
 - Rarely
 - Sometimes
 - Often
 - Most of the time
- Other _____

12. Please rate the following skills on a scale of 1 to 10 where 1 is “not important at all” and 10 is “very important” according to how important the skill is to being able accomplish the responsibilities of your job as a library media specialist.

- _____ Understand the rules for describing a resource (AACR2 or RDA).
- _____ Know how to determine the subject(s) of a resource.
- _____ Understand the MARC structure of a bibliographic record.
- _____ Know how to find and use authorized subject headings.
- _____ Know how to find and use authorized name headings.
- _____ Know how to formulate a Dewey decimal number.
- _____ Know and assign the elements of a call number.
- _____ Understand how to use the integrated library system (ILS) to catalog and/or load records.
- _____ Understand how to find and download bibliographic records from a vendor or other library catalog.

13. From where do you get catalog records? (Select all that apply.)

- Download them from a vendor’s database (i.e. Follett’s TitleWave)
- Download them from a bibliographic utility (i.e. OCLC’s WorldCat)
- Receive them from the publisher when a resource is ordered.
- Download them from the Library of Congress’s database.
- Download them from another library’s database.

- Create them from CIP (Cataloging in Publication) data.
- Create them from information on or about the resource other than CIP.
14. Do you edit records that you do not create, (e.g. records that are downloaded from a vendor, publisher, bibliographic utility, or library catalog)?
- Never
- Rarely
- Sometimes
- Often
- Most of the time
- Always
15. How many hours are devoted to cataloging and classification in an average week?
- 0
- Less than 1 hour
- 1–3 hours
- 3–5 hours
- More than 5 hours
16. Please rank the following skills in order of importance, from 1 being the most important skill through 10 being the least important skill according to how important the skill is to being able accomplish the responsibilities of your job as a library media specialist.
- _____ Understand the rules for describing a resource (AACR2 or RDA).
- _____ Know how to determine the subject(s) of a resource.
- _____ Understand the MARC structure of a bibliographic record.
- _____ Know how to find and use authorized subject headings.
- _____ Know how to find and use authorized name headings.
- _____ Know how to formulate a Dewey decimal number.
- _____ Know and assign the elements of a call number.
- _____ Understand how to use the integrated library system (ILS) to catalog and/or load records.
- _____ Understand how to find and download bibliographic records from a vendor or other library catalog.

Copyright of Journal of Education for Library & Information Science is the property of Association for Library & Information Science Education and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.