

A STUDY OF THE PERCEPTION OF CATALOGING QUALITY AMONG
CATALOGERS IN ACADEMIC LIBRARIES

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This study explores the concept of "quality" in library cataloging and examines the perception of quality cataloging among catalogers who work in academic libraries. An examination of the concept of "quality cataloging" in library science literature revealed that even though there is some general agreement on how this concept is defined, the level of detail and focus of these definitions often vary. These various perceptions were dissected in order to develop a framework for evaluating quality cataloging definitions; this framework was used to evaluate study participants' definitions of quality cataloging. Studying cataloger perceptions of quality cataloging is important because it is catalogers (particularly original catalogers) who are largely responsible for what is included in bibliographic records. Survey participants ($n = 296$) provided their personal definition of quality cataloging as well as their opinions on their department's cataloging, their influence upon their department's policies and procedures, and the specific data that should be included in a quality bibliographic record. Interview participants ($n = 20$) provided insight on how their opinions of quality cataloging were formed and the influences that shaped these opinions.

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS	iii
LIST OF TABLES	vii
LIST OF FIGURES	vii
Chapter	
1. INTRODUCTION	1
Problem Statement and Context.....	1
Background of the Problem	2
Cataloger's Judgment	4
Research Questions.....	5
Delimitations and Limitations.....	6
Purpose and Significance of the Study	6
Definitions.....	8
2. LITERATURE REVIEW	10
The Rise of Cooperative Cataloging and the Dominance of the Library of Congress	12
A “Crisis” Emerges.....	15
Cooperative Cataloging Networks.....	17
The Automation of the Cataloging Process	26
The Adoption of Minimal Level Cataloging (MLC).....	28
The Library of Congress in the 1990s.....	31
Cataloging Quality in the 1990s and 2000s	37
Quality Dimensions	44
Increased Focus on User & Cataloging Process	48
Conclusion	54
3. METHODOLOGY	55
Introduction.....	55
Research Approach/Design.....	55
Population	66
Data Collection	68
Survey	68
Interviews.....	71
Data Analysis	74
Demographics	76
Conclusion	89

4. DATA ANALYSIS.....	91
Introduction.....	91
Survey.....	91
Attributes of a Quality Bibliographic Record.....	92
Personal Definitions of Quality Cataloging.....	95
Institution Definitions of Quality Cataloging.....	105
Influence Upon Cataloging Department Policies & Procedures.....	107
The Quality of the Respondent's & Cataloging Department's Cataloging.....	109
MARC Fields/Subfields in a Quality Bibliographic Record.....	113
Quality Cataloging Attributes.....	116
Impact of RDA Implementation Upon Quality Cataloging Definitions.....	122
Interviews.....	127
Personal Definitions of Quality Cataloging.....	128
How Quality Cataloging Definition Has Changed.....	130
Events Impacting Quality Cataloging Definition.....	131
Necessary Conditions for Quality Cataloging Work.....	133
Impact of Standards Upon Quality Cataloging.....	134
Cataloging Department's View of Quality Cataloging.....	135
Cataloger's Judgment's Role in Quality Cataloging.....	136
Impact of RDA Implementation Upon Quality Cataloging Definitions.....	138
Current State of Library Cataloging Quality.....	140
Other Considerations.....	143
MARC Records.....	148
Conclusion.....	156
5. FINDINGS.....	157
Introduction.....	157
Restatement of the Problem.....	157
Research Questions.....	158
Further Discussion.....	164
Situated Learning Theory & Communities of Practice.....	164
The Need for <i>Accurate</i> and <i>Complete</i> Cataloging.....	170
Cataloging Education and Training.....	176
Conclusion.....	182
6. CONCLUSIONS.....	183
Introduction.....	183
Significance.....	183
Cataloging as a Community of Practice.....	183
Re-examination of the "Four Categories of Quality Definitions" Framework.....	191
Limitations/Future Research.....	194

APPENDICES

A. SURVEY QUESTIONS 196

B. INTERVIEW QUESTIONS 213

C. LETTER TO THE HEAD OF CATALOGING OR TECHNICAL SERVICES 215

D. SAMPLE OF QUALITY CATALOGING DEFINITIONS DATA ANALYSIS 217

E. RESULTS OF THE CHI-SQUARE TESTS COMPARING PERSONAL QUALITY
CATALOGING DEFINITIONS TO SPECIFIC DEMOGRAPHIC DATA..... 219

F. MARC FIELDS AND SUBFIELDS RANKED BY LEVEL OF IMPORTANCE 230

G. QUALITY CATALOGING ATTRIBUTES RANKED BY LEVEL OF IMPORTANCE .. 233

REFERENCES 238

LIST OF TABLES

Table 2.1. Metadata Application Profile (MAP) BIBCO Standard Record (BSR) for printed books.....	39
Table 2.2. Cataloging department definitions of quality cataloging.....	53
Table 3.1. Justification of quality cataloging attributes on survey.....	59
Table 3.2. Justification of MARC fields and subfields on survey.....	64
Table 3.3. Four categories of quality cataloging.....	75
Table 3.4. Respondents by type of library.....	78
Table 3.5. Length of time in non-professional position.....	82
Table 3.6. Universities/colleges where respondents attended cataloging courses (top 10).....	84
Table 3.7. Type of degrees/certificates held by survey respondents.....	86
Table 3.8. Year respondent received degree/certificate (by decade).....	86
Table 3.9. Frequency of continuing education course and/or conference attendance.....	88
Table 3.10. Type of material cataloged originally on an average day.....	89
Table 4.1. Top 10 most frequently used words or phrases describing a quality record.....	93
Table 4.2. Top 10 most frequently used words or phrases describing a non-quality record.....	94
Table 4.3. Synonyms for incorrect and incomplete information.....	95
Table 4.4. Replicated four categories of quality cataloging and attributes summary.....	96
Table 4.5. Cataloging experience levels organized into the four categories of quality cataloging.....	99
Table 4.6. Cataloging experience levels collapsed into broader time spans.....	100
Table 4.7. Quality cataloging categories chosen by age range.....	102
Table 4.8. Quality cataloging categories chosen by level of cataloging experience.....	102

Table 4.9. Quality cataloging categories chosen by type of cataloging position held.....	103
Table 4.10. Quality cataloging categories chosen by number of institutions employed during career.....	103
Table 4.11. Quality cataloging categories chosen by whether or not respondent took a cataloging course for college/university credit.....	103
Table 4.12. Top 10 most frequently used words or phrases describing quality cataloging	104
Table 4.13. Institution does not define quality cataloging.....	106
Table 4.14. How respondents influence department policies and procedures.....	109
Table 4.15. Reasons for why respondent does not produce quality cataloging or is unsure about quality of cataloging.....	111
Table 4.16. Reasons for why department does not produce quality cataloging.....	113
Table 4.17. Top 10 "very important" MARC fields/subfields.....	114
Table 4.18. Top 10 "not important" MARC fields/subfields.....	115
Table 4.19. Top 10 MARC fields/subfields added by survey respondents.....	116
Table 4.20. Top 10 "very important" quality cataloging attributes.....	117
Table 4.21. Top 10 "not important" quality cataloging attributes.....	120
Table 4.22. Summary of opinions about how the implementation of RDA will affect respondent's definition of quality cataloging.....	125
Table 4.23. Summary of opinions about how the implementation of RDA will affect respondent's definition of quality cataloging by cataloging experience level.....	127
Table 4.24. Explanation of bibliographic record encoding levels.....	150
Table 4.25. Encoding level codes for fixed field ELvl and the number of records that contain these codes.....	152
Table 6.1. Established and situated conceptualizations of learning compared.....	185

LIST OF FIGURES

Figure 3.1. Age range of survey respondents.....	79
Figure 3.2. Cataloging experience of survey respondents.....	80
Figure 3.3. Employment status of survey respondents.....	81
Figure 3.4. Number of institutions for which respondent has worked.....	82
Figure 3.5. Cataloging courses taken for college/university credit.....	83
Figure 3.6. Possession of a library and/or information science degree or certificate.....	85
Figure 3.7. Continuing education and/or conference attendance.....	87
Figure 4.1. Personal quality definitions organized into the four categories of quality cataloging.....	98
Figure 4.2. Institution quality definitions organized into the four categories of quality cataloging.....	107
Figure 4.3. Level of influence upon cataloging department policies and procedures.....	108
Figure 4.4. Do you feel that the cataloging you perform is quality cataloging?.....	110
Figure 4.5. Do you feel that the cataloging your department performs is quality cataloging?.....	112
Figure 4.6. Will the implementation of RDA impact your definition of quality cataloging?.....	124
Figure 4.7. Personal definitions of quality cataloging - interview participants.....	129
Figure 5.1. A typical ecology of cataloging community learning activities.....	169
Figure 6.1. Individual learning in the context of multiple communities and networks of practice.....	189

CHAPTER 1

INTRODUCTION

Problem Statement and Context

"Quality cataloging" is a concept whose meaning is often assumed to be universally understood, but do all catalogers really perceive this concept in the same way? In 2008, cataloger J. McRee Elrod proclaimed that, "[c]learly the quality of catalogue records being added to bibliographic utilities and individual library catalogues is declining" (Elrod, 2008, p. 5). Elrod does not include any evidence for this decline or the nature of the decline, but instead assumes by stating that the decline is "clearly" happening, that this perception is not uncommon. However, can it be taken for granted that all catalogers conjure up the same definition of quality cataloging as Mr. Elrod?

Attempts to define the attributes of quality cataloging date back several decades and discussions in library science literature expressing concern over how to best approach library cataloging stretch back to the 19th century. Within the last four decades, these discussions have become more pointed and heated. Even though some basic points can be agreed upon regarding the attributes of quality cataloging, general consensus on these attributes has remained largely elusive. With the recent introduction of the new cataloging standard *Resource Description and Access* (RDA), new concern has surfaced about the direction of "quality cataloging" and what this concept can (and *should*) encompass.

The problems this study addresses are the ambiguous nature of "quality" in cataloging and the difficulties in assessing what quality cataloging means due to differing perceptions of this concept among professional and non-professional catalogers in academic libraries. The differing perceptions may be due to many reasons, such as local practice, type of library and user

population, cataloging education/training, and the specific demands of one's position (e.g., a technical services manager looking to cut costs may have a different perception of quality than a professional cataloger). Perceptions of cataloging quality may also alter over time due to changes in and/or limitations of technology, as well as cataloging standards and rules.

By studying cataloger perceptions of cataloging quality, a greater understanding of cataloger expectations and motivations in regard to the creation of bibliographic records will be gained. The study examines the reasons for these perceptions and whether or not these perceptions have changed over time (and if they have, in what ways have they changed).

Background of the Problem

The notion of "quality" has been discussed at great length in various academic disciplines, particularly business. The American Society for Quality, which is a "global community of experts and the leading authority on quality" for areas such as education, government, healthcare, manufacturing, and service (American Society for Quality, 2011), currently defines quality as:

A subjective term for which each person or sector has its own definition. In technical usage, quality can have two meanings: 1. the characteristics of a product or service that bear on its ability to satisfy stated or implied needs; 2. a product or service free of deficiencies. (American Society for Quality, 2011)

For hundreds of years, business organizations have attempted to define quality, but results have varied widely. Quality has been defined as value; conformance to specifications; conformance to requirements; fitness for use; loss avoidance; and meeting and/or exceeding customers' expectations (Reeves & Bednar, 1994, p. 419). These definitions do not necessarily conflict with one another, but nonetheless represent different viewpoints and measurement problems. Reeves and Bednar (1994) conclude that defining quality using only one viewpoint neglects the

complexity and (oftentimes) subjectivity of the concept; attempts to define quality too broadly to encompass all of these meanings would result in a definition with little utility when it comes to evaluating quality in objective terms.

“Cataloging is an art, not a science,” Charles Cutter noted in the preface to the fourth edition of his *Rules for a Dictionary Catalog* (1904, p. 6). The idea that the practice of cataloging requires more than a strict conformance to rules flows through much of library literature in which quality cataloging is discussed. Cataloging necessitates a tolerance for ambiguity and the ability to create a comprehensible, surrogate representation of an item where standardization can be often elusive. This necessity complicates the search for a straightforward definition of quality cataloging. The process of defining quality cataloging has been compared to defining pornography (Bruce & Hillmann, 2004) and to defining art: “As with the person who cannot define art but knows it when he sees it, I cannot completely define a good cataloguing record, but I know it when I retrieve it” (Avdoyan, 1993, p. 5).

"Quality cataloging" has been defined in many ways in library science literature. Some definitions are very specific and some less so:

Accurate bibliographic information that meets users' needs and provides appropriate access in a timely fashion. (*Cataloging quality*, 1995, p. 28)

What library users say it is. (Calhoun via Wasylenko, 1999, p. 102)

Level of content (AACR2 level of description, inclusion of subject classification or subject headings, authority control of headings, etc.)...accuracy of content (in transcription from the item, in conformity with the standards applied)...fitness for purpose. (MacEwan & Young, 2004, p. 2)

We define quality for support staff by percentage error rate in the following: selection or suitability of OCLC record as a match for item cataloged; correcting typographical errors in the following fields: 100, 245, 260, 300, 5xx; making appropriate edits to bibliographic and holdings records; accurate creation of item and holdings records; recognizing cataloging problems and bringing them to the attention of a supervisor. For cataloging librarians: quality is defined by excellent original cataloging based on AACR2 full-level

standards; name authority records created to standards set by NACO; effective supervision of support staff, including timely resolution of questions and problems; a reasonable turnaround time for materials so that a backlog is not created or growing; responsiveness to needs of internal and external patrons; completeness, efficiency, responsive to queries and complaints. (Primary Research Group, 2008, p. 136)

Even though several of these definitions express some of the same attributes of quality cataloging, they also reflect differing concerns and focus similar to what is found in business literature.

Cataloger's Judgment

The concept of cataloger's judgment can partially explain why there are differing perceptions of quality cataloging among catalogers. Ferris (2008) defined cataloger's judgment as "the level of expertise attained by each cataloger after years of having interpreted and applied the *principles* of bibliographic control" (p. 179). One could also argue that cataloger's judgment is not solely about level of expertise, but rather the cataloger's ability to utilize that expertise to make informed cataloging decisions. Since the standard cataloging rule book in the English-speaking world, the *Anglo-American Cataloguing Rules, 2nd edition* (AACR2), cannot cover every possible cataloging situation encountered by a cataloger, cataloger's judgment is instrumental in allowing the cataloger the freedom to adapt cataloging practice and rules in ways that the cataloger feels will best meet their users' needs. This judgment is usually developed and refined over time as the cataloger gains more experience cataloging information objects and navigating the various cataloging tools, such as AACR2 and the *Library of Congress Subject Headings* (LCSH). Santamauro and Adams (2006) explained that "[w]hile catalogers' judgment is often assumed to be 'common sense,' it is actually the result of cataloging culture, hands-on experience, and education" (p. 13).

Catalogers' judgment is an essential tool for navigating the complexity of information organization, but it can also lead to a lack of uniformity in the cataloging process and bibliographic records. This lack of uniformity, in turn, leads to what some may consider a lack of quality cataloging. For example, a cataloger may decide to not include all the access points for those involved in the creation of a DVD due to time constraints or due to lack of user interest in such information. If this record is included in a networked cataloging environment, such as the Online Computer Library Center (OCLC) network, it may be considered lacking in quality for libraries with users who value additional access points for this type of information object. Since AACR2 does not state a minimum or maximum number of added access points that can be included in a bibliographic record, records produced under either scenario are technically correct. However, the "quality" of each record is perceived differently depending on the judgment of the cataloger.

Research Questions

This study seeks answers to the following research questions:

- 1) How do catalogers currently define quality cataloging?
- 2) How do catalogers distinguish "quality" in terms of the cataloging process, the catalog record (as a product, or artifact, of the process), adherence to standards, and impact upon users?
- 3) What characteristics of a bibliographic record, including field/subfield usage for content designation, are perceived to be the most important to catalogers when they judge the quality of a record?
- 4) How is local cataloging practice influenced by cataloger perceptions of quality cataloging?

Chapter 3 gives further background on each of the research questions and the methods used to answer them.

Delimitations and Limitations

Due to the fact that this study was intended to explore cataloger *perceptions* of quality cataloging, there was no attempt to determine an objective definition of quality cataloging. In addition, the focus population of this study was limited to catalogers who work in an academic library, perform original cataloging, and are either classified as professional or non-professional in their employment status. The perceptions of catalogers outside of this population were not considered and could be the focus of future studies. In addition, library user opinions of quality cataloging were not examined by this study. Even though the OCLC (2009a) study of user and librarian perceptions of quality in the WorldCat database provides general insight on this topic, there needs to be more research performed by academic libraries at the local level (as suggested by Chapman and Massey (2002) and Hider and Tan (2008)) to determine the quality cataloging attributes that would best serve a specific library's user population.

This study reveals how study participants' perceptions of quality cataloging influence local cataloging policy; however, this study did not examine department policy and procedure manuals to see if these quality perceptions were present in actual policy and procedure. A future study that included this examination would help to generate a more complete picture of how cataloger perceptions of quality cataloging influence local cataloging policy.

Purpose and Significance of the Study

Hider and Tan, in their 2008 study of quality cataloging, asked seven cataloging experts to rank the same five bibliographic record sets of Library of Congress full-level records from best to worst in terms of quality. Each of the seven experts ranked the record sets differently. If "cataloging experts" cannot agree on what constitutes quality cataloging and cataloger's

judgment is involved, is it possible to define quality cataloging at all? Or, perhaps more appropriately, is it possible to define quality cataloging in such a way that would be universally applicable to all cataloging situations? In addition, even if it is possible to come to a general agreement on the definition of quality cataloging, why is it important to define it at all?

In regards to the first question about the possibility of defining quality cataloging, it could be argued that, even if every cataloger cannot agree on the same attributes, most catalogers could agree upon a baseline standard for what should be in a bibliographic record that would allow for user access, such as the Program for Cooperative Cataloging's (PCC) BIBCO standard record (BSR). Baseline standards may be a good starting point in assessing quality, but are minimum, agreed-upon standards enough to earn the title of "quality cataloging"?

It could also be argued that quality cataloging cannot be defined in such a way that is applicable to all cataloging situations because each cataloging environment has its own unique set of challenges, differing user populations, and administrative expectations. Attempts to construct an objective definition could even be detrimental; catalogers might be forced into cataloging in such a way that may not best fit the needs of their users in order to follow a supposed objective definition of quality cataloging. In such a situation, it is not necessary or even helpful to construct a general definition of quality cataloging that attempts to cover all cataloging environments.

This study does not attempt to formulate an objective definition of quality cataloging. Instead, it examines the *perception* of cataloging quality from the perspective of catalogers and how these perceptions affect the expectations and actions of catalogers when they create and evaluate bibliographic records. Studying cataloger perceptions of quality cataloging is important because it is catalogers (particularly original catalogers) who are largely responsible for what is

included in bibliographic records. Even if original catalogers do not have the authority to decide everything that goes into an original record, they may have influence upon cataloging department policies that govern what should and should not be in a bibliographic record created and/or accepted by that department.

The purpose of the current study is to collect and examine cataloger definitions of and thoughts concerning quality cataloging in order to determine what they feel are the most important attributes of the cataloging process and bibliographic record, as well as their opinions about the application of cataloging standards and how the cataloging process and product impacts users. The exploration of these perceptions of quality cataloging will produce a greater understanding of how catalogers approach their work and how these perceptions impact records produced, as well as departmental policy, if at all.

Definitions

Taylor (2006) defines "cataloging" as "the process of creating surrogate records for information packages by describing the information package, choosing name and title access points, conducting subject analysis, assigning subject headings and classification numbers, and maintaining the system through which records are made available" (pp. 528-529).

For the purposes of this study, "original cataloging" is defined as the creation of a new record that does not contain any prior data and/or the editing of an existing record that previously contained only very minimal data.

Perception is defined as "the process through which sensations are interpreted, using knowledge and understanding of the world, so that they become meaningful experiences" (Bernstein, Clarke-Stewart, Roy, Srull, & Wickens, 1994, p. 175). In this study, "perception" is

not used in what Bernstein et al. (1994) call the "ecological view" or the "computational view," both of which focus more on environmental stimuli and the human body's reactions to such stimuli. Instead, "perception" is examined from the "constructionist" viewpoint, which focuses on human expectations, inferences, and understanding about reality and, subsequently, the meaning humans ascribe to that reality (Bernstein, et al., 1994, pp. 176-177).

The literature review in Chapter 2 provides a review of how quality cataloging has been discussed in library and information science literature.

CHAPTER 2

LITERATURE REVIEW

Prior to the 1970s, the concept of quality cataloging is rarely discussed in library science literature. Even though the literature indicates that the decline of quality cataloging has been a topic of conversation among practicing catalogers for many years, the first articles and editorials specifically addressing quality cataloging did not emerge until the late 1970s and early 1980s. However, early on in the development of cataloging as a profession, there are glimpses in the literature of what comprises good cataloging, or, perhaps more specifically, what aspects lead to bad cataloging.

The late nineteenth century was a time of great change and progress in the library world in general, but also for cataloging specifically. The dawn of modern, professional librarianship can be traced back to one very prolific year in particular: 1876. It was the year in which the American Library Association (ALA) and its official channel of communication, the *Library Journal* were formed. In addition, 1876 was when Melvil Dewey published the first edition of his decimal classification system and Charles A. Cutter published his *Rules for a Printed Dictionary Catalogue*, the foundation of modern cataloging codes.

Charles Cutter was one of the first to identify specific aspects of a catalog record lacking quality. When Cutter became editor of the Boston Athenaeum catalog in 1870, he found that his ideas of how the catalog should be compiled were not reflected in the work that had been done previously on the catalog that he had inherited.

The first attempt at the catalog's construction was, according to Cutter, a very hasty endeavor. In the epilogue "The Editor to the Proprietors" in the fourth part of the *Catalogue of the Library of the Boston Athenaeum. 1807-1871*, Cutter wrote,

Sometimes they took the title from the back of the book, sometimes from the title-page, sometimes from the half-title, and sometimes, apparently, from their own imaginations. They omitted freely, of course, and they altered the order of words for the purpose of omitting, and of the words which they retained they abbreviated the greater part to the verge of unintelligibility. They spent no time on the investigation of authors' full names or in the discovery of the authors of anonymous and pseudonymous books, nor did they trouble themselves about cataloguing rules. (Boston Athenaeum & Cutter, 1880, p. 3399)

Cutter believed that many of the errors he encountered were due to two main problems: (1) the lack of personnel trained in cataloging principles and, (2) the speed with which they worked.

The speed issue was a particularly thorny problem in Cutter's eyes because focus on the speed of work often allowed for the introduction of more errors, and for Cutter, an error-infested catalog is only slightly better than no catalog at all. Again, Cutter observed that

[t]heir chief object must have been quick work; their writing, therefore, was often illegible or ambiguous by reason or haste; their copying was often faulty, especially in names and dates...the worse they worked, the more they did, leaving a larger crop of errors for others to uproot, and the nearer the catalogue seemed to completion the farther off it really was. (Boston Athenaeum & Cutter, 1880, p. 3399)

Cutter's comments in the epilogue of the Boston Athenaeum catalog are unique in that it is rare to find such pointed criticisms of cataloging practice during this time period – a time when cataloging rules were far from standardized. Due to the inability of library leaders to consolidate cataloging efforts through cooperative cataloging, the need for standardized cataloging practice between libraries was not strongly felt. Cutter felt that a standardized and error-free catalog was essential for users of the catalog to find the works they needed. Many of Cutter's contemporaries, such as Melvil Dewey, agreed.

Therefore, during the late nineteenth century, two of the major issues pushed to the forefront of debates regarding cataloging were the standardization of cataloging rules and the “wholly visionary” idea of cooperative cataloging on a national scale. The success of the latter, many felt, would be determined by the attainment of the former; the standardization of cataloging rules among libraries would be the key to getting cooperative cataloging efforts off the ground and achieve the efficiency and cost-savings that collaboration would provide. According to Dewey (1877), the formation of professional channels such as ALA and the *Library Journal* could now be used to rid the library profession of the “sheer extravagance” of duplicated effort by catalogers in different libraries (p. 170).

Standardization, however, was difficult to attain for many reasons, principal of which was the feeling that the adoption of a general set of cataloging rules would not properly address local needs. For this reason, many libraries used an amalgam of contemporary cataloging rules (and there were several, such as Cutter’s and Linderfelt’s), “taking what was most advantageous from each” (Heisey, 1976, p. 225). “Quality cataloging” was defined by local needs and practices, and standardization between libraries was therefore viewed with skepticism. However, as the nineteenth century was coming to a close, the sense of urgency to standardize cataloging rules for the sake of cooperative efforts was intensifying.

The Rise of Cooperative Cataloging and the Dominance of the Library of Congress

At the Conference of Librarians at Philadelphia in 1876, James G. Barnwell of the Philadelphia Mercantile Library suggested the creation of a “universal catalog” – in essence an early form of cooperative cataloging, in order to consolidate cataloging efforts, save money, and encourage standardization in cataloging rules. Barnwell stated,

Of course the whole general subject of rules for cataloging applies with special force to an undertaking of the kind proposed, and I think it is of the first importance to the successful completion of the work that a code of rules be formed by a conference of bibliographers, and then adhered to with the most slavish servility; for entire uniformity, next to accuracy of description, is the most essential element of a useful catalog. (1876, p. 58)

In response to the idea of cooperative cataloging by use of a universal catalog, the attendees of the Conference of Librarians, including Melvil Dewey and Charles Cutter, agreed that, though time-consuming and pricey, such an undertaking would be more cost-effective for libraries in the long run.

The idea of cooperative cataloging was praised in a letter by R.B. Pool of the Y.M.C.A. Library in New York to the *Library Journal* editor as a means of achieving greater “accuracy, method, and uniformity” (1877, p. 290). He explained that, “if some of our catalogues were examined by experts they might leave the catalogue in quite as sad a plight as Mr. Collier’s, after the critic at the British Museum had examined his sample titles, and found two errors for every title” (Pool, 1877, p. 290). The specific “errors” found and that may have possibly been found in Pool’s library were never addressed.

On the other hand, some felt that cooperative cataloging would take away too much local control and force standardization on disparate libraries. As stated previously, during this time period, consistency in the application of rules within an institution’s catalog was often more important than consistency among catalogs. But it was not only cataloging rules that created a roadblock for cooperative efforts; the lack of agreement on the *size* of cataloging cards was also a major point of contention. Edlund (1976) noted, “[L]ibrarians around the country often felt as strongly about the particular size of the card they were using as they did about the data the card contained” (p. 391). And this, of course, is assuming that they used card catalogs in the first

place; many libraries used “printed book catalogs or printed lists of their collection or paste-up catalogs” (Edlund, 1976, p. 391).

In addition, cooperative cataloging threatened to strip away the means by which librarians learned about their local collections. Frederic Vinton, a librarian at Princeton University, believed that “co-operative cataloguing (by which each librarian shall have the least possible writing to do) is unfavorable to good librarianship" because it is the "supposed drudgery of cataloguing" that allows the librarian to become good at his job (1877, p. 53). Vinton was concerned that he would "lose that familiarity with the subjects and even the places of my books which results from having catalogued and located every one” (1877, p. 53). This anxiety was no doubt felt by others in the library community as R.R. Bowker, writing in the 1883 *Library Journal*, argued in response to the demand for cooperative cataloging that

[i]t chiefly behooves us, building a fair basis for the future, not to attempt and to expect too much; to make haste slowly; not to rashly ignore and put aside the old in planning for the new; and to remember that cooperation does not mean rigid uniformity, and that, among many varieties of situation and circumstance, the best way is often a relative term. (p. 250)

Despite the concerns of some in the library community about the introduction of cooperative cataloging, there appeared to be more in favor of the idea than those opposed.

The introduction of the card distribution program at the Library of Congress in 1901 is generally seen as the catalyst for moving cooperative cataloging from a disorganized dream to a more unified reality. For quite some time before the card distribution program came to pass, a growing contingency of catalogers wished that the Library of Congress would become the *de facto* national library of the United States. “Is it practicable,” Melvil Dewey wrote in 1877, “for the Library of Congress to catalogue for the whole country?” (p. 171). Though reluctant and

unsure of the success of the venture, Herbert Putnam, the Librarian of Congress who initiated the card distribution program, felt that it was time for the Library of Congress to try.

In 1901, Putnam sent a three-page circular to more than four hundred libraries and four-page memorandum called *Distribution of Printed Catalogue Cards by the Library of Congress* detailing the distribution plan (Edlund, 1976). The plan was to generate extra copies of catalog cards created for the Library of Congress collection of works and then distribute them to subscribers at cost plus ten percent (to cover printing costs). According to Scott (1976), “[t]he response in inquiries and orders was not only prompt but far greater in volume than had been anticipated; the response to the quality of the cataloging was equally gratifying” (p. 303).

The success of the Library of Congress card distribution program led to the emergence of the Library of Congress as the leader in the establishment of cataloging practices and rules for the United States that lasts to this day. Library of Congress cataloging was viewed as the embodiment of cataloging quality and “a pattern for the catalogers of the country, a sort of state church for the laity as it were, whose decisions were not generally questioned although there was always dissent” (Charlton, 1949, p. 81).

A “Crisis” Emerges

In the 1940s, Andrew Osborn argued, in part, that in the decades following the standardization of cataloging rules, cataloging had become "elaborate, highly technical, a skill too often existing in and for itself" due to the increase of and focus upon cataloging rules (1941, p. 93). This, in turn, led to administrators, who once worked side by side with the cataloger, to become out of touch with cataloging and the benefits and problems associated with it. Just like those before him, nowhere does Osborn explicitly define "quality cataloging." However, the

implication is that the fewer rules there are to weigh the cataloger down (and the more freedom catalogers are given to practice their "art"), the better the end result of their efforts will be.

Osborn also discussed the four dominant "theories of cataloging" that he felt best categorized most catalogers during this time period: legalistic, perfectionistic, bibliographic, and pragmatic. Osborn concluded that the legalistic theory, which is a strict adherence to rules, had come to dominate cataloging departments. Legalists felt that the cataloging process was more efficient when there were more cataloging rules that cover as many cataloging scenarios as possible; "[t]he argument is that if everything has been covered in the code of laws then there will be no more debates, no more wasted time" (Osborn, 1941, p. 94).

The perfectionists felt that the best approach to cataloging was to create records that are as complete as possible, performed with all present and future users in mind. Bibliographical theorists' ideas of cataloging were similar to the perfectionists in that more bibliographic detail is considered better than less detail for all items, regardless of the information object's value to the user. For example, the bibliographic theorist would catalog a modern mass-market paperback in the same way as a seventeenth century rare book. The pragmatist catalogers looked at the enterprise of cataloging in a purely practical way and understood the fact that rules and practices must be re-interpreted and changed as library and user needs evolve. Individual catalogers may possess traits from all of these theories, but Osborn insisted that catalogers must try to follow the path of the pragmatist over the other theories. "The quality of cataloging in such libraries is satisfactory," Osborn wrote, "because it has been developed with the practical needs of the library constantly in mind" (1941, p. 97).

Osborn concluded that the addition of details to the established cataloging rules hindered catalogers' ability to establish a standard level of cataloging that would be generally accepted.

The cataloging details helpful to one library may not be so for another. Therefore, Osborn made several suggestions that he felt would make catalogers more pragmatic in their approach to cataloging. He suggested that cataloging practices should be "meaningful" and practical; that there should be less cataloging rules and more use of cataloger's judgment; and that cataloging work should be triaged in order to maximize "quality": "[t]he quality of the work would be high for anything regarded as essential. Nonessentials would be given little attention or passed over" (Osborn, 1941, pp. 98-99). Osborn did not further elaborate on what he meant by "quality" and "essential" versus "nonessential" materials. How they are defined would presumably be left up to the local cataloging department and based upon what is most practicable. "Quality cataloging" for Osborn is not a static, objective notion, but one that is limited by local necessity and constantly evolving as "the taste or the needs of the time" frequently change (Osborn, 1941, p. 96).

Cooperative Cataloging Networks

The rise of cooperative cataloging networks during the 1970s parallels the increase in the number of articles and studies in the library science literature that mention quality cataloging. Up until the 1970s, it was rarely discussed in library science literature how cooperative cataloging would affect the quality of the cataloging produced. On the whole, most discussions concerning cooperative cataloging were centered on its benefits to the cataloging community in terms of savings in staff time and processing costs. In addition, many felt that the re-use of bibliographic records by many provided standardization of cataloging practices and this idea was viewed as a beneficial result. Consistency, especially with the *Library of Congress Rule Interpretations* (LCRIs), was seen as a mark of quality, even if it was never expressed exactly in this way. Despite complaints about aspects of Library of Congress cataloging, on the whole it was viewed

as upholding a high standard and the decisions of the Library of Congress in regards to cataloging practices were generally seen as authoritative and favorable. However, the advent of computerized cataloging methods in the 1960s and 1970s changed the course of cooperative cataloging conversations. Quality cataloging discussions, having mostly lurked in the background throughout professional cataloging's history (seemingly understood, yet not properly acknowledged), suddenly emerged as a major concern in library science literature.

Discussion of quality in regards to cooperative cataloging networks was largely centered upon the Ohio College Library Center (OCLC) corporation, founded in 1967. Its expansion beyond its original association of Ohio Colleges in 1977 led to its name change to Online Computer Library Center and a much larger database of participant-contributed bibliographic records. In 1973, the OCLC database held around 652,000 records (Maciuszko, 1984, p. 69). Ten years later, the database held around 11 million records (Hafter, 1986, p.19). In 2011, the number of records approaches 240 million (OCLC, 2011c).

Part of the reason for OCLC's staggering growth in the 1970s was the fact that "it did not demand or enforce standardization in cataloging practice upon its users. Instead, it stressed cooperative activity in building the data base by adding as many records to it as possible and made its inputting standards loose and flexible" (Hafter, 1986, p. 13). By the late 1970s, this "loose and flexible" approach to building a network database was challenged by competitors, such as the Research Libraries Information Network (RLIN), which was strict about the type of the records allowed in their database. The rapid growth of OCLC's database, initially seen as essential in order to be cost-effective, soon came to be seen as not-so-cost-effective after all. The result of accepting everything was the inclusion of the bad records with the good, and the "bad records" were often duplicate records, or catalog records with minimal data. Either way,

catalogers soon realized that the time saved by using cataloging networks was being shifted to sorting through poor quality records to find the one that matched the item in-hand and updating it to fit local needs (Hafter, 1986, p. 14).

In Wilson Luquire's 1976 dissertation *Selected Factors Affecting Library Staff Perceptions of an Innovative System: A Study of ARL Libraries in OCLC*, he was surprised to find that quality was a major issue among catalogers using OCLC. From his interviews he found that

no matter how large or how small the institution is, no matter how good or how poor the institution's basic public image is, no matter how prestigious or lacking in prestige the library is, the staff at all levels, almost unanimously, stated that they would have to sacrifice "quality" if they were to accept, without major revisions, OCLC contributed copy. (Luquire, 1976, pp. 61-62)

Luquire did not attempt to define "quality cataloging" in his study; instead, he suggested that further study was needed to determine what is meant when this concept is used. Based upon his discussions with the subjects of his study, Luquire felt that "what is called quality may not really be absolute quality but rather local practices and needs which are often not met by contributed copy" (1976, p. 62).

A 1977 editorial in *The Journal of Academic Librarianship* entitled "Data Base Pollution" stated that "a growing number of librarians are alarmed over the lack of bibliographic quality of catalog records found in machine readable data bases" (RMD, 1977, p. 127). This lack of quality was not only found in OCLC, but in the National Union Catalog (NUC) as well. The author discussed the existence of unofficial "blacklists" of cataloger's names (and, presumably, the cataloger's institution) whose cataloging was to be avoided due to its lack of quality in the NUC (RMD, 1977). The author also suggested that catalogers often have to review all bibliographic data received through the NUC and OCLC because of perceived lack of quality,

essentially negating the time and expense that was supposed to be saved through cooperative cataloging programs and networks (RMD, 1977).

Boissonnas (1979) also wrote that quality in the OCLC database “is a continuing source of controversy for catalogers” (p. 80). In order to investigate quality in OCLC, Boissonnas devised a study that compared Library of Congress (LC) and OCLC records to what the Cornell Law Library (CLL) deemed an “authoritative record” : a record that is complete as possible (“there is no such thing as an optional field” (p. 81)) and needs little modification (only the 049 field, the Cutter number, and the series tags will be touched). Boissonnas found that LC records conformed more often to CLL’s “authoritative” record than OCLC records and more time was spent correcting OCLC records than LC records. Most problems were due to “the format of cataloging or tagging” in the Machine-Readable Cataloging (MARC) standard, which had the potential to cause serious access and retrieval issues (Boissonnas, 1979, p. 82). However, Boissonnas surmised that even though problems with LC and OCLC records could negatively impact access in any catalog that contains these records, the degree of impact depends on the standards of an institution and the collection involved. “Quality,” Boissonnas wrote, “or the definition of an authoritative record, is a very subjective notion. Because of the standards and procedures followed at CLL, a substantial amount of work is generated which another library would not consider doing. Its records would not be less correct than CLL’s; they would merely be different” (1979, p. 82). Ultimately, the question of quality for Boissonnas was a monetary one: “Given our resources and the current standards, how much quality can we afford to provide?” (1979, p. 80).

In 1981, James Schoenung submitted his dissertation titled *The Quality of the Member-Input Monographic Records in the OCLC On-Line Union Catalog*. He sought to "evaluate the

effectiveness of the OCLC Shared Cataloging Subsystem, with particular emphasis on the quality of member-input monographic catalog records" up to 1977 (Schoenung, 1981, p. xvi). Using Library of Congress cataloging as the "benchmark" to evaluate the OCLC network's monographic records, Schoenung found that the numbers of errors (of varying degrees of seriousness) in the OCLC database seemed to be in decline. Less than 7% of the errors found affected access or "a work's description or identification at the edition level" (Schoenung, 1981, p. 230). Records that were input prior to 1975 accounted for 70% of the total number of errors tallied (Schoenung, 1981, p. 227). Schoenung also reported that the biggest issue with the OCLC database in terms of quality was the presence of a large amount of duplicate records. According to Schoenung, duplicate records result in wasted storage space and increase the amount of time needed by the cataloger to locate the appropriate record for the item in-hand, even if they did not necessarily affect the ability to retrieve the records.

Like Boissonnas, Schoenung was careful to note that "the concept of quality cataloging is most meaningful within the context of a particular library" (1981, p. 83). Despite the fact that Schoenung found that OCLC member-contributed copy lacked the quality of Library of Congress record copy, he insisted that his data show that the vast majority of records in the OCLC database fall into a "grey area" in terms of quality. While there were relatively few "fatal" or "serious" errors affecting access to the records, "style" errors were common (such as errors in punctuation, capitalization, abbreviations, use of outdated cataloging rules, etc.). How this ultimately affects the quality of the record depends on the library. Schoenung concluded his study by stating that, "[e]ach library must decide for itself the degree of imperfection it can tolerate and design workflows based on these limitations, always recognizing that today's 'perfect' record will not stand the test of time" (1981, p. 231).

OCLC continued to be a topic of complaint throughout the 1980s despite measures taken by OCLC to ensure better quality in its database. Further studies, such as the ones conducted separately by Sheila Intner and Carol C. Davis in 1987, demonstrated that the complaints often lacked solid foundation. Intner's study examined the perception that records in the OCLC network were inferior in quality to the records in the Research Libraries Information Network (RLIN). According to Intner (1989), "OCLC emphasized building its database, encouraging members to contribute new cataloging without applying strict controls on its accuracy and fullness, while RLIN assigned a high priority to cataloging quality" (p. 38). Intner examined 215 matched pairs of records from OCLC and RLIN (430 records total) and tallied the errors found in each record. Errors included: incorrect spelling, punctuation, and capitalization; misapplication of AACR2 or LCRI; problems with MARC coding; and the lack of subject headings or classification numbers (Intner, 1989, p. 39). She found that the differences in quality between OCLC and RLIN records were statistically insignificant. In addition, the majority of the errors found in both sets of records did not affect retrieval through access points. Intner suggested two major reasons for many of the errors found in the OCLC and RLIN records: (1) the errors were produced by inputters rather than by catalogers, perhaps due to poor handwriting or the attempt to conform to other citation styles; and, (2) there is a lack of understanding of cataloging rules and standards by catalogers due to a poor cataloging education in library school (1989, pp. 39-40). However, Intner concluded that, based upon her sample, the quality of records in both the OCLC and RLIN networks were good and the existence of a quality discrepancy between OCLC and RLIN cannot be justified from the results of her study.

Carol C. Davis, who at the time of her study was the manager of the Online Data Quality Section, Cataloging and Data Base Services Department, Marketing and User Services Division

of OCLC, wrote in 1989 that “there are lingering perceptions in some areas of the library community that OCLC has a ‘dirty database’” (p. 43). In order to examine these perceptions, OCLC conducted a study in 1987 that surveyed users of OCLC’s Online Union Catalog concerning the quality of the bibliographic records in that network. On a scale from excellent to poor, the OCLC study found that the majority of those surveyed (92.5% - most of whom identified themselves as “technical services librarians” or “catalogers”) believed that the quality of the records in the OCLC network was excellent to good (Davis, 1989, p. 44). The areas identified by the survey as specific to quality in a bibliographic record were “adherence to national standards, accuracy of name headings, accuracy of subject headings, typographical accuracy, and accuracy of MARC tagging” (Davis, 1989, p. 47).

Most of those surveyed rated these areas as “good” in OCLC’s database (once again, on a scale from excellent to poor), though academic research libraries on average rated these areas of quality as “fair.” Davis believed that the more critical attitudes of the academic research libraries toward OCLC’s database were due to the larger collections, and, therefore, larger catalogs, of academic research libraries where the accumulation of errors, particularly in access points, had the potential to create serious retrieval problems. When asked to rank the types of errors found in bibliographic records in terms of the seriousness of the error, unlike most other kind of libraries that ranked duplicate records as the most serious error, academic research libraries felt that name heading errors were the most serious threat to quality (Davis, 1989, pp. 48-49). Ultimately, the results of the OCLC survey confirmed what Intner had also seen in her survey, namely, that the perception of low quality in networked cataloging databases is just that: a perception that does not stand on any solid evidence.

Horny (1985) wrote that ensuring the quality control of a library's catalog starts by strict enforcement of procedure and review of catalogers' work at the local level – catalogers cannot afford to let the Library of Congress, cooperatives, or networks do all of the monitoring.

Participation in cataloging networks forces librarians to realize that local standards need to be adjusted in order to benefit the network members as a whole. If individual members put their cataloging needs above the needs of network colleagues, then the network will be imperiled.

Discussion over the effects of shared, network cataloging upon quality did not stop at concerns over local versus network responsibility, and skewed expectations and perceptions of the records contained in the databases. There was also discussion of how the very existence of shared cataloging networks endangered not only cataloging quality, but the cataloging profession itself.

In 1986, Ruth Hafter completed a thorough study on the effects of cataloging networks upon libraries, the professional status of catalogers, and the quality of the cataloging produced. Her work, titled *Academic Librarians and Cataloging Networks: Visibility, Quality Control, and Professional Status*, examined “the other side of the cost-benefit equation of communal database creation in general, and of network quality control activities in particular” (Hafter, 1986, p. 3). According to Hafter, increasing interest in quality control came from greater participation in cataloging networks. Concern over quality grew even more vocal when more and more libraries began to automate their cataloging processes in the late 1970s and 1980s. As these cataloging networks grew, so did libraries' dependence on copy cataloging. This, in turn, led to the hiring of more paraprofessionals and fewer professional catalogers since (according to administrators) copy cataloging did not require the professional expertise that original cataloging requires. With

a broader range of bibliographic records available through cataloging networks, less original cataloging was needed, and, therefore, fewer professional catalogers were required to provide it.

In addition to the cost savings of hiring paraprofessionals, library administrators also began to lobby heavily for the inclusion of minimum level cataloging in cataloging networks. In Hafter's study, she found that half of the library administrators interviewed felt that traditional cataloging practices were too time consuming and costly and "were in favor of reducing the number of data elements and the complex description contained in the bibliographic records for many of the items acquired by their libraries" (Hafter, 1986, p. 89). Library administrators' objections were particularly loud during the transition from AACR to AACR2, which many felt was not worth the effort monetarily.

Hafter also polled practicing catalogers on their views of this shift from local control of cataloging to dependence upon cooperative cataloging. Many viewed this shift as beneficial in terms of efficiency and cost, but it also led to the deprofessionalization of cataloging and a decline in cataloging quality. Networks create an easier, more efficient cataloging process, requiring less individual effort on the part of libraries, consequently deprofessionalizing and marginalizing cataloging (Hafter, 1986).

Criticism of cataloging quality was not limited to the cataloging networks. Taylor and Simpson (1986) noticed that there is a perceived lack of quality in Cataloging In Publication (CIP) records produced by the Library of Congress Cataloging In Publication Division. CIP records are created by the Library of Congress using "prepublication galleys or front matter from publishers cooperating in the CIP program" (Taylor & Simpson, 1986, p. 376). Because of the CIP program, cataloging data can be produced before a work is published and often is transcribed by the publisher on the back of the title page when the work is published. Although

Library of Congress cataloging data are more widely and quickly available using this method, the process can cause problems when publishers make any changes to the work between the time that the CIP data are transcribed and the actual printing of the work. According to Taylor and Simpson (1986), “such changes mean that the finished copy may sometimes vary greatly from the CIP version that may have already been used by numerous libraries” (p. 376).

In order to determine if these CIP records were indeed error-ridden (and reflected lower quality) in comparison to other Library of Congress cataloging, Taylor and Simpson (1986) compared CIP and non-CIP records in order to determine the difference in error rates between the two groups. They found that the error rates of CIP and non-CIP records were similar in terms of “significant” errors and on the whole Library of Congress cataloging “is of reasonably high quality regardless of its beginnings” (Taylor & Simpson, 1986, p. 387). The areas where they felt that errors would be considered “significant” were other title punctuation, added entries, subject headings, the Dates fixed field, the series statement, the title proper, Dewey Decimal Classification, ISBN, Library of Congress Classification, MARC tags, the main entry, filing indicators in the 245 field, and the LCCN. In addition, the majority of both groups had either no errors or had few errors of significance; many errors were due to changes in cataloging practice or variations due to local cataloging policies.

The Automation of the Cataloging Process

Even though cooperative networks were most often the target of criticism in discussions of quality cataloging, there were other sources of controversy in library literature. The use of computers in the cataloging process was seen as a boon and a bane as it affects cataloging quality. In 1983, Soules wrote passionately about the decline of quality cataloging due to a

heavier reliance upon computer technology. Soules insisted that catalogers were misled into thinking that computers can make the cataloging process easier or eliminated altogether. On the contrary, computers have made catalogers' jobs more time consuming and difficult due to the fact that they have to spend more time dealing with the intricacies of the technology and less time performing actual cataloging (Soules, 1983). This, in turn, affects the quality of cataloging output because for every technology problem that distracts the cataloger, "there is one more possibility for human error or forgetfulness" (Soules, 1983, p. 28).

Morita (1983) agreed that computers had their limitations when it comes to some areas of cataloging, such as the maintenance of the intellectual content of records (call numbers, subject headings, etc.). However, Morita insisted that computer technology is vastly superior to humans when it comes to detecting errors in content description, such as typographical errors and missing information – errors that were present in card catalogs, but were much harder to locate once the card had been filed. In addition, the maintenance of access points (which, according to Morita is "the most important in maintaining quality" (1983, p. 2)) is made easier and more efficient by automatic heading changes and alerts that call attention to typing errors. Even though computer technology has not progressed to the point where all errors can be detected and corrected independently of human intervention, much of the past cataloging "grunt work" (such as correcting misspellings) will be eliminated eventually, freeing catalogers to spend more time on more intellectually demanding aspects of cataloging. This will ultimately lead to a higher quality catalog (Morita, 1983).

Horny (1985) concluded that computer technology made the cataloging process easier and more efficient in terms of maintaining quality, but this technology required even more vigilance in keeping certain types of errors out of the catalog. Even more so than in a card

catalog, “minor kinds of mistakes can effectively ‘lose’ bibliographic records” (Horny, 1985, p. 206) such as typographical errors in access points. In addition, the added complexity of using the MARC format in the cataloging process as opposed to “long-established and probably quite rigid rules for typing of catalog cards,” (Horny, 1985, p. 207) has placed a larger, technological burden on support staff, and a greater possibility that errors can occur within a bibliographic record. Horny insisted that the question ‘what is quality?’ will never be answered definitely, but there can be a “satisfying” answer, nonetheless (1985, p. 210). “What can make it satisfying is recognition that we know what we can reasonably accomplish with available resources and that we are targeting our work accordingly” (Horny, 1985, p. 210).

The Adoption of Minimal Level Cataloging (MLC)

As the popularity of network cataloging grew in the 1970s, so did the idea that a standard should be formulated to address situations where full descriptive and subject cataloging were not desirable in a bibliographic record. In the late 1970s, the *Anglo-American Cataloguing Rules, 2nd edition* (AACR2), were under construction and the decision was made to include “levels of description” as well. The intent of the basic level of description in AACR2, Level One, was to include only bibliographic description in a catalog record and did not address access points (Stamm, 1996, p. 192).

In yet another push to reduce arrearages, the Library of Congress concurrently devised *National Level Bibliographic Records-Books* (NLBR) that consisted of its own baseline standard for “categories of materials that had been in arrearage for over three years or for certain publications for which subject access was an uncommon aspect of retrieval” (Thomas, 1996, p. 501). This standard came to be known as minimal level cataloging (MLC) and at the time of its

implementation in 1979, MLC records consisted of the author, title, Library of Congress card number, edition, publication/distribution information, physical description, a series statement, and notes (Stamm, 1996, p. 193). However, “MLC did not provide for subject access, classification beyond a single LC class letter at the end of the 050 field, or authority work” and the work of creating the MLC records “was not performed by professional catalogers” (Stamm, 1996, p. 193).

MLC standards at the Library of Congress changed over time, eventually becoming a tiered service (MLC vs. “MLC Plus”) where MLC might include more fixed fields, added entries, uniform titles, and notes (Stamm, 1996, pp. 193-194), but as far as some Library of Congress employees and many librarians outside of the Library were concerned, the damage to the Library of Congress’s reputation as the bastion of cataloging quality was already done. Ross and West (1986) asserted that MLC did not provide enough information in records for sufficient user (both patrons and library staff) access and inhibited browsing due to the lack of subject analysis (classification and subject headings). This, in turn, hindered the effectiveness of cataloging networks, the whole point of which was to reduce costs and staff time by cataloging an item once and (preferably) fully so that every library in the network can benefit (Ross & West, 1986).

Rhee (1986) echoed this argument and concluded that MLC impeded access to the very rare and unique items it was meant to help rescue from the depths of technical services backlogs.

She noted that

academic libraries tend almost always to provide full cataloging (primarily derived from records in the bibliographic utilities rather than created originally) for mainstream materials that are already well controlled bibliographically through a variety of published sources, while they give short shrift to materials that are harder to locate in bibliographic sources other than the library catalog. (Rhee, 1986, p. 336)

Thomas (1996) noted that at the Library of Congress, “[s]ubject catalogers decried the loss of access simply on the basis of chronology...their reference colleagues supported them saying that the savings realized in cataloging were lost as they bore the additional cost of trying to locate materials inadequately described in the database” (p. 501). Mann (1991), a reference librarian at the Library of Congress, commented that the major reason for the acceptance of MLC (that *some* record is better than *no* record) is trumped by actual user information seeking behavior: the principal of least effort. Due to their lack of access points and subject analysis, MLC records tend to be most useful for known-item searches. By cutting off these alternate means of access to the user, “they will find—and settle for—whatever we make it *easy* for them to find” (Mann, 1991, p. 10). Mann also argued that MLC makes the work of reference librarians, who rely on the connections that access points and subject analysis make between items in a library collection, more difficult. Therefore, MLC lacks not only “predictability and serendipity,” but, “in preventing access to full texts in a systematic manner, it lacks *depth* as well” (Mann, 1991, p. 9). Finally, Mann asserted that such cataloging is not the quality cataloging many have come to expect from the Library of Congress. Mann felt that the goal of the Library of Congress is to “create, maintain, extend, and stock the standardized intellectual gridwork that makes the literature of the world—in all subject areas and in all languages—identifiable and retrievable in a systematic and predictable manner even by people who are not already experts in the subjects they wish to research” (1991, p. 21). In Mann's opinion, MLC undermines this goal.

The Library of Congress in the 1990s

The initiation of MLC was, according to Library of Congress cataloger Jeffrey Myers-Hayer, a “nibble at the edges” of the quality of Library of Congress cataloging by the management (1993, p. 17). But after the appointment of James H. Billington as Librarian of Congress in September 1987, a chain of events was set in motion that changed the Library of Congress’s cataloging practices and brought about an explosion of discussion concerning what cataloging quality means within the Library of Congress.

There was never a time in the history of the Library of Congress when arrearages were not casting a dark shadow over cataloging operations. There were always more items coming into the department than cataloging copy going out. When he took office, Billington inherited a nearly 40 million item backlog that was growing every year. Billington, who began office proclaiming his dedication to making the Library of Congress more accessible to the public, felt that a backlog of this magnitude was a major disservice to users since unprocessed items are inaccessible items. In his plea to the United States Congress for more funds to deal with the arrearage problem, Billington stated,

Putting the world’s largest reservoir of human knowledge to good use for the nation is our mission. But it simply will not be possible in the future unless the basic business of preserving and making available the collections gains a higher level of support than exists at present. (1990, p. 93)

With additional funds from Congress, Billington sought to tackle the arrearage by hiring more paraprofessional staff, streamlining the cataloging process, and doing more copy cataloging of the Library’s collections. In 1989, Billington announced his three-year target plan to reduce the number of unprocessed items by 11.3 million and by 1991, arrearages were down by 4.2 million (Billington, 1992, p. 70). Also in 1991, Billington was authorized to hire 164 new catalogers to help deal with the growing backlog (Billington, 1992, p. 70).

In September 1990, the Whole Book Cataloging Project was put into motion after a one-year pilot. The goal of the project was to eliminate the separation between the descriptive and subject cataloging divisions, a workflow partition that had been in place at the Library of Congress since the 1940s. This division of labor was originally meant to bring more efficiency to the cataloging process since it was believed that the creation of a record by separate subject and descriptive experts would be more expedient than one cataloger trained to do both activities (Yee, 1987). Billington decided that this “assembly line” process was ultimately too time consuming and a Whole Book Planning Committee was formed to study the implications of combining cataloging functions. Henriette Avram, who was asked to report the findings of the Whole Book Cataloging Project Evaluation Steering Committee, stated that “[t]he quality of the cataloging output during the project, implemented during 1989 as a pilot, was ‘excellent’,” that the project would increase productivity, and the project staff “in general have been overwhelmingly positive, resulting in very high morale” (Fineberg, 1990, p. 356).

Behind the scenes rumblings amongst Library of Congress staff seemed to undermine Avram’s report of positive responses to the project, and to Billington’s changes overall. The emergence of a new group within the Library of Congress appeared to reinforce the idea that Billington’s plans were quite unpopular amongst many on the Library of Congress staff and not just within the Cataloging Directorate.

In February of 1990, the Collections Services unit at the Library of Congress launched the Cataloging Forum, a group open to all Library of Congress staff and designed to be “an independent body dedicated to the open discussion of cataloging policy and practices at the Library of Congress” (“Cataloging Forum begins February 27,” 1990, p. 77). Over the next five years, the Cataloging Forum published a series of six opinion papers starting in 1991. Of those

six publications, four of them focused specifically upon cataloging quality. Two of those four on cataloging quality were written by Library of Congress reference librarian Thomas Mann. From these opinion papers, it is clear that there was anxiety concerning how Billington's planned changes in the Cataloging Directorate would affect the quality of Library of Congress cataloging which, as seen from previous discussion, was generally seen as the "gold standard" in cataloging quality.

In two of the Cataloging Forum Opinion Papers (no. 1 in 1991 and no. 5 in 1994), Thomas Mann focused on the quality of subject cataloging and the need for subject specialists to create "systematic avenues of access" (Mann, 1991, p. 3). Mann explained that the direction of Library of Congress cataloging will create bibliographic records that will not be helpful for users performing in-depth research because keyword searching can only take the user as far as what words happen to be in the record. Subject cataloging using a controlled vocabulary, such as the *Library of Congress Subject Headings* (LCSH), and classification systems, such as *Library of Congress Classification* (LCC), collocates works by subject under predetermined subject terms and class numbers, taking much of the guesswork out of subject searching. MLC records (which do not contain subject headings and full call numbers) and the combination of the descriptive and subject cataloging departments undermine the quality of Library of Congress records by denying expert subject analysis (Mann, 1991; Mann, 1994). According to Mann, he was not alone in feeling this way: "it is not an encouraging sign when 81 percent of our own professional subject catalogers have recently signed a petition to the Librarian, objecting to the 'permanent decline in cataloging quality' that they foresee under their new organizational structure" (Mann, 1991, p. 14).

In 1993, a fourth opinion paper titled *Cataloging Quality Is...Five Perspectives* was published with three Library of Congress catalogers (Lenore Bell, Susan Morris, and Jeffrey Myers-Hayer) and two Library of Congress reference librarians (Levon Avdoyan and Allison Level) weighing in on what cataloging quality means to them. Each contributor had a slightly different idea of how cataloging quality should be defined.

Avdoyan (1993) listed what he felt were the most important aspects of a "good record," though he admitted that quality cataloging is, like art, hard to define because "quality" is often in the eye of the beholder:

1. Must have an established author;
2. Must have a uniform title, if appropriate;
3. Must be strictly transliterated by existing Library of Congress Romanization tables or be catalogued in the vernacular;
4. Must have established series entries—not just one, but all;
5. Must have established subject entries of more than a general nature;
6. Must be consistently cataloged with other volumes of its set;
7. Must have full descriptive cataloging, including bibliographical notes, indications of illustrative matter, etc.;
8. Must contain the coding necessary for the use of the automated limit functions already established, e.g., language, imprint, geographical, etc.;
9. Must be fully classified, with the inclusion of cutter numbers. (pp. 5-6)

Avdoyan's list of cataloging quality attributes is more specific and lengthy than the others in the opinion paper, mainly because his beliefs are more in line with Osborn's "perfectionist" cataloger; he believed catalogers should strive to create the fullest and most accurate record as possible so that everyone (from the Library of Congress to the smallest public library) can benefit from LC's expertise. "Quality cataloging," Avdoyan wrote, "is the consistent creation of a comprehensive bibliographic record, aimed at the highest level of researcher, yet retrievable by all users both now and (with minimal adaptation if necessary) in the future" (1995, p. 3).

The two reference librarians agreed with Thomas Mann's previous assessment of MLC records - that they create more work for reference librarians and users by providing less

information in each record. “A symbiotic relationship exists between quality cataloging and quality reference,” Level (1993) writes (p. 20) and Avdoyan (1993) states, “[a]ny record is *not* better than no record at all” (p. 4).

The Library of Congress catalogers had other ideas of what quality cataloging means to them. Lenore Bell insisted that quality cataloging is maintaining standards, such as following AACR2, the *Subject Heading Manual* (SHM), and the MARC standard. Bell claimed that this is something that is not done outside the Library of Congress with the accuracy and thoroughness performed by Library of Congress catalogers. The reorganization of the Cataloging Directorate forced catalogers to “circumvent many standards in the acceptance of external cataloging copy” (Bell, 1993, p. 7).

Susan Morris agreed with this definition to a certain extent, but felt that cataloging quality is more than just an adherence to standards. She wrote that she believed in the “classic definition of quality” (though she does not say from whom or where this definition originated) which “stressed accuracy of transcription, adherence to a set of instructions embodied in a descriptive cataloging code or a subject cataloging manual, and completeness of each cataloging record” but now, the definition could be expanded to include “cost-effectiveness, timeliness, and greater awareness of user skills and needs” (Morris, 1993, p. 11).

Because of this expansion of what is seen as quality in cataloging to a greater stress upon the service cataloging can provide to the user, Morris explained that one can no longer claim that there is an objective definition that all catalogers can agree upon and follow: “catalogers must develop their own personal ideal of cataloging quality in order to perform effectively” (Morris, 1993, p. 11). The combining of subject and descriptive cataloging duties at the Library of Congress into one department altered Morris’ perception of cataloging quality. “After several

years of subject cataloging, I find myself less tolerant of the minutiae of the descriptive rules and more likely to use them to help me record what *I* think the user needs to know about the book, rather than rigidly applying the rules merely to avoid errors” (Morris, 1993, p. 13).

Jeffrey Myers-Hayer defined quality cataloging as “the provision of accurate, useful bibliographic information in a timely manner, at a reasonable cost” (1993, p. 17). Myers-Hayer also noted that “[t]raditionally, LC has stressed the first element of this definition at the expense of timeliness and cost” (1993, p. 17). Due to the changes made by Library of Congress management, LC catalogers must begin to define quality cataloging more like other libraries who have worked under harsher financial conditions, Myers-Hayer warned.

On October 17, 1994, the Library of Congress Cataloging Forum hosted six speakers, each of whom addressed cataloging quality. Barbara Tillett, chief of the Cataloging Policy and Support Office (CPSO), asked Library of Congress employees to respond with their definitions of quality cataloging (*Cataloging quality*, 1995, p. [1]). The result of Tillett's efforts was the sixth opinion paper of the Cataloging Forum, titled *Cataloging Quality: A Library of Congress Symposium*. Tillett found that most responses were in line with Myers-Hayer's definition in the 1993 opinion paper; that cataloging quality is "accurate bibliographic information that meets users' needs and provides appropriate access in a timely fashion" (*Cataloging quality*, 1995, p. 28). However, Tillett also noted that many believed that quality cataloging (at least at the Library of Congress) should go beyond this basic definition. According to respondents, quality cataloging should also consist of "consistent application of cataloging rules and principles of subject analysis, as well as accurate content designation" (*Cataloging quality*, 1995, p. 28). In addition, records should be as complete and accurate as possible when first created, saving the time of institutions who will reuse the record later on. Tillett also found the continued thread of

discontent with the recent changes in LC cataloging policies and the restructuring of the Cataloging Directorate. Respondents felt that quality cataloging is a reflection of the "integrity of the institution" and the changes have chipped away at that integrity. Specific problems mentioned by respondents include:

- wide variation in practice from team to team and within teams
- misuse of MLC, OCLC, and 2A cataloging, resulting in no retrievable access
- use of copy that is not reviewed for appropriate subject access
- lack of timely maintenance of our records and tools and degradation of LCSH as a tool due to inconsistent policies
- lack of management concern for quality cataloging as reflected in:
 - abandonment of formalized quality control reviews
 - dismissal of quality review as too costly and time consuming...a luxury we can no longer afford
 - lack of corrective action
 - management's approach to arrears reduction that used a quick fix, abandoning those standards perceived by management to prevent rapid processing
 - lack of appreciation for language and subject expertise; believing instead that anyone can be cross-trained to do subject cataloging and that mastering the rules of LCSH is all that is needed to do subject analysis; dismissing the importance of subject knowledge (*Cataloging quality*, 1995, p. 28-29)

All of the Cataloging Forum opinion papers demonstrate the deep concern that many Library of Congress employees felt at what they viewed as a loss in cataloging quality due to the changes occurring at the library.

Cataloging Quality in the 1990s and 2000s

While the Library of Congress was having its internal debate on quality cataloging, others outside of the Library continued to discuss the topic as well. Just as there had been in previous years, there continued to be studies in the 1990s and 2000s on the existence of cataloging errors in catalogs and databases (Knutson, 1990; Zeng, 1993; Beall, 2000; Shedenhelm & Burk, 2001; El-Sherbini, 2010). However, a greater effort was being made to create a standard for measuring quality. In addition, user satisfaction and quicker processing of library materials became a larger

part of the cataloging quality discussion. As a result, works that discuss quality cataloging during this time period are more questioning of traditional practices and desirous of developing strategies and guidelines for the cataloging process and product that would meet basic information needs in the broadest sense. However, most of these studies find that an objective quality measurement for all libraries is difficult to obtain and that dimensions of quality are best calculated using local standards and empirical research of user preferences.

The Program for Cooperative Cataloging (PCC) was formed in 1995 by the Library of Congress as a way "to promote the creation of unique original cataloging according to a mutually agreed upon standard in a timely and cost-effective manner" (Thomas, 1996, p. 499). Libraries who agreed to be a part of the PCC also agreed to follow specific cataloging standards for core- and full-level records. The core record contained "reliable, accurate, and authoritative access points" (Thomas, 1996, p. 500), but not necessarily subject access or notes. However, a PCC full-level record would include subject access as well (Library of Congress, 2010). This collaborative work involving the creation of monographic bibliographic records was called BIBCO (the Bibliographic Component of the PCC) and the core- and full-level dichotomy of records was continued until January 4, 2010 when the PCC implemented the BIBCO standard record (BSR). According to the PCC, the BSR is "'floor' record that promotes an essential set of fields and codes that are sufficient for user tasks" (Library of Congress, 2009, Dec. 18) and essentially made the full-level record the minimum standard for PCC records. The BSR metadata application profile (MAP) contains the data elements that are considered mandatory (M) and mandatory if applicable (A) for BIBCO standard records (see Table 2.1).

Table 2.1

Metadata Application Profile (MAP) BIBCO Standard Record (BSR) for Printed Books (Library of Congress, 2009, Nov. 23).

Element	Labels and notes	Use
Leader		
06	Type of record “a” or “t”	M
07	Bibliographic level “m”	M
17	Encoding level “blank”	M
18	Descriptive cataloging form “a”	M
008 Variable Control Fields-Fixed-Length Data Elements: Books		
06	Type of date/Publication status	M
07-10	Date 1	M
11-14	Date 2	A
15-17	Place of publication, production or execution	M
23	Form of item	M
35-37	Language	M
38	Modified record	A
39	Cataloging source “c”	M
Variable data fields		
010	Library of Congress Control Number LCCN	A
020	International Standard Book Number ISBN \$c not required for BSR	A
041	Language code	A
042	Authentication code “pcc”	M
050, etc.	Classification number: Assign at least one classification number from an established classification system recognized in the MARC 21 Format for Bibliographic Data.	M
Element Labels and notes Use 100/110/111/ 130	Main entry—personal name; corporate body; meeting name; uniform title	A
240	Uniform title Supply if known or can be easily inferred from the item being cataloged.	A
245	Title and statement of responsibility	
	\$a Title proper	M
	\$n, \$p, \$b, \$c, \$h	A

Note. M=Mandatory data element; A=Mandatory if applicable.

(table continues)

Table 2.1 (continued).

Element	Labels and notes	Use
246	Varying form of title: \$a, \$n, \$p Assess each item or collection and assign titles that cover variations deemed important to assist users. The importance of varying title information is intended to reflect individual cataloger judgment and/or local policy. Code the 246 for parallel title as 246:31; all other varying titles may be coded as 246:13.	A
250	Edition statement	A
260	Publication, distribution, etc. (imprint) \$a, \$b, \$c Supply data appropriate for \$a and \$b if readily available; otherwise, use [S.l.] and [s.n.]. \$a Place of publication For items with only one publisher but multiple places are presented, catalogers may give only the first place listed.	M
300	Physical description	
	\$a Extent	M
	\$b Other physical details	A
490	Series statement Transcribe here the form of the series statement as it appears on the prescribed source in the item.	A
500	Source of title proper	A
501	With note	A
502	Dissertation note	A
505	Formatted contents note Contents may be encoded at one of two levels; “basic” or “enhanced”.	A
533	Reproduction note	A
546	Language note Give the language(s) of the described materials if not apparent from the rest of the description. Also describe alphabets, script, or other symbol systems appearing in the item.	A

Note. M=Mandatory data element; A=Mandatory if applicable.

(table continues)

Table 2.1 (continued).

Element	Labels and notes	Use
600-630, 650-651	<p>Subject access fields</p> <p>Use judgment in assessing each item. As appropriate, assign a complement of headings that provides access to at least the primary/essential subject and/or form of the work at the appropriate level of specificity. Assign such headings from an established thesaurus, list, or subject heading system recognized by the MARC 21 Format for Bibliographic Data. Follow the conventions of the particular subject heading system being used, including instances in which paired or related headings are needed to represent fully the primary subject aspect. Include all subfields provided in the particular subject heading system that are necessary to provide appropriately specific access or represent relevant aspects of the subject or form.</p>	A
700-740	<p>Added entry fields</p> <p>Use judgment in assessing each item. Assign a complement of added entries that covers the significant relationships associated with the work, expression, or manifestation of which the item is a part. The inclusion and importance of added entries are intended to reflect individual cataloger's judgment and/or local policy, in the context of shared cataloging.</p>	A
776	<p>Additional physical form entry</p> <p>Prefer use of this field with "\$i Display text" in lieu of the 530.</p>	A
8XX	<p>Series added entry</p> <p>If cataloger judgment or local cataloging policy is to trace a series, include in this field the authorized form of the series as established in the LC Name Authority File.</p>	A

Note. M=Mandatory data element; A=Mandatory if applicable.

According to the current PCC values statement, PCC members adhering to the minimum standards produce "[q]uality cataloging records, rich enough in content to be used with little or no modification at the local level and reasonable enough in cost to be generated in large numbers" (Library of Congress, 2010). By creating a specific blueprint for the construction of "quality" bibliographic records, Thomas (1996) asserted that the PCC has crafted a definition of quality cataloging "that is more thoroughly utilitarian" (p. 500). However, the PCC does not take into account the needs of various types of libraries, but instead focuses on what it feels is the baseline bibliographic record needs of its members, who are largely academic libraries (Library of Congress, 2009, Oct. 30). In addition, according to the *Final Report of the Task Group on BIBCO Standard Record Requirements* (Task Group on BIBCO Standard Record Requirements, 2009), the PCC BIBCO standard record contains all of the necessary elements needed to support the user tasks of the *Functional Requirements for Bibliographic Records* (FRBR): find, identify, select, and obtain. However, the actual effectiveness of these user tasks to serve user needs have been called into question. Hoffman (2008) pointed out that the creators of FRBR did not take into account any user studies when they developed the conceptual model and the user tasks. Because of this, Hoffman questioned the legitimacy of using the FRBR user tasks as a basis for the development of cataloging standards meant to help fulfill user needs.

In another effort to create a measureable standard for quality cataloging, Chapman and Massey (2002) performed a pilot study on the use of an "audit tool" to measure the accuracy of bibliographic records within a particular library and therefore determine the quality of that library catalog. They chose to look at eleven specific areas based on the *International Standard of Bibliographic Description* (ISBD): title; material description; statement of responsibility; author heading(s); edition; physical description; imprint; series; classmark/shelfmark; subject

headings; genre/category; and location (or branch) (Chapman & Massey, 2002, p. 316). The audit performed at the University of Bath library looked specifically at "the proportion of records with at least one error, either a keyboarding error (whether spelling or typing), incomplete data, or an omitted field" (Chapman & Massey, 2002, p. 316). The authors stressed that, even though the audit tool could be used in different libraries in a general way, it is essential to modify the tool based upon the library's collections and user needs. Therefore, the audit tool is not necessarily an objective standard for measuring cataloging quality, but a means of evaluating "accuracy in the library's own terms" (Chapman & Massey, 2002, p. 322).

MacEwan and Young (2004) attempted something similar in their effort to develop a "systematic measurement of the quality of bibliographic records at the British Library" (p. 1) using the FRBR user tasks as a guide. MacEwan and Young used Tom Delsey's mapping of MARC data elements to FRBR user tasks (Delsey, 2006), as well as their own mappings, in order to weight the importance of particular MARC data elements. Even though the authors could not come to any definite conclusions about the quality of the records in the British Library due to their small sample size (only 30 records were selected), they did feel that using the FRBR user tasks to determine the quality of a bibliographic record is "a firm starting point for assessing the value of the service (we provide users) both in terms of what we would like to offer and what we can afford to offer" (MacEwan & Young, 2004, p. 7).

In order to construct a quality cataloging measurement tool that is more evidence-based upon user needs and preferences, Hider and Tan (2008) conducted multiple studies and used multiple tools that looked at the validity of "expert opinion" of quality cataloging and what data elements users want and are actually using in the library catalog. Their study focused on public library catalog use in Singapore. As mentioned in Chapter 1 of the current study, Hider and Tan

tested the reliability of "expert opinion" in determining the quality of bibliographic records and found that there was little consistency between the experts' choices of records (Hider & Tan, 2008, pp. 343-344). The authors also conducted interviews, distributed surveys, and carried out "think-aloud sessions" with patrons of the National Library Board (NBL) public libraries in Singapore. The purpose of these techniques was to learn more about what data elements the users found most helpful in the identification and selection of items at the public library. Using the data they collected from the interviews, survey, and think aloud sessions, Hider and Tan created a record quality measurement tool that weighted the data elements according to user preferences. The tool would then measure the severity of errors in a record based upon their location in the record. A misspelling in the title proper (MARC field 245\$a), for example, would be weighted more heavily than a misspelling in the physical description field (MARC field 300) because users claimed that the title field was one of the most important data elements (in addition to the fact that the 245 field is an access point and the 300 field is not).

Hider and Tan admitted in their article that the creation of such a quality cataloging measurement tool is time-consuming, expensive, and highly localized in its effectiveness. They insisted that empirical research at the local level is essential for understanding what quality cataloging means for the individual library. This is because a standardized measurement of quality cataloging will not necessarily fit the needs of all users in every library (Hider & Tan, 2008).

Quality Dimensions

In addition to exploring how to create standardized measurements for quality cataloging, several groups and researchers attempted to define "dimensions of information quality." Instead of focusing on, for example, which MARC fields are needed in a quality record, these articles

attempted to develop a general framework for quality data that can be adapted to particular information environments, not just library cataloging departments.

In 1997 (updated in 2002), Statistics Canada unveiled its *Quality Assurance Framework* (QAF) in order to build confidence in the reliability of its information. It defined quality data in terms of "fitness for use," which they say is a "multidimensional concept embracing both the relevance of information to users' needs, and characteristics of the information such as accuracy, timeliness, accessibility, interpretability and coherence that affect how it can be used" (Statistics Canada, 2002, p. 1). The characteristics do not exist in a vacuum and the strength of the quality framework as a whole is reliant upon the performance of each of its parts; "failure in any one dimension will impair or destroy the usefulness of the information" (Statistics Canada, 2002, p. 3). Definitions for each of these characteristics are provided here (Statistics Canada, 2002, p. 3):

Relevance The ***relevance*** of statistical information reflects the degree to which it meets the real needs of clients. It is concerned with whether the available information sheds light on the issues of most importance to users. Assessing relevance is a subjective matter dependent upon the varying needs of users. The Agency's challenge is to weigh and balance the conflicting needs of current and potential users to produce a program that goes as far as possible in satisfying the most important needs within given resource constraints.

Accuracy The ***accuracy*** of statistical information is the degree to which the information correctly describes the phenomena it was designed to measure. It is usually characterized in terms of error in statistical estimates and is traditionally decomposed into bias (systematic error) and variance (random error) components. It may also be described in terms of the major sources of error that potentially cause inaccuracy (*e.g.*, coverage, sampling, nonresponse, response).

Timeliness The ***timeliness*** of statistical information refers to the delay between the reference point (or the end of the reference period) to which the information pertains, and the date on which the information becomes available. It is typically involved in a trade-off against ***accuracy***. The ***timeliness*** of information will influence its ***relevance***.

Accessibility The ***accessibility*** of statistical information refers to the ease with which it can be obtained from the Agency. This includes the ease with which the existence of information can be ascertained, as well as the suitability of the form or medium through

which the information can be accessed. The cost of the information may also be an aspect of *accessibility* for some users.

Interpretability The *interpretability* of statistical information reflects the availability of the supplementary information and metadata necessary to interpret and utilize it appropriately. This information normally covers the underlying concepts, variables and classifications used, the methodology of data collection and processing, and indications of the accuracy of the statistical information.

Coherence The *coherence* of statistical information reflects the degree to which it can be successfully brought together with other statistical information within a broad analytic framework and over time. The use of standard concepts, classifications and target populations promotes coherence, as does the use of common methodology across surveys. *Coherence* does not necessarily imply full numerical consistency.

The Statistics Canada *Quality Assurance Framework* also detailed exactly how to effectively manage each of these quality dimensions within Statistics Canada's many programs. Their general definitions of quality metadata characteristics are helpful in assessing quality library cataloging as well, but fall into the same predicament raised earlier by Chapman & Massey (2002) and Hider & Tan (2008), namely that quality frameworks work best when utilized in specific, local environments.

There is nothing inherently wrong with wanting to define quality in this manner as it is beneficial for specialized information communities to have guidelines as unambiguous as possible with which to measure the quality of their data. However, Bruce and Hillmann (2004) argued that sometimes specialist communities tend to view their data as unique to their community and resist the idea that a general, agreed-upon definition of quality can be reached. This is partly due to institutional and resource constraints that force bibliographic data creators to focus on project-specific solutions as opposed to thinking about better interoperability between their data and the data of other communities. Bruce and Hillmann asserted that better interoperability is necessary for long-term data quality, but thinking beyond the needs of the

immediate project is often viewed as a costly luxury; "[q]uality that serves outsiders is seen as [an] unaffordable altruism" (Bruce & Hillmann, 2004, p. 241).

Using Statistics Canada's *Quality Assurance Framework* as a starting point, Bruce and Hillmann developed their own set of characteristics for quality metadata that are "better adapted to the growing number of large-scale projects in which metadata from multiple source providers is aggregated into a unified metadata resource" (p. 243). These characteristics are: completeness, accuracy, provenance, conformance to expectations, logical consistency and coherence, timeliness, and accessibility. From Bruce and Hillmann (2004):

Completeness - (1) "The element set used should describe the target objects as completely as economically feasible"; (2) "the element set should be applied to the target object population as completely as possible." (p. 243)

Accuracy - "Minimally, the information provided in the values needs to be correct and factual. At the next level, accuracy is simply high-quality editing: the elimination of typographical errors, conforming expression of personal names and place names, use of standard abbreviations, and so on." (p. 243)

Provenance - Essentially information about the creation of the item: "who made it, how it was made, and where it has been." (p. 243)

Conformance to Expectations - "Element sets and application profiles should, in general, contain those elements that the community would reasonably expect to find" and "metadata choices need to reflect community thinking and expectations about necessary compromises in implementation." (p. 244)

Logical Consistency and Coherence - "[E]lements are conceived in a way that is consistent with standard definitions and concepts used in the subject or related domains and are presented to the user in consistent ways." (p. 245)

Timeliness - Is compromised of two ideas: currency and lag. "'Currency' problems occur when the target object changes but the metadata does not. 'Lag' problems occur when the target object is disseminated before some or all of the metadata is knowable or available." (p. 245)

Accessibility - The reduction or removal of physical or intellectual barriers to metadata access. Accessibility can be compromised if the metadata is not properly linked to the object described; is unreadable due to technical reasons.

Once again, this framework could be viewed as too vague and general to be useful across libraries and user populations, but Bruce and Hillmann insisted that starting with a generally agreed upon framework is essential for productive dialogue about quality at the local level, even if some of the particulars may produce differing opinions.

Increased Focus on User & Cataloging Process

In 1990, Graham discussed what he called the "essential record" and insisted that when discussing quality cataloging, "we have to make distinctions between providing access and providing convenience in access (that is, doing the patron's work for the patron in advance)" (p. 215). According to Graham (1990), quality has two characteristics: extent ("how much information is provided in the record") and accuracy ("the correctness of what is provided") (p. 214). He listed specific elements that should be considered when attempting to measure the level of quality in the library catalog. These elements include the level of detail, mechanical accuracy, intellectual accuracy, appropriateness of headings, holdings, and standards adherence (Graham, 1990, p. 214).

When considering quality cataloging, Graham argued that the debate often centers on the "extent" aspect rather than "accuracy." While many agree that transcription should be accurate, the level of detail needed is viewed differently. Graham compared this issue to that of choosing between two automobiles, such as a Volkswagen Beetle and a Mercedes-Benz. At the time of their release, both were considered to be reliable cars that would take passengers to their destination. However, the Mercedes-Benz contained more desirable features and amenities (Graham, 1990). In the same vein, Graham wrote, there are certain features of a library catalog and bibliographic records that are desirable, though not absolutely necessary, such as authority

control: "it is not in the strict sense *essential* for provision of access for the assiduous, knowledgeable patron" (Graham, 1990, p. 215). Graham argued that "[l]ocal administrative practice should emphasize lean records in the interest of both local and more general cost saving and service enhancement" (1990, p. 217). Ultimately, Graham insisted that this notion of "service enhancement" must be part of the quality equation; "[q]uality in cataloging is inversely proportional to cataloging productivity" (1990, p. 213).

The idea that increased cataloging productivity was an essential part of quality cataloging was also stressed in the Catalog Management Discussion Group meeting at the 1998 ALA Midwinter Conference. Both Karen Calhoun, Manager of the Cataloging Department at Cornell University Library, and John Schalow, head of the Cataloging Department at the University of Maryland Libraries, insisted that quality cataloging is getting library material into the users' hands as soon as possible. This occurs by accepting cataloging copy with little review and automating the cataloging process as much as possible in order to save money and time (Wasylenko, 1998).

The suggestion that catalogers need to focus more on new ways and means of satisfying the information needs of library end user occurs again and again in library literature during the 1990s and 2000s. In 2009, OCLC conducted a study titled *Online Catalogs: What Users and Librarians Want* which looked at both user and librarian ideas of cataloging quality (OCLC, 2009). This study found that there is a disconnect between user and librarian perceptions of quality and that these perceptions are driven by different outlooks and goals. The user identifies more with the information environment on the World Wide Web and seeks more direct access to online content. Users also want more of what OCLC calls "enrichment data" such as tables of contents and summaries in catalog records (OCLC, 2009, p. 50). The librarian, on the other hand,

is more focused upon the most efficient means of fulfilling work assignments. Therefore librarian ideas of quality cataloging are biased towards attributes like the elimination of duplicate records and fixing MARC coding errors which may or may not affect information retrieval on the user's end. This, of course, does not mean that the librarians' views of quality are inconsistent with the users' views. Often users are unaware of what goes on behind the scenes of catalog creation and do not understand the mechanisms that allow them to find what they seek. However, the OCLC report recommends that, in light of these findings, librarians "pay more attention to the library's delivery services and the data elements that support a positive experience for the end user" (OCLC, 2009, p. 55).

In order to focus more on the user as a major component of cataloging quality, Paiste (2003) described a "culture of quality" that every cataloging department should aspire to that goes beyond the bibliographic record and the library catalog. According to Paiste (2003), in order to produce quality cataloging, institutions must staff individuals who see the big picture, take pride in their work, feel empowered by their employers, and continually seek out ways to learn more and improve their skills. The goal of the "culture of quality" is to satisfy user needs; "[t]he customer, not the producer is the judge of quality" (Paiste, 2003, p. 328).

On the other hand, Bade (2008) contended that over-concern with the desires of the ambiguous "user" and rapid catalog record processing has led some (Intner, 1990; Wurangian, 2003; Deeken, 2006) to dismiss concerns regarding the quality of cataloging produced under these pressures. According to Bade, one such method is the use of the phrase "the perfect record" used by those who believe that catalogers are overly focused upon the intricacies of the bibliographic record and applying standards and rules (Bade, 2008, pp. 113-115). After examining the literature that includes the phrase "the perfect record," Bade found that it is

primarily used as a “rhetorical strategy for dismissing all issues concerning quality by reducing the very complex and context dependent notion of quality to what is implied in the phrase 'the perfect record'...a phrase used almost entirely by those who categorically reject it in the context of demands or questions concerning quality” (Bade, 2008, p. 114). In other words, claiming that creating perfect records is the goal of cataloging (or, at least, overzealous catalogers) is a way of sidestepping serious discussions of how to create and modify records that would best serve a library’s specific user population.

Thomas (1996) and Hill (2008) both concluded in their articles on quality cataloging that definitions of quality cataloging evolve as cataloging environments, pressures, and technologies change. Thomas (1996) wrote about the effects of outsourcing, copy cataloging, and the introduction of MLC and the Cooperative Online Serials program (CONSER), National Coordinated Cataloging Program (NCCP), and PCC upon perceptions of quality cataloging over the past 50 years. After examining selected works in library science literature and finding an increase in discussion and varying ways of defining quality cataloging, Thomas (1996) found that “[q]uality is not immutable but is rather a standard of excellence that reflects the values of the individuals proclaiming it” (p. 492).

Hill (2008) examined how changes in the management of the library catalog had a direct affect upon assessments of cataloging quality: as the catalog itself evolved, so did expectations for quality. Hill (2008) asserted that, from a manager's point of view, decisions regarding quality were multi-dimensional - looked at from philosophical, practical, monetary, and circumstantial viewpoints (p. 7). For example, philosophically, some material was deemed more important to include in the library catalog (books and journals) than others (photographs and sound

recordings) and practically, the number of authors of a work should be limited to no more than three due to the size limitations of catalog cards (the "rule of three") (Hill, 2008, p. 7).

According to Hill (2008), these managerial decisions, in addition to the shift from local control of the library catalog to cataloging in a cooperative environment, the decrease in the professional review of cataloging at the local level, and the change in catalog technology from cards to computers, has forced a re-thinking of what quality cataloging means in the modern, online era. Hill suggested that, in this day and age, examining quality cataloging from the point of view of the accuracy of the individual record is not enough. Instead, catalogers need to reexamine the cataloging process and focus on the bigger picture: "extent and content of individual records, extent and content of the database as a whole, and the effectiveness and accuracy of mechanisms to expose those records and that database to the World Wide Web have become the real measures of database quality" (Hill, 2008, p. 21).

Based upon the literature concerning quality cataloging that has emerged in the 1990s and 2000s, this reexamination of the definition of quality cataloging seems to be already occurring, but in a fragmented manner. According to a recent report by the Primary Research Group on academic library cataloging practices (Primary Research Group, 2008), definitions of quality cataloging cover a wide range of attributes (see Table 2.2). Responses to the question "How does your cataloging department define quality?" are both specific and general, and offer a broad range of opinions about quality cataloging. These data suggest that academic catalogers (or, at least their departments) are no longer thinking of quality cataloging only in terms of accuracy and extent of the bibliographic record and adherence to standards, but also in terms of the efficiency cataloging process and the benefit of cataloging (the product *and* the process) to library users.

Table 2.2

Cataloging Department Definitions of Quality Cataloging (Primary Research Group, 2008)

How does your cataloging department define quality?	# of Times Used by Respondents
Accuracy	21
Following professionally/nationally recognized standards	14
Getting items cataloged and on the shelf in a "timely manner"	12
Users' ability to find resources	11
Getting items cataloged and on the shelf "quickly"	7
Following local standards	6
Quality not defined	6
Completeness of record	5
Adequate access/almost no errors	5
Service	4
Selecting the "best record"	3
Correct access points	3
Ease of access	2
"Appropriate linkages"	2
"Processed promptly yet carefully"	2
"Error-free"	2
"Achieving excellence"	2
"No significant backlogs"	2
Catching mistakes	2
Useful records	2
Depends on cataloging done	1
Follows "established quality guidelines"	1
Limited duplication	1
"Cleanliness"	1
Provide "clear" bibliographic information	1
"Full and accurate subject analysis"	1
"Rate of through-put"	1
Intuitive records	1
"Sufficient description"	1
"Professional, experienced catalogers doing the work"	1
"Full use of authority control vendor"	1
Use of minimal, yet well-trained student workers	1
"Rush cataloging requests handled immediately"	1
"Valid subject headings, description and classification"	1
"High productivity and turnaround time"	1
Call number collocates collection properly	1
Enough access points so that record can be found	1
"Timely, current, correct metadata records"	1
Makes sense	1
"Zero defects"	1

Conclusion

The review of the literature indicates that discussions of quality cataloging in library science literature are an integral part of the larger discussion about the evolution of cataloging as a profession, as well as the influence of technology and cooperative efforts upon that profession. Even though many aspects of what makes cataloging "quality" can be agreed upon by catalogers regardless of the library environment, there are still enough differences in opinion to make defining "quality cataloging" more complicated than it may first appear. Cataloger experience, position, background, working environment, and user population, as well as changes in cataloging rules and technology, all contribute to an individual's idea of what quality cataloging should be. So far, there are not any known studies that seek to investigate how and why original catalogers perceive quality cataloging the way they do, as well as how this perception affects their work and influences the work of their department.

CHAPTER 3

METHODOLOGY

Introduction

In this chapter, the research methodology used for this study is explained. This includes an examination of the research approach and design, the tools used by to collect data for the study, and justification for approaches used in the survey and interviews. A description of the study population is also provided, as well as a description of data collection and data analysis techniques, and a summary of demographic data collected on the survey used for this research project.

Research Approach/Design

A mixed method research design was employed in order to answer the research questions stated in Chapter 1 of this study. A combination of qualitative and quantitative research methods were used to gather and analyze data on cataloger perceptions of quality, specifically, a survey instrument (Appendix A) and interviews (Appendix B). Pilot study interviews were conducted to help inform the research methodologies chosen for this study and a pilot survey was distributed before the actual survey in order to obtain feedback about the survey and correct any mistakes, confusing questions, and/or answer choices. The details of these pilot studies are examined later on in this chapter.

Q1: How do catalogers currently define quality cataloging?

The aim of this investigation is not to determine an objective definition of quality cataloging. Instead, the aim is to identify particular attributes and attitudes within catalogers'

perception of quality cataloging. A survey instrument and interviews are the most appropriate tools to discover these attributes and attitudes. Surveys are an excellent means of collecting data from a large sample of respondents with relatively little expense when compared to other data gathering methods (Nardi, 2006). Structured interviews were also conducted in order to elicit cataloger perceptions of quality cataloging. According to Fontana and Frey (1994), structured interviews begin with a predetermined set of questions that are asked of each respondent and recorded by the interviewer. This method of data collection "is one of the most common and most powerful ways we use to try to understand our fellow human beings" and their perspectives on a particular topic (Fontana & Frey, 1994, p. 361). Interview responses are guided by the predetermined questions asked by the interviewer, but the respondent is allowed to respond in her or her own words.

Q2: How do catalogers distinguish "quality" in terms of the cataloging process, the catalog record (as a product, or artifact, of the process), adherence to standards, and impact upon users?

One of the many issues in studying cataloger perceptions of quality is the fact that different catalogers focus on different aspects of cataloging when offering their definitions of quality. For example, one cataloger may focus on the catalog record itself and the process of creating it by adhering to standards, and another may focus more on how their work impacts users of the catalog. In the 2008 Primary Research Group study that asked respondents to relate how their cataloging department defines quality cataloging, answers ranged from "ease of findability of library materials" to long explanations of how errors rates are calculated, which cataloging duties are performed by which staff member, and turnaround time (Primary Research Group, 2008, pp. 134-138). For this study, a survey instrument and interviews were used to

"tease out" how catalogers may address these aspects when defining quality. Survey participants were asked to rate predetermined attributes of quality cataloging using this scale of importance:

Very important
Quite important
Important
Somewhat important
Not important
I don't know what this means

This particular rating scale was chosen in order to give survey participants the ability to rate each attribute based upon their perception of that attribute's importance in a quality record. Allowing the participants to choose only whether an attribute is "important" and "not important" would not be the best way to determine participant's actual perception. This is because participants may feel that an attribute is desirable, but not necessary essential for quality cataloging.

The attributes of quality cataloging (see Table 3.1) were chosen based upon their presence in the library literature and within the pilot study of this research as being a part of quality cataloging definitions. A few attributes have been included that are not mentioned in the literature or in the pilot study. This is because these attributes may be an important part of the quality cataloging equation even though they are not represented in the literature or the pilot study. Survey participants were encouraged to write-in quality cataloging attributes that are not specifically listed on the survey. Asking survey participants to rate the quality cataloging attributes demonstrates the degree to which participants feel that attribute is important to quality cataloging. This contrasts with the approach of asking the participants to choose which attributes they feel best define quality cataloging to them - an approach which does not reveal the level of interest the participant has (or does not have) toward the attributes. A rating scale "permits a

person to respond on a continuum rather than completely endorsing (or not endorsing) something" (Thomas, 1999, p. 21).

I grouped the quality cataloging attributes according to four broad, pre-determined categories of quality cataloging. I used my expert opinion to construct these categories and they were not subjected to inter-coder reliability testing. These four categories are: (1) the technical details of the bibliographic record, such as the accuracy of the data, error rates, and the inclusion or exclusion of fields; (2) the adherence to standards on the local, national, professional, or network level; (3) the cataloging process, including the pace of the workflow, staff training and performance, and administrative support; and (4) the impact of cataloging upon the users, such as the findability and accessibility of bibliographic records in the system and how well they lead the user to his or her desired information object. By grouping the attributes into these broad categories, I can identify the levels of focus upon the cataloging process, the catalog record (as a product, or artifact, of the process), adherence to standards, and impact upon users by participants in the study.

Table 3.1

Justification of Quality Cataloging Attributes on Survey

	Primary Research Group (2008) (1)	Snow Pilot Study (2010) (2)	Bade (2008) (3)	Library of Congress Cataloging Forum (1993) (4)	Library of Congress Cataloging Forum (1995) (5)	Not represented in literature or pilot study
Technical details of bibliographic record						
Creating a bibliographic record that is free of typographical errors	✓				✓	
Transcription of bibliographic data is as accurate as possible		✓		✓	✓	
Creating a bibliographic record that is as perfect as possible			✓	✓		
Creating a bibliographic record that best represents the item in-hand		✓				
Creating a bibliographic record that is as complete as possible, created with all present and future users in mind				✓		
Creating a bibliographic record that has the appropriate level of description (not too much information/not too little)						✓
Creating a bibliographic record that goes beyond basic description		✓		✓		
Call number is included and accurate		✓		✓		
Subject headings are included and accurate		✓		✓	✓	
Subject headings are at the appropriate level of specificity		✓		✓	✓	
Record includes links to information outside of catalog relevant to item		✓				
Fixed fields (008 field) are included and accurate		✓		✓		

(table continues)

Table 3.1 (continued).

	Primary Research Group (2008) (1)	Snow Pilot Study (2010) (2)	Bade (2008) (3)	Library of Congress Cataloging Forum (1993) (4)	Library of Congress Cataloging Forum (1995) (5)	Not represented in literature or pilot study
Adherence to standards (local, national, professional, network)						
Access points are correctly identified & formulated according to AACR2		✓		✓	✓	
Access points conform to authority records/controlled vocabulary used by library						✓
MARC tags are correct		✓		✓	✓	
Punctuation conforms to AACR2		✓				
Creating a bibliographic record that conforms to local standards	✓				✓	
Creating a bibliographic record that conforms to OCLC standards		✓				
Creating a bibliographic record that conforms to AACR2	✓	✓		✓	✓	
Creating a bibliographic record that conforms to Library of Congress Rule Interpretations (LCRI)		✓			✓	
Creating a bibliographic record that is transliterated according to Library of Congress Romanization tables				✓		
Using catalogers' judgment in choosing whether or not to adhere to standards (local, AACR2, etc.)		✓				

(table continues)

Table 3.1 (continued).

	Primary Research Group (2008) (1)	Snow Pilot Study (2010) (2)	Bade (2008) (3)	Library of Congress Cataloging Forum (1993) (4)	Library of Congress Cataloging Forum (1995) (5)	Not represented in literature or pilot study
The cataloging process/workflows/staff						
Little or no duplication of bibliographic records in the catalog	✓					
Items are cataloged and shelved quickly	✓					
Items are cataloged and shelved in a timely manner	✓			✓	✓	
Items are cataloged in a cost-effective manner				✓		
Enough time is allowed for complex/original cataloging		✓				
Backlogs are kept to a minimum	✓					
Initial training of cataloging staff is comprehensive		✓			✓	
Support staff is trained to adhere to national/local standards and supervised appropriately	✓				✓	
Complex/original cataloging is performed by professional catalogers	✓				✓	
Administration is responsive/supportive of cataloging process/needs		✓				
Administration is trained in/knowledgeable of cataloging		✓				
Needed cataloging resources are provided by employer		✓				
Continuing education is encouraged by employer		✓				
Support of overall cataloging community		✓				
Possessing good domain knowledge of material cataloged		✓				

(table continues)

Table 3.1 (continued).

	Primary Research Group (2008) (1)	Snow Pilot Study (2010) (2)	Bade (2008) (3)	Library of Congress Cataloging Forum (1993) (4)	Library of Congress Cataloging Forum (1995) (5)	Not represented in literature or pilot study
Impact upon users/findability/accessibility						
Creating a bibliographic record that is helpful/useful to the user		✓		✓	✓	
Enough access points are included so that the record can be found	✓				✓	
As many access points that are needed are included		✓				
The user is able to find records in the catalog quickly						✓
The user is able to find records in the catalog efficiently		✓				
User complaints/comments about catalog are addressed quickly	✓					
Having <i>some</i> record in the catalog, even if it lacks full description				✓	✓	
Awareness of user needs and skills				✓		

(1) Primary Research Group. (2008). *Academic library cataloging practices benchmarks*. [Rockville, MD]: Primary Research Group.

(2) Snow, K. (2010). Unpublished pilot study interviews conducted from December 17, 2009 through January 5, 2010.

(3) Bade, D.W. (2008). The perfect bibliographic record: Platonic ideal, rhetorical strategy or nonsense? *Cataloging & Classification Quarterly* 46(1), 109-133.

(4) *Cataloging quality is...five perspectives* (Opinion Papers, No. 4). (1993). Washington, D.C.: Library of Congress Cataloging Forum.

(5) *Cataloging quality: A Library of Congress symposium* (Opinion Papers, No. 6). (1995). Washington, D.C.: Library of Congress Cataloging Forum.

Q3: What characteristics of a bibliographic record, including field/subfield usage for content designation, are perceived to be the most important to catalogers when they judge the quality of a record?

Perceptions of what content should or should not be designated in a bibliographic record also reflect perceptions of quality cataloging as a whole and could possibly affect the cataloger's decision making process when creating a new record or modifying an existing record. The survey asked respondents to rate Machine-Readable Cataloging (MARC) fields/subfields by their level of importance in a quality catalog record (assuming that the field/subfield was applicable) using this scale:

- Very important
- Quite important
- Important
- Somewhat important
- Not important
- I don't know what this means

The MARC fields/subfields included in the survey are justified by the literature review, the AACR2 first level of description, the *International Standard Bibliographic Description* (ISBD), the MARC Content Designation Utilization Project (MCDU), and the pilot study for this research project (see Table 3.2). The respondents were also given a choice to add any fields or subfields that are important to them that were not included on the survey. The 504 field (Bibliography, etc. Note) was added to the list of MARC fields on the survey because of its frequent inclusion in bibliographic records.

In addition to this, in order to identify specific characteristics and fields in records, the interview respondents were asked to provide six bibliographic records: three records that the respondent felt to be "quality" and three records that the respondent felt to be "not quality." The respondent was also asked to give a brief explanation for each record as to why he/she felt that the record was "quality" or "not quality." This exercise provided measureable data needed to

answer the third research question, in addition to the data gathered by the survey and other interview questions.

Table 3.2

Justification of MARC Fields & Subfields on Survey

	PCC BIBCO (2010) (1)	AACR2 (1st level) (2002) (2)	Chapman & Massey (2002) (3)	ISBD(G) (1992) (4)	Hider & Tan (2008) (5)	MCDU (2006) (6)	Snow Pilot Study (2010) (7)
008						✓	✓
010	✓						
020	✓	✓		✓	✓		✓
022		✓		✓			
041	✓						✓
042	✓						
043						✓	
050/090	✓		✓			✓	✓
082/092	✓		✓				✓
100	✓		✓		✓		✓
110	✓		✓		✓		✓
111	✓		✓		✓		✓
130	✓				✓		✓
240	✓				✓		✓
245\$a	✓	✓	✓	✓	✓	✓	✓
245\$b	✓					✓	✓
245\$c	✓	✓	✓	✓		✓	✓
245\$h	✓		✓			✓	✓
245\$p	✓						✓
246	✓				✓	✓	✓
250	✓	✓	✓	✓	✓		
260\$a	✓	✓	✓	✓	✓	✓	
260\$b	✓	✓	✓	✓	✓		
260\$c	✓	✓	✓	✓	✓	✓	
300\$a	✓	✓	✓	✓	✓	✓	
300\$b	✓		✓	✓	✓	✓	
300\$c	✓		✓	✓	✓	✓	
440/490	✓		✓	✓	✓		✓

(table continues)

Table 3.2 (continued).

	PCC BIBCO (2010) (1)	AACR2 (1st level) (2002) (2)	Chapman & Massey (2002) (3)	ISBD(G) (1992) (4)	Hider & Tan (2008) (5)	MCDU (2006) (6)	Snow Pilot Study (2010) (7)
500	✓	✓		✓	✓	✓	✓
501	✓	✓		✓			
502	✓	✓		✓			
505	✓	✓		✓	✓		✓
520		✓		✓			✓
521		✓		✓	✓		
533	✓	✓		✓			
546	✓	✓		✓			✓
600	✓		✓		✓		✓
610	✓		✓		✓		✓
630	✓		✓		✓		✓
650	✓		✓		✓	✓	✓
651	✓		✓		✓		✓
655	✓		✓		✓		✓
700	✓				✓	✓	✓
710	✓				✓	✓	✓
730	✓				✓		✓
740	✓				✓		✓
776	✓						
800	✓						✓
830	✓						✓
856					✓		✓

(1) Library of Congress. (2009, Nov. 23). *Implementation of the BIBCO Standard Record for books*. Retrieved March 15, 2010, from http://www.loc.gov/catdir/pcc/bibco/BSR_ImplementationDoc.pdf

(2) Joint Steering Committee for the Revision of AACR. (2002). *Anglo-American Cataloguing Rules, 2nd ed., 2002 rev., 2005 update*. Chicago: American Library Association.

(3) Chapman, A. & Massey, O. (2002). A catalogue quality audit tool. *Library Management* 23(6/7), 314-324.

(4) International Federation of Library Associations and Institutions. ISBD Review Committee Working Group. (1992). *ISBD(G): General International Standard Bibliographic Description*. Retrieved March 28, 2010, from <http://archive.ifla.org/VII/s13/pubs/isbdg.htm>

(5) Hider, P. & Tan, K. (2008). Constructing record quality measures based on catalog use. *Cataloging & Classification Quarterly* 46(4), 338-361.

(6) Moen, W.E., Miksa, S.D., Eklund, A., & Polyakov, S. (2006, May 3). *MARC Content Designation Utilization Project: Inquiry and Analysis - Preliminary Analysis of Commonly Occurring Elements in MARC21 Records from OCLC WorldCat*. Retrieved March 28, 2010, from <http://www.mcd�.unt.edu/wp-content/CoreElementsAnalysisae3May2006.pdf>

(7) Snow, K. (2010). Unpublished pilot study interviews conducted from December 17, 2009 through January 5, 2010.

Q4: How is local cataloging practice influenced by cataloger perceptions of quality cataloging?

Through the survey instrument and interviews, employer perceptions of quality cataloging were gathered. The survey instrument and interviews also contain questions that attempt to define catalogers' roles in influencing definitions of quality cataloging for their department. One question asked how much influence (if any) the respondent had upon department policies and procedures. If the respondent has any influence, another question asked how the respondent influenced policies and procedures in his/her department. While conducting the pilot study for this research, I found that one of the participants claimed to have a great deal of influence on the policies for creating and evaluating the cataloging for the type of material she regularly cataloged. Examining this influence will shed further light on how individual cataloger's perceptions of quality affect the policies and procedures of cataloging departments in academic libraries.

Population

The target population of this study is catalogers who work in an academic library in a professional or non-professional position and who perform original cataloging. Original cataloging is defined as the creation of a new record that does not contain any prior data and/or the editing of an existing record that previously contained only very minimal data. Academic libraries include those libraries at junior or community colleges, technical schools, seminaries, colleges, and universities. Professional librarians (including catalogers) generally have a master's degree in library science, information science, or an equivalent area of study (American Library Association, 2011). Non-professional catalogers consist of paraprofessionals, students, and volunteers, though paraprofessionals make up the majority of catalogers who are defined as

non-professional in this study. A paraprofessional librarian is "a member of the library support staff, usually someone who holds at least the baccalaureate degree, trained to understand specific procedures and apply them according to pre-established rules under normal circumstances without exercising professional judgment" (Reitz, 2010).

Currently, the number of academic libraries in the United States is approximately 3,500 according to OCLC (2010). However, LibWeb's listing of academic libraries in the United States contains 2,251 academic libraries (Dowling, 2010). I believe that the number of academic libraries listed on the LibWeb website is sufficient to provide a good sample size for this study. The sample size of the study is based on the approximate number of original catalogers in academic libraries. According to a survey by R2 Consulting conducted in 2009, there are more than 8,000 original catalogers employed in North American academic libraries (Fischer & Lugg, 2009, p. 10). Using a sample size table provided in Leedy (1997), the minimum number of survey respondents needed is 367. This study did not go as far as determining, or validating, if the 367 sample size needed was truly a representative sample of all types of academic libraries. There was no stratified sampling performed on the 8,000 original catalogers to ensure that all types of academic libraries were represented.

The rationale for studying academic catalogers is based on the fact that academic cataloging departments contribute a greater percentage of original cataloging copy to large cataloging networks, such as the Online Computer Library Center (OCLC), than other types of libraries. According to R2 Consulting's 2009 study of MARC records in the North American marketplace, 97% of academic libraries fall into what they call "the traditional (green) tier" - the marketplace where the majority of MARC records are created, sold, and bought by commercial

and non-commercial entities - as opposed to 65% of school libraries and 63% of public libraries that fall into this tier (Fischer & Lugg, 2009, p. 30).

The rationale for studying catalogers who perform original cataloging is based on the fact that when performing original cataloging, there is greater potential for cataloger's judgment and preferences in terms of quality to come into play than in copy cataloging. Hoffman (2008) suggests that there is increased pressure on copy catalogers to accept cataloging copy with minimal changes. Therefore, there is less potential for cataloger's judgment to be used in determining the quality of a bibliographic record when performing copy cataloging.

The rationale for studying both professional and non-professional catalogers is based on a 2008 Primary Research Group study which states, "[a]bout 27.3% of the survey participants routinely use paraprofessional staff for original cataloging. Public colleges were more than three times more likely than private colleges to use paraprofessionals for original cataloging, and larger colleges were more than twice as likely as smaller ones to do so. More than two-thirds of research universities use paraprofessionals for original cataloging" (p. 40). Therefore, it would be prudent to include both professional and non-professional catalogers in this study.

Data Collection

Survey

The survey instrument was designed to be completed online using the website Survey Monkey (<http://www.surveymonkey.com/>), with the participants having the option of receiving a paper version upon request. Participants were identified using LibWeb Directory of Academic Libraries in the United States (http://lists.webjunction.org/libweb/Academic_main.html). A random sample of academic libraries was chosen from this list and I went to the library

homepage of each of the libraries chosen in order to collect contact information. I decided that disseminating the survey using this approach would help to reduce self-selection bias amongst the participants, as well as allow me to make assumptions about the whole population of academic catalogers who create original records. If the survey was only disseminated through email listservs, such as Autocat and OCLC-CAT, I would only be able to draw conclusions about the catalogers who subscribe to these listservs.

Due to the fact that there is no known list of catalogers who perform original cataloging in the United States, I decided that the best way of reaching the original catalogers without using listservs was to contact the head of cataloging or technical services at each library selected. If no head of cataloging or technical services was identified on the library homepage, I collected the contact information for the director of the library or whoever appeared to have the highest position at the library. The rationale for this approach was that the head of cataloging or technical services would presumably be in a better position to know who performed the original cataloging at his or her library and would be able to pass on the link to the survey directly to those individuals.

After collecting contact information for about 750 individuals, I conducted a pilot study in July 2010 to determine the effectiveness of this method of distribution and to gain feedback about the clarity of the questions and answers on the survey and if there were any typos or grammatical errors. The letter sent to the heads of cataloging or technical services during the pilot study, as well as during actual data collection, is included in Appendix C. The letter was slightly modified when sent to the library directors; the letter asked the directors to pass on the link to catalogers who perform original cataloging at their library as opposed to catalogers in

their department (which is how it was worded in the letter to the heads of cataloging or technical services).

During the pilot study, I emailed two technical services department heads at two separate academic libraries and asked them if they would be willing to participate in the pilot study and provide feedback on the wording and clarity of the email that I planned to send in the actual study. After obtaining their agreement, I sent them another email asking them to pass on the link to the survey to the original catalogers in their departments (Appendix C). The pilot study yielded helpful feedback on the survey, though not on the email sent to the heads of cataloging or technical services. I believe that the two recipients of the email may have misunderstood what kind of feedback they were asked to provide.

After making the necessary corrections to the survey, I used the contact information already collected to contact the random sampling of libraries. I used this method of data collection for about a month (August 2010). The minimum number of respondents needed (367) was not met during this time frame. About 200 surveys had been started (though not all completed) during this time. Because this number was so much less than the 367, I decided to post the link to the survey on multiple cataloging email listservs (Autocat, OCLC-CAT, and NGC4Lib) asking current participants to finish the survey (if they had not already completed it) and for further participants in the study. The survey was kept open until the end of September, 2010. At that point, I collected the contact information of the survey participants who had started the survey, but did not finish it. On the survey, there were only two pages of questions that participants were asked to answer. The aforementioned participants completed the page of demographic questions (which contained a question asking for the participant's name and email address), but did not complete the next page, which contained questions asking participants

about quality cataloging. I contacted these participants using the email address they provided on the first page of the survey and asked them to please finish the survey at their earliest convenience.

When I closed the survey in October of 2010, 472 people had at least clicked through past the first page of the survey, which contained the consent document (see Appendix A). There were 75 blank responses (neither the demographics nor the quality definitions pages of the survey were completed) and these surveys were discarded. There were 96 surveys that were only partially completed (i.e., the demographics page was completed, but the quality definitions page was not) and were subsequently discarded as well. A total of 5 completed responses were rejected for the following reasons: one respondent worked as a cataloger in a public library, two respondents were not currently or recently working as catalogers at the time of survey completion, one respondent worked for an "association library" (I was unable to confirm that this is an academic library), and one respondent only performed copy cataloging. After culling the responses, the total number of completed and accepted surveys was 296, about 81% of the 367 sample size needed.

Interviews

One of the questions on the survey asked the participant if he or she would be willing to participate in an interview for the study. A total of 187 respondents (63% of the total respondents) answered "yes" to this question. The name and contact information were collected for those who chose "yes" and I contacted 44 of these respondents based upon various criteria. I felt that it would be best to choose catalogers representing different demographic categories, such as academic library type, professional status, age range, experience range, feelings about

Resource Description and Access (RDA), etc., as opposed to using random sampling. I felt that this would ensure that different viewpoints on quality cataloging would be heard.

Pilot interviews were conducted in December, 2009 and January, 2010 in order to test the rigor and appropriateness of the questions chosen for the interview portion of this study's methodology. Three participants were initially chosen and contacted via email in order to gain their permission to be interviewed. Participants were chosen based upon my acquaintance with them and the presumption that they would agree to participate in this informal interview on short notice. Two out of the three agreed to be interviewed. Another participant was contacted through the recommendation of one of the other two participants and agreed to be a part of the pilot study. All three participants are professional catalogers who perform original cataloging and currently work at an academic library in the Dallas/Fort Worth Metroplex. I was unable to locate a non-professional cataloger to participate in the pilot study.

Each scheduled participant was asked to complete a questionnaire prior to the interview and then bring it to the interview. The questionnaire was mainly composed of demographic questions, such as age range, experience level, etc. Participants were also asked to locate six bibliographic records prior to the interview: three "quality" bibliographic records and three "not quality" bibliographic records. For each of the records, participants were asked to give explanations as to why the record was "quality" or "not quality" respectively. Participants were asked to provide copies of these records and the explanations and bring them to the interview.

Each participant was asked the same set of questions, though the last two participants were asked one additional question. I decided to add an additional question to the interview question set as a means of eliciting further information from participants that would answer the

study's research questions. Each participant was also asked to walk-through their "quality" and "not quality" records with me.

I examined the transcripts of each interview and the explanations that the participants gave for choosing their "quality" and "not quality" records. I used the four, broad categories of quality cataloging attributes to categorize the participant's responses to the interview questions (see Table 3.1). Data from each of these examinations were used to inform the survey instrument and interview questions used in this study.

Starting in October of 2010, I used the revised interview questions to begin interviewing the respondents who agreed to take part in the interview process. Just like in the pilot study, interview participants were asked to send me (either through the postal service or through email) six bibliographic records: three "quality" bibliographic records and three "not quality" bibliographic records. A pre-interview questionnaire was not given to the interview participants because the demographic information that this questionnaire provided in the pilot interviews was available through the survey that the interview participants had already completed.

Of the 44 respondents contacted, 20 individuals agreed to take part in the interview process and provide the 6 bibliographic records requested. However, I only received records from 11 of the interview participants. Via email, I scheduled interview times with each of the 20 participants. The interviews were conducted by phone from October to December of 2010. The interview participants were told that the interviews would last about 15-20 minutes, a time frame determined based upon my experience during the pilot study. Most interviews lasted on average about 20-25 minutes, with some lasting only 10-15 minutes and some lasting almost an hour. I recorded all of the interviews, with each participant's permission.

Data Analysis

Data analysis of the survey data was largely done within Survey Monkey and Excel spreadsheets. Some of the more complicated data analysis was performed within the statistical software program SPSS and the qualitative research analysis software NVivo. Many of the answers to the demographic questions were analyzed and organized within Survey Monkey, such as questions about the respondent's age range or level of cataloging experience. Answers to open-ended questions, such as "How do you personally define quality cataloging," were analyzed using content analysis within Excel spreadsheets. Content analysis was used in order to determine patterns of words and phrases each respondent used to answer the questions. This method of data analysis is defined by Neuendorf (2002) as "the systematic, objective, quantitative analysis of message characteristics" (p. 1). Weber (1990) further explains that content analysis "uses a set of procedures to make valid inferences from text" (p. 9). I attempted to identify patterns in cataloger perceptions of quality by applying this data analysis technique to respondent survey and interview responses. I manually grouped data from several of the survey questions into the four, predetermined categories of quality cataloging (technical details of the bibliographic record; adherence to standards; cataloging process/workflow/staff; and impact upon users/accessibility). The cataloging quality attributes listed under each category in Table 3.3 were used as a guide for categorization of the data collected.

Table 3.3

Four Categories of Quality Cataloging

Technical Details of the Bibliographic Record	Adherence to Standards	The Cataloging Process/Workflow/Staff	Impact Upon Users/Accessibility
<ul style="list-style-type: none"> • Accuracy • Level of Description • Lack of Typographical Errors 	<ul style="list-style-type: none"> • Follows AACR2 • Correct Use of MARC Tags • Adherence to Local Standards • Use of Controlled Vocabularies 	<ul style="list-style-type: none"> • Processing Time • Amount of Backlog • Faculty/Staff Training & Continuing Education • Administrative Support 	<ul style="list-style-type: none"> • Record is Helpful/Useful • Amount of Access Points • Awareness of User Needs/Skills • Findability

The answers to the question "How do you personally define quality cataloging" were organized into the four categories; however, many of the answers fell into more than one category. Therefore, I tabulated the responses based on "number of occurrences." For example, the definition "quality cataloging is adherence to the *Anglo-American Cataloguing Rules, 2nd edition* (AACR2) and MARC while striving to produce the most helpful record for library users" contains occurrences of attributes found in the categories "adherence to standards" and "impact upon users." Therefore, this one definition was counted under the "adherence to standards" category and the "impact upon users" category. A screenshot of the use of this method is included in Appendix D. This method allowed me to determine which categories received the most focus from the survey respondents. The answers that did not mention attributes of any of the four categories were also noted and analyzed separately.

In the quantitative data analysis of this research, the data gathered by the survey are both descriptive and inferential. Questions on the survey, such as the age range of the participants and the types of items cataloged, were designed to illuminate the characteristics of the population that was sampled. Graphical representations were made to show, for example, how many

participants hold a Master's degree in library science, or how many years each participant has worked as a cataloger. A chi-square test of independence within SPSS software was used to analyze the survey data to show the relationships between independent and dependent variables within the population. For example, I examined whether or not there is a statistically significant relationship between the age range of survey respondents and quality cataloging attributes they mention when they were asked to define quality cataloging. The chi-square test "examines independent observations (e.g., nominal- or ordinal-level questions on a survey) to determine if there is a significant association between them" (Hernon, 1994, p. 127). The chi-square test is the most appropriate statistical test for this study because I compared two sets of nominal data to establish if there is statistical significance. Chapter 4 details the results of the chi-square test.

Survey participants were also asked to provide the top three attributes of a quality bibliographic record and the top three attributes of a non-quality bibliographic record. The qualitative research analysis software NVivo was used to perform a word frequency analysis on the answers to this question in order to determine the most frequent words or phrases respondents used to describe a quality and non-quality bibliographic record. This data was not organized into the four categories of quality cataloging because the question asked specifically about attributes of the bibliographic record and the four categories encompass more than just the attributes of the bibliographic record.

Demographics

As mentioned previously, the target population of this study is professional and non-professional catalogers who work in an academic library and perform original cataloging. Demographic information was collected on the survey in order to learn more about the study's population. This information was also used to cross-analyze demographic data with quality

definitions data from the survey. The first "question" on the survey was a consent document that every participant was required to accept if he/she agreed to participate in the study and before continuing to the next page of the survey. The next question collected each respondent's name and email address. Only three out of the 296 respondents did not fill-in the answer correctly; for example, putting their first name in the "Name" answer box and their last name in the "Email address" answer box or giving a fake name (putting only random letters in each answer box). As mentioned in the previous chapter, these names and email addresses were only used to contact participants if there was a problem with their survey or if they agreed to participate in the interview portion of this study.

Respondents were also asked about the type of library for which they currently work. If the type of library where they work was not included in the answer choices, the respondent was encouraged to choose "Other" and write-in their library type in the answer box provided. Table 3.4 contains the breakdown of respondents by library type.

Table 3.4

Respondents by Type of Library (n = 296)

Type of Library	Number of Respondents	Percentage of Respondents
University	222	75%
College	44	15%
Junior or Community College	10	6%
Medical School	3	1%
Seminary	2	1%
Technical College	1	.34%
Art & Design College	1	.34%
Historical Society*	1	.34%
Cataloging Agency**	1	.34%
Independent Academic Research Library	1	.34%
University Health Sciences	1	.34%
Total	296	100%

*Serves as the North American History Library for a university

**Clients are primarily academic libraries

The vast majority of respondents (75%) work in a university library. It can be assumed that this disparity is due to the fact that universities tend to be larger and encompass multiple colleges. This, in turn, would require a larger faculty and staff and a larger library collection, and therefore lead to the employment of more catalogers to process that collection.

The respondents were also asked about their age range on the survey. Most respondents fell into the 51-60 age range (36% of total respondents). 48% of the total respondents are under the age of 50 and 52% of the total respondents are over the age of 50. Figure 3.1 shows the number and percentage of respondents by age range.

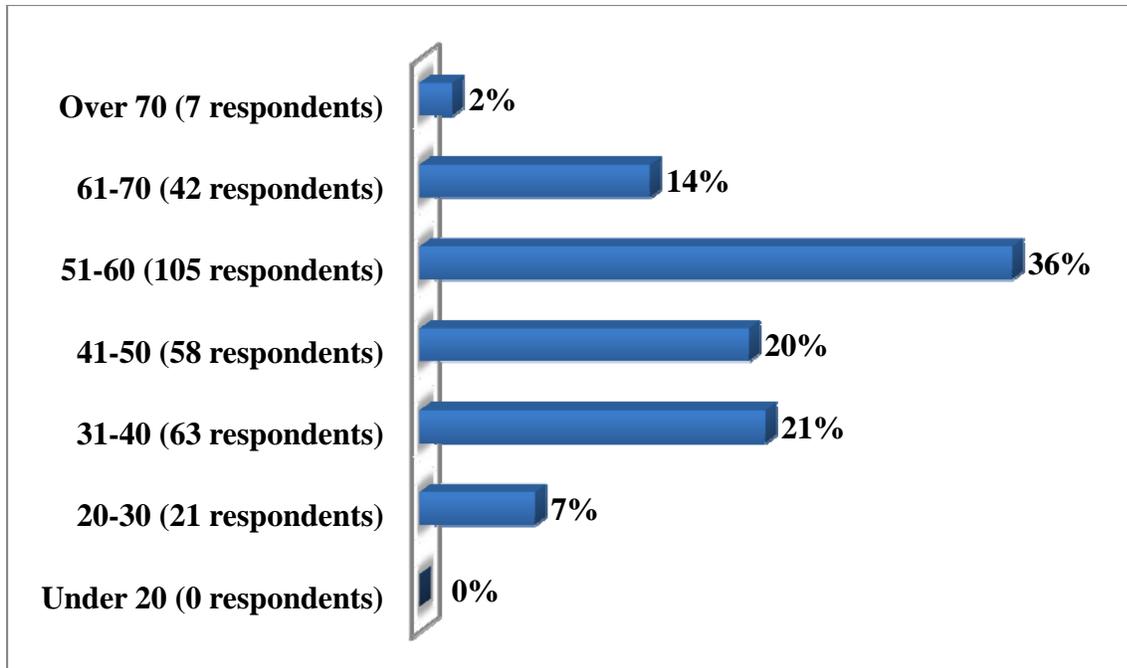


Figure 3.1. Age range of survey respondents ($n = 296$).

When asked how long they have worked as a cataloger (including both previous and current positions), the most frequent response was 0-5 years of cataloging experience (20% of total respondents). 61% of survey respondents answered that they have worked as a cataloger for 20 years or less. 39% of survey respondents have cataloged for more than 20 years. Figure 3.2 contains the levels of cataloging experience of the survey respondents.

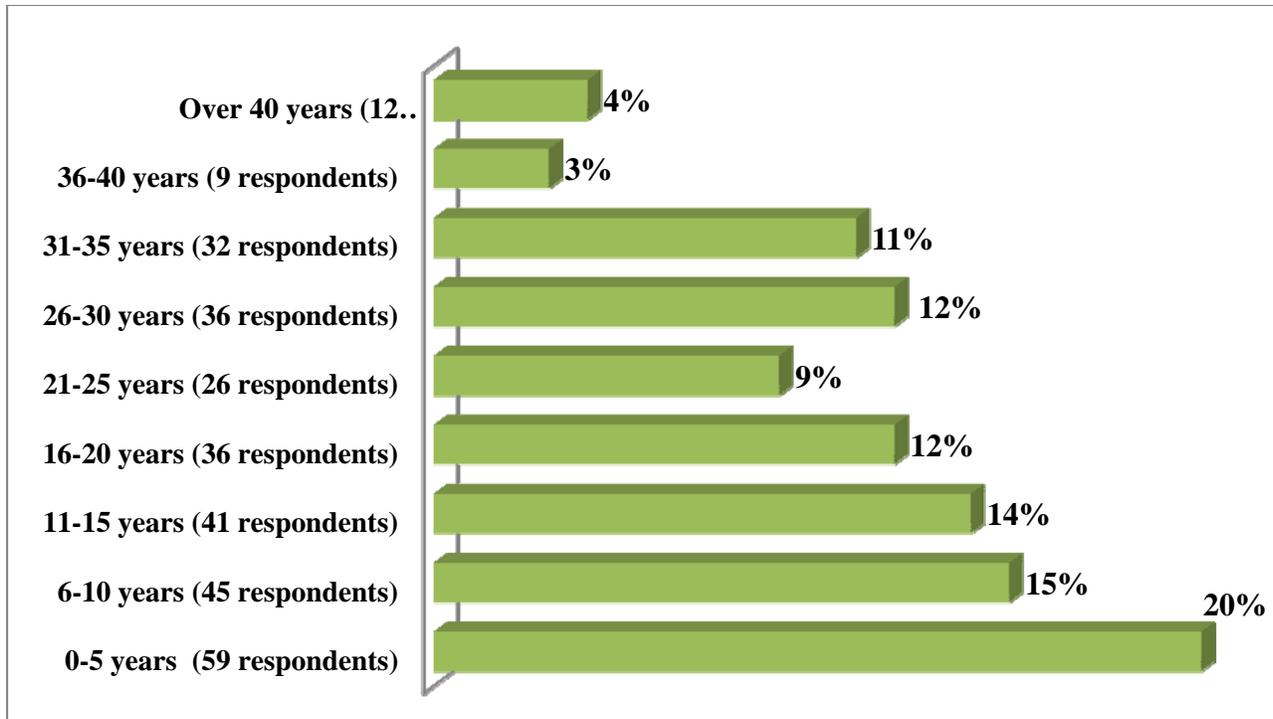


Figure 3.2. Cataloging experience of survey respondents ($n = 296$).

Another question asked respondents, "If you are employed in a professional cataloging position, did you ever catalog in a non-professional capacity (as a paraprofessional or student, for example)?" A total of 166 respondents (56%) answered "yes" and 92 respondents (31%) answered "no" to this question. A total of 38 respondents (13%) answered with "Not applicable - I am not currently employed as a professional cataloger." Because there was not a question asking respondents about their employment status (professional or non-professional), this answer allowed me to estimate how many non-professionals participated in the survey. Based on information from this question, 87% of the respondents work in a professional cataloging position and 13% of the respondents work in a non-professional position. Most non-professionals surveyed work in a paraprofessional position, though there were a few respondents who claimed to be contract catalogers, so their employment status was unclear. Figure 3.3 shows

the percentages of professional catalogers and non-professional catalogers who completed the survey.

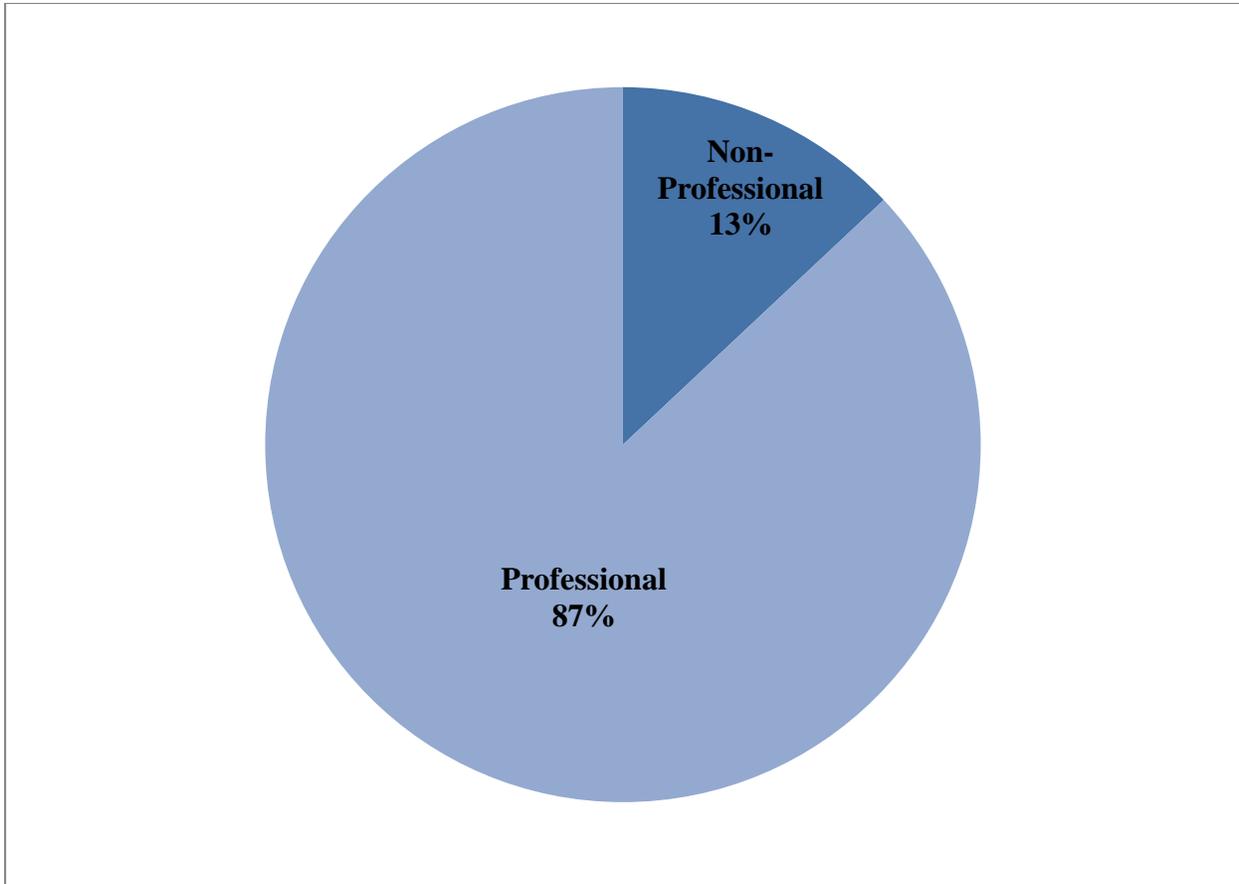


Figure 3.3. Employment status of survey respondents ($n = 296$).

Those respondents who answered that they cataloged in a non-professional position before working in their current, professional position, were also asked how long they worked in the non-professional position. Most respondents (nearly 54%) worked in a non-professional cataloging position for 0-2 years. Of those who answered this question, 81% worked for 5 years or less in a non-professional position before becoming a professional cataloger. Table 3.5 shows the breakdown of respondents by the number of years they worked in a non-professional cataloging position.

Table 3.5

Length of Time in Non-Professional Position (n = 171)

Number of Years in Non-Professional Position	Number of Respondents	Percentage of Respondents
0-2 years	92	53.8%
3-5 years	46	26.9%
6-8 years	14	8.2%
9-11 years	8	4.7%
12-14 years	2	1.2%
15-17 years	3	1.8%
18-20 years	3	1.8%
Over 20 years	3	1.8%

Respondents were also asked to state how many institutions for which they have worked. Most respondents (81%) have worked for 3 or less institutions. Figure 3.4 presents respondent answers to the question, "For how many institutions have you worked as a cataloger? (include both professional and non-professional positions).

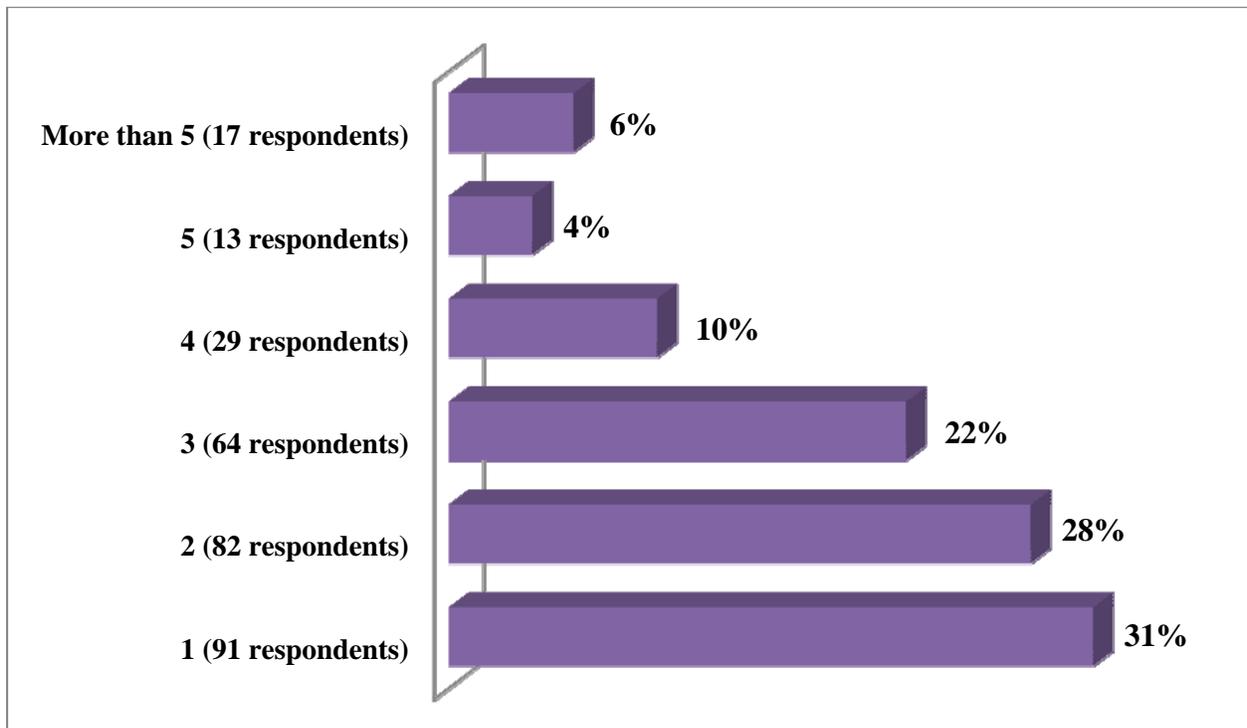


Figure 3.4. Number of institutions for which Respondent has worked (n = 296).

Respondents were also asked a series of questions relating to their educational background in library and information science and cataloging. The respondents were asked if they had previously taken any cataloging courses for college or university credit. Most (87%) said they had and 13% said they had not. Figure 3.5 contains a pie chart with this breakdown.

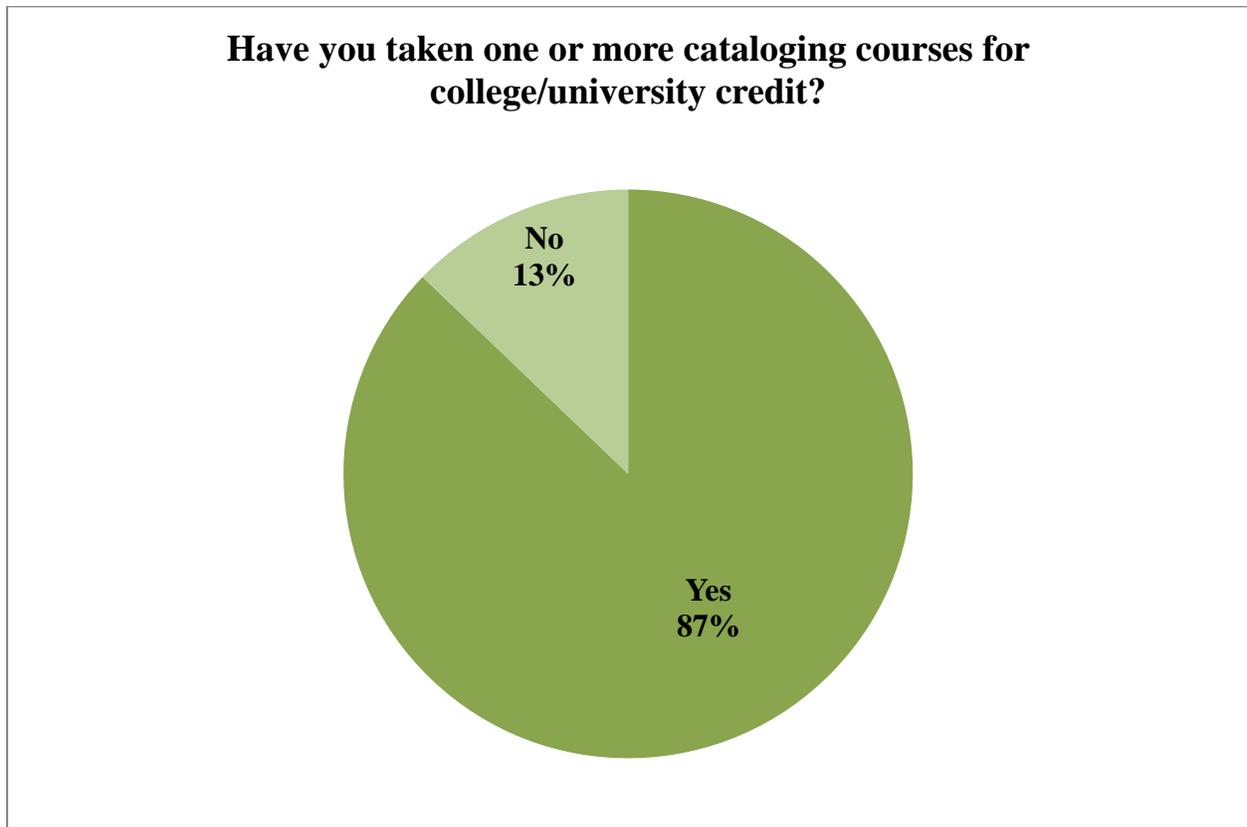


Figure 3.5. Cataloging Courses Taken for College/University Credit ($n = 296$).

Those who answered "yes" to the previous question about taking one or more cataloging course for college or university credit were then asked to choose the university or college where they attended the course(s). The top ten responses to this question are presented in Table 3.6.

Table 3.6

Universities/Colleges Where Respondents Attended Cataloging Courses (Top 10)

Name of University/College	Number of Respondents
Indiana University	18
Illinois, University of	15
Michigan, University of	14
Kent State University	12
North Texas, University of	12
Rutgers University	11
Simmons College	10
Dominican University	9
Pittsburgh, University of	8
Texas - Austin, University of	8

There were a total of 81 schools represented on the survey (either chosen by the respondent from the list provided in the survey or written-in by the respondent). A total of 59 schools (73%) currently are, or were, accredited by the American Library Association (ALA) when the respondents took their cataloging course(s). A total of 13 schools (16%) are located in the United States and are not currently ALA-accredited or were not ALA-accredited when the respondents took their cataloging course(s). A total of 9 schools (11%) are not located in the United States and are not currently ALA-accredited or were not ALA-accredited when the respondents took their cataloging course(s).

Of the total number of respondents who answered this question, 92% attended cataloging courses at an ALA-accredited school. The remaining 8% of the respondents attended cataloging courses at a school that is not ALA-accredited; 5% of those respondents attended an institution in the United States and 3% did not attend an institution in the United States.

Next, respondents were asked if they possessed a library and/or information science degree or library technician certificate (see Figure 3.6). A total of 87% of the respondents

answered that they do possess a library and/or information science degree or library technician certificate; 13% said they do not possess any of these degrees or certificates.

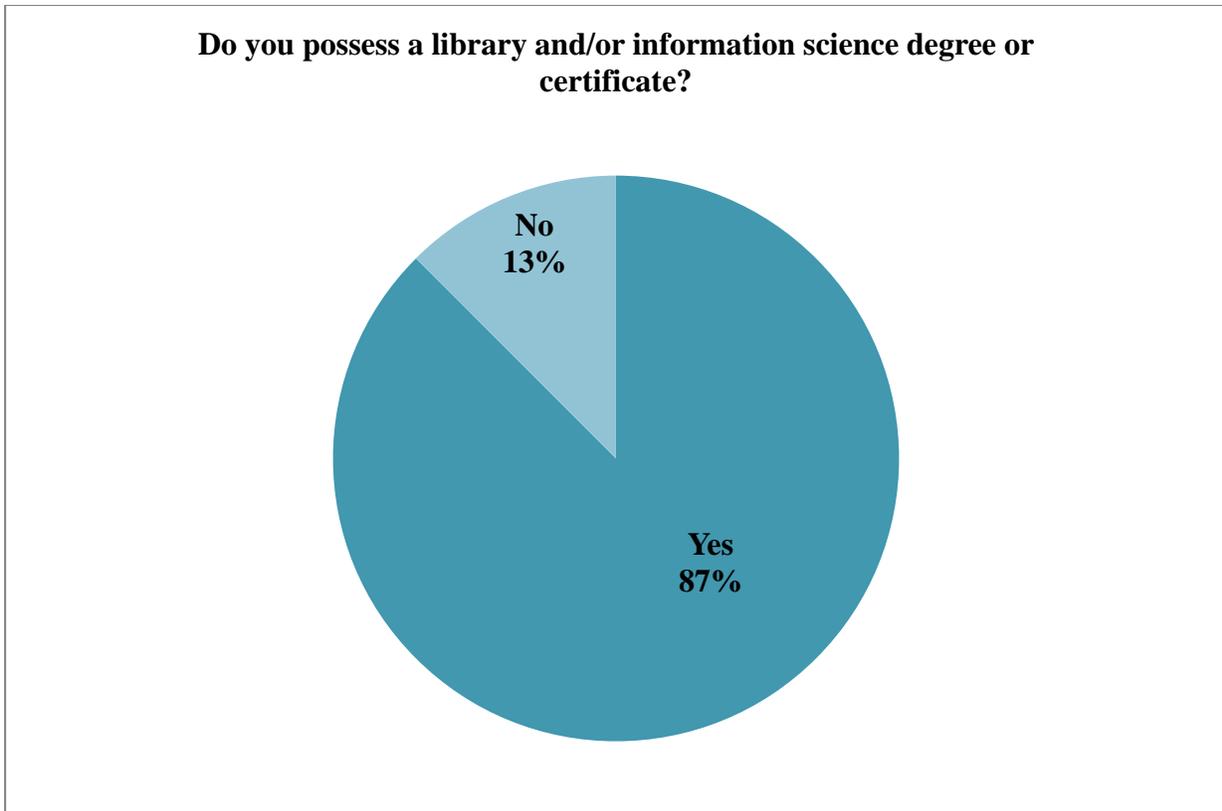


Figure 3.6. Possession of a library and/or information science degree or certificate ($n = 296$).

Respondents who answered "yes" to the above question were then asked which specific degrees/certificates they possess. Most respondents (52%) possess a Master's degree in library science. The next most commonly held degree is a Master's degree in library and information science, possessed by 36% of the survey respondents. Table 3.7 summarizes the types of degrees/certificates held by survey participants.

Table 3.7

Type of Degrees/Certificates Held By Survey Respondents (n = 266)

Type of Degree/Certificate	Number of Respondents	Percentage of Respondents
Master's Degree in Library Science	137	52%
Master's Degree in Library AND Information Science	97	36%
Bachelor's Degree in Library Science	8	3%
Master's Degree in Information Science	7	3%
Library Technician Degree/Certificate	4	2%
Master's Degree in Library & Information Studies	4	2%
Master's Degree in Library Studies	2	1%
Specialist in Library and Information Science	2	1%
Ph.D. in Library Science	1	.38%
Ph.D. in Information Science	1	.38%
Master's Degree in Library Service	1	.38%
Master's Degree in Information Studies	1	.38%
Master's Degree in Librarianship	1	.38%
Total	266	100%

Respondents were then asked to provide the year they obtained their degree(s) and/or certificate(s) in library and/or information science. The answers to this question are summarized by decade in Table 3.8. Most respondents (37%) received degrees in the 2000s. The majority of survey respondents (59%) received their degree/certificate in the 1990s or 2000s. A total of 41% received their degree/certificate before the year 1990.

Table 3.8

Year Respondent Received Degree/Certificate (by Decade)

Decade	Number of Responses	Percentage of Responses
1950s	2	1%
1960s	14	5%
1970s	48	17%
1980s	49	18%
1990s	62	22%
2000s	101	37%

Answers to the next two questions indicated that most respondents considered continuing education and conference attendance to be important. The question did not specify if the continuing education or conferences attended needed to be specifically about cataloging-related topics. Respondents were first asked to specify if their employer requires them to attend continuing education courses or conferences, if their employer *does not* require them to attend continuing education courses or conferences but they do so anyway, or if they do not attend continuing education courses or conferences. A total of 230 respondents (78%) answered that they are not required by their employer to attend continuing education courses or conferences, but they do so anyway. In sum, 93% of respondents take continuing education courses and/or attend conferences and only 7% do not do so (see Figure 3.7).

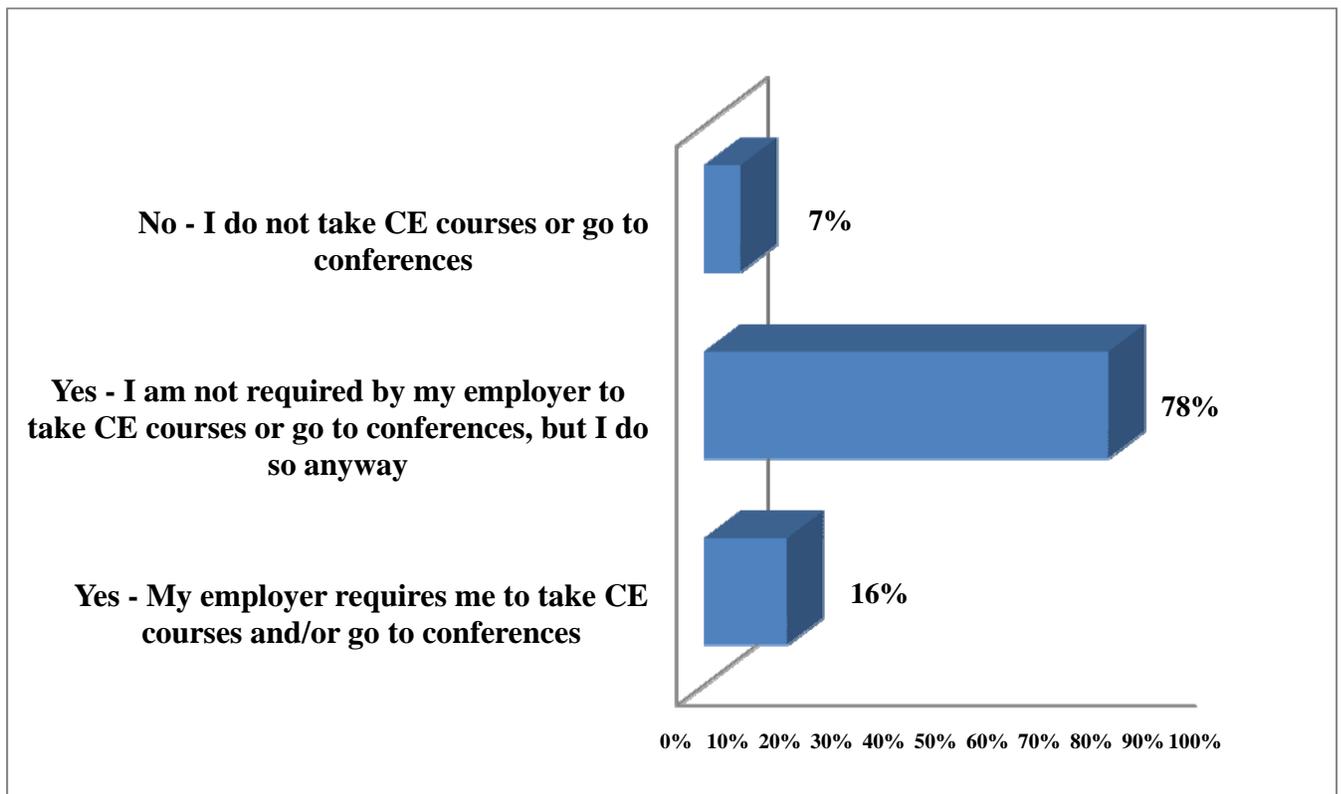


Figure 3.7. Continuing education and/or conference attendance ($n = 296$).

Of those who do take continuing education courses and/or attend conferences (either required by their employer or not), most respondents said that they do this frequently, about two or three times a year (114 respondents; 42% of responses). Table 3.9 provides a summary of the frequency of continuing education and/or conference attendance.

Table 3.9

Frequency of Continuing Education Course and/or Conference Attendance (n = 274)

Frequency	Number of Responses	Percentage of Responses
Very Frequently - four or more times a year	34	12%
Frequently - two or three times a year	114	42%
Often - usually about once a year	65	24%
Infrequently - I have attended CE courses and/or conferences in the past, but I don't currently do so on a regular basis	57	21%
Other (please specify)	4	2%

The final question in the demographics portion of the survey asked respondents to select which types of materials on which they perform original cataloging most often. Respondents were asked to choose amongst the predetermined answer choices listed in Table 3.10 and to select all that apply. Respondents were also given the option to write-in material types that were not represented in the answer choices.

Table 3.10

Type of Material Cataloged Originally On An Average Day (n = 296)

Type of Material	Number of Respondents	Percentage of Respondents
General Collection Monographs	196	66%
Dissertations/Theses	104	35%
Special Collections Material	102	35%
Motion Pictures/Videorecordings	98	33%
Electronic Resources	92	31%
Items in Languages Other Than English	89	30%
Continuing Resources	63	21%
Sound Recordings	59	20%
Rare Books/Manuscript Material	51	17%
Archival Material	40	14%
Music	35	12%
Cartographic Resources	21	7%
Other (Please Specify)	20	7%
Microforms	16	5%
Three-Dimensional Artifacts/Realia	13	4%

The most frequent answer was "General Collection Monographs" (66% of respondents). However, even though the majority of respondents chose this answer, it is not the only type of material on which they perform original cataloging on a typical day. Because the respondents were asked to select all the types of materials on which they perform original cataloging on a typical day, I was able to determine that respondents perform original cataloging on three material types on average. Incredibly, two respondents answered that they perform original cataloging on ten types of material on an average day.

Conclusion

The quantitative and qualitative research methodologies and tools chosen for this study were appropriate for collecting the data needed to answer this study's research questions. The

online survey tool Survey Monkey was used successfully to collect data for the study and Excel, SPSS, and NVivo software were used to analyze the data. On the whole, the data collection process was performed without any major problems, and the data analysis yielded insightful results. The last page of the survey contained questions used to elicit respondent opinions on quality cataloging. These responses are summarized in the next chapter.

CHAPTER 4

DATA ANALYSIS

Introduction

The data collected from the survey instrument and the interviews were analyzed within the Survey Monkey tool, Excel spreadsheets, the statistical software program, SPSS, and the qualitative research analysis software, NVivo. The following chapter details the results of data analysis performed on the survey and interview data collected.

Survey

The questions on the "quality cataloging" portion of the survey were chosen in order to obtain each respondent's personal definition of quality cataloging, how their institution defines quality cataloging, the top attributes of a quality bibliographic record, if and how each respondent influences the policies and procedures of his/her cataloging department, how each respondent feels about the quality of their own cataloging and the cataloging performed by catalogers in their department, the Machine-Readable Cataloging (MARC) fields and subfields important for quality cataloging, quality cataloging attributes important to each respondent, and finally, if the respondent feels that the implementation of the new cataloging standard, *Resource Description and Access* (RDA), will affect his or her definition of quality cataloging. Some of the survey data was cross-analyzed against answers obtained from the demographic portion of the survey in order to determine if there is any correlation between certain respondent demographic characteristics and their answers to the questions in the final portion of the survey. The following section summarizes the data analysis of the "quality cataloging" portion of the survey.

Attributes of a Quality Bibliographic Record

The first two questions in the "quality cataloging" section of the survey prompted participants to list the top three attributes of a quality bibliographic record and the top three attributes of a non-quality bibliographic record. Most answers to these questions consisted of one word or short phrase per attribute. Here are a few typical responses to the question, "In your own words, what do you feel are the top three attributes of a quality bibliographic record?":

Attribute #1 - Authority-controlled headings

Attribute #2 - Accurately transcribed title and publication information

Attribute #3 - Good subject headings

Attribute #1 - Accuracy

Attribute #2 - Fullness

Attribute #3 - Accessibility

In order to determine the most common attributes given by respondents, the NVivo software program was used to perform a word frequency query. A word frequency query within NVivo calculates the rate of occurrence of words and numbers (but not phrases) within a specific set of data. I removed certain non-illuminating words from the query results (such as *has*, *and*, and *very*) and combined the frequency rates of some words that are very close in meaning (for example, *correct* & *correctness* and *author* & *authors*). I also made the decision to combine certain words into a phrase if the words are found together as a phrase more often than not. For example, the word *call* was used by respondents 27 times, but in every one of these instances, *call* was paired with the word *number* or *numbers* in their answers. Therefore, in order to construct a more meaningful picture of the data, I counted the frequency of the use of *call number/call numbers* instead of the frequency of these words by themselves (*number* and *numbers* were sometimes used outside of the phrase *call number(s)* but very infrequently).

Table 4.1 lists the top 10 most frequently used words or phrases in answer to the question, "In your own words, what do you feel are the top three attributes of a quality bibliographic record?"

Table 4.1

Top 10 Most Frequently Used Words or Phrases Describing a Quality Record

Word/Phrase	Frequency
accuracy/accurate/accurately	221
subject/subjects	166
heading/headings	143
complete/completeness	100
description/descriptions	80
information	75
correct/correctly/correctness	67
access points	64
authoritative/authorities/authority/authorized	57
standards	55

The words *accurately*, *accurate*, and *accurately* were paired with many different words so that it was difficult to put together a consistent picture of how respondents used these words. *Accurate*, for example, was sometimes paired with *access points*, *subject headings*, *spelling*, *physical description*, etc., as well as used by itself (though it was more common for *accuracy* to be used by itself like in the example provided above). The same can be said about the words *complete* and *completeness*, as well as *correct*, *correctly*, and *correctness*.

The words *subject* and *subjects* were used slightly more often than *heading* and *headings*, but they were commonly paired together. For example, *heading* or *headings* was used with *subject* 97 times, or for 58% of all occurrences of *subject* or *subjects*. *Subject* was paired with *analysis* 29 times, or 17% of the time.

Information was used in a wide variety of contexts, but its most frequent pairing was with *accuracy of* or *accurate* (21 times). The same can be said of *description* or *descriptions* which were frequently paired with *accurate* (34 times), *complete* (18 times), and *full* or *fullness of* (11 times).

Answers to the question, "In your own words, what do you feel are the top three attributes of a non-quality bibliographic record?" were similar to the answers to the previous question; respondents spoke of similar topics, but in the negative. Table 4.2 contains the top 10 words and phrases used to describe a *non-quality* bibliographic record.

Table 4.2.

Top 10 Most Frequently Used Words or Phrases Describing a Non-Quality Record

Word/Phrase	Frequency
subject/subjects	142
heading/headings	136
information	114
lack/lacks/lacking	104
inaccurate/inaccuracies/inaccuracy	92
incorrect/incorrectly	86
incomplete/incompleteness	82
description	60
errors	60
access point/points	57

As before, more often than not, *subject* and *subjects* were used in conjunction with *heading* or *headings* (86 times out of the 142 times that *subject* or *subjects* occurred). In all cases, *subject* or *subjects* was preceded by *lack of*, *no*, *poor*, *inaccurate*, and other similar terminology. Also, just as in the previous question, *information* was used in many different ways, but the most prominent uses were in describing *incorrect information* (17 times) and *incomplete information* (16 times). Respondents often used words or phrases that essentially mean the same thing as *incorrect* and *incomplete* (see Table 4.3).

Table 4.3

Synonyms for Incorrect and Incomplete Information

Incorrect Information	Incomplete Information
inaccurate information (14 times)	missing information (11 times)
erroneous information (2 times)	lack of information (7 times)
made up information (1 time)	lack of important information (3 times)
	lack of necessary information (2 times)
	lacking essential information (1 time)
	partial information (1 time)
	insufficient information (1 time)

Personal Definitions of Quality Cataloging

The next question on the survey asked participants, "How do you personally define quality cataloging?" Similar to the 2008 Primary Research Group study that asked how the respondent's institution defines quality cataloging, answers to this question ranged from one word to several paragraphs, sometimes simply referring back to the attributes given in the question, "In your own words, what do you feel are the top three attributes of a quality bibliographic record?" (6% of respondents answered in this fashion). There were only four responses that either did not answer the question asked ("We are a very small Cataloging Dept. with just two people who do the basic cataloging and upgrading records for books that have any problems" and "?"), did not have a personal definition of quality cataloging ("I don't"), or provided only a vague answer ("Consistency"). These four answers were set aside and I proceeded to perform a content analysis on the remaining data within an Excel spreadsheet.

Each answer was examined and coded according to the four categories of quality cataloging previously established. Again, these four categories are: the technical details of the bibliographic record; adherence to standards; the cataloging process/workflow/staff; and the

impact upon users/accessibility. Table 3.3 from Chapter 3 provides a brief summary of the categories and the accompanying attributes and is replicated here, but as Table 4.4.

Table 4.4

Replicated Four Categories of Quality Cataloging & Attributes Summary

Technical Details of the Bibliographic Record <ul style="list-style-type: none"> • Accuracy • Level of Description • Lack of Typographical Errors 	Adherence to Standards <ul style="list-style-type: none"> • Follows AACR2 • Correct Use of MARC Tags • Adherence to Local Standards • Use of Controlled Vocabularies 	The Cataloging Process/Workflow/Staff <ul style="list-style-type: none"> • Processing Time • Amount of Backlog • Faculty/Staff Training & Continuing Education • Administrative Support 	Impact Upon Users/Accessibility <ul style="list-style-type: none"> • Record is Helpful/Useful • Amount of Access Points • Awareness of User Needs/Skills • Findability
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Each of the four categories was assigned a specific color and the respondent answers were color-coded according to these category colors (see Appendix D for an example of the color-coded data in Excel). Since respondents often provided attributes from more than one of the four categories, I color-coded individual words, phrases, or sentences within each answer. These "occurrences" were tallied under columns labeled with the names of the four categories to the right of the respondent answers resulting in multiple columns ticked per answer (once again, see Appendix D).

Respondent answers that did not fit into one of the four categories were highlighted in a different color so that I could go back and further examine the answer. However, these instances were rare. Only 16 responses (5%) contained attributes that could not be properly organized into any of the 4 pre-determined categories. However, 15 out of those 16 responses did contain answers that *could* be organized into at least 1 of the 4 categories in addition to the ideas that fell

outside of the categories. Only 1 of the 16 responses did not conform to any of the 4 categories.

All of these 16 definitions discussed the functionality or display of the library catalog. Here is an example of a definition that not only refers to adherence to standards and the impact upon users, but also to objectives of the catalog:

Library cataloging has developed over the past 150 years according to the principles of service to library users. The standards we use (consistency in description, authority control for headings, controlled vocabulary for subject analysis) enable users to "find, identify, select, and obtain" the information resources they need for personal use and enrichment and academic research. Elaine Svenonius has suggested a fifth user task, that of navigating the catalog. Consistency of practice and authority control in bibliographic records and files go partway there--our ILSs could do better in enabling precision and recall in searching.

After coding the personal definitions of quality cataloging provided on the survey, I tallied the number of occurrences of each of the 4 categories of quality cataloging. The category that contained attributes that were mentioned the most often was the "technical details of the bibliographic record" category with 241 occurrences (40% of occurrences; 81% of respondents). The "impact upon users" category was the next most frequently mentioned at 173 (28% of occurrences; 58% of respondents) closely followed by "adherence to standards" at 156 occurrences or (26% of occurrences; 53% of respondents). The "cataloging process" was mentioned by respondents the least with 39 occurrences (6% of occurrences; 13% of respondents). See Figure 4.1 for a chart of these results.

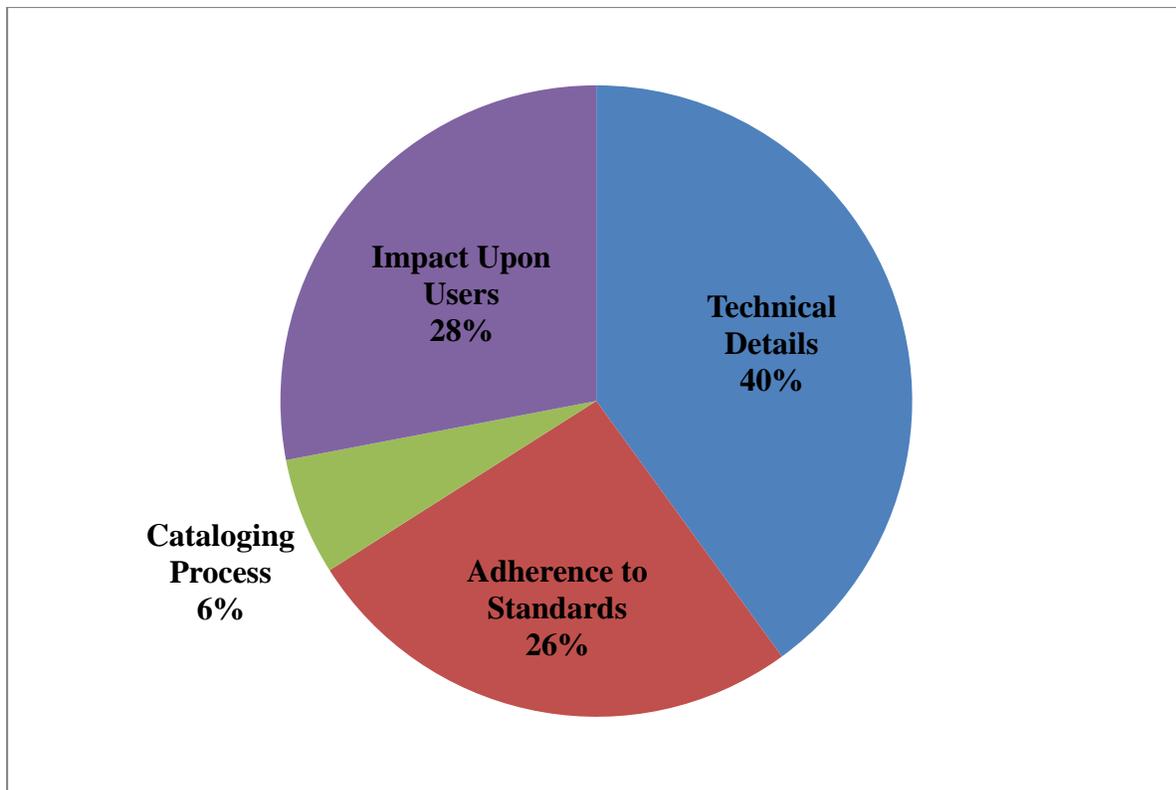


Figure 4.1. Personal quality definitions organized into the four categories of quality cataloging.

In addition to using content analysis to analyze the personal definitions of quality cataloging, I performed data analysis comparing specific demographic characteristics to personal quality cataloging definitions sorted by the four categories of quality cataloging. The chi-square test of independence was used to determine whether or not there is any statistical significance between certain demographic characteristics of the survey participants and personal quality cataloging definitions sorted by the four categories of quality cataloging.

After sorting survey respondent answers to, “How do you personally define quality cataloging?” into the four categories of quality cataloging, I used SPSS statistics software to calculate statistical significance. Five demographic characteristics were chosen for comparison: age range, cataloging experience level, type of cataloging position held (professional or non-professional), the number of institutions for which the respondent has been employed, and if the

respondent has taken cataloging course for college/university credit. This information was gathered from Survey Monkey and compiled in an Excel spreadsheet. After cross-tabulating the answers to these demographic questions with the answers to the question, “How do you personally define quality cataloging?” sorted into the four categories of quality cataloging, I entered this data into the SPSS statistics software program. Some of the demographic categories from the survey had to be combined into larger groups in order to produce larger sample sizes for analysis. This was necessary due to the fact that some demographic categories contained numbers less than five, which, according to Hernon (1994) may alter the validity of the results. For example, in the cataloging experience demographic category, instead of keeping the experience levels as they appeared on the survey (see Table 4.5), I collapsed adjacent categories to bring totals for each quality cataloging category above five (except for the 21-30 year category). See Table 4.6 for the "collapsed" categories. Full SPSS calculations of the chi-square tests are located in Appendix E.

Table 4.5

Cataloging Experience Levels Organized Into the Four Categories of Quality Cataloging

	Tech. Details	Standards	Process	Users
0-5 years	47	24	10	38
6-10 years	37	23	7	25
11-15 years	34	26	5	27
16-20 years	29	22	7	18
21-25 years	23	11	1	17
26-30 years	27	22	3	15
31-35 years	28	18	4	23
36-40 years	7	5	1	2
Over 40 years	9	5	1	8

Table 4.6

Cataloging Experience Levels Collapsed Into Broader Time Spans

	Tech. Details	Standards	Process	Users
0-10 years	84	47	17	63
11-20 years	63	48	12	45
21-30 years	50	33	4	32
31 years and over	44	28	6	33

As noted previously, numbers used for the personal quality cataloging definitions sorted by the four categories of quality cataloging are the number of *occurrences* of a particular quality cataloging category within a certain demographic category. The numbers do *not* signify the number of respondents total who chose only that category. It was common that the quality cataloging definitions mention attributes from more than one category of quality (for example, in the definition "quality cataloging is adherence to AACR2 and MARC while striving to produce the most helpful record for library users" contains occurrences of categories "adherence to standards" and "users."). Therefore, the number of occurrences were totaled and used for analysis in SPSS. For example, of the respondents within the age range 31-40, 52 of the quality definitions mentioned the technical details of the bibliographic record at least once, 38 of the quality definitions mentioned adherence to standards at least once, 11 of the quality definitions mentioned the cataloging process at least once, and 34 of the quality definitions mentioned users at least once.

Of the five chi-square tests performed, only one showed statistical significance between a demographic category and the four categories of quality cataloging. There was a significant association between type of position held (professional vs. non-professional) and the quality categories chosen, specifically between non-professionals and the quality category "technical details of the bibliographic record." Significance can be pin-pointed within specific categories by

examining the standardized residual score. If the standardized residual score falls outside of ± 1.96 , then it is significant at $p < .05$ (Field, 2009). The standardized residual for non-professionals defining quality within the category “technical details of the bibliographic record” is 2.6. It was expected that 19.4 responses would fall under this category, but there were 31 responses. At -1.8, the “adherence to standards” category under non-professionals was very close to reaching statistical significance, but did not quite meet the -1.96 minimum requirement. This suggests that non-professionals are more focused on the technical details of the bibliographic record and less focused on adhering to standards than was statistically expected. However, the significance of this conclusion is limited by the fact that one of the counts (non-professionals choosing the “cataloging process” quality category) is less than 5. According to Field (2009), counts of more than 5 produce more accurate chi-square statistics than those less than 5.

All of the remaining tests (age range ($\chi^2 (6) = 2.579, p < .859$), cataloging experience level ($\chi^2 (9) = 5.485, p < .790$), the number of institutions for which the respondent has been employed ($\chi^2 (12) = 7.623, p < .814$), and if the respondent has taken cataloging course for college/university credit ($\chi^2 (3) = 3.686, p < .297$)) showed there is no statistical significance between these demographic characteristics and the quality cataloging categories chosen on the survey. This suggests that in regards to opinions given about quality cataloging on the survey, there are no major differences between catalogers of different ages, experience levels, education levels, and number of employers.

This finding is mirrored in calculations performed in Excel, tabulated to show the percentage of occurrences within specific demographic categories (see Tables 4.7-4.11). The occurrences across the different demographic categories were statistically similar, though the low

number of respondents in certain demographic areas made it difficult to show statistical significance (as evidenced in the SPSS findings).

Table 4.7

Quality Cataloging Categories Chosen by Age Range

Age Range	Tech. Details	Tech. Details %	Standards	Standards %	Process	Process %	Users	Users%
20-30	16	36%	10	22%	4	9%	15	33%
31-40	52	39%	38	28%	11	8%	34	25%
41-50	47	38%	27	22%	10	8%	39	32%
51-60	91	42%	61	28%	8	4%	58	27%
61-70	30	40%	19	25%	3	4%	23	31%
Over 70	5	38%	1	8%	3	23%	4	31%

Table 4.8

Quality Cataloging Categories Chosen by Level of Cataloging Experience

Cataloging Experience Level (in years)	Tech. Details	Tech. Details %	Standards	Standards %	Process	Process %	Users	Users %
0-5 years	47	39%	24	20%	10	8%	38	32%
6-10 years	37	40%	23	25%	7	8%	25	27%
11-15 years	34	37%	26	28%	5	5%	27	29%
16-20 years	29	38%	22	29%	7	9%	18	24%
21-25 years	23	44%	11	21%	1	2%	17	33%
26-30 years	27	40%	22	33%	3	4%	15	22%
31-35 years	28	38%	18	25%	4	5%	23	32%
36-40 years	7	47%	5	33%	1	7%	2	13%
Over 40 years	9	39%	5	22%	1	4%	8	35%

Table 4.9

Quality Cataloging Categories Chosen by Type of Cataloging Position Held

Type of Cataloging Position Held	Tech. Details	Tech. Details %	Standards	Standards %	Process	Process %	Users	Users %
Professional	110	25%	143	33%	37	8%	149	34%
Non-Professional	31	44%	13	19%	2	3%	24	34%

Table 4.10

Quality Cataloging Categories Chosen by Number of Institutions Employed During Career

Number of Institutions	Tech. Details	Tech. Details %	Standards	Standards %	Process	Process %	Users	Users %
1	72	39%	43	23%	13	7%	56	30%
2	69	39%	46	26%	14	8%	46	26%
3	52	39%	35	27%	6	5%	39	30%
4	24	40%	20	33%	4	7%	12	20%
5	10	40%	6	24%	1	4%	8	32%
More than 5	14	42%	6	18%	1	3%	12	36%

Table 4.11

Quality Cataloging Categories Chosen by Whether or Not Respondent Took a Cataloging Course for College/University Credit

Taken Cataloging Course for Credit?	Tech. Details	Tech. Details %	Standards	Standards %	Process	Process %	Users	Users %
No	34	47%	15	21%	2	3%	22	30%
Yes	207	39%	141	26%	37	7%	151	28%

The word frequency analysis of the answers to the question, "How do you personally define quality cataloging?" yielded similar results to respondent opinions concerning what should be included in a quality bibliographic record (see Table 4.12).

Table 4.12

Top 10 Most Frequently Used Words or Phrases Describing Quality Cataloging

Word/Phrase	Frequency
record/records	247
accuracy/accurate/accurately	175
item	160
subject/subjects	151
information	126
user/users	114
heading/headings	112
access	105
complete/completeness/completely	69
catalog	66

Most of the terms found to be used frequently in describing a quality record can also be found here. However, it is interesting that the most frequently used term is "record" and its plural "records" when respondents were asked to personally define quality cataloging generally.

The terms "quality" and "cataloging" were in top 10 list of most frequently used words ("quality" was used 149 times and "cataloging" was used 224 times), but many respondents began their personal definition of quality cataloging along these lines:

- Quality cataloging is...
- Quality cataloging begins with...
- Quality cataloging should include...
- Quality cataloging allows...
- I define quality cataloging as...
- etc...

Therefore, these words were excluded from the top 10 list in Table 4.10 due to the fact that they were frequently paired together as a way of rephrasing the question posed.

Institution Definitions of Quality Cataloging

After participants were asked to give their personal definition of quality cataloging, they were asked to provide their employer's definition of quality cataloging. If their employer does not define quality cataloging, the participants were asked to note this as their answer. Of the 296 respondents, 162 respondents (55%) answered that their employer does not (to their knowledge) formally define quality cataloging. However, these respondents expressed this in multiple ways. Of those 162 respondents, 113 (38%) simply stated that their institution does not define quality cataloging and did not elaborate further. A total of 49 respondents (17%) qualified their statement with an additional statement. That additional statement generally fit into one of three types: there is no definition, but the cataloging is still good; there is no definition and the cataloging is bad; and there is no formal definition of quality, but there is an informal agreement within the department about what is quality cataloging. Table 4.13 provides a summary of these results.

Table 4.13

Institution Does Not Define Quality Cataloging (n = 162)

Response	Number of Respondents	Percentage of Respondents
No definition	113	38%
Informal agreement within department	33	11%
No definition - cataloging is bad	9	3%
No definition - cataloging is good	7	2%

Of the remaining responses, 83 respondents (28%) provided their institution's definition of quality cataloging, 25 respondents (8%) claimed that their institution's definition is the same as their own definition, 22 respondents (7%) said that their institution allows catalogers to catalog based upon their own definitions of quality cataloging, and 11 respondents (4%) did not properly answer the question.

The responses that included their institution's definition of quality cataloging were examined and categorized according to the four categories of quality cataloging in the same way as the personal definitions of quality cataloging. Within these responses, there were 132 occurrences of quality cataloging attributes that fit into the four categories of quality cataloging. The category with the most occurrences was the "adherence to standards" category (56 occurrences; 42% of the total number of occurrences). The next most popular category was the "technical details of the bibliographic record" with 34 occurrences (26% of the total number of occurrences) and then the "impact upon users" category contained 28 occurrences (21% of the total number of occurrences). Attributes with the "cataloging process" category were mentioned 14 times (11% of the total number of occurrences). Figure 4.2 summarizes these results.

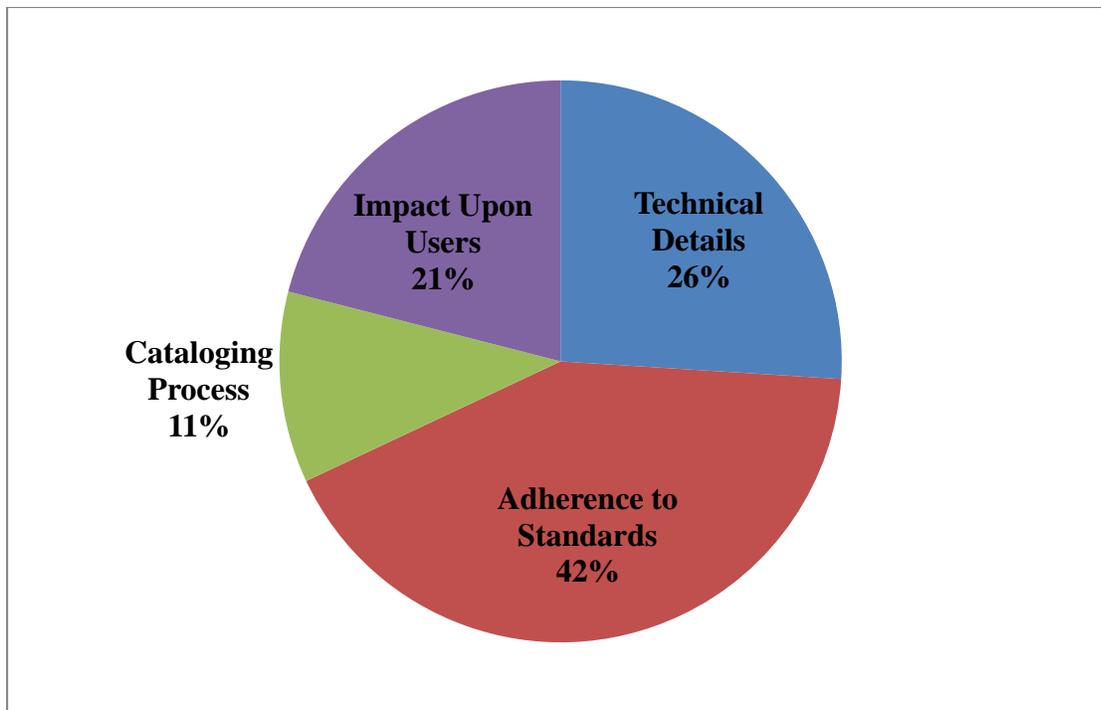


Figure 4.2. Institution quality definitions organized into the four categories of quality cataloging.

These results are in contrast to the personal definitions of quality cataloging. The "technical details of the bibliographic record" category, the most popular category for personal definitions of quality cataloging, is no longer the most popular choice for department definitions of quality cataloging. The focus is more upon "adherence to standards" within cataloging departments, according to survey responses.

Influence Upon Cataloging Department Policies & Procedures

The next two questions on the survey are concerned with the level of influence respondents have on cataloging policies and procedures within their department and, if they have influence, *how* they influence the policies and procedures. Of the 296 respondents, 275 (93%) said they influence their departments policies and procedures in some way. Of these respondents, 162 (55%) said they have "a lot of influence" and 113 (38%) said they have "some influence."

Only 21 respondents (7%) said that they do not have any influence on policies and procedures in their department. See Figure 4.3.

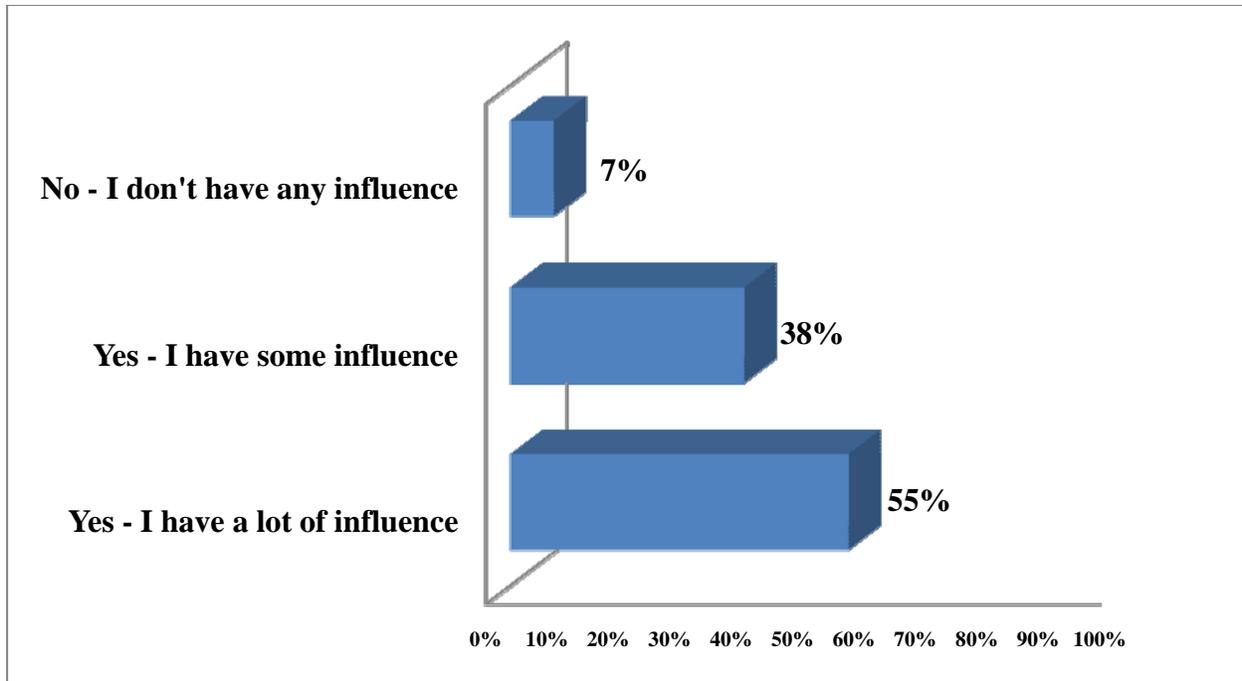


Figure 4.3. Level of influence upon cataloging department policies and procedures ($n = 296$).

Respondents who answered that they have influence (either some or a lot) on their department's policies and procedures were then asked, "In what ways do you influence these policies and procedures?" I categorized these responses in an Excel spreadsheet to determine if there were any noticeable patterns. Of the 270 respondents who answered the question, the most frequent response was that the respondent was solely responsible for creating the policies and procedures for the department (89 respondents; 33%). Table 4.14 summarizes the remaining responses.

Table 4.14

How Respondents Influence Department Policies and Procedures (n = 270)

Response	Number of Respondents	Percentage of Respondents
Solely responsible for creating policies & procedures for dept.	89	33%
Voices opinion at meetings/when reviewing policies & procedures	60	22%
Creates policies & procedures in collaboration with others	56	21%
Coordinates discussion of cataloging issues/determines how dept. should interpret rules & standards	31	11%
Other/Did not answer the question	23	9%
Is free to catalog how he/she wants, even if other policies & procedures are in place	6	2%
Is the only cataloger	5	2%

According to these responses, 145 respondents (54%) either are solely or collaboratively responsible for the creation of their department's cataloging policies and procedures. Considering this high number, it may seem surprising that department definitions of quality cataloging were not often in line with the personal definitions of quality cataloging stated by survey respondents. However, since 55% of respondents claimed that their institution does not even define quality cataloging, the differences between the personal and departmental definitions of quality cataloging cannot necessarily be explained by the level of respondent influence on cataloging policies and procedures as a whole.

The Quality of the Respondent's & Cataloging Department's Cataloging

Respondents were then asked to discuss the quality of their own cataloging and the cataloging of their department. When asked, "Do you feel that the cataloging you perform is quality cataloging?," a total of 275 out of the 296 respondents (93%) answered "Yes" (see Figure

4.4). Only 21 respondents (7%) answered "No/Not sure" (that their cataloging is not quality or that they were unsure about the quality of their cataloging). If the respondent answered "No/Not sure," they were asked to explain why this is the case.

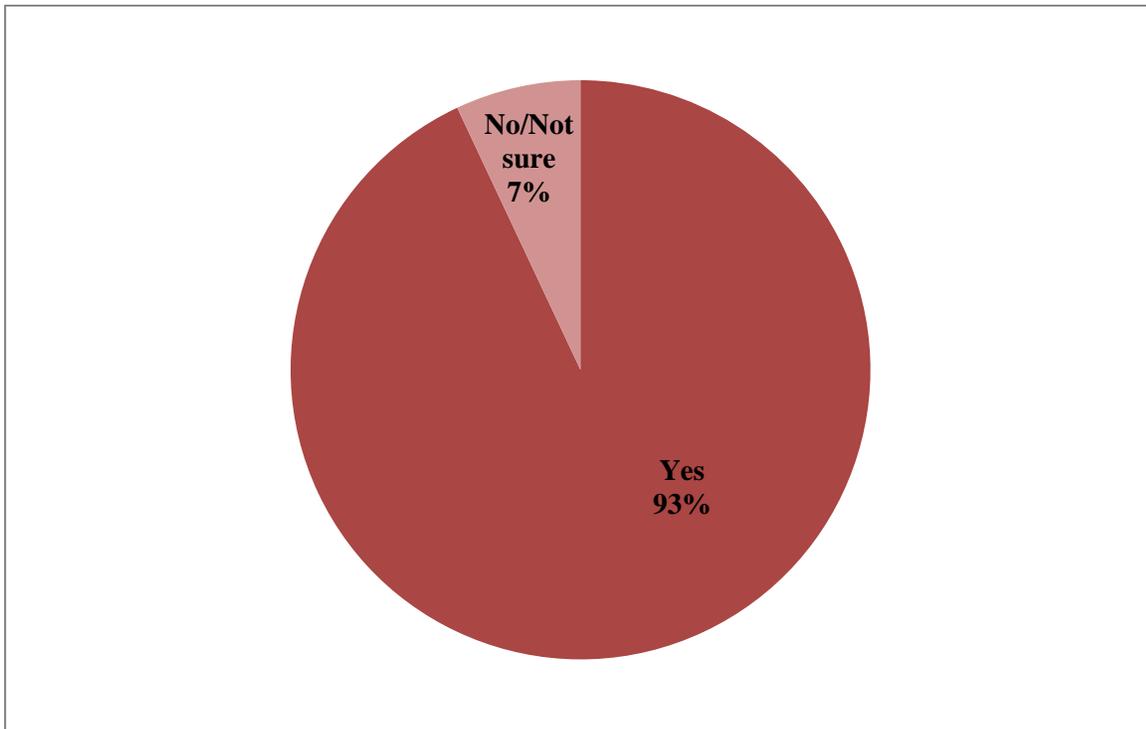


Figure 4.4. Do you feel that the cataloging you perform is quality cataloging? ($n = 296$).

The 21 respondents who chose "No/Not sure" gave a variety of reasons for why this is the case. The most frequent response was that the respondent felt that he/she did not always produce quality cataloging due to institutional pressures, such as time constraints and department policies (38% of respondents). Table 4.15 summarizes the remaining responses.

Table 4.15

Reasons for Why Respondent Does Not Produce Quality Cataloging or Is Unsure About Quality of Cataloging (n = 21)

Response	Number of Respondents	Percentage of Respondents
Institutional pressures (such as time constraints)	8	38%
Unsure about cataloging knowledge	5	24%
Other	5	24%
Unsure if cataloging product is useful	3	14%

"Other" in Table 4.15 represents reasons given by individual respondents that were not mentioned by others, such as the lack of cataloging tools provided by the respondent's institution and lack of knowledge about certain subject matter.

Slightly more respondents felt unsure about cataloging quality in their cataloging department or felt that their department does not produce quality cataloging (see Figure 4.5). A total of 244 respondents (82%) said "Yes" in answer to the question, "Do you feel that the cataloging your department performs is quality cataloging?" and 52 respondents (18%) answered "No/Not sure" and were asked to explain why they chose this answer.

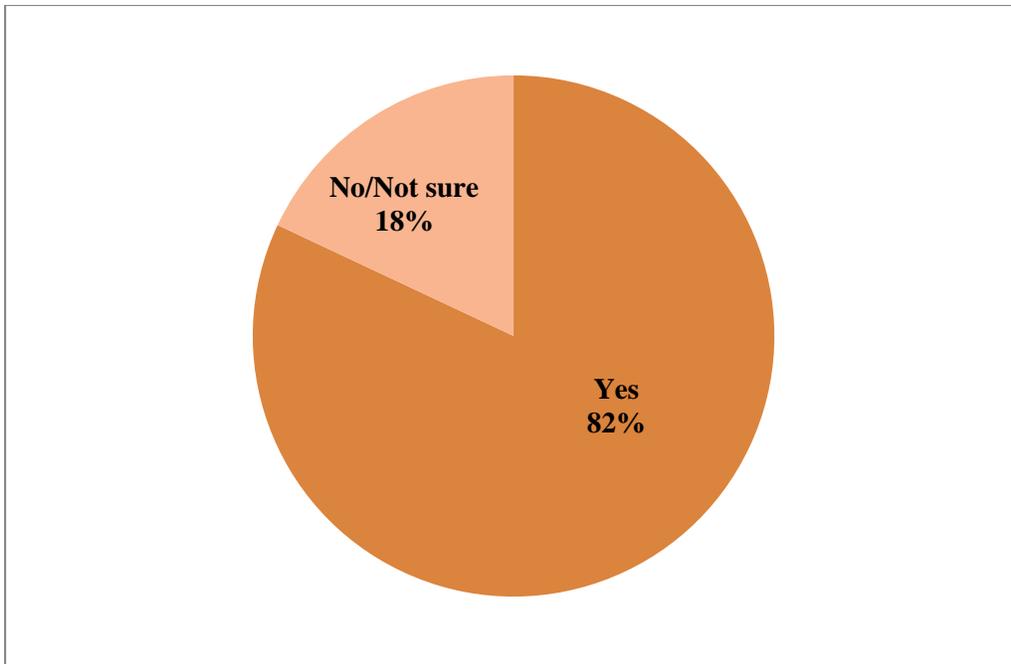


Figure 4.5. Do you feel that the cataloging your department performs is quality cataloging? ($n = 296$).

Once again, the most common reason why respondents chose "No/Not sure" was the existence of institutional pressures, such as time constraints and department policies. However, there were an almost equal number of respondents who said that they are not sure about the quality of their department's cataloging because they do not review the work of their colleagues and therefore did not feel comfortable making a judgment about the quality of their work. There were a variety of other reasons for choosing "No/Not sure" as well, which are summarized in Table 4.16.

Table 4.16

Reasons For Why Department Does Not Produce Quality Cataloging (n = 52)

Response	Number of Respondents	Percentage of Respondents
Institutional pressures (such as time constraints)	11	21%
Other catalogers' work not reviewed	9	17%
Copy cataloging quality is bad	7	13%
Other catalogers need more training	7	13%
Other catalogers have different ideas about quality cataloging	6	12%
No other catalogers in department	6	12%
Other catalogers have a bad attitude/work ethic	3	6%
Other	3	6%

MARC Fields/Subfields in a Quality Bibliographic Record

The MARC fields and subfields described in Table 3.2 of Chapter 3 were presented to participants of the survey. The survey participants were asked to rank each MARC field and subfield based upon their level of importance in a quality bibliographic record and they were presented with a dropdown menu containing the following options:

- Very important
- Quite important
- Important
- Somewhat important
- Not important
- I don't know what this means

Participants were not allowed to skip any of the MARC fields and subfield choices and were given the option to add further MARC fields and subfields that were not presented within the answer choices (see Appendix A for how this question was presented to survey participants). Appendix F contains the full set of MARC field and subfield rankings made by survey respondents.

Of the MARC fields and subfields ranked "very important," 245\$a (title proper) was the top field chosen by respondents; 291 out of 296 respondents (98%) ranked this field as "very important." Except for one MARC subfield (260\$c - date of publication), all of the top ranked MARC fields and subfields combinations contain access points that are indexed by integrated library systems. Table 4.17 summarizes the top 10 MARC fields and subfields that were ranked as "very important." Table 4.18 summarizes the top ten MARC fields and subfields that were ranked "not important."

Table 4.17

Top 10 "Very Important" MARC Fields/Subfields (n = 296)

MARC Field/Subfield	Number of Respondents	Percentage of Respondents
245\$a (Title Proper)	291	98%
100 (Personal Name Main Entry)	278	94%
650 (Topical Subject Heading)	268	91%
110 (Corporate Body Main Entry)	258	87%
651 (Geographic Subject Heading)	250	85%
600 (Personal Name Subject Heading)	248	84%
700 (Personal Name Added Entry)	238	80%
610 (Corporate Body Subject Heading)	236	80%
260\$c (Date of Publication)	233	79%
111 (Meeting Name Main Entry)	216	73%
710 (Corporate Body Added Entry)	216	73%

Table 4.18

Top 10 "Not Important" MARC Fields/Subfields (n = 296)

MARC Field/Subfield	Number of Respondents	Percentage of Respondents
082/092 (Dewey Call Number)	111	38%
521 (Target Audience Note)	108	37%
042 (Authentication Code)	93	31%
043 (Geographic Area Code)	72	24%
776 (Additional Physical Form Entry)	60	20%
010 (LC Control Number)	52	18%
501 ("With" Note)	35	12%
300\$c (Dimensions)	28	10%
504 (Bibliography, Etc. Note)	28	10%
520 (Summary, Etc. Note)	28	10%

The presence of the 082/092 (Dewey Call Number) as the top "not important" field was not too surprising since most academic libraries use Library of Congress Classification and not Dewey Decimal Classification (Chan, 2007).

I also examined the MARC fields and subfields that respondents felt were important enough to be added to the list provided on the survey. Since the MARC field and subfield list provided on the survey was heavily influenced by the PCC's BIBCO standard record requirements that are geared towards book cataloging, several important MARC fields and subfields used in non-book cataloging were not included on the survey. Most of the MARC fields and subfields added by respondents are note fields that are commonly used in motion picture/videorecording, sound recording, special collections, and other non-book bibliographic records. A total of 73 respondents chose to add additional MARC fields and/or subfields. Table 4.19 contains the most popular responses.

Table 4.19

Top 10 MARC Fields/Subfields Added By Survey Respondents (n = 73)

MARC Field/Subfield	Number of Respondents	Percentage of Respondents
508 (Creation/Production Credits Note)	8	3%
511 (Participant/Performer Note)	8	3%
538 (System Details Note)	8	3%
007 (Physical Description Fixed Field)	7	2%
028 (Publisher Number)	7	2%
590 (Local Note)	7	2%
024 (Other Standard Identifier)	6	2%
255 (Cartographic Mathematical Data)	5	2%
510 (Citation/References Note)	4	1%
518 (Date/Time & Place of Event Note)	4	1%
586 (Awards Note)	4	1%
780 (Preceding Entry)	4	1%
785 (Succeeding Entry)	4	1%

Quality Cataloging Attributes

As discussed in Chapter 3, I selected various quality cataloging attributes based upon the review of the literature and the pilot study for this project and then grouped these attributes within four, broad categories: the technical details of the bibliographic record, adherence to standards, the cataloging process/workflow/staff, and the impact upon users/accessibility (see Table 3.1). These attributes were presented to survey participants in question 27 of the survey, but in alphabetical order and *not* grouped according to the four categories of quality cataloging (see Appendix A). Just as in the previous question on MARC fields and subfields, the survey participants were asked to rank each attribute based upon their importance to quality cataloging. Participants were presented with a dropdown menu containing the following options:

- Very important
- Quite important
- Important
- Somewhat important
- Not important
- I don't know what this means

Participants were not allowed to skip any of the attributes and were given the option to add further attributes that were not presented within the question (see Appendix A to see how this question was presented to survey participants). Appendix G contains the full set of quality attribute rankings made by survey respondents. Table 4.20 contains the top 10 attributes chosen by survey respondents.

Table 4.20

Top 10 "Very Important" Quality Cataloging Attributes (n = 296)

Attribute	Category	Number of Respondents	Percentage of Respondents
Creating a bibliographic record that is helpful/useful to the user	Users	279	94%
Enough access points are included so that the record can be found	Users	268	91%
The user is able to find records in the catalog efficiently	Users	264	89%
Subject headings are included and accurate	Tech. Details	246	83%
Access points conform to authority records/controlled vocabulary used by library	Standards	243	82%
Transcription of bibliographic data is as accurate as possible	Tech. Details	238	80%
Access points are correctly identified & formulated according to AACR2	Standards	236	80%
Creating a bibliographic record that best represents the item in-hand	Tech. Details	233	79%
Creating a bibliographic record that is free of typographical errors	Tech. Details	212	72%
Call number is included and accurate	Tech. Details	206	70%

The first three attributes on the top ten "very important" quality cataloging attributes list are from the category "impact upon users/accessibility." The remainder of the top ten is comprised of five attributes from the "technical details of the bibliographic record" category and two attributes from the "adherence to standards" category. None of the "cataloging process/workflow/staff" category attributes appeared within the top ten.

During the data analysis phase of this study, I discovered that the phrasing of some of the quality attributes used in this question was problematic. It is important to note that two of the attributes above, "Subject headings are included and accurate" and "Call number is included and accurate," could have been interpreted by respondents in multiple ways (see Chapter 5 of this study for a full discussion of this issue). These attributes were originally grouped into the "technical details of the bibliographic record" category. This is because this category is mainly for attributes that describe the correctness and presence of information in a bibliographic record. The attribute "Subject headings are included and accurate" was meant to reflect the presence of subject headings in a record and how well they describe the item represented by the record. This attribute was *not* meant as a reflection of the subject headings' accuracy as they relate to the controlled vocabulary in which they belong. For example, a record for a book about the Second World War may contain the subject heading "World War II," which is an accurate subject description of the work. However, this description is *not* accurate according to the *Library of Congress Subject Headings* (LCSH) where the authorized form of "World War II" is "World War, 1939-1945." Therefore, the term *accurate* can have multiple meanings depending on how one chooses to interpret it.

On the survey, there is a definite possibility that respondents interpreted the attributes "Subject headings are included and accurate" and "Call number is included and accurate" to

mean that subject headings and a call number are not only present in the record, but they also conform to controlled vocabularies such as the *Library of Congress Subject Headings* and *Library of Congress Classification*. If this is the case, then these attributes could be counted towards to the "adherence to standards" category as well as the "technical details of the bibliographic record" category. This makes the frequency of these two categories within the top ten quality cataloging attributes more even at five for "technical details" and four for "adherence to standards."

Of the top ten "not important" quality cataloging attributes, four out of the ten attributes are from the "cataloging process/workflow/staff" category. Two attributes are in the "technical details of the bibliographic record" category, three attributes are in the "adherence to standards" category, and one is in the "impact upon users/accessibility" category (see Table 4.21).

Table 4.21

Top 10 "Not Important" Quality Cataloging Attributes (n = 296)

Attribute	Category	Number of Respondents	Percentage of Respondents
Complex/original cataloging is performed by professional catalogers	Process	47	16%
Record includes links to information outside of the catalog that are relevant to the item	Tech. Details	45	15%
Administration is trained in/knowledgeable of cataloging	Process	31	11%
Creating a bibliographic record that is as perfect as possible	Tech. Details	30	10%
Punctuation conforms to AACR2	Standards	27	9%
Having some record in the catalog, even if it lacks full description	Users	21	7%
Creating a bibliographic record that is transliterated according to Library of Congress Romanization tables	Standards	20	7%
Items are cataloged in a cost-effective manner	Process	19	6%
Items are cataloged and shelved quickly	Process	18	6%
Using catalogers' judgment in choosing whether or not to adhere to standards (local, AACR2, etc.)	Standards	15	5%

A total of 25 respondents included an answer in the "Other (please specify)" option offered for this question. However, most "answers" provided by respondents using the "Other" choice were actually clarifications and comments upon the answers already provided. Some of these clarifications and comments helped to shed light on why respondents ranked certain attributes as "not important." For example, the top attribute listed as "not important" was "Complex/original cataloging is performed by professional catalogers." Two respondents elaborated on why they ranked this attribute in this way:

I don't believe that original cataloging has to be done by professional cataloger - although it is at my institution. I believe that well trained paraprofessional staff can produce equally excellent bibliographic records.

[C]omplex original cataloging needs to be done by skilled and knowledgeable people; they need not be professional.

The ranking of "Administration is trained in/knowledgeable of cataloging" as one of the top "not important" attributes was somewhat puzzling because the attribute "Administration is responsive/supportive of cataloging process/needs" was ranked as "very important" by 62% of the survey respondents; only two respondents ranked it as "not important." It would seem as though administrative support of the cataloging department would be enhanced by the administration's knowledge of what cataloging is and what catalogers do. Respondents did not elaborate on this attribute in the "Other" section of the survey, but I inquired about this attribute in several of the interviews conducted for this study. The results of this inquiry will be provided later on in this chapter during the interview data analysis.

Another "not important" attribute that received several comments was "Using catalogers' judgment in choosing whether or not to adhere to standards (local, AACR2, etc.)." I acknowledge that this attribute was phrased poorly and had intended for it to read "Using catalogers' judgment in choosing **how to interpret** standards (local, AACR2, etc.)." In regards to the attribute as it was phrased on the survey, respondents observed that:

Cataloger's judgment should be reserved for difficult cases. Deciding on a whim not to follow standards could be a serious disservice.

Re: last question: I chose "I don't know what this means" to reject the premise of the bullet. Cataloger's judgment is to be used in interpreting and applying standards, not deciding whether or not to adhere to them.

I think catalogers judgment is important and that standards should be flexible, but am not sure what you mean by the last choice.

The results of this question largely mirrored the results of the personal definitions of quality cataloging question in regards to the quality cataloging categories. Even though "impact upon users" attributes were highest on the list of "very important" attributes, there were slightly

more "technical details of the bibliographic record" attributes chosen by respondents as being "very important" for quality cataloging than any other single category.

Impact of RDA Implementation Upon Quality Cataloging Definitions

Since the survey for the current study was distributed shortly after the release of the first edition of the new cataloging rules *Resource Description and Access* (RDA) in Summer 2010, I was curious to know how participants felt about RDA and how it may impact quality cataloging, if at all. It is anticipated that RDA will replace the cataloging standard AACR2 sometime after January of 2013, the earliest date that the United States national libraries (the Library of Congress, the National Agricultural Library, and the National Library of Medicine) stated they will implement RDA on a wide scale (Library of Congress, 2011). The Joint Steering Committee (JSC) responsible for the development and revision of AACR2, decided in 2005 to forego release of another revision or edition of AACR2. Instead, the JSC focused on developing a new cataloging standard that would be more internationally inclusive, make it easier to describe a broader range of information entities, and more user-friendly (both for catalogers and users). In order to make the code more user-friendly, the JSC decided early on to incorporate the conceptual models *Functional Requirements for Bibliographic Records* (FRBR) and *Functional Requirements for Authority Data* (FRAD) which were developed by the International Federation of Library Associations and Institutions (IFLA) beginning in the 1990s. FRBR, an entity-relationship model, and its vocabulary are used heavily in RDA. With FRBR, IFLA sought to “provide a clearly defined, structured framework for relating the data that are recorded in bibliographic data to the needs of the users of those records” and also “recommend a basic level of functionality for records created by national bibliographic agencies” (International Federation

of Library Associations and Institutions, 1998). In order to accomplish this, the FRBR report contains a description of the conceptual model (including explanations of entities, relationships, and attributes), a proposed national level standard for a bibliographic record, and it defined user tasks associated with bibliographic resources. RDA incorporates many of these features into its structure.

The final question on the quality cataloging portion the survey asks the participants, "Do you feel that the implementation of the new cataloging standard Resource Description and Access (RDA) will impact your definition of quality cataloging? Please explain why or why not." Participants were asked to choose one of the following answers:

- Yes
- No
- Not Sure
- I don't know what RDA is

If participants chose "yes," "no," or "not sure," they were asked to explain why they answered in this way. A total of 158 respondents (53%) answered that they were "not sure" how the implementation of RDA will impact their definition of quality cataloging. A total of 58 respondents (20%) answered "yes," 76 respondents (26%) answered "no," and 4 respondents (1%) answered "I don't know what RDA is." Figure 4.6 shows how respondents answered this question.

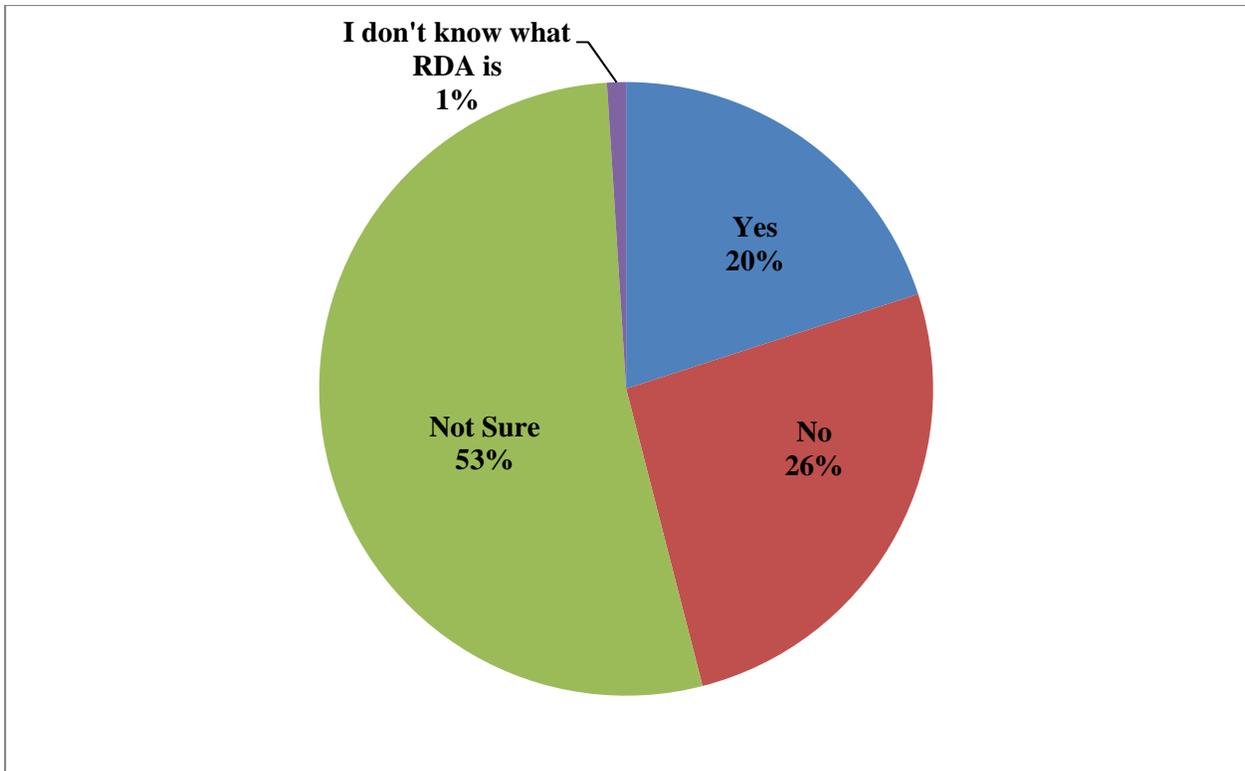


Figure 4.6. Will the implementation of RDA impact your definition of quality cataloging? ($n = 296$).

I examined and categorized the explanations provided by the respondents in order to determine any noticeable patterns. A total of 259 respondents (88%) provided an explanation for their answer choice. Table 4.22 summarizes the explanations provided by the respondents.

Table 4.22

Summary of Opinions About How the Implementation of RDA Will Affect Respondent's Definition of Quality Cataloging (n = 259)

Response	Number of Respondents	Percentage of Respondents
Unsure/Neutral/Need to know more	128	49%
RDA will not affect definition of quality	54	21%
Negative reactions	51	20%
Positive reactions	16	6%
Mix of positive and negative reactions	10	4%

A total of 128 respondents (49%) explained that either they were unsure about RDA, neutral in their opinion of RDA, or felt that they needed to learn more about RDA before they could say if it would affect their definition of quality cataloging either way. Some typical responses in this category were:

I haven't had a chance to study RDA [and] all of its accompanying standards, as well as the new MARC fields that are being created.

I haven't decided if it will impact our quality control standards.

The college has no plans for RDA. The college will most likely wait and see how the implementation and migration shakes out.

A total of 54 respondents (21%) said that the implementation of RDA will not affect their definition of quality cataloging at all. Some typical responses in this category were:

My own definition of quality is not going change. My definition is the "what" of quality; RDA is a "how" of quality. I have my disagreements with AACR2. I'm sure I'll have my disagreements with RDA, too.

Since to me quality cataloging involves providing appropriate access points, correctly describing the item in hand and providing other links for the patron, I do not think that RDA will change that basic definition.

I do not think it should change the criteria for quality and accuracy.

The remaining 77 respondents (30%) either spoke of RDA positively, negatively, or a mixture of both positive and negative language. 51 respondents (20%) spoke negatively, 16 respondents (6%) spoke positively, and 10 respondents (4%) reacted to RDA with a mixture of positive and negative statements.

Negative statements:

I don't know that RDA will be adopted (HAHAHAHAHAHA!). But I also don't know that I will fully implement this standard even if it's adopted by the cataloging police. I currently don't plan to subscribe to the web product. Maybe my consortium will subscribe, and I'll have access to it. Seems too early to give too much thought to this thing.

Since we cannot afford to have the RDA online service, we will be at a disadvantage. We are not happy with many of the changes and feel they will not serve our users. (Example - not using \$h in 245) Also our ILS probably will not support many of the changes.

Positive statements:

I think RDA, once it is fully understood, will improve cataloging. I'm hoping the best fields become high on the list of importance, and other required fields which aren't necessary, will become lower on the list of importance.

I'm excited for RDA to be implemented widely; I think an emphasis on the user and the inter-connectedness of records will be a welcome change from the micro-focus cataloging has had on punctuation & form for some time.

Statements with a mix of positive and negative language:

I'm already using RDA for serials. In some ways it is easier. For example, one can add multiple 260s and that is much clearer than the old place of publication or publisher varies notes. However, especially for foreign languages, leaving off a uniform title and minimizing other information can be a really bad idea.

With RDA there will be a lot of room for "judgement" [sic] and I feel that the quality of cataloging will diminish because the structure that we have used won't be in place. I do believe there are good qualities to RDA, I just feel that there will be a mish-mash of records for awhile.

The age range and cataloging experience level of respondents are not a factor in how each respondent answered this question about RDA. I chose to cross-analyze the age range and

cataloging experience level demographics from the first part of the survey against answers to the question about how the implementation of RDA will affect the respondent's definition of quality cataloging. Of the respondent's under the age of 50, 53% were "unsure" how the implementation of RDA will affect their definition of quality cataloging; 54% of respondents over the age of 50 answered this question the same way.

Opinions about RDA across cataloging experience levels were also relatively similar.

Table 4.23 contains the summary of respondent opinions about RDA according to cataloging experience level.

Table 4.23

Summary of Opinions About How the Implementation of RDA Will Affect Respondent's Definition of Quality Cataloging By Cataloging Experience Level (n = 259)

	Positive	Negative	Mix of Positive and Negative	Unsure/Neutral/ Needs to know more	RDA will not affect quality definition
0-10 years	8%	22%	3%	44%	23%
11-20 years	7%	16%	4%	48%	24%
21-30 years	4%	25%	2%	55%	14%
31-40 years	3%	19%	5%	51%	22%
Over 40 years	9%	9%	0%	64%	18%

Interviews

As part of this study's research proposal, a sample of the study population was interviewed in order to learn more about participant's opinions of quality cataloging and how these opinions were formed and evolved over the course of his/her career. As mentioned in the previous chapter, interview participants were chosen from the pool of respondents who answered "yes" to the last question on the survey, "Would you be willing to be interviewed for this research project?" A total of 187 respondents (63%) said they would be willing to participate in

an interview. I contacted 44 of these respondents using the email address they provided within the survey. A total of 21 respondents agreed to be interviewed, though one had to cancel shortly before the interview due to work constraints. The interviews were conducted by telephone from October to December of 2010. The interview participants were not randomly selected because I wanted catalogers with different backgrounds represented - different age ranges, cataloging experience levels, education levels, types of academic libraries, etc. After interviewing the 20 participants, I decided to stop pursuing further interviews due to data saturation; answers to most interview questions were seen over and over again and I felt that little new information would be gained by continuing to interview further participants. The list of interview questions can be found in Appendix B.

Personal Definitions of Quality Cataloging

The personal definitions of quality cataloging that the interview participants stated on the survey were gathered and analyzed. For the most part, the definitions fell into the same quality cataloging categories at the same rate as the survey participant population (see Figure 4.7). Attributes under the "technical details of the bibliographic record" were used the most frequently (37% of the total number of occurrences), attributes in the "adherence to standards" and "impact upon users" categories were used the same number of times (27% of the total number of occurrences), and attributes from the "cataloging process" category were used the least number of times (10% of the total number of occurrences).

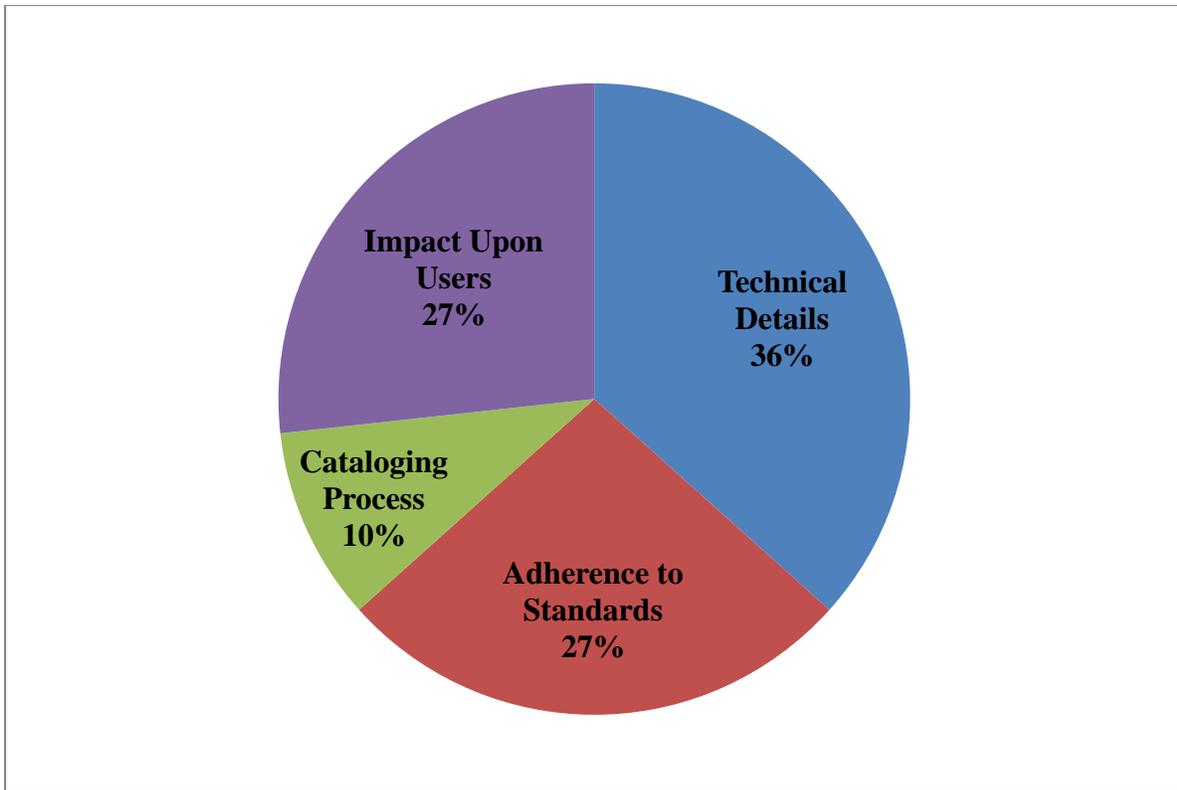


Figure 4.7. Personal definitions of quality cataloging - interview participants.

I began each interview by reading to each interview participant the personal quality cataloging definition they provided on the survey and then asked them if they wanted to add or remove anything from that definition or elaborate on it further. A total of 14 out of the 20 participants said that the definition they provided on the survey captured how they felt about quality cataloging at the time of the interview and did not choose to add, remove, or elaborate upon their definition. Two participants chose to add comments about quality cataloging to their definition and four simply elaborated on parts of their existing definition.

How Quality Cataloging Definition Has Changed

The second interview question was designed to elicit information about how and when quality cataloging definitions are formed by members of this study's population. Although many of the interview participants claimed that their definition of quality cataloging has not changed at all during the course of their career (8 out of the 20 respondents; 40%), the remaining 12 participants explained that their definition is not the same now as it was when they first began cataloging. Four out of the 20 participants noted that their definition has expanded due to greater experience and knowledge of what can go into a catalog record. Here are comments from two interview participants:

...it takes a long time to learn the art of cataloging and when I first started, I didn't understand the purpose of a number of things, such as validating headings, making sure they match the authority records or providing every access point possible because I didn't know every access point when I first started.

I think when I first started cataloging, I only thought of a certain number....a limited number of fields because there was so much to remember. As I gained proficiency and I learned about fields that I had never seen before, I learned about them and a lot of times that apply as well.

Three out of the 20 participants explained that they used to be more focused on rules when they first started cataloging, but now they are less focused on strictly following the rules and more focused on access and/or properly coding the catalog data:

I have moved away from the tried and true and the need for a lot of rules to a place where I am more concerned about encoding, making sure the codes are correct for retrieval purposes, for statistical purposes, where keyword is much, much more important to me than, say, subject analysis...Syntax is more important to me than semantics.

When I first started, probably around 10 years ago, I was much stricter about having to match exactly what AACR2 said or what MARC21 said....that you have to have ISBD punctuation or else it's no good...those types of things. I have become less concerned about some of those types of things. It's more about 'is everything accurate? Can you get to it?'

The answers of the remaining 5 participants did not vary widely from the other responses, but still contained slightly different viewpoints:

- 1 participant responded that his definition is much more focused on details
- 1 participant responded that her definition is much more relaxed and she is not as concerned if her records are as complete as possible
- 1 participant responded that her original definition was much more focused on the speed of cataloging, but now she is more focused on "standards and management"
- 1 participant responded that her definition has expanded due to the knowledge that shared cataloging allows more people to see her records, so they need to be more accurate and carefully constructed
- 1 participant responded that his definition has expanded due to his experience working with users who have different approaches to searching the catalog

Events Impacting Quality Cataloging Definition

Interview participants were asked about events that have impacted their definition of quality cataloging, but they were also encouraged to think of ideas, people, or anything else that/who might have influenced their perception of quality cataloging. I received a wide variety of responses to this question that sometimes reflect the individual backgrounds and work situations of the participants. The most common response given (4 out of the 20 participants) was "experience," namely, becoming more familiar with cataloging practice and standards through performing cataloging on a regular basis:

I would say the main thing is just getting experience...gives me a higher and higher bar for my own definition of quality cataloging. The more fields I know of, I hold myself to a higher standard to meet them and to include more lines in my records.

Probably just age, experience, wisdom, that type of thing. The more we practice, the more we learn and the more we see how these things work.

Several of the participants (3 out of the 20) who have been practicing cataloging for a longer length of time stated that the introduction of "electronic cataloging" and OCLC's

networked cataloging profoundly impacted their perception of what quality cataloging is and can be:

I think it would definitely be the electronic cataloging...We could not afford to belong to OCLC, so we still bought cards and I think that was a revolution. It took us longer to get to an automated catalog and I think that does change your perspective. So I think that is the defining difference...if it's truly shared cataloging because it's not just LC that does it, everybody's responsible for OCLC's database.

Oh definitely the introduction of OCLC. I am from the era of people putting in very, very brief records. Where they basically put in an author, title, publisher, and date and maybe a subject heading. They were doing quick and dirty cataloging and the cataloging has improved. The Expert Community [Project] in OCLC has been wonderful.

Discussions with co-workers, supervisors, and other cataloging colleagues over email listservs and at conferences also had an impact upon participants (4 out of 20 participants):

I really learned to be a cataloger from working with the people around me. I felt that I didn't get a very good education at all...cataloging when I was in school. So it's more the people who have been working in the field for 15...20 years who can really teach you and give you the knowledge that you need in order to do your job.

I would definitely say that the AutoCat listserv has impacted me in ways I have never known. I read it every day and I get the digest version, but I think most of my definition was formed by the opinions of people that I now respect on that listserv. I think that's how I found my definition is from reading the ideas of people who have been doing this a lot longer than I have and who have a more...a whole picture of what's going on and I've based my definition on a lot of people I have never met, but read and follow and trust.

Participants also mentioned that their quality cataloging definition was impacted by the following:

- looking at other records (both good and bad)
- changes in user search behavior/information environment
- work conditions (such as time constraints)
- training library school students
- RDA

Necessary Conditions for Quality Cataloging Work

Next, participants were asked, "In general, what do you feel are necessary conditions for performing quality cataloging work? Alternatively, what would prevent you from producing a quality record?" The top answer to this question (14 out of 20 participants) was "time" - having enough time to produce quality cataloging is important. However, of those who said that time was important, 8 said explicitly that they are not under any time pressure by their employer and most of the others did not indicate that they were under any time pressure. Only two participants said that they felt pressure from their employer to perform their cataloging quickly, but one out of these two said that she prefers it this way.

A total of 8 out of the 20 participants said that the availability of cataloging tools is important for producing quality cataloging - having tools that are up-to-date and having a good understanding of the tools:

Having the standards and rules written out for you, either in print or online. Some sort of reference that you can get your hands on easily and therefore if you don't have those standards and practices and rules written out, then you're on your own...For me, it would be having my AACR2 binder with me and I have many links in my favorites, such as OCLC Bib Formats for the Connexion records that we create. And we also have an internal, sort of a local practices type thing that we keep track of on a wiki that's just used by library staff.

I think that, like I said before on the survey, just having the right tools and the right standards to use that would support good cataloging. I think we could do more if we had better tools and better standards that were more in line with our current context.

...the subject analysis...that needs a lot of time devoted to it to take those correct controlled vocabulary terms and figure out which subdivisions you might be able to use and applying those and figuring out where you want to class it depending on the scheme you're using. So it's really about time and understanding the tools that you need to use to make those things happen.

Five out of the 20 participants expressed that administrative support is important for producing quality cataloging, as well as proper on-the-job training:

What would prevent me from producing a quality record...a non-supportive boss/manager that does not believe in upgrading and creating quality records and contributing to the database as a whole to make it better for everybody. I've had a couple bosses like that. I don't currently, which is wonderful. And training. Training is essential for people to understand.

I guess you need support...it's part of what the time is, you need support from your peers and your supervisor that it's important to do a good job....that doing good cataloging improves access in the catalog for patrons. And that, in turn, improves scholarship and the quality of student performance.

And I think another thing that impacts it is how your administration feels about quality cataloging. I was at a conference once and I was talking to a couple of the people and one person (I think she was a library director) said, "oh, we don't care where it goes on the shelf as long as it's got that barcode." I was really taken aback...

Other conditions necessary for producing quality cataloging work, according to interview participants:

- familiarity with format and/or subject of items cataloged
- having a cataloging mentor
- quiet
- enough staff to do the needed work
- making sure vendors are clear about expectations
- a collaborative atmosphere
- analytical skills and judgment
- an eye for detail, yet able to see the whole picture
- a non-legalistic rules-based environment

Impact of Standards Upon Quality Cataloging

When asked how national and international standards guide their work or even detract from their ability to produce quality records, all of the interview participants expressed in some way the value of using national and international cataloging standards. One interview participant articulated the sentiment felt by many of the other participants: "It easier for our users if we're consistent and we do things the same way and it definitely goes faster if we don't have to recreate the wheel every three seconds." However, most participants qualified their statements with an

expression of concern about the usefulness of the current standards and anxiety about the direction and cost of the development of new standards. Only 4 out of 20 participants said that they could not think of any way that standards detracted from their ability to create quality records. 9 out of 20 participants said that current standards do not detract, but there are problems with them that need attention:

- the standards do not always meet the needs of their users, and so the participants rely heavily on their own judgment in instances where they feel that the standards are lacking
- the standard creation/revision process is not efficient and should include more cataloger input; enhancing records should be easier
- the standards need to be updated to make metadata easier to manipulate in an online environment
- more collaboration with Europe is needed
- the standards can be a little constricting at times

Eight out of 20 participants did not state explicitly that the current standards hinder their ability to create quality records, but did state that standards (particularly AACR2) are flawed and need updating in some way:

- AACR2 and MARC need a lot of updating because there is still too much "card catalog mentality"
- AACR2 is flawed, but for the most part ok - the ILS needs to receive more focus than updating standards
- the current standards aren't perfect, but it would be too costly to change standards right now
- the standards are lacking because they do not handle non-print book formats very well
- AACR2 needs to be updated, but doesn't see RDA as a good replacement

Cataloging Department's View of Quality Cataloging

Interview participants were then asked if their cataloging department shared their view of quality cataloging. A total of 12 out of the 20 participants said that their department does share their view of quality cataloging. However, 4 participants out of those 12 are either the only cataloger in the department (and therefore their view is the only view) or they are in charge of

department and instruct their subordinates to catalog based on their perception of quality cataloging. Only 2 of the 20 participants said that they held a different view of quality than the rest of their department. One said that is because her department is too "legalistic" and focused on rules and not enough on users; the other said that her colleagues were not concerned enough about rules and standards. The remaining 6 participants said that they believe that most in their department share their view of quality cataloging, but there are some who do not:

There's one person in our department who's been cataloging for 20, 30 years and so she's really particular about following the rules. I'm a little more liberal in assigning call numbers and stuff.

I would say that a significant proportion would share my view of quality. There may be a couple, three people who do things a little quicker and dirtier than I would like.

I would definitely say that my supervisor who trained me absolutely does because I do original cataloging, I have her check...look over my work... I don't think that everyone else does. I don't think everyone else has that ethic or that mindset. I think some people come here to work in technical services so they don't have to talk to anyone else and they just want to come into their little cube and just do their work, but don't feel a passion for it.

The interview participant's responses to this question reinforce data from the survey concerning respondent views of the quality of the cataloging in their department.

Cataloger's Judgment's Role in Quality Cataloging

Except for one, interview participants all agreed that cataloger's judgment is important for producing quality cataloging. The lone exception felt that cataloger's judgment should be limited because it can lead to too much inconsistency in cataloging practice. However, just as in their responses about the importance of standards for quality cataloging work, many did express some reservations about the use of cataloger's judgment. A few respondents said that even though they

feel that cataloger's judgment contributes to quality cataloging, it is important that catalogers do not "agonize" too much over decisions:

I think it plays a bigger role in quantity, if you're able to make some good cataloger judgments and not agonize over them, things go a lot quicker. But in terms of quality....if a cataloger has been trained about what to think about in order to make a good judgment, then I think it can help quality a lot.

Another participant spoke positively about cataloger's judgment, but felt differently about it when discussing RDA:

I was taught to use AACR2 and am kind of a details freak. I think allowing so much freedom to the cataloger [using RDA] versus a set of across-the-board standards in cataloging might lead to inconsistency and too much variation in records.

Proper cataloging training was also a concern of some interview participants who felt that lack of training in cataloging rules and standards may lead to using judgment improperly when producing catalog records.

So a lot of times my colleagues will be "well, we can just do this" and they'll make these horrible records....they'll make records that don't conform to the bibliographic formats...I don't want to say "at all," but there is no punctuation...they're not thinking about the indicators...they're not capitalizing correctly...they're not adding enough fields.

Judgment is based on a wide base of knowledge. If you don't have that wide base of knowledge, you can't really do quality cataloging. And that means knowing what the rules are, it means knowing the local practices.

The need for standardized practices and rules as a condition for proper use of cataloger's judgment is stressed by participants throughout the study. Cataloger's judgment without a solid grounding in standardized practices and rules is generally viewed as a breeding ground for non-quality cataloging.

Impact of RDA Implementation Upon Quality Cataloging Definitions

Interview participant views of the impact of RDA implementation upon quality cataloging definitions were largely similar to survey responses. I sought interview participants who would be able to offer insights into perceptions of RDA from various viewpoints. On the survey, five of the interview participants chose "not sure" in answer to the question, "Do you feel that the implementation of the new cataloging standard Resource Description and Access (RDA) will impact your definition of quality cataloging? Please explain why or why not." Seven of the interview participants chose "yes" and eight chose no."

A total of 18 out of the 20 interview participants commented about RDA implementation on the survey. Of those responses, three were positive about RDA; five were negative about RDA; five were unsure, neutral, or needed to know more about it; and five said that their definition of quality cataloging will not change with RDA implementation. For the most part these viewpoints did not change when interview participants were asked again about RDA and its impact upon their definition of quality cataloging.

Several admitted that they still do not understand RDA and what its impact will be upon cataloging practice:

I think I know very little about RDA, so I'm only making assumption and guesses despite going to these webinars over and over again.

I'm still kind of uncertain about the whole process. The creation of it has been going on longer than before I even entered library school, so I'm coming into it late in the conversation in the last 2 years and I think that I'm not sure how RDA is going to affect our cataloging.

I like the idea that it's based on FRBR. I think that will be helpful. I don't think I will fully understand it until I actually start using it, so it's really hard to comment on it.

There was some concern that RDA rules would require the use of more cataloger's judgment than in AACR2 since there is a perception that RDA rules are more flexible than

AACR2. This increase in flexibility may make it more difficult to define quality cataloging (for individual catalogers and for cataloging departments):

We just discussed here in our office about RDA and how no two people are going to catalog the same way when you have so much freedom. And so that kind of goes back to what I said about the variation and not having the standard types of records.

I guess it will be strange to define quality in terms of RDA instead of AACR2. It just seems like AACR2 is such an institution. And it seems like we're defining cataloger's judgment by putting in all these things that we assume to be true and pulling cataloger knowledge and experience and it's going to go away now. It feels like sort of dumbing down things. I guess there's an element of elitist thought here where it's a language that catalogers speak the best and the ability to stay in that language and follow the rules and stuff is what defines a high quality record.

I think it's going to be very difficult for paraprofessionals doing copy cataloging to assess whether it is a quality record or not just because of the various ways that RDA lets people describe things. So I think it's going to change our view of what we call quality.

Other interview participants focused on the necessity of changing cataloging standards, the possible benefits of the change, and the idea that change can be difficult:

I've been trying to learn a lot about RDA. I've been taking some webinars and reading a lot of articles and stuff and I think it's really exciting. I think that trying to find a way for our catalog records to be part of the semantic web and to be searchable is wonderful and I think taking some of the archaic, catalog-card structure out of cataloging will be difficult for people....when it's all on the computer, it doesn't really make any sense to transcribe the title page as a paragraph the way we keep doing when all we have to do is list the author and the title and the publisher and the date and do it in a more computer-readable way than we are doing it now. I think it makes a lot of sense and in the end it will be easier for everybody.

It will be a change for folks used to using AACR2, but there aren't that many differences that are going to be really hard for them to accept....In terms of quality, as usual there is a bit of a learning curve with everything new and then you just get used to it and move on.

People are so upset about this whole thing and it's just another way of arranging the information. I can't think of a good metaphor right now, but I don't think it's going to be that big of a deal. It just means that we'll have to learn some new things and it probably will make things easier for our patrons to find.

Overall, interview responses mirrored survey responses in regards to the uncertainty many catalogers feel about the development and implementation of RDA. Even though there were definitely strong opinions (positive and negative) about RDA, many catalogers noted their attempts to learn more about RDA and their willingness to adapt their cataloging practice once RDA is implemented on a wider scale.

Current State of Library Cataloging Quality

When asked whether or not the current state of library cataloging (the catalog records, the cataloging process, and/or the catalog as a whole) is quality, 15 out of the 20 interview participants said "yes, the current state of library cataloging is quality." However, all but two participants qualified his/her "yes" with criticisms of library cataloging and/or suggestions for improvement. Even though there was some overlap in the suggestions for improvement, most interview participants had different ideas about how to improve current cataloging practice. The two most popular suggestions (three participants for each suggestion) were (1) to encourage more catalogers to upgrade records in OCLC or just cooperate more in general; and (2) to focus on better training and mentoring for new catalogers and those already in cataloging positions.

In regards to greater cooperation and OCLC record enhancement, one participant commented:

When I come across an OCLC record that's not complete or it's got minimal information in it, I think the fact that I can go in there and improve it if I've got the item in hand just makes it better for the next person. I think the open access for searching and changing other people's work....that we can collaborate that way without having to check with each other, I think is good.

In regards to training and mentoring, one participant remarked:

I do a lot of work with library school students that are interested in cataloging. I have fieldwork students all the time. One of my fieldwork students recently got a job in [...].

She said she can't believe how untrained the staff are in her small, academic library. She said that it is quite obvious that no one has paid any attention to these people trying to do the cataloging and they have been on their own and they don't know some of the simplest concepts. I don't know how we do that kind of outreach. It's kind of like you need to send experts into these places and make sure that the catalogers have what they need and have somebody knowledgeable that they can ask things to. I don't know.

Another participant said:

Training. Training catalogers and cataloging staff...paraprofessionals on up. If you are going to use it in your catalog or any other catalog, you need to create a good record. You may have a standalone system now, but what's going to happen in 10 years? Or, are you a part of a consortium that no longer has any funding? And are you going to have to go out on your own and get your own catalog? Or form with another group? I've worked in consortia. I've worked in one very cooperative consortium and one where the first record in was always right and no one could enhance it. That's not what I believe. I believe that everyone has something to contribute. Training is essential, which is something that is being cut with budget cuts. Training workshops, teaching people this is quality cataloging.

The next most popular suggestions (two participants for each suggestion) were (1) to support a cataloging environment that uses more unstructured or sharable data with those outside the library community; (2) to move beyond the MARC format; and (3) to discourage tape loaded vendor records in OCLC. One participant's comment on unstructured/sharable data:

I'd like to see more unstructured data. I would like to free all that data from MARC...to extensible catalogs where we can really get them into XML [extensible markup language] and let that information flow differently and people can look for it by words. A more unstructured environment is where I think we'll be in the next 20 years.

Another participant mused about moving beyond MARC and moving beyond current cataloging practices in general:

I hope that it [cataloging practice] progresses and that some of these RDA things coming in the future and some of the ways of looking at a cataloging record and moving beyond the MARC record happen while I'm still here so I can learn new things and I think it's exciting to learn something new. Given the state of the world, it's really hard to stay in the same place without feeling kind of silly. I'm looking forward to some of these changes.

Finally, a participant's observations about vendor records in OCLC:

I think we need to get the vendors on our quality side because the vendors who are creating a lot of our initial records have no clue about quality cataloging...Often you can't even find these vendor records even though they supposedly match what you have because you ordered it on that record and the vendor sent you the item, so in theory that record should be what you have, you couldn't tell it from the record itself.

The following is the remaining list of suggestions made by interview participants:

- Need more genre headings, 505, and 520 fields in records
- Need to "settle on a code and move forward"
- Need better OPAC design
- Need more time devoted to cataloging
- Need less "nit picky rules"
- Need more customization of records at the local level
- Need more comprehensive cataloging (more needs to go into catalog)
- Need more catalogers
- Need more efficiency in cataloging (both the practice and the systems)
- Need catalogers to communicate more with each other, other librarians, and users

Two out of the 20 participants said that the current state of cataloging is not quality. One of these two participants stated that the practice of cataloging has become "cumbersome" mainly because we are still using MARC, but also because too many catalogers seem to be attached to traditional cataloging practices:

I wish there was more free thinking around different ways we can do things, but we seem so tied to the way things currently are because of our systems, this established practice. Even with RDA, I don't feel like we're breaking out of that at all. I think we are sort of continuing a mission to keep going with the MARC format and not thinking about other ways we can format the data to make it easier for us to share and display.

The other participant who said that the current state of cataloging is not quality remarked that she felt that Library of Congress cataloging has declined in quality. She said that she was also concerned about the level of cataloging training library school graduates are receiving:

You know a major indicator is just going into OCLC and looking up any title and seeing how many results you get. It shouldn't be like that. The Library of Congress cataloging which used to be so reliable is filled with errors now...And when I talk to people coming out of library school, even younger colleagues who are recent graduates of library school, I don't know where they are going to library school, but just seem to know nothing about cataloging! It's really kind of alarming. So I don't see how anyone could get quality cataloging.

Three out of the 20 said that it depends on the institution or the cataloger performing the cataloging; that lack of cataloging training has led to a "mixed bag" of quality and non-quality cataloging, especially in regards to when to (and when *not* to) create new records in OCLC. One participant remarked:

I'd say that the state of cataloging is that people are doing the best they can, but you've got a range of catalogers adding materials to OCLC and some people using their cataloger's judgment don't recognize what they are looking at on the screen...that it's the same thing they have in-hand, so they create a new record when they don't have the authorization to enhance it. So they create a new record and make a better one than what's there. And then you have two records in the catalog for the same thing.

Another participant made a similar observation:

There's some, but there's still...using the OCLC example, there are way too many records that are created for the same publication and it's something that I suspect that there are many inexperienced catalogers out there. There's also those out there who really don't understand when to input a new record.

Of all the responses to this question about the current state of library cataloging, the state of cataloging education, training, and mentoring for new catalogers appears to be the most common concern. Even though there was a wide range of suggestions for improving current cataloging practice, many of the suggestions directly or indirectly point to the idea that good cataloging training is key to producing quality cataloging.

Other Considerations

In addition to the scripted interview questions, I chose to question most interview participants about other topics as well. Specifically, I asked interview participants about whether or not they also worked at the reference desk and/or have frequent interactions with their library's users. This question was prompted by some of the interview participants' comments that their experience working at their library's reference desk influenced their thoughts about quality

cataloging. I decided to ask other interview participants if they work the reference desk or interact with users on a regular basis, and if this experience has influenced their perception of quality cataloging if they do.

When asked if they work the reference desk at their library or if they have frequent interactions with users, nine participants said "no," six said "yes," and five participants were not asked the question. Of those who said that they do work at the reference desk, all but one said that the experience has influenced their thoughts about quality cataloging and continues to do so.

One participant commented:

I find that I am a better cataloger because I am a reference librarian and I'm a better reference librarian because I'm a cataloger. I feel that the two go hand-in-hand.

Another participant remarked:

I work at the reference desk every day...I think that if you don't know how your patrons are looking for things, then one, as a cataloger, is really missing something. I find it immensely helpful to do reference because people don't search the way that I search.

One interview participant said that it helped him when he first started working the reference desk, but doesn't really help him so much now:

I think in the beginning it kind of helped. I don't know how much continuing to do that really serves to give you new insights...or give me new insights.

Most of the nine participants who said they did not work the reference desk at their library did not feel that this hinders their ability to produce quality cataloging; only one of these participants acknowledged that she wished she did work more often with users in order to inform her cataloging practice.

The other eight participants who said that they did not work at the reference desk believed that they are able to stay informed about user needs in other ways. Six of these participants say that they have frequent interactions with public services staff and/or other

librarians at the library who inform them of problems with the catalog or catalog enhancements they would like to see. One respondent noted:

I don't believe that it hinders me...it's certainly something that I am open to knowing more about, but I just don't know how much realistically that would play into what I do honestly. I do have frequent interactions with the public services staff if there are any issues in the catalog that we fix, but don't reflect much on quality cataloging.

Another commented:

The reason why I know what patrons prefer is that the special collections librarian, who does have interactions with patrons, she'll tell me that people will look for it here and not here.

One participant remarked that participating on her library's integrated library system (ILS) committee helped her gain a better understanding of user needs:

I was on our Voyager ILS user group, I was on that committee this past year, so I got a lot more feedback from students in the past year than I have in recent years because I served on that committee.

Another participant believed that her previous reference experience was enough to keep her informed about user needs, even though she does not work the reference desk now:

I used to work the reference desk in a previous job, so I don't think I'm hindered by not being at the reference desk because I can put myself in their shoes and think, "what would I need to know?" and "does this make any sense to me?" and "what additional explanation can I give that will help things be clearer for the patron?"

Finally, one participant who does not work at the reference desk said that it probably best this way because users receive more benefit from a librarian who works in public services on a regular basis:

I think it's valuable but I also think that students get a better reference experience from those who do it more often than just once a week. Every once and awhile people talk about training people to do other people's jobs, but I can't imagine training someone to do cataloging occasionally and it's also hard to train someone to do reference occasionally and to do as good a job as the people who...it's their function to do it. Even though it does increase your knowledge of what's going on in the library. I'm not sure it's best for the patrons.

I also asked interview participants who rated the quality cataloging attribute "Administration is trained in/knowledgeable of cataloging" low in importance on the survey why they rated the attribute this way. I was curious as to why this particular attribute was rated so often as "not important" by survey participants.

In regards to the level of cataloging knowledge and training that library administrators have, most respondents agreed with the survey results that administrators do not necessarily need to know how to catalog in order to be a supportive of the cataloging process and product. Even though several participants mentioned that having an administrator with a cataloging background benefitted the department, there were also several participants who said the opposite: that having a cataloging background either did not help or actively hindered their ability to manage properly.

One participant argued that an administrator who is puzzled by cataloging or views it as complex tends to be more supportive of those who do "get it" and the administrator who knows how to catalog may view some aspects as easy and take things for granted. Another participant also said something along these same lines:

I have worked for both. I currently work for an administrator who has a cataloging background, so she's definitely knowledgeable in cataloging, but doesn't really see the value in it. And I've worked for another administrator who knew nothing about cataloging, but was willing to delegate to people he knew who were experts. So I think it's really the willingness to trust your staff...to know your staff and trust them. That's more important than what you know. I think a good manager will pick really good people and then delegate well.

This idea that good administrators do not necessarily have to be good catalogers was echoed by other participants:

I don't think that the director needs to have that much working knowledge of specific standards. They have to have a broad knowledge of standards and practices...AACR2 and RDA and that sort of thing, but obviously it's really more important that they leave it up to us to make sure that we're following the rules and that we keep up-to-date with professional development and any kind of workshops or webinars that are available to us.

So that they support us by encouraging us to go and paying for any webinars that we need to learn, like RDA practices, that sort of thing.

That comes down to people willing to delegate tasks to experts and it goes beyond just cataloging....it's anything, whether it's reference service or computer support or anything. Administrators can't be experts in everything; they need to be willing to delegate responsibility to experts and trust them to do a good job, and ultimately it's all about communication. I don't expect administrators to be experts in anything in particular except for administration.

Other participants agreed with this sentiment, but also felt that having lower-level administrators (such as the head of cataloging or technical services) with at least a basic understanding of cataloging and/or cataloging courses in library school benefits catalogers:

...in our library, there is a director and a head of technical services, who happens to be a cataloger as well. So obviously it's different, my experiences with her because she has to have the knowledge of cataloging in order to do her own job. But she is also very supportive of bringing our cataloging concerns to the director.

I think that if you have a head of technical services who has been hands-on and has an understanding of what is involved in the work and can express the importance and the needs for the department so that upper administration has at least an appreciation for the work and an understanding of the complexity of it and what's needed to get it done, they don't have to have the hands-on if they're open and open-minded and empathetic, sympathetic, understanding, and supportive.

These comments helped to clarify the survey responses concerning the lack of importance attributed to administration's knowledge of and training in cataloging practices. However, lack of administrator knowledge about the benefits of cataloging, coupled with catalogers' inability to properly communicate these benefits, might lead to lack of support for cataloging. One respondent commented:

I have been given a lot of leeway with my two directors to do what I needed to do in this department and they have been very supportive. The first one was like, "I don't know why there has to be cataloging" and he and I would have lots of arguments and in the end he realized that if you get the data right at the beginning, there's no need for a mediator, such as reference. It took awhile to convince him of that.

Another respondent remarked that an administration that does not see the benefits of cataloging can create a negative environment for catalogers:

...there's been a tradition here that there are some people who give a high standard of cataloging and others who do not...It comes from above, in the culture here. We have a person in charge here at [...] who doesn't understand cataloging and doesn't understand why it is important.

MARC Records

In addition to answering questions about quality cataloging, interview participants were asked to send six bibliographic records (three records they believed were "not quality" and three records they believed to be "quality") as well as comments about those records either in electronic or paper format. A total of 11 out of the 20 interview participants provided these records and most of these participants provided comments about each of the records explaining why they felt each record was "quality" or "not quality."

The purpose of this exercise was to gain a better understanding of the types of records participants viewed as "quality" and "not quality" and the composition of these records. I also sought to compare the MARC fields and subfields in these records to the MARC fields that survey respondents felt were "very important" to include in a quality bibliographic record. These two avenues helped me answer the third research question for this study: What characteristics of a bibliographic record, including field/subfield usage for content designation, are perceived to be the most important to catalogers when they judge the quality of a record?

During the data analysis, I examined the "quality" record MARC fields to see if the top ten "very important" MARC fields and subfields on the survey were represented in these records. In all of the records, the top ten "very important" MARC fields and subfields were included if they were required for that item (for example, the 110 field (corporate body main entry) was

ranked fourth on the list of "very important" MARC fields and subfields, but not all records require a corporate body main entry).

Next, I examined the "encoding level" (fixed field code ELvl; Leader/17) of each of the records. According to the OCLC Bibliographic Formats & Standards website (2011b), the encoding level represents "[t]he degree of completeness of the machine-readable (MARC) record." In the OCLC database, different levels of cataloging are acceptable as long as the records contain the proper ELvl code to indicate the level of encoding. The main levels of cataloging are: full, core, minimal, and abbreviated. Table 4.24 contains the definitions of each of these levels.

Table 4.24

Explanation of Bibliographic Record Encoding Levels (OCLC, 2011b)

Level	Definition
Full-level cataloging	Records that meet the requirements of second-level description (AACR2, rule 1.0D2). Correspondence between data in Full-level records and data required for second-level description is not exact. Input full records when possible.
Core-level cataloging	Records that meet at least the requirements of first-level description (AACR2, rule 1.0D1) and meet some requirements of second-level description (AACR2, rule 1.0D2). The core standard is a less-than-full standard, but is more inclusive than Minimal-level. The standard is optional. Use it as appropriate.
Minimal-level cataloging	Records that meet the requirements of first-level description (AACR2, rule 1.0D1). Correspondence between data in Minimal-level records and data required for first-level description is not exact. Data required for online cataloging may not be required by cataloging rules. Input Minimal-level records as appropriate. Users may upgrade Minimal-level records.
Abbreviated-level cataloging	Brief records that do not meet the requirements of Minimal-level cataloging specifications. Because Abbreviated-level records may not meet Minimal-level standards, users with Full-level cataloging authorization or higher can upgrade these records. Depending on the authorization level, users may upgrade to <i>K</i> , <i>I</i> , <i>4</i> or ♣

Interview participants were told to choose records that they felt were "quality" and "not quality" regardless of the encoding level of the record. Some participants explained that they intentionally tried to find "not quality" records that were "full-" or "core-" level cataloging since "minimal-" and "abbreviated-" cataloging frequently lacked descriptive information, subject headings, and call numbers. These participants felt that they could find "not quality" records without resorting to choosing records that were intended to be incomplete. However, one

participant who chose this route noted that choosing "not quality" "full-" or "core-" level records was harder than she previously thought:

I was thinking "oh my goodness, it's going to be so easy to find the bad records." But I have been looking and looking this past week and I'm actually finding it harder than I thought to find a really bad record! Because one of the things I realized is that a lot of the records that I consider to be "bad records" are less-than-full level cataloging. They are not an "I" level cataloging record [full-level input by OCLC participants]. So, I am trying to find level "I" because people think they are doing good cataloging, so I just found that interesting. So I guess I was thinking that it was worse than it really is.

Table 4.25 provides an explanation of the encoding level (ELvl) codes used in the OCLC database as well as the number of times they are represented in the "quality" and "not quality" records chosen by interview participants. One set of records is not included here because the participant did not include the encoding levels for her records. (Note: not all ELvl codes are included in this Table; only the codes that were included in the participant records are presented here).

Table 4.25

Encoding Level Codes for Fixed Field ELvl (OCLC, 2011a) And The Number of Records That Contain These Codes (n = 60)

Code	Explanation	Number of "Quality" Records	Number of "Not Quality" Records
[blank]	Full-level. The most complete MARC record. The record's information is derived from a physical inspection of the item. Code <i>blank</i> is used by authorized national bibliographic agencies and libraries participating in PCC (BIBCO and CONSER). BIBCO and CONSER records will contain an authentication code in field 042.	14	
2	Less-than-full level, material not examined. A record between Minimal-level and Full-level cataloging. The record's information is derived from an existing description of the material (e.g., a printed catalog card). The physical item is not reinspected. All of the descriptive access points are transcribed. The authoritative headings may not be current. Code 2 is used, for example, when only a subset of data elements is transcribed from a catalog card during a retrospective conversion to the MARC format. Code 2 is used only by the Library of Congress.		1
3	Abbreviated level. A brief record that does not meet Minimal-level cataloging specifications. Headings in the record may reflect established forms to the extent that such forms are available at the time the record was created.		6
4	Core-level. A record that is less-than-full, but greater-than-minimal-level cataloging and that meets core record standards for completeness. Any OCLC participant may enter a Core-level record as long as Core-level input standards are followed. A Core-level record that is entered by a library participating in PCC through BIBCO or CONSER will contain an authentication code in field 042.	1	
I	Full-level input by OCLC participants. A record that conforms to OCLC's level <i>I</i> input	14	8

	standard. The level <i>I</i> input standard represents full cataloging. Use level <i>I</i> when transcribing LC or NLM copy.		
K	Less-than-full input by OCLC participants. A record that conforms to OCLC's level <i>K</i> input standard. The level <i>K</i> input standard represents less-than-full cataloging.	1	3
L	Full-level input added from a batch process. A full-level record batchloaded from an institution other than LC, NLM, BL, NLC or NLA.		2
M	Less-than-full added from a batch process. A less-than-full record batchloaded from institutions other than LC, NLM, BL, NLC or NLA.		10

The encoding levels for most of the "quality" records ($n = 30$) were either blank (the code used by authorized national bibliographic agencies and libraries participating in PCC) or "I" (full-level input by OCLC participants). There was more variety in the encoding levels of the "not quality" records ($n = 30$). Most were coded as "less-than-full-" or "abbreviated-" level records, but there were also several "I" level records as well.

In general, the "not quality" records submitted by participants contained a lot less information than the "quality" records. The "not quality" records frequently lacked fields that contained subject headings, call numbers, and notes and/or contained fields with incomplete information (for example, the 300 field which contains the physical description information about the item). Most of the records provided were for books, both fiction and non-fiction.

Even though call number fields (particularly the 050/090 Library of Congress call number fields) were not ranked in the top ten "very important" MARC fields and subfields, 10 out of the 11 respondents either commented on the lack of call number in the "not quality" records or provided "not quality" records that did not contain call numbers. Subject headings

were largely missing from the "not quality" records, but of those that did have subject headings, the headings themselves tended to be accurate to the description of the work and accurate in their relation to the controlled vocabulary of which they belong. Only one participant observed that the subject headings that already existed in her "not quality" records were not specific enough and a few more subject headings should be added to make the records more complete.

Note fields (MARC fields 5xx) were also frequently referred to in the "quality" and "not quality" records. Once again, even though no note fields were ranked in the top ten "very important" MARC field and subfield list, the addition of note fields were seen as a mark of a "quality" record by all but two participants who did not view the addition of note fields in the book records as completely necessary for quality (though one mentioned the benefits of additional note fields, such as a summary and a cast/crew note, in a videorecording record). Note fields were viewed as particularly important in records for non-book items, such as videorecordings and manuscripts. Even though the lack of certain note fields, such as the 505 (contents note) and 520 (summary note) fields, were not mentioned often in the "not quality" records, they are frequently mentioned as improvements in the "quality" records. However, this was not the case across the board. Summaries (520 field) were seen as essential in records for fiction books, but not for non-fiction books. The opposite was true for the contents note (505 field), which was viewed favorably in non-fiction book records, but not necessarily fiction book records. Only one participant presented a "not quality" record that was labeled as such primarily because of its lengthy, enhanced contents note which indexed all of the chapter titles. He commented:

The 'low quality' here is the complete abandonment of LCRI 2.7B18 and the spirit of the contents note in general. The use of the enhanced 505 field only serves to load the keyword title index with terms that will make other searches irrelevant or less precise.

This approaches indexing the content, which the catalog is not meant to do and creates a cluttered OPAC display.

Most often the comments on the records revolved around the lack of certain fields or information in the "not quality" records and the inclusion of certain fields and information in the "quality" records. Standards and rules were mentioned by a few participants, but their importance was largely implied or assumed. For example, participants would sometimes mention "incorrect punctuation" within certain fields without saying precisely that the punctuation did not conform to *International Standard Bibliographic Description* (ISBD) standards of punctuation (which is what they meant). One participant noted the lack of a contents note containing the titles of the five-part video series of her "not quality" record, but did not mention that this lack of contents note goes against AACR2 rule 7.7B18, which says to include such a note.

The frequency of MARC field/subfield occurrences were not counted in the "quality" and "not quality" records due to the fact that frequency of occurrence in a MARC record does not always indicate quality. For example, the 110 field (corporate body main entry) is one of the top fields chosen as "very important" for a quality record. However, if there is no corporate body authorship (which is common for books), then there is no need for the 110 field in the record. Its lack of presence in a bibliographic record does not diminish its importance overall.

In general, the "quality" and "not quality" records provided by interview participants supported the findings on the survey concerning MARC field and subfield usage in bibliographic records, as well as other findings from the survey. For example, even though note fields were not generally viewed by survey respondents as being "very important" in quality bibliographic records, the idea that they contribute to the "completeness" of a record is seen as a good feature.

Conclusion

The data collected from the survey and interviews helped to answer this study's research questions and raised other important issues as well. Much of the data pointed to cataloger focus on the technical details of the bibliographic record in the definitions of quality cataloging and the attributes of a quality bibliographic record. However, cataloging's impact upon users also featured prominently, especially in participants' ranking of quality cataloging attributes. In the next chapter, the research questions are answered using the findings from the data analysis and further discussion is provided regarding some of the issues raised during the data analysis.

CHAPTER 5

FINDINGS

Introduction

The data collected from the survey and interviews and the subsequent data analysis revealed interesting results about academic catalogers' perceptions of quality cataloging. Not only did these data help to answer the study's research questions, but they also yielded other discoveries about the library cataloging community in general and how quality cataloging perceptions are formed and reinforced within this community. The following chapter re-states the problem that this research addresses, answers the research questions posed in Chapter 1 of this study, and presents further discussion about additional issues raised by this study.

Restatement of the Problem

As stated in Chapter 1 of this study, the problems this study addresses are the ambiguous nature of "quality" in cataloging and the difficulties in assessing what quality cataloging means due to differing perceptions of this concept among professional and non-professional catalogers in academic libraries. Catalogers who take pride in their work tend to think in terms of achieving "quality" in their cataloging. However, it is not always clear if catalogers focus on the same attributes (such as the existence of certain information in a bibliographic record, adherence to cataloging standards, etc.) when they envision quality cataloging, or even if they define these attributes in the same way (when a cataloger says that quality cataloging is having an "accurate" and "complete" record, what exactly does this mean?).

In this study, I sought to analyze how catalogers who work in academic libraries and perform original cataloging perceive quality cataloging, how this perception is formed, and how

it affects their work. This study was *not* designed to devise a blueprint for catalogers and libraries to learn what quality cataloging is and then apply it to their own situation. On the other hand, examining the attributes that catalogers feel are important for quality cataloging may help to guide and inform discussions of quality cataloging among catalogers and within cataloging departments.

Research Questions

The first and second research questions posed in this study are best addressed together since the answers to these questions are similar. The first two questions are:

- 1) How do catalogers currently define quality cataloging?
- 2) How do catalogers distinguish "quality" in terms of the cataloging process, the catalog record (as a product, or artifact, of the process), adherence to standards, and impact upon users?

I determined from the literature review and the pilot study for this research that catalogers tend to focus on four particular categories of attributes when they are asked to define quality cataloging. The focus is not always upon only one of these categories; definitions can include attributes from one category or all four categories. These categories are: (1) the technical details of the bibliographic record, such as the accuracy of the data, error rates, and the inclusion or exclusion of fields; (2) the adherence to standards on the local, national, professional, or network level; (3) the cataloging process, including the pace of the workflow, staff training and performance, and administrative support; and (4) the impact of cataloging upon the users, such as the findability and accessibility of bibliographic records in the system and how well they lead the user to his or her desired information object. This study found that this division also occurs in the quality cataloging definitions given by study participants.

Participants largely defined quality cataloging using attributes from the "technical details of the bibliographic record" category (241 occurrences; 40% of the total number of occurrences and chosen at least once by 81% of the total number of respondents). This means that the most common topics participants spoke about in their definitions were, for example, the accuracy and completeness of the data in a record compared to the item in-hand, the existence of typographical errors in records, and whether certain types of information were included in the record.

The word frequency analysis conducted on the quality cataloging definitions confirmed the conclusion that catalogers primarily focus on the characteristics of the bibliographic record the most when they think about quality cataloging. "Record" or "records" were the terms used the most times by survey respondents in their definitions of quality cataloging (247 times, or almost once per the total number of study respondents). This focus on the technical details of the bibliographic record was found regardless of the demographic characteristics of the catalogers. Catalogers across different ages ranges, experience levels, type of position held, number of institutions employed, and education level all chose this category the most often.

The "impact upon users" and "adherence to standards" categories of quality were a very close second and third place among study participants. "Impact upon users" attributes were used by respondents at least once 173 times (28% of the total number of occurrences and used by 58% of the respondents). "Adherence to standards" attributes were used at least once 156 times (26% of the total number of occurrences and used by 53% of the respondents). The "cataloging process" attributes were used by participants the least number of times (39 times; 6% of the total number of occurrences and used by 13% of the respondents).

It is important to note that 78% of survey respondents used attributes from two or more categories when defining quality cataloging. This shows that most participants view quality cataloging as multi-faceted and not strictly within the confines of a single category.

The third research question of this study is, "What characteristics of a bibliographic record, including field/subfield usage for content designation, are perceived to be the most important to catalogers when they judge the quality of a record?" This question can be answered using multiple sets of data. First, in terms of quality record attributes, word frequency analyses performed on the listings of quality record attributes and quality cataloging definitions demonstrated that *accuracy* and *completeness* and their synonyms are the most common terms participants use when they think about quality catalog records. Due to the fact that these terms were often paired with various other terms, such as *access points*, *subject headings*, *spelling*, *physical description*, *information*, etc., there were no prominent patterns of usage that emerged. In addition to this, there was confusion in regards to what respondents meant when they used the terms *accuracy* and *completeness*. Later on in this chapter there will be further discussion of the use of *accuracy* and *completeness*.

The Machine-Readable Cataloging (MARC) fields and subfields that were perceived to be the most important to participants are largely access points that contain either the title of a work (245\$a, the field ranked most often as "very important" for a quality record), main entry headings (personal name (100), corporate body (110), and meeting name (111)), added entry headings (personal (700) and corporate body (710)), and subject headings (personal name (600), corporate body (610), topical (650), and geographic (651)). The date of publication subfield (260\$c) was the only MARC field/subfield included in the top ten "very important" fields/subfields that is not an access point indexed by most library systems.

The ranking of these MARC fields and subfields as the most important for a quality bibliographic record shows the high value placed on data in access point fields even when keyword searching (i.e., natural language) is a popular way users search the library catalog. However, other research has shown that even if users utilize keyword searching more often than structured searching through access points, their inclusion (particularly subject headings) improves the effectiveness of the keyword search (Gross & Taylor, 2005; Miller, 2011).

The opinions of the survey participants in regards to the top MARC fields and subfields in a quality record are largely supported by the MARC records submitted by the interview participants. All of the "quality records" sent by interview participants contained the top ten "very important" MARC fields and subfields if they were applicable to the record. The only field that interview participants frequently mentioned as being important in a quality bibliographic record that was *not* represented in the top ten on the survey was the Library of Congress call number field (MARC fields 050/090). The existence of note fields (5xx) were also viewed as a way for the quality records to be more "complete" even though they are not ranked very highly on the survey. This would suggest that these fields have the potential to add further quality to a bibliographic record, but they are not necessarily an *essential* component of a quality record. However, perhaps this viewpoint should be reconsidered.

In OCLC's 2009 study of user and librarian quality preferences for WorldCat, several of the quality "enhancements" that users said they would like to see would be found in a bibliographic record's note fields, such as summaries/abstracts and tables of contents (OCLC, 2009). The users did not specify the *type* of material for which this information would be the most helpful, which would indicate that summaries/abstracts and tables of contents would be helpful for all formats and genres of materials, if applicable. This finding contradicts the

viewpoint common in academic libraries and present within this study that summaries are not necessary to include in a quality record for a non-fiction work. The summary field (MARC field 520) was one of the top ten "not important" MARC fields for a quality record and was mentioned by interview participants as important for fictional works, but not necessarily for non-fictional works. The inclusion of the contents note field (MARC field 505) was more often seen as a way of enhancing the quality of bibliographic records. Even though OCLC's study focused on users of WorldCat, which includes the holdings of libraries beyond just academic libraries, it would still be worthwhile for academic libraries to investigate whether or not enhancing their records with more 5xx note fields (particularly the 520 field) would benefit their users and bring more "quality" to their catalog despite the fact that it may be more work for the cataloging department.

The final research question of this study is, "How is local cataloging practice influenced by cataloger perceptions of quality cataloging?" Based upon study participants' answers on the survey, local cataloging practice is heavily influenced by cataloger perceptions of quality cataloging, especially if the size of the cataloging department is small or if the cataloger is the head of the department. The majority of survey respondents (93%) said that they have some or a lot of influence on department policies and procedures. A majority of the respondents (55%) said that they have "a lot of influence" on policies and procedures for their department. Local cataloging practice is influenced directly by study participants because 54% of the total number of respondents claimed to be either solely responsible or collaboratively responsible for creating the policies and procedures. This creates an obvious avenue for individual cataloger perceptions of quality cataloging to be codified and influence local cataloging practice. Here are some of the comments provided by survey respondents on how they influence policies and procedures in their department:

My boss has given me total freedom with cataloging, knowing my qualifications and experience. It's a bare bones staffed library and I do 99% of the cataloging, including serials, monographs, media, and some Class Reserves. I am essentially the head of the cataloging here. I create the policies and procedures.

I set them.

I am the only cataloger here, so it's all up to me.

I'm the head of the department and set the quality standard for myself and my student workers. My colleagues who take care of Docs and Serials consult with me on issues. They generally follow my lead on most things.

When asked if their department shared their view of quality cataloging, several interview participants noted that because they are the sole professional cataloger at their institution or the head of their department, their view of quality cataloging is what is taught and practiced. For example, here is one interview participant's response:

My student assistants currently do copy cataloging and their concept of cataloging is extremely limited. So, in that way, they do share my view because I believe I'm the only person who influences their view. I don't think they get influenced by anyone else except for me. So I'd say they have to share my view.

Examining the actual policies and procedures of the study population's department to examine actual influence was outside the scope of this study. However, the survey did ask participants to include their department's definition of quality cataloging, if a formal definition exists. A total of 55% of survey respondents said that their department does not formally define quality cataloging, but the definitions provided have a slightly different focus than the personal definitions provided. Institution definitions of quality cataloging include more attributes in the "adherence to standards" category (42%) with "technical details of the bibliographic record" (26%) and "impact upon user" (21%) attributes coming in second and third. It is possible that this elevation of "adherence to standards" attributes in institution definitions of quality could be due to the need for more specificity and objectivity in discussing quality expectations in a

cataloging department. Using adherence to standards, such as the *Anglo-American Cataloguing Rules, 2nd edition (AACR2)* and the *Library of Congress Subject Headings (LCSH)*, as the bar for quality work could make quality expectations clearer for catalogers and easier for supervisors to enforce quality standards.

Further Discussion

Situated Learning Theory & Communities of Practice

Throughout this research study, participants referred to various influences on their thinking about quality cataloging. These influences more often than not appeared since they graduated library school (if they did graduate library school). As I was conducting the interviews for this study and delving further into the events and ideas that have shaped participants' perceptions of quality cataloging, I ran across the concept of communities of practice, a part of situated learning theory that helped me to gain a better understanding of how perceptions of quality cataloging are formed in the minds of catalogers who work in academic libraries.

Situated learning theory, developed in the early 1990s by educational theorists Jean Lave and Etienne Wenger, is an offshoot of social learning theory that stresses that the skills and knowledge of a particular practice can only be learned effectively by engaging in the actual practice and by interacting with others who take part in the same practice (Lave & Wenger, 1991). Within situated learning theory is the idea that in order to discuss and learn about their practice, practitioners form (either formally or informally) what are called communities of practice. Lave and Wenger (1991) explain that engaging in communities of practice implies "participation in an activity system about which participants share understandings concerning what they are doing and what that means in their lives and for their communities" (p. 98). Using

various modes of communication, either in-person or at a distance, communities of practice are often formed around the need to interpret existing standards and negotiate their meaning. This negotiation, in turn, shapes the ideas of individuals within the practice, as well as the practice itself - "through active and dynamic negotiation of meaning, practice is something that is produced over time by those who engage in it" (Wegner, 2010, p. 180).

The practice of cataloging displays many of the characteristics inherent in situated learning theory and communities of practice. Formal and informal channels of communication are commonplace and well-established within the cataloging profession. Conferences, websites, email listservs, and library literature serve as common avenues of communication between catalogers in order to share ideas, express concerns, and discuss interpretations of cataloging standards. These conversations also take place to varying degrees within each cataloger's workplace through formal discussions (such as at department meetings), as well as informal discussions with colleagues inside and outside the cataloging department. Catalogers also learn from other catalogers in a more indirect way: by examining and emulating what they see in other library catalogs and records. These activities are crucial in the development of a cataloger's professional identity, in addition to shaping cataloger ideas about the product of their labor.

On this study's survey, most survey participants (93%) participate in continuing education activities, such as conferences and webinars and 78% of those respondents are not required by their employer to do so. They also participate frequently - 42% of those who do participate in continuing education activities do so about two or three times a year on average. Even though the question did not specify that the continuing education activities had to be cataloging-focused, these figures indicate that at least among this study's population, engagement in the cataloging community of practice through these channels is commonplace and viewed

positively within the community. This outlook is supported by statements made by survey participants within the comment sections.

The survey statements demonstrate that participants view continuing education courses and conference attendance as good sources of authoritative information about what is going on in the cataloging. Here is one statement taken from the comment section of the question, "Do you feel that the cataloging you perform is quality cataloging?":

As the only cataloger at this library, I am trying to learn and create quality, accurate records, but I do not have a lot of years of experience cataloging monographs, etc. **I'm learning and attending on-line workshops to try and increase my knowledge.**

In reference to their influence on cataloging department policies and procedures:

I think I probably have some influence in that I'm one of only 2 people here who catalog music materials. **I try to keep abreast of what's happening in the larger music cataloging community (via the Music Library Assn., their listserv discussion group, and occasional conference attendance),** and so carry that weight and authority when it comes to discussions of policy relating to at least music cataloging issues.

And explaining their opinion of how RDA will impact their definition of quality cataloging:

It has been very difficult to see exact examples of an RDA record so that it can be compared to a MARC record. **We have participated in webinars and a seminar by an LC trainer, and kept up with discussion on listservs,** but it seems that the general consensus here is that AACR2 could have been modified enough to cover any current shortcomings without resorting to an entirely new system that is costly to implement and untested in its impact upon patrons.

Email listservs, such as AutoCat, are mentioned as being a source of respected knowledge and current practices. Here is one statement taken from the comment section of the question, "Do you feel that the cataloging you perform is quality cataloging?":

I try to do the best I can using the attributes listed above, but cataloging is not my full-time job anymore so my skills have gotten rusty. **I try to keep up with current practices thru listserves** but that is not always satisfactory.

Explaining their opinion of how RDA will impact their definition of quality cataloging:

Since the rules are "looser" in many cases, I think I'll need both more time to use the standards in a day-to-day manner. I haven't had much practical experience with it yet, although **I'm following discussions closely (on AutoCat, etc.)**.

I am not familiar enough with RDA to say for sure how my definition of quality cataloging will be impacted. From what I have seen, it seems to impose unnecessary layers of complexity (**cf. a recent Autocat discussion** on the absurd physical description fields that can result when standard abbreviations are omitted) on a process that was already quite complex enough.

Respondents also mentioned the importance of discussing cataloging practice with colleagues and how they are influenced by catalog records created by others. In reference to their influence on cataloging department policies and procedures:

Meetings and discussions with reference librarians and administrators, coming back from conferences and national standards-writing committee meetings with evidence suggesting importance of what we're doing, keeping up on literature and forwarding salient articles to Dept. head and administrators, etc.

I am the sole cataloger so my views are taken seriously. I am very influential when it comes to making sure standards are followed within local limits. However, **my peers provide opinions that help me understand user perspectives which in turn provides insight as to how I should catalog material.**

And explaining their opinion of how RDA will impact their definition of quality cataloging:

I'm not sure it will change my basic perception of what quality cataloging is or is not. **I will have to wait until I start to create records using the new cataloging rules or see how others are applying the new rules to their records.**

Interview participants also frequently mentioned these various channels of communication and learning:

I usually **consult my Maxwell's Handbook for AACR2** as I'm creating a record and **sometimes I look at other records in our system to kind of use them as a guide.**

I would definitely say that **the AutoCat listerv has impacted me in ways I have never known.** I read it every day and I get the digest version, but I think most of my definition [of quality cataloging] was formed by the opinions of people that I now respect on that listserv.

I've been trying to learn a lot about RDA. **I've been taking some webinars and reading a lot of articles and stuff.**

... **the audio-visual cataloging guide that's been produced for DVDs.** It's not a standard, but it's the standard for our field and how we should be forming our records.

What **you can choose from OCLC helps you develop a sense of a what a good record is.** So if we have to do any original cataloging, if we have to update records, we know what we think a record needs. I think I have learned a lot that way.

Most of the catalogers [in my department] have been taught to follow the rules and they do quite well. And **we ask each other questions to make sure we're doing things right.** We all have our own copy of AACR2 and everything.

All of these comments by survey and interview participants suggest that the cataloging profession has a robust community of practice that often has a strong impact upon the way individual catalogers approach their work and their perception of quality cataloging, for better or for worse. However, whether or not catalogers are fully aware of this influence is uncertain. On question 27 of the survey that asks participants to rank quality cataloging attributes by level of importance, only 80 respondents (27%) said that the "support of the overall cataloging community" is "very important" to them. Out of all of the quality cataloging attributes, this is the one where the most respondents answered "I don't know what this means" (19 respondents, 6% of the total number of respondents).

Despite this, it is still important to acknowledge the cataloging profession as a community of practice and its influence upon the thinking on individual catalogers. Figure 5.1 is a modification of Snyder and Wegner's (2010) ecology of community learning activities within communities of practice with the specific activities of cataloging practice in mind. This figure was created after examining the comments of survey and interview participants. Even though not all catalogers participate in all of these activities, this diagram attempts to demonstrate the complex web of learning activities that catalogers can participate in within their community of practice.

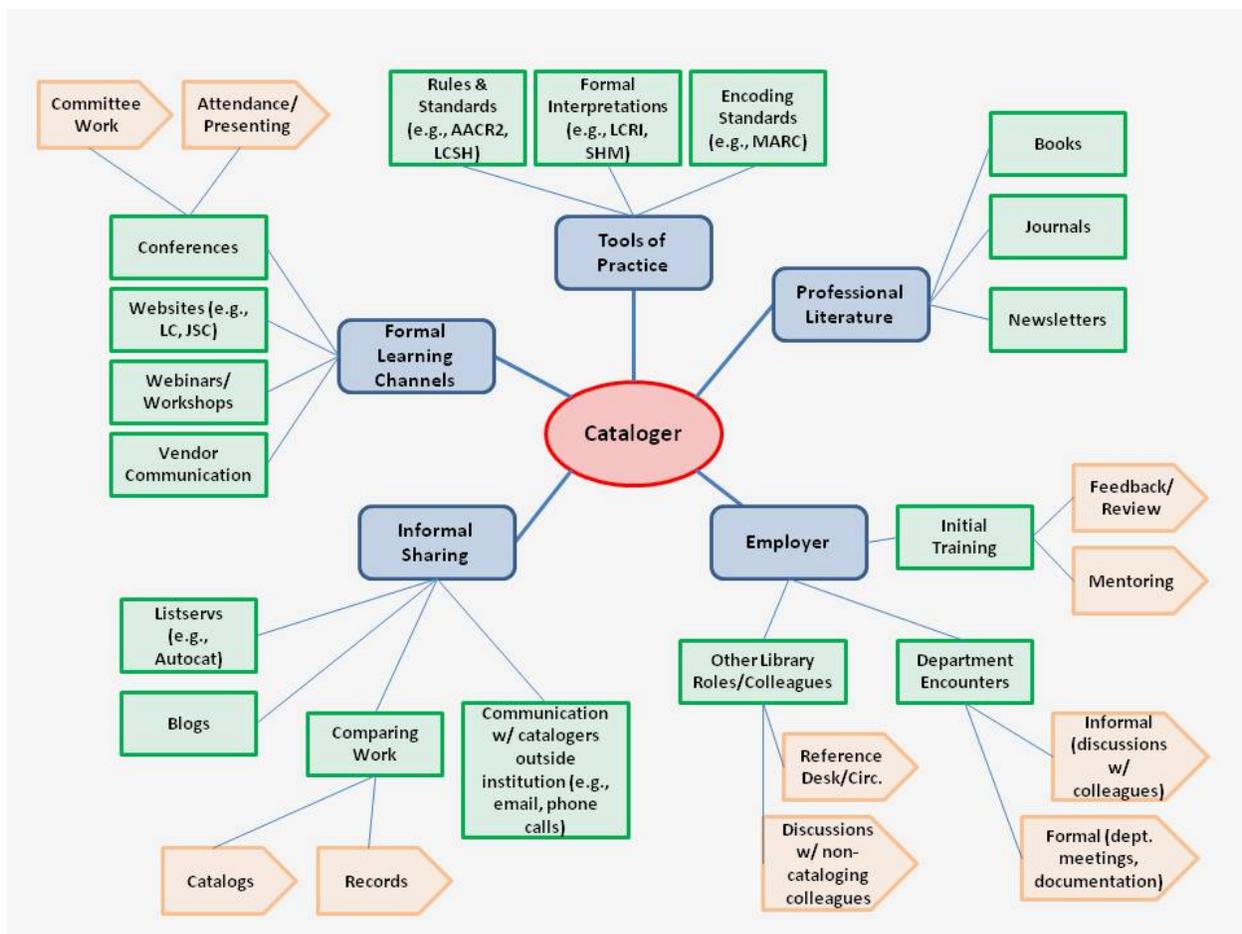


Figure 5.1. A typical ecology of cataloging community learning activities. Modified from Snyder and Wegner (2010).

The cataloging community's "tools of the trade" (such as AACR2, LCSH, and MARC) create a shared language that catalogers use to communicate. Many of the activities in the ecology stem from catalogers' desire to discuss the different uses of these tools, the outcomes of their use, and various interpretations of how and why they are used. The activities range from more formal social interactions through conferences and webinars, employee training sessions, and department meetings, to informal exchanges amongst colleagues (either within or outside the cataloger's institution) in-person, on listservs, or blogs, and by catalogers comparing their own records and catalog to those of other catalogers and institutions.

The data from this study point to the fact that cataloger's judgment is shaped largely through a cataloger's interactions with the cataloging community of practice. This would explain why there is general agreement among definitions of quality cataloging; identification with a community of practice requires a certain amount of what Wegner (2010) calls "alignment" (p. 186). Certain protocols should be followed, standards adhered to, and activities coordinated so that "the action has the effects we expect." (Wegner, 2010, pp. 184-185). In other words, membership in a community of practice implies a certain degree of conformity or else learning and meaning-creation would be extremely difficult or impossible. However, different levels of training, support, and engagement in the cataloging community of practice, as well as diverse work environments, expectations, and pressures could explain why there is some variation in opinion of quality cataloging and why catalogers may place greater emphasis on some aspects of cataloging practice over others.

The Need for *Accurate* and *Complete* Cataloging

When study participants were asked to define quality cataloging and quality bibliographic records, among the most common descriptors they used were *accurate*, *accuracy*, *complete*, and *completeness*. If it is assumed that *correct* and *correctness* can be used synonymously with *accurate* and *accuracy*, then the frequency of use of *accurate* and its synonyms is almost double the frequency of the next most frequently used term describing quality cataloging. The data analysis in Chapter 4 of this study demonstrated that *accurate*, *accuracy*, *complete*, and *completeness* were frequently used on their own to describe quality cataloging or a quality bibliographic record, but they were also often paired with other words or phrases to describe a specific aspect of cataloging or cataloging tool or standard, such as *information*, *description*,

access point, or *subject headings*. However, even when *accurate*, *complete*, and their synonyms were paired with these other words or phrases, the exact meaning of these descriptors were vague and open to interpretation. For example, when a survey respondent stated that a quality bibliographic record must contain *accurate information*, did he/she mean that the information must not contain typographical errors? The information must be a truthful representation of the item in-hand? The information must be correctly described according to AACR2? Or, perhaps all of these were meant when *accurate information* was used?

According to Graham (1990), accuracy is "the correctness of what is provided," which is divided into two major areas: "mechanical accuracy" which focuses on typographic and transcription precision, and "intellectual accuracy" which focuses on how well the description, access points, subjects, etc. match the item cataloged (p. 214).

Bruce and Hillmann (2004) defined accuracy as "[m]inimally, the information provided in the values needs to be correct and factual. At the next level, accuracy is simply high-quality editing: the elimination of typographical errors, conforming expression of personal names and place names, use of standard abbreviations, and so on" (p. 243).

According to these definitions, accuracy cannot be viewed as a one-dimensional idea. Graham's "mechanical accuracy" and "intellectual accuracy" could largely fit into Bruce and Hillmann's "minimal" definition of accuracy. Even though Graham did not state this in his definition, in his article he was in agreement with Bruce and Hillmann that even though adherence to standards can be considered a part of the definition of "accuracy," it is not an *essential* part of the definition; it is useful, but still a luxury (Graham, 1990).

Of the few respondents who chose to define *accurate* or *accuracy* on the survey, most of their responses seem to fit within the minimal definitions of accuracy provided by Graham and Bruce & Hillmann, but there were still a few that viewed *accuracy* as an adherence to standards:

- "Accuracy - the record adequately identifies the item in hand"
- "accuracy - Bib records reflects accurately the item in hand"
- "Accuracy (no typos and **correct tagging**)"
- "Accuracy (fact check information to make sure correct)"
- "Accuracy - **conforming to cataloging standards**"
- "accurate (**all punctuation, phrases, etc. match AACR2 and ISBD principles**)"
- "accurate (no typos, etc.)"

One further consideration in the examination of *accurate* and *accuracy* usage is the fulfillment of user needs, which are not mentioned specifically in the definitions referred to so far. One could argue that fulfillment of user needs is implied in the definition of these terms. For example, one could reasonably assume that eliminating typographical errors and presenting factual information do help fulfill user information needs in the sense that these actions help facilitate the search and discovery process; a typographical error could keep a user from finding the item he/she needs and incorrect information could lead the user to assume that a library has an item that it does not actually have. However, the addition of standards adherence to the equation is slightly more problematic. As Graham (1990) pointed out, adherence to standards is not "*essential* for provision of access for the assiduous, knowledgeable patron," (p. 215) but, in addition, its presence does not always guarantee an achievement of user needs either. As Hoffman (2008) has pointed out, current cataloging standards have largely neglected to incorporate the results of user studies and at times do not accurately reflect the needs of modern library users. Therefore, accuracy in the adherence to cataloging standards may demonstrate

cataloging quality within the cataloging community; however, how crucial this particular aspect of *accuracy* is for library users' sense of quality cataloging is unclear.

Bruce and Hillmann's definition of *complete* and *completeness*, on the other hand, does take user needs into account to a certain degree. Bruce and Hillmann (2004) explained that

[m]etadata should be complete in two senses. First, the element set used should describe the target objects as completely as economically feasible...Second, the element set should be applied to the target object population as completely as possible; it does little good to prescribe a particular element set if most of the elements are never used, or if their use cannot be relied upon across the entire collection (p. 243).

This definition is in contrast to Boissonnas's (1979) definition of *complete* (which is, granted, meant for local use and was not intended to necessarily be applied to all libraries).

Boissonnas (1979) defines *complete* as "no such thing as an optional field. All fields are either required or required if applicable" (p. 81).

Bruce and Hillmann's definition implies that there is much more judgment involved in determining what is *complete* as opposed to what is *accurate*. Bruce and Hillmann were careful to point out in their definition that the decision to include all possible metadata for an item needs to be weighed against economic realities and user needs. Not only will these circumstances vary by library, but within a library as well. One survey participant summarized the situation in this way:

I don't know that there's a written-down definition of quality cataloging, but my impression is that my institution supports accuracy and completeness and adherence to national standards. I rather think we might have different ideas about what constitutes completeness, though.

This tug-of-war between "preferred completeness" and "actual completeness" is a problem not only for those catalogers who claim to have institutional pressure to process cataloging quickly, but also for those who do not. Several of the interview participants in this

study stated that although they did not have time constraints imposed upon them by their institution, they felt self-imposed pressure to create records in order to minimize backlogs and make items accessible to their users.

We have people here with college degrees and they are highly educated, they have their own self-imposed, "this is what I think I need to get done each year" and some of them are whizzes are cranking them out.

Another participant commented:

I'm very lucky...my library director, she wants really...she wants good work and she's not as concerned as other administrators might be with how fast things happen. But even so, there are times when I have a big backlog and I've got to get some of these books out of here and I'm not as concerned with certain parts of the record maybe. Like, Oh, I don't really care as much about the description fields, like the 300 field. You know, I don't care if there are portraits in the book, nobody cares if there are portraits in the book. So I guess that's something that impacts me in my work...I don't know if it impacts my definition, but it certainly impacts what I do.

Another problem with *completeness* mentioned earlier in this study is the idea that a "complete record" is a record that fulfills all of the requirements of a particular element set. A record may be "complete" according to a particular element set, but this does not necessarily ensure quality in the eyes of the cataloger or the user. For example, even though the Program for Cooperative Cataloging's (PCC) BIBCO standard record (BSR) was (according to the PCC) designed to produce "[q]uality cataloging records, rich enough in content to be used with little or no modification at the local level and reasonable enough in cost to be generated in large numbers" (Library of Congress, 2010), some study participants expressed the view that this element set may not be "quality" in their eyes or in the eyes of their users. One survey respondent commented:

I believe the PCC BSR coded as a full record is a colossal step backwards. Having what may be a core-level record indicated as being "full" is not quality cataloging.

One interview participant explained that the BSR may be fine as a baseline standard, but felt that BSR records often could be enhanced to provide more information for users. However, due to OCLC policy restrictions, non-PCC members are not allowed to augment the records of PCC members within the OCLC database:

We've got the PCC emerging as the de facto dictators of how we should do things, but it's a members-only club...there's nothing inherently wrong with any of the PCC records. But the fact that they are set up to these standards and we can't enhance them is...that, to me, is a barrier to providing value-added...more quality, if you will, to a record that exists. If you've got something where you happen to be more of an expert in that subject area and you can provide better subject analysis and enhance it in that fashion or, I run into this all the time, where on a PCC record for an electronic resource where I can upgrade the cataloging that's there, I can't do it because it's locked down at the level that the PCC has on there and OCLC doesn't allow non-PCC members to replace that record with any enhancements...if I want to add a little extra detail that's going to help my users and eventually could help your users as well, why shouldn't we allow for that?

This sentiment that quality cataloging sometimes involves going beyond baseline or minimum standards is echoed in the few definitions of *complete* and *completeness* supplied on the survey:

- "Completeness--**at least all the required fields and then some**"
- Complete: "it includes all necessary and helpful MARC fields"
- "Completeness (including as much information available on a given item)"
- "completeness (presence of headings, subject headings, full ISBD description)"
- Complete: "all necessary MARC fields are present and metadata are accurate"
- "Completeness, i.e., including as much information as possible, e.g., contents notes, added entries, etc."
- "completeness -- **more than minimal MARC**"
- "Completeness (**not meeting a floor standard, but full-level cataloging at least**)"
- "Completeness (includes parallel vernacular fields, includes sufficient descriptive notes, includes at least three subject headings - where applicable, includes all necessary access points, etc.)"
- "Completeness (inclusion of certain core record elements)"
- "Complete records--filling in all the appropriate fields in ways that are helpful to the patron."

Since study participants were not asked to define the terms they used when describing quality cataloging, it is understandable that participants did not choose to delve into the intricacies of what "accurate/accuracy" and "complete/completeness" really means to them. However, discussion of what these terms mean to individual catalogers and providing explicit definitions "accurate/accuracy" and "complete/completeness" in cataloging department policies and procedures would be a productive exercise at the local level.

Cataloging Education and Training

In the literature review of this study, Charles Cutter in the 19th century identified the lack of cataloging education and training as one of the major obstacles to producing good cataloging. This was one of his main criticisms about the cataloging performed for the Boston Athenaeum catalog in 1880 and this concern continues to be echoed by current-day catalogers.

The study data suggest that many catalogers feel that quality cataloging stems from a good cataloging education and proper on-the-job training. If these are lacking, non-quality cataloging will result. Throughout the study, multiple respondents said that they believed that library schools no longer require cataloging courses in order to fulfill the requirements of the Master's degree in library and/or information science. Furthermore, those students who do complete one or more cataloging courses are not learning the cataloging skills the respondents feel they should know. One survey respondent remarked:

Deprofessionalization, the move of Library schools toward Info schools, and a dirth [sic] of cataloging course requirements has endangered quality cataloging in my opinion.

Another survey respondent commented:

Recent hires, particularly those with professional degrees, catalog poorly.

Interview participants made similar remarks about cataloging education:

When I talk to people coming out of library school, even younger colleagues who are recent graduates of library school, I don't know where they are going to library school, but just seem to know nothing about cataloging! It's really kind of alarming. So I don't see how anyone could get quality cataloging.

Another interview participant noted:

Well, one of the things I've noticed is that there is not a lot of cataloging being taught in library schools and the people who come out with the library degrees don't have the cataloging training, they don't have the education and theory in it and people aren't interested in going into cataloging. So there are fewer and fewer people out in the field doing the work, and when they start cutting back positions, there's even fewer people and they outsource it to the vendors and you wonder, how are the people there learning to do cataloging? It's a hard thing to figure out...what's the solution to it...I don't know.

The observation that library schools are not requiring cataloging courses in the same numbers as in the past is supported by the library literature. Joudrey's (2002) study of information organization courses offered in library schools sheds some light on this issue. Joudrey showed that even though the number of programs requiring general information organization courses has actually increased since the 1990s (from 38% to just under 50%), the number of programs that require an introductory cataloging course has decreased from 63% to 43.8% (Joudrey, 2002, p. 78).

The movement towards requiring general information organization courses can be viewed as beneficial because more library school students are exposed to bibliographic control concepts. However, this move has its drawbacks for those who want to see more emphasis on standards and tools used specifically in library cataloging practice, things that might not be covered in the general information organization course. Joudrey (2002) elaborated on this concern in his study:

It would seem that new librarians/library students are still being exposed to bibliographic control. The change may be in the depth of knowledge. A trend of moving toward organizing information courses and away from traditional cataloging seems to be underway. Instead of learning to catalog and focusing on the rules and procedures, it seems that a general, broad approach is the goal. New

librarians may know nothing about *LCRIs* or number building in Dewey, but they will have a familiarity with metadata, ISBD, EAD, and general classification concepts. (p. 89)

Not only does this help explain the number of new catalogers who seem to lack a comprehensive library cataloging education, but it may also account for what some study participants feel is a decline in cataloging knowledge among librarians as a whole, particularly library administrators. A few study participants expressed feeling undervalued and underappreciated by their colleagues and their administration because these individuals do not understand the importance of cataloging principles and/or how catalogers contribute to the overall goals of the library. One survey respondent commented:

I think catalogers are often undervalued or misunderstood. And sadly many administrators do not understand the importance of cataloging (even mediocre).

Another survey respondent noted:

Cataloguing is highly undervalued, but if cataloguers became extinct the information provided within libraries would be difficult to locate, and as with the web, would lead to information overload when performing searches. Cataloguing is a prime function of libraries - one of great importance, even if others are too ignorant to see.

Lack of knowledge about cataloging practices among administrators may also translate to lack of support, especially during tough economic times:

Overall, I think libraries are continuing to move away from quality cataloging due to ongoing budget constraints, staff cuts, etc.-- this over and above the perception that cataloging is a luxury appreciated only by the picky.

As mentioned in Chapter 4 of this study, this concern over lack of administration knowledge of and training in cataloging practices was surprising in light of the fact that the attribute "Administration is trained in/knowledgeable of cataloging" was one of the top "not important" quality attributes on the survey. However, participants clarified during the interview phase of the study that an in-depth knowledge of cataloging practices does not necessarily make

an administrator supportive of cataloging needs and processes. As one interview participant pointed out, "[a]dministrators can't be experts in everything; they need to be willing to delegate responsibility to experts and trust them to do a good job, and ultimately it's all about communication."

On the other hand, administrators who have a better understanding of cataloging principles and practices may be better positioned to provide the support needed by catalogers, respect catalogers' opinions, and make more informed hiring decisions. As noted in Chapter 4, even though some interview participants did not feel that their administrators needed to know much about cataloging principles and practices in order to be supportive, some did express the benefits of having a boss who could understand the problems that catalogers face and communicating these issues to those even higher up the administrative ladder:

I think that if you have a head of technical services who has been hands-on and has an understanding of what is involved in the work and can express the importance and the needs for the department so that upper administration has at least an appreciation for the work and an understanding of the complexity of it and what's needed to get it done, they don't have to have the hands-on if they're open and open-minded and empathetic, sympathetic, understanding, and supportive.

The inconsistency of on-the-job training for new catalogers was also apparent in the responses by survey and interview participants. One survey respondent remarked:

My biggest frustration is that the cataloging we do at [...] is in a shared database [and] many times my work is 'wiped out' by untrained, or under-trained, 'catalogers' at other institutions.

And one of the interview participants related the experiences of one of her cataloging interns who, in her first cataloging job, was shocked at the poor training her colleagues had received:

She said she can't believe how untrained the staff are in her small, academic library. She said that it is quite obvious that no one has paid any attention to these people trying to do the cataloging and they have been on their own and they don't know some of the simplest concepts.

Another interview participant commented:

I know that I was not trained very well as a cataloger when I was in library school and I was hired for a cataloging job right out of library school and I found myself very quickly in over my head.

However, several interview participants spoke fondly about the high-quality on-the-job training they received when they first started cataloging:

I really learned to be a cataloger from working with the people around me. I felt that I didn't get a very good education at all...cataloging when I was in school. So it's more the people who have been working in the field for 15...20 years who can really teach you and give you the knowledge that you need in order to do your job.

I've learned so much from [my supervisor], and I've learned about access points from her because she finds these things in the record that I would never even consider putting a subject for or an added entry for an author or something and I have definitely learned it from her that access points matter and they help people find things.

All of the above comments suggest that receiving comprehensive on-the-job training can be hit-or-miss in the cataloging profession. The cataloging skills of new catalogers may prove deficient if they do not receive the initial support they need to transition from a more "principles-heavy" cataloging curriculum in library school to a more "practice-heavy" environment at work. Even though there are many institutions that have formal training programs for new catalogers, the lack of professional catalogers in academic library cataloging departments could be contributing to the incomplete training new catalogers are receiving, especially if those professional catalogers have multiple job duties that prevent them from devoting enough time to new cataloger training and development. In an informal study performed by Hopkins (2002) which examined the work environments of catalogers, 56% of respondents said that they worked in institutions "with 1 or no degreed catalogers" (p. 377).

Part of the solution to the problem of insufficient cataloging education and inconsistent on-the-job training, at least for prospective catalogers, may be to place more emphasis upon

cataloging practicum or internship experiences in library school. In a study conducted by McGurr and Damasco (2010) concerning cataloging practicum and internship experiences of library school graduates, 99% of the respondents said that their practicum or internship experience was positive for them and that "the experience provided them with the practical skills necessary to obtain their first cataloging job" (McGurr & Damasco, 2010, p. 10). These experiences also offered practicum and internship supervisors an opportunity to mentor new catalogers and demonstrate the value of choosing cataloging as a career path. However, McGurr and Damasco also found that only 31% of their respondents said that their practicum or internship was required by their program. Requiring or at least giving greater encouragement to prospective catalogers in library school to complete practica or internships may help provide the practical cataloging experience they need for a smoother transition into a professional cataloging position.

Also accepting the fact that new catalogers need time and experience on-the-job to develop and hone their cataloging skills, regardless of their background, is important for more experienced catalogers who may have forgotten what it was like when they first started in the profession. This study found that quality cataloging definitions did not vary widely by age range or experience level within the study population. This suggests that catalogers young and old, new and experienced share similar views and concerns about quality cataloging. One survey respondent remarked:

I am a novice cataloger. I know I make mistakes. But my vision of quality cataloging is that I do what I can, not providing any incorrect or misleading data, and then my colleagues come after me and build upon what I've done. This way, we work together to have robust, quality data.

Encouraging new catalogers to engage in a wide range of cataloging community of practice activities is another way that both cataloging educators and practitioners can help to

educate those new to the profession. It may also serve to let new catalogers know that they are not alone as they build confidence in their cataloging ability. As the "novice cataloger" observes above, openness to collaboration and willingness to build upon other's contributions may be positive steps towards producing more quality in cataloging.

Conclusion

This chapter restated the problem statement for this study, answered the research questions, and discussed further ideas and issues raised by the study. The data analysis showed that catalogers within this study's population tend to focus more on the technical details of the bibliographic record (namely, typographical errors, how closely the record represents the item in-hand, and the inclusion of certain fields) more often than other attributes. In addition, they felt that MARC access point fields and subfields, such as the 245 (main title), 100 (personal name main access point), and 650 (topical subject heading) fields, are the most important fields to include in a quality bibliographic record. However, there are indications that study participants did not always feel that the inclusion of important MARC fields is always sufficient for a quality bibliographic record. The next (and final) chapter will explore the significance of the findings for library and information science, as well as communicate unanticipated limitations of the study and future research suggestions.

CHAPTER 6

CONCLUSIONS

Introduction

The final chapter of this study examines the significance of the study, discusses further limitations found during the course of the study, and presents avenues for future research in this area.

Significance

This study of the perceptions of quality cataloging among catalogers in academic libraries produced rich data that answered the study's research questions and also opened up new avenues of exploration. Two of these significant avenues are discussed below: (1) the idea that the cataloging profession is a community of practice and the benefits of examining the cataloging profession through the lens of situated learning theory; and (2) the "four categories of quality cataloging" framework and the need to re-imagine quality cataloging definitions going beyond this framework, from a "record focus" to a "systems focus."

Cataloging as a Community of Practice

The data from this study suggest that the cataloging profession can be viewed as a community of practice. By examining the cataloging profession in more depth through the lens of situated learning theory, a more complete picture of how catalogers learn, develop cataloger's judgment, and keep up with their practice will emerge. Knowledge gained by this examination may help cataloging educators and practitioners find new or better ways of educating and training future and current catalogers. Since the education and training of catalogers was identified by this study as a concern of study participants, a closer look at situated learning

theory and communities of practice, as well as how the cataloging profession fits into this framework, would be beneficial.

Situated learning theory (a branch of social learning theory) was first proposed by Jean Lave and Etienne Wenger in 1991 as an alternative to the prevailing learning theory of cognitivism, specifically addressing the learning behaviors of practitioners. Cognitivist theories of learning assume that learning is largely a passive activity dominated by top-down transmission of knowledge, usually within the classroom or training sessions, and using accepted textbooks or manuals. Situated learning theory, on the other hand, claims that learning is a social activity that largely takes place within the setting in which the learning will be applied. In other words, context is essential for proper learning because "abstract representations are meaningless unless they can be made specific to the situation at hand" (Lave & Wenger, 1991, p. 33). Table 6.1 shows the differences between the established, cognitivist view of learning and situated learning, as presented by Lave and Wenger.

Table 6.1

Established and Situated Conceptualizations of Learning Compared (Contu and Willmott, 2003, p. 294)

Conceptualization	Established	Situated
Learning	Cognitive— Passive— Selective	Interactive— Participative—Pervasive
Form of knowledge	Canonical/Codified/ Theoretical Distilled in texts and manuals	Tacit/Embedded/ Practical Embedded in community and identity
Understanding developed	Abstract/Universal	Embodied/Context-sensitive
Outcome of learning	Acquisition of information or skill	Trans(formation) of identity
Transmission	Vertical: Instruction by authorities	Horizontal: Collaboration with peers

Lave and Wenger set out to explore situated learning theory in order to clarify ideas about apprenticeship within communities that engage in shared interests and activities. Even though there are many similarities between apprenticeship and situated learning activities, Lave and Wenger felt that it was important to distinguish between "historical forms of apprenticeship" and the "theoretical framework for analyzing educational forms," examined within the construct of situated learning (Lave and Wenger, 1991, p. 31).

They found that an essential conduit for situated learning activities came in the form of what they termed "communities of practice." Lave and Wenger never formally defined communities of practice in their initial work on the subject, but explained that the concept implies "participation in an activity system about which participants share understandings

concerning what they are doing and what that means in their lives and for their communities" (Lave & Wenger, 1991, p. 98).

In a later work, Wenger (2001) defined a community of practice as "a group of people who share an interest in a domain of human endeavor and engage in a process of collective learning that creates bonds between them: a tribe, a garage band, a group of engineers working on similar problems" (p. 2).

According to Wenger (2001), there are three characteristics of a community of practice that separate it from being simply a community in a general sense, like a neighborhood:

1) *Domain*: Individuals within a community of practice must have a basic knowledge of what that community does and how they perform activities within that practice. It is a "shared competence that distinguishes members from other people." (Wenger, 2001, p. 2)

2) *Community*: Even though there may be differing levels of engagement by individuals within a community of practice, membership in a community of practice is marked by social activities between members for learning to occur. Wenger (2001) explains that

[i]n pursuing their interest in their domain, members engage in joint activities and discussions, help each other, and share information. Having the same job or the same title does not make for a community of practice unless members interact and learn together. (p. 2)

3) *Practice*: Engagement in a particular practice goes beyond following the "official" standards and protocols within an organization or profession. It is essential for members of the community to

develop a shared repertoire of resources: experiences, stories, tools, ways of addressing recurring problems— in short a shared practice...nurses who meet regularly for lunch in a hospital cafeteria may not realize that their lunch discussions are one of their main sources of knowledge about how to care for patients, even though in the course of all these conversations, they have developed a set of stories and cases that become a shared repertoire for them to think about and discuss new cases. (Wenger, 2001, pp. 2-3)

In Lave and Wenger's 1991 text on situated learning theory and communities of practice, they presented several examples of communities of practice that exemplify the wide range of community types and interests. Some present clear characteristics of a traditional apprenticeship

(such as tales about butchers and Yucatec midwives) and some do not (such as the tale of how nondrinking alcoholics are initiated into the Alcoholics Anonymous program). All of these cases illustrate the importance of "learning by doing" and the need for social interactions among members of the community to educate both newcomers and more experienced members, as well as perpetuate the practice.

Orr (1990) provided an example of situated learning within communities of practice in his study of Xerox photocopier technicians. Orr found that even though the technicians were given initial training and manuals describing how to perform the tasks of their profession, they found the information lacking in many ways. The technicians were given documentation by their employer on how to fix the photocopy machines, but often the documentation failed to cover the many of the unique issues they found themselves dealing with in the field. Experience helped to guide the technicians through these problem spots, but Orr noticed that they also gained knowledge of their practice through what he termed "collective memory" and "war stories" amongst the technicians (Orr, 1990). They would meet regularly outside their place of employment and discussed problems they encountered that were not satisfactorily answered in their documentation, how best to deal with certain customers, or generally "talked shop." These conversations serve multiple purposes within their community of practice. It "preserves and circulates needed information," it allows the technicians to digest the problems within their practice in narrative form to better understand complex situations, it helps the technicians "make sense of ambiguity" within their practice, and, finally, it assists in the creation of the technicians' professional identities (Orr, 1990, pp. 186-187).

In Lave and Wegner's work, this idea of identity creation is key to understanding how individuals function, learn, create meaning, and understand their role within their community of

practice. Lave and Wenger (1991) called this "legitimate peripheral participation" which is "a descriptor of engagement in social practice that entails learning as an integral constituent" (p. 35). They claimed that legitimate peripheral participation "provides a way to speak about the relations between newcomers and old-timers, and about activities, identities, artifacts, and communities of practice" (Lave & Wenger, 1991, p. 29). The authors used "legitimate" not in the sense that one could be a "legitimate" or "illegitimate" participant in a community of practice, but in the sense of "belonging" (Lave & Wenger, 1991, p. 35). To be a member of a community of practice is to be a "legitimate member" who may participate more or less than other members and, in addition, may belong to multiple communities to varying degrees.

Handley, Clark, Fincham, & Sturdy (2007) explained that the development of identity may be complicated by individual's participation in multiple communities that may or may not share exactly the same interests or goals (see Figure 6.1). However, each of these communities influences an individual's identity and allows an individual to gain a broader perspective of the network as a whole (Handley, et al., 2007). For example, a cataloger who specializes in cataloging music material may identify with the community of music catalogers specifically and the broader community of catalogers generally, and identify with and participate in both communities.

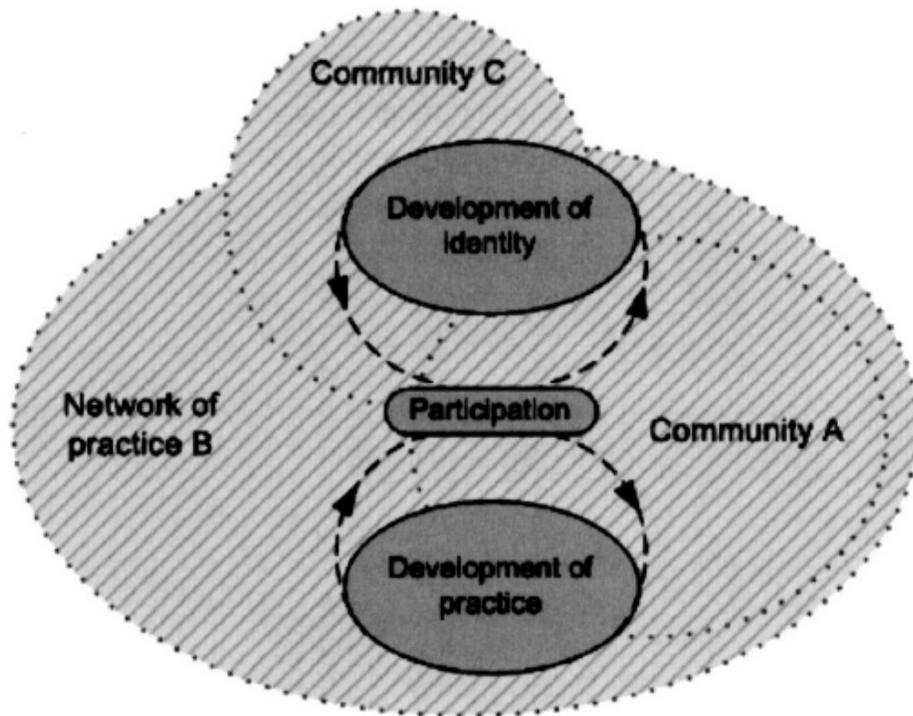


Figure 6.1. Individual learning in the context of multiple communities and networks of practice (from Handley, et al., 2007, p. 176).

Part of becoming a member of a community of practice is being able to identify and use the established "tools of the trade" within that community. Lave and Wenger called these "artifacts." Artifacts are not only tools practitioners need to practice, but they carry with them historical significance to the community as a whole. For example, Lave and Wenger (1991) pointed out that "the alidade used by the quartermasters for taking bearings has developed as a navigational instrument over hundreds of years, and embodies calculations invented long ago" (p. 101). Cataloging standards such as the *Anglo-American Cataloguing Rules, 2nd edition* (AACR2), have a long, rich history of development that anchors the cataloging community historically. In fact, in cataloging practice, it is often important to understand the history of cataloging rules and standards in order to recognize the reasoning behind their usage. For

example, AACR2 instructs catalogers to transcribe only the first named author in the statement of responsibility for an item that has more than three authors listed as having shared responsibility on the chief source of information. The reasoning behind this rule stems from a time when cataloging data was transcribed on 3" x 5" cards with limited space. Therefore, limiting the number of authors mentioned on a catalog card representing a bibliographic object was a matter of efficiency due to space constraints. According to Lave and Wegner (1991), engaging in a community of practice is more than just learning to use the recognized tools, "it is a way to connect with the history of the practice and to participate more directly in its cultural life" (p. 101).

Encouraging catalogers, both novice and experienced, to engage more fully in the cataloging community of practice benefits both the cataloger and the community. Through community of practice activities, novice catalogers have multiple avenues of learning more about their profession and its expectations and the tools of the trade. These avenues also help hone cataloger's judgment, whether the cataloger works in a large cataloging department or is the lone cataloger at his/her institution. Experienced catalogers have multiple avenues to influence novice catalogers, voice their concerns, and learn about new developments in the community. A greater understanding of how catalogers navigate, communicate, and learn within their community of practice may help cataloging practitioners and educators gain insight into the ways catalogers utilize the various activities to learn about their practice and interact with other practitioners. This may lead to more effective ways of engaging with and educating the community on topics that cataloging practitioners and educators feel are important.

Re-examination of the "Four Categories of Quality Definitions" Framework

The data from this study also show that the four categories of quality that I identified within the literature review present a valid framework for studying quality cataloging definitions. Even though there were a few definitions that contained attributes that fell outside this framework, the vast majority of the quality cataloging definitions contained attributes that fit into at least one of the four categories. Because of the popularity of the attributes that are contained in these four categories, cataloging departments may benefit by comparing their current quality definition with the attributes found in the four categories. Does the local definition of quality cataloging encompass contain attributes from all of the four categories? *Should* the local definition contain attributes from all of the four categories?

For those departments without a definition of quality cataloging, the framework could be used to initiate discussion about quality cataloging and to develop a comprehensive definition for the department. Catalogers should discuss which of the four categories they *should be* focused on the most (which may not be the categories that are currently receiving the most focus). Or they could decide to treat all four categories with equal importance.

In addition to these discussions, it is also essential to ask: are the four categories *sufficient* for defining quality cataloging? Do catalogers need to re-evaluate their ideas about quality cataloging and approach it in a different way? Bruce and Hillmann's (2004) framework of completeness, accuracy, provenance, conformance to expectations, logical consistency and coherence offers a good starting point for discussing the quality of the metadata produced in cataloging departments. However, it is also important that library catalogers learn to think beyond the cataloging data and, more importantly, the catalog *record* when they reflect upon what quality cataloging means to them. In addition to the data and the record, catalogers need to

also focus their energies on ensuring the quality of the *catalog* as a whole, enhancing the quality of the academic library user's discovery experience, as suggested by Hill (2008) in the literature review of this study. Granted, this study did not specifically ask catalogers their opinion of the library catalog as a whole, but they were given an opportunity to include it in their personal definition of quality cataloging and most did not.

Francis Miksa (1989) pointed out that early cataloging education did focus on the construction of the catalog, not just the records. It focused on "bibliographic system making as a total concept... [rather than] cataloging as the preparation of entries" (pp. 291-292), which is essentially how cataloging is taught now. In the late 19th- and early 20th-centuries, cataloging courses taught future catalogers

the best way to display bibliographic data, how thoroughly names should be established and written, the relative merits of different sizes and thicknesses of cards, the design and arrangement of card catalog furniture, problems in handwriting (or typing) bibliographic data, and, with respect to item files, the merits of closely classified, relative position systems. (Miksa, 1989, p. 285)

Even though many of these topics are irrelevant in the age of electronic cataloging, the idea that catalogers should learn about and be more involved in the design of the cataloging *system* should be revisited. Catalogers often communicate their pride in the quality of their data and the records they construct, while, at the same time, express frustration at how that data and those records are displayed in their catalog. Here are some of the comments made by survey participants about this issue:

Personally, I strive to create complete MARC records, however it is quite disheartening to realize that much of what I code into a record will not be utilized by our ILS.

Quality cataloging cannot be separated from OPAC functionality. For example, our OPAC (and many others) has no ability to sort by main entry. Consequently related works are scattered through the catalog. Author and title sorts produce bizarre results when applied to search results which include both title and name main entries.

It is frustrating that the OPAC systems we have available to us do not currently make full (or sometimes, even good) use of the data available in a high quality, full MARC record. I'd hate to see records 'dumbed down' on this account.

The lack of integrated library system (ILS) and online public access catalog (OPAC) functionality in libraries can be traced to many factors. These include vendor inability to properly update core ILS modules designed to work more with print rather than electronic resources, staffing limitations, and proprietary obstacles that limit libraries to certain hardware and features that may not completely fit their needs (Kinner & Rigda, 2009). The slow pace and uneven nature of vendor enhancements to ILSs also contribute to cataloger frustrations. Kinner and Rigda (2009) as well as several others (Breeding, 2007; Andrews, 2007) suggested that greater vendor willingness to work with non-proprietary products, as well as greater library willingness to embrace open-source solutions, will do the most in good in improving catalog functionality (and hopefully cataloger *and* user satisfaction, as well). "Libraries will no longer feel they are at the mercy of the vendor and will be able to assume more control over delivery of services, which will lead to greater satisfaction among libraries and their users" (Kinner & Rigda, 2009, p. 416).

This statement, as well as this study's results, support conclusions made in the 2009 OCLC report on librarian and user expectations of online catalogs which states:

Librarians' perspectives about data quality remain highly influenced by classical principles of information organization, while end users' expectations of data quality arise from their experiences of how information is organized on popular Web sites. What is needed now is to integrate the best of both worlds in new, expanded definitions of what "quality" means in library online catalogs, as well as who is responsible for providing it. (OCLC, 2009, p. 51)

Even though it is still important for catalogers to adhere to "classical principles of information organization," it is equally important for catalogers to envision quality cataloging as more than just a "quality record."

Limitations/Future Research

Several limitations were mentioned in Chapter 1 of this study, but there were also several unanticipated and unintended limitations that were revealed during the course of the study.

One unanticipated limitation of this study was the problem of investigator bias. The fact that I am also a cataloger helped me to better understand and interpret the responses of study participants than someone without this background. On the other hand, this cataloging knowledge occasionally lead me to formulate questions and answers without properly thinking through the implications of using certain terminology. For example, just like many of the study participants, I used the term "accurate" in an ambiguous way in the survey that should have been more clear. On the survey, the quality cataloging attributes. "Subject headings are included and accurate" and "Call number is included and accurate" were placed in the "technical details of the bibliographic record" category of quality cataloging, but they could also be viewed as being a part of the "adherence to standards" category because of the "accurate" reference. Instead of having a category under "adherence to standards" that said "Access points conform to authority records/controlled vocabulary used by library," I should have had separate attributes for adherence to *Library of Congress Classification* and *Library of Congress Subject Headings* and left off the "accurate" part of the attributes in the "technical details of the bibliographic record" category.

Even though this study was successful in identifying ways in which cataloger's judgment and perceptions of quality cataloging are formed by using situated learning theory and communities of practice, the research proposal was not designed with this theory in mind. Therefore, it is recommended that future research should be performed using situated learning theory as its framework to further examine how cataloger's judgment and perceptions of quality are formed, and well as how catalogers' ideas on these topics are influenced by the cataloging community as a whole.

As mentioned in Chapter 1 of this study, the population was limited to catalogers who work in an academic library and perform original cataloging. The fields of library and information science would benefit from research designed to study cataloger *and* user perceptions of quality cataloging outside of the population of this study. User studies at the local level would be particularly helpful so that individual libraries gain a greater understanding of the needs of their specific user population.

Also mentioned in Chapter 1 of this study was the fact that individual department policy and procedure manuals were not examined as part of this study. A comparison of the results of this study to cataloging manuals used in actual departments would be an interesting avenue of future research in order to see how cataloger perceptions of quality cataloging are reflected in department documentation.

APPENDIX A
SURVEY QUESTIONS

Quality Cataloging

1. Welcome

Welcome! The title of this study is: A Study of the Perception of Cataloging Quality Among Catalogers in Academic Libraries **This survey should only be completed by catalogers (either professional or paraprofessional) working in an academic library and who perform original cataloging.** "Original cataloging," as defined by this study, includes the creation of a new record that does not contain any prior data and/or the editing of an existing record that previously contained only very minimal data. At least a portion of the original cataloging must be done using the MARC standard.

This survey is confidential, but not anonymous. However, no identities will be used in any reports resulting from the research.

This survey is best completed with Internet Explorer. It is fine to start and stop the survey, but you must use the same computer throughout due to the use of cookies. Please be aware that the last page you were on when you left will be blank when you return. All of your previous responses will be saved and available for editing when you return. Also, it is important that you click Done at the end of the survey in order for your survey to be counted.

Please read the consent form on the next page and tick the box at the end of the form that indicates you agree to participate in the survey.

Thank you for your participation! Please click Next.

2. Consent

Quality Cataloging

* 1. Information Notice

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

Title of Study: A Study of the Perception of Cataloging Quality Among Catalogers in Academic Libraries

Principal Investigator: Dr. Shawne Miksa, University of North Texas (UNT), Department of Library and Information Sciences.

Key Personnel: Karen Snow, Ph.D. Candidate, University of North Texas (UNT), Department of Library and Information Sciences.

Purpose of the Study: You are being asked to participate in a research study which seeks to identify how quality cataloging is defined by catalogers working in academic libraries.

Study Procedures: This survey can be completed in about 30-35 minutes.

After completing the survey participants may be asked to volunteer to take part in a follow-up interview where they will be asked to answer up to 10 questions related to quality cataloging. This interview will take approximately 20 minutes. The Principal Investigator will record this session with your agreement, so that it can be transcribed for later analysis.

Foreseeable Risks: There are no foreseeable risks involved in this study.

Benefits of this study: This study is expected to bring a greater understanding of cataloger expectations and motivations in regard to the creation of bibliographic records.

Procedures for Maintaining Confidentiality of Research Records: Signed consent forms and coded interview results will be kept in separate locations and in a secure location. Audio recordings made during follow-up interviews will be transcribed by the Principal Investigator and destroyed at the conclusion of the study. Transcripts of the interview

Quality Cataloging

will be reviewed by the Principal Investigator and retained in a locked file for 3 years in a secure location. The confidentiality of participant information will be maintained in all publications and presentations resulting from this study.

Questions about the Study: If you have any questions about the study, please contact Karen Snow at telephone number _____ or by email Karen.Snow@unt.edu, or Shawne Miksa at telephone number 940-565-3560 or by email Shawne.Miksa@unt.edu.

Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Research Participants' Rights: Your agreement below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- Dr. Shawne Miksa or Karen Snow has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and volunteer.

I agree (and I wish to participate)

3. Demographics

*** 2. Please enter your full name and email address. This information will remain confidential and will not be used for purposes outside the scope of this research project.**

Name:

Email Address:

*** 3. What is the title of your position where you are currently employed?**

Quality Cataloging

*** 4. In which type of library do you currently work?**

- University
- College
- Junior or Community College
- Trade or Vocational School
- Seminary
- Other (please specify)

*** 5. Have you taken one or more cataloging courses for college/university credit?**

- Yes
- No

Quality Cataloging

6. If you have taken one or more cataloging courses for college/university credit, at which institution(s) did you take these course(s)? (Select all that apply)

- | | |
|---|--|
| <input type="checkbox"/> Alabama Agricultural and Mechanical University | <input type="checkbox"/> Mississippi, University of |
| <input type="checkbox"/> Alabama, University of | <input type="checkbox"/> Missouri-Columbia, University of |
| <input type="checkbox"/> Alberta, University of | <input type="checkbox"/> Montreal, University of |
| <input type="checkbox"/> Appalachian State University | <input type="checkbox"/> New York - Albany, State University of |
| <input type="checkbox"/> Arizona, University of | <input type="checkbox"/> New York - Buffalo, State University of |
| <input type="checkbox"/> Ball State University | <input type="checkbox"/> New York - Geneseo, State University of |
| <input type="checkbox"/> Bridgewater State College | <input type="checkbox"/> North Carolina - Chapel Hill, University of |
| <input type="checkbox"/> Brigham Young University | <input type="checkbox"/> North Carolina - Greensboro, University of |
| <input type="checkbox"/> British Columbia, University of | <input type="checkbox"/> North Carolina Central University |
| <input type="checkbox"/> California - Berkeley, University of | <input type="checkbox"/> North Texas, University of |
| <input type="checkbox"/> California - Los Angeles, University of | <input type="checkbox"/> Northern Illinois, University of |
| <input type="checkbox"/> Carnegie Institute of Technology | <input type="checkbox"/> Oklahoma, University of |
| <input type="checkbox"/> Case Western Reserve University | <input type="checkbox"/> Old Dominion University |
| <input type="checkbox"/> Catholic University of America | <input type="checkbox"/> Oregon, University of |
| <input type="checkbox"/> Central Arkansas, University of | <input type="checkbox"/> Our Lady of the Lake College |
| <input type="checkbox"/> Central Michigan University | <input type="checkbox"/> Pittsburgh, University of |
| <input type="checkbox"/> Central Missouri State University | <input type="checkbox"/> Pratt Institute |
| <input type="checkbox"/> Chicago State University | <input type="checkbox"/> Puerto Rico, University of |
| <input type="checkbox"/> Chicago, University of | <input type="checkbox"/> Queens College, City University of New York |
| <input type="checkbox"/> Clarion University of Pennsylvania | <input type="checkbox"/> Rhode Island, University of |
| <input type="checkbox"/> Clark Atlanta University | <input type="checkbox"/> Rowan University |
| <input type="checkbox"/> Columbia University | <input type="checkbox"/> Rutgers University |
| <input type="checkbox"/> Dalhousie University | <input type="checkbox"/> St. John's University |
| <input type="checkbox"/> Delaware, University of | <input type="checkbox"/> Salem State College |
| <input type="checkbox"/> Denver, University of | <input type="checkbox"/> Sam Houtson State University |
| <input type="checkbox"/> Dominican University | <input type="checkbox"/> San Jose State University |
| <input type="checkbox"/> Drexel University | <input type="checkbox"/> Simmons College |
| <input type="checkbox"/> East Carolina University | <input type="checkbox"/> South Carolina, University of |

Quality Cataloging

- | | |
|---|--|
| <input type="checkbox"/> Emory University | <input type="checkbox"/> South Florida, University of |
| <input type="checkbox"/> Emporia State University | <input type="checkbox"/> Southern California, University of |
| <input type="checkbox"/> Florida State University | <input type="checkbox"/> Southern Connecticut State University |
| <input type="checkbox"/> Grand Valley State University | <input type="checkbox"/> Southern Mississippi, University of |
| <input type="checkbox"/> Hawaii, University of | <input type="checkbox"/> Spalding University |
| <input type="checkbox"/> Houston at Clear Lake, University of | <input type="checkbox"/> Syracuse University |
| <input type="checkbox"/> Illinois, University of | <input type="checkbox"/> Tennessee, University of |
| <input type="checkbox"/> Indiana University | <input type="checkbox"/> Texas - Austin, University of |
| <input type="checkbox"/> Iowa, University of | <input type="checkbox"/> Texas Woman's University |
| <input type="checkbox"/> Kent State University | <input type="checkbox"/> Toronto, University of |
| <input type="checkbox"/> Kentucky, University of | <input type="checkbox"/> Utah State University |
| <input type="checkbox"/> Long Island University | <input type="checkbox"/> Valdosta State University |
| <input type="checkbox"/> Longwood College | <input type="checkbox"/> Vanderbilt University |
| <input type="checkbox"/> Louisiana State University | <input type="checkbox"/> Washington, University of |
| <input type="checkbox"/> McGill University | <input type="checkbox"/> Wayne State University |
| <input type="checkbox"/> Maryland, University of | <input type="checkbox"/> Western Michigan University |
| <input type="checkbox"/> Marywood College | <input type="checkbox"/> Western Ontario, University of |
| <input type="checkbox"/> Michigan, University of | <input type="checkbox"/> Wisconsin - Madison, University of |
| <input type="checkbox"/> Minnesota State University | <input type="checkbox"/> Wisconsin - Milwaukee, University of |
| <input type="checkbox"/> Minnesota, University of | |
| <input type="checkbox"/> Other (please specify) | |

*** 7. Do you possess a library and/or information science degree or certificate?**

- Yes
- No (please skip to question 10)

Quality Cataloging

8. If you answered Yes to the above question, which library and/or information science degree or certificate do you possess? (please select all that apply)

- Library Technician Degree/Certificate
- Bachelor's Degree in Library Science
- Bachelor's Degree in Information Science
- Master's Degree in Library Science
- Master's Degree in Information Science
- Master's Degree in Library AND Information Science
- Ph.D. in Library Science
- Ph.D. in Information Science
- Other (please specify)

9. If you possess a library and/or information science degree or certificate, in what year did you receive it?

	Year
Library Technician Degree/Certificate	<input type="text"/>
Bachelor's Degree	<input type="text"/>
Master's Degree	<input type="text"/>
Ph.D.	<input type="text"/>
Other (please specify)	<input type="text"/>

*** 10. Do you take Continuing Education (CE) courses or go to library-related conferences (such as the ALA Annual Conference)? (this includes both face-to-face and online sessions, such as webinars)**

- Yes - My employer requires me to take CE courses and/or go to conferences
- Yes - I am not required by my employer to take CE courses or go to conferences, but I do so anyway
- No - I do not take CE courses or go to conferences

Quality Cataloging

11. If you answered Yes to the above question, on average how often do you attend CE courses and/or conferences?

- Very Frequently - four or more times a year
- Frequently - two or three times a year
- Often - usually about once a year
- Infrequently - I have attended CE courses and/or conferences in the past, but I don't currently do so on a regular basis
- Other (please specify)

*** 12. Into what age range do you fall?**

- Under 20
- 20-30
- 31-40
- 41-50
- 51-60
- 61-70
- Over 70

*** 13. How long have you worked as a cataloger? (include previous and current positions)**

- 0-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- 21-25 years
- 26-30 years
- 31-35 years
- 36-40 years
- Over 40 years

Quality Cataloging

*** 14. If you are employed in a professional cataloging position, did you ever catalog in a non-professional capacity (as a paraprofessional or student, for example)?**

- Yes
- No
- Not applicable - I am not currently employed as a professional cataloger

15. If you answered Yes to the above question, how long did you catalog in a non-professional capacity?

- 0-2 years
- 3-5 years
- 6-8 years
- 9-11 years
- 12-14 years
- 15-17 years
- 18-20 years
- Over 20 years

*** 16. For how many institutions have you worked as a cataloger? (include both professional and non-professional positions)**

- 1
- 2
- 3
- 4
- 5
- More than 5

Quality Cataloging

*** 17. On an average day, on what types of items do you perform original cataloging most often? (select all that apply)**

- General Collection Monographs
- Continuing Resources
- Electronic Resources
- Cartographic Resources
- Music
- Sound Recordings
- Motion Pictures/Videorecordings
- Rare Books/Manuscript Material
- Archival Material
- Special Collections Material
- Microforms
- Three-Dimensional Artifacts/Realia
- Dissertations/Theses
- Items in languages other than English
- Other (please specify)

4. Quality Definitions

*** 18. In your own words, what do you feel are the top three attributes of a quality bibliographic record?**

Attribute #1

Attribute #2

Attribute #3

*** 19. In your own words, what do you feel are the top three attributes of a non-quality bibliographic record?**

Attribute #1

Attribute #2

Attribute #3

Quality Cataloging

*** 20. How do you personally define quality cataloging?**

*** 21. How does the institution where you are employed define quality cataloging? If your institution does not define quality, please note this.**

*** 22. Do you have any influence upon cataloging department policies and procedures where you are employed?**

- Yes - I have a lot of influence
- Yes - I have some influence
- No - I don't have any influence

23. If you answered Yes to the above question, in what ways do you influence these policies and procedures?

*** 24. Do you feel that the cataloging you perform is quality cataloging?**

- Yes
- No/Not Sure (please explain)

Quality Cataloging

*** 25. Do you feel that the cataloging your department performs is quality cataloging?**

Yes

No/Not Sure (please explain)

*** 26. Please rate the following content designation MARC fields/subfields by how you personally feel in regards to their importance in a quality bibliographic record. Assume that these fields/subfields are applicable to the theoretical item you are cataloging. (PLEASE NOTE: Some MARC field/subfields may not be represented in this list. If you would like to add a field/subfield that you feel is important in a quality record that is NOT listed here, please use the comment box below under "Other (please specify)")**

	Importance
• 008 (Fixed Fields)	<input type="text"/>
• 010 (LC Control Number)	<input type="text"/>
• 020 (ISBN)	<input type="text"/>
• 022 (ISSN)	<input type="text"/>
• 041 (Language Code)	<input type="text"/>
• 042 (Authentication Code)	<input type="text"/>
• 043 (Geographic Area Code)	<input type="text"/>
• 050/090 (LC Call Number)	<input type="text"/>
• 082/092 (Dewey Call Number)	<input type="text"/>
• 100 (Personal Name Main Entry)	<input type="text"/>
• 110 (Corporate Body Main Entry)	<input type="text"/>
• 111 (Meeting Name Main Entry)	<input type="text"/>
• 130 (Uniform Title Main Entry)	<input type="text"/>
• 240 (Uniform Title)	<input type="text"/>
• 245\$a (Title Proper)	<input type="text"/>
• 245\$b (Remainder of the Title)	<input type="text"/>
• 245\$c (Statement of Responsibility)	<input type="text"/>
• 245\$h (General Material Designation)	<input type="text"/>
• 245\$p (Name of Part/Section)	<input type="text"/>
• 246 (Variant Title)	<input type="text"/>

Quality Cataloging

• 250 (Edition Statement)	<input type="text"/>
• 260\$a (Place of Publication)	<input type="text"/>
• 260\$b (Name of Publisher)	<input type="text"/>
• 260\$c (Date of Publication)	<input type="text"/>
• 300\$a (Extent of Item, such as pagination)	<input type="text"/>
• 300\$b (Other physical details, such as illustrations)	<input type="text"/>
• 300\$c (Dimensions)	<input type="text"/>
• 440/490 (Series Statement)	<input type="text"/>
• 500 (General Note)	<input type="text"/>
• 501 ("With" Note)	<input type="text"/>
• 502 (Dissertation Note)	<input type="text"/>
• 504 (Bibliography, Etc. Note)	<input type="text"/>
• 505 (Formatted Contents Note)	<input type="text"/>
• 520 (Summary, Etc. Note)	<input type="text"/>
• 521 (Target Audience Note)	<input type="text"/>
• 533 (Reproduction Note)	<input type="text"/>
• 546 (Language Note)	<input type="text"/>
• 600 (Personal Name Subject Heading)	<input type="text"/>
• 610 (Corporate Body Subject Heading)	<input type="text"/>
• 630 (Uniform Title Subject Heading)	<input type="text"/>
• 650 (Topical Subject Heading)	<input type="text"/>
• 651 (Geographic Subject Heading)	<input type="text"/>
• 655 (Form/Genre Subject Heading)	<input type="text"/>
• 700 (Personal Name Added Entry)	<input type="text"/>
• 710 (Corporate Body Added Entry)	<input type="text"/>
• 730 (Uniform Title Added Entry)	<input type="text"/>
• 740 Uncontrolled Related/Analytical Title Added Entry)	<input type="text"/>
• 776 (Additional Physical Form Entry)	<input type="text"/>
• 800 (Personal Name/Series Added Entry)	<input type="text"/>
• 830 (Uniform Title/Series Added Entry)	<input type="text"/>
• 856 (Electronic Location & Access, such as a URL)	<input type="text"/>
Other (please specify)	<input type="text"/>

Quality Cataloging

* 27. Please rate the following attributes in regards to your personal perception of quality cataloging. (PLEASE NOTE: Some attributes of a catalog record may not be represented in this list. If you would like to add an attribute that you feel is important for quality cataloging that is NOT listed here, please use the comment box below under "Other (please specify)")

	Importance
• Access points are correctly identified & formulated according to AACR2	<input type="text"/>
• Access points conform to authority records/controlled vocabulary used by library	<input type="text"/>
• Administration is responsive/supportive of cataloging process/needs	<input type="text"/>
• Administration is trained in/knowledgeable of cataloging	<input type="text"/>
• As many access points that are needed are included	<input type="text"/>
• Awareness of user needs and skills	<input type="text"/>
• Backlogs are kept to a minimum	<input type="text"/>
• Call number is included and accurate	<input type="text"/>
• Complex/original cataloging is performed by professional catalogers	<input type="text"/>
• Continuing education is encouraged by employer	<input type="text"/>
• Creating a bibliographic record that is as perfect as possible	<input type="text"/>
• Creating a bibliographic record that best represents the item in-hand	<input type="text"/>
• Creating a bibliographic record that conforms to AACR2	<input type="text"/>
• Creating a bibliographic record that conforms to Library of Congress Rule Interpretations (LCRI)	<input type="text"/>
• Creating a bibliographic record that conforms to local standards	<input type="text"/>
• Creating a bibliographic record that conforms to OCLC standards	<input type="text"/>
• Creating a bibliographic record that goes beyond basic description	<input type="text"/>
• Creating a bibliographic record that has the appropriate level of description (not too much information/not too little)	<input type="text"/>
• Creating a bibliographic record that is as complete as possible, created with all present and future users in mind	<input type="text"/>
• Creating a bibliographic record that is free of typographical errors	<input type="text"/>
• Creating a bibliographic record that is helpful/useful to the user	<input type="text"/>
• Creating a bibliographic record that is transliterated according to Library of Congress Romanization tables	<input type="text"/>
• Enough access points are included so that the record can be found	<input type="text"/>
• Enough time is allowed for complex/original cataloging	<input type="text"/>
• Fixed fields (008 field) are included and accurate	<input type="text"/>

Quality Cataloging

- Having some record in the catalog, even if it lacks full description
- Initial training of cataloging staff is comprehensive
- Items are cataloged and shelved in a timely manner
- Items are cataloged and shelved quickly
- Items are cataloged in a cost-effective manner
- Little or no duplication of bibliographic records in the catalog
- MARC tags are correct
- Needed cataloging resources are provided by employer
- Possessing good subject domain knowledge of material cataloged
- Punctuation conforms to AACR2
- Record includes links to information outside of the catalog that are relevant to the item
- Subject headings are at the appropriate level of specificity
- Subject headings are included and accurate
- Support of overall cataloging community
- Support staff is trained to adhere to national/local standards and supervised appropriately
- The user is able to find records in the catalog efficiently
- The user is able to find records in the catalog quickly
- Transcription of bibliographic data is as accurate as possible
- User complaints/comments about catalog are addressed quickly
- Using catalogers' judgment in choosing whether or not to adhere to standards (local, AACR2, etc.)

Other (please specify)

Quality Cataloging

*** 28. Do you feel that the implementation of the new cataloging standard Resource Description and Access (RDA) will impact your definition of quality cataloging? Please explain why or why not.**

- Yes
 No
 Not Sure
 I don't know what RDA is

Please explain if you answered Yes, No, or Not Sure

*** 29. Would you be willing to be interviewed for this research project? (If Yes, then the investigator will contact you using the email address you provided within the survey)**

- Yes
 No

30. If you would like to make additional comments about quality cataloging, please do so here.

5. Thank you

Thank you for completing my survey! If you have any questions or comments, please email Karen.Snow@unt.edu. Please click Done below to submit the survey. Your survey will not be counted unless you click the Done button below, so DO NOT close out of the survey before clicking Done! Once you have clicked Done, you cannot go back and edit your survey responses.

APPENDIX B
INTERVIEW QUESTIONS

1) This is how you personally defined quality cataloging on the survey:

[quality cataloging definition from survey given here]

Would you like to add or remove anything from this definition?

2) Has your personal definition of quality cataloging changed over the course of your career? If so, in what ways has your definition changed?

3) What events (if any) have impacted your definition of quality cataloging?

4) In general, what do you feel are necessary conditions for performing quality cataloging work? Alternatively, what would prevent you from producing a quality record?

5) How do national and international standards guide your work or even detract from your ability to produce quality records?

6) Do you believe that your department shares your view of quality cataloging?

7) Does cataloger's judgment play a role in producing quality cataloging? If so, in what ways does it contribute to quality cataloging?

8) On the survey, you said this about how RDA will impact your definition of quality cataloging:

[response to RDA question on survey given here]

Would you like to add any further comments on RDA and its impact on quality cataloging definitions?

9) Do you believe the current state of library cataloging (the catalog records, the cataloging process, and/or the catalog as a whole) is quality? If not, in what ways or areas can cataloging improve?

That is all of my questions for today. Would you like to add any further comments about quality cataloging specifically or the state of cataloging generally?

APPENDIX C

LETTER TO THE HEAD OF CATALOGING OR TECHNICAL SERVICES

Dear _____,

My name is Karen Snow and I am a Ph.D. Candidate in Information Science in the College of Information at the University of North Texas. I am writing to you to request your assistance in disseminating a survey I am using to collect data for my dissertation research. The title of my dissertation is "A Study of the Perception of Cataloging Quality Among Catalogers in Academic Libraries." This study addresses the ambiguous nature of "quality" in cataloging and the difficulties in assessing what quality cataloging means due to differing perceptions of this concept among catalogers. My intent is to explore these perceptions of quality cataloging in the academic library environment and to produce a greater understanding of how catalogers approach their work. I will investigate how these perceptions of quality cataloging impact records created and to what degree catalogers influence departmental policy.

The target population of this study is catalogers (both professional and paraprofessional) who work in an academic library and perform original cataloging using the MARC 21 standard. "Original cataloging," as defined by this study, includes the creation of a new record that does not contain any prior data and/or the editing of an existing record that previously contained only very minimal data.

I would greatly appreciate it if you would pass on the link to my online survey to the catalogers in your department who perform original cataloging and/or complete the survey yourself if you perform original cataloging for the department. The survey can be found here:

<http://www.surveymonkey.com/s/BFPZQC9>

The survey should take approximately 30-35 minutes to complete. The deadline for completing the survey is Tuesday, August 31, 2010.

Please do not hesitate to contact me at Karen.Snow@unt.edu if you should have any questions or concerns.

I appreciate your time and assistance and thank you in advance for your help!

Karen Snow
Ph.D. Candidate
Department of Library & Information Sciences
College of Information
University of North Texas
Karen.Snow@unt.edu

APPENDIX D

SAMPLE OF QUALITY CATALOGING DEFINITIONS DATA ANALYSIS

J	K	L	M	N
	Technical Details of the Bibliographic Record	Adherence to Standards	Cataloging Process	Impact Upon Users
How do you personally define quality cataloging? - Open-Ended Response				
attention to detail			1	
Quality cataloging is when the cataloger takes adequate time to create a complete record according to current standards and practices (e.g., AACR2, ISBD, Bib Formats) and that accurately describes the item in hand. The cataloger creates a record for other copy catalogers that does not require any editing.	1	1	1	
Quality cataloging is an accurate description of the item at hand, with author/title/publication information, giving the patron access points and subject approaches. Today, with the possibility of searching every word in a bibliographic record, it is still important to have separate access points. Quality cataloging can include having all words correctly spelled as they appear on the item; with corrections as necessary. Helpful, also, are contents which include titles and authors of individual works when these works are compositions (as in music) or essays (in books). Call numbers are helpful for other catalogers and for patrons' browsing on the shelves.	1			1
Quality cataloging gets a user to the item or resource sought in the most direct fashion possible.				1
The record is accurate according to level 2 core rules of AACR2 in Areas 1-6 and 8. Notes are optional.		1		
Quality cataloging consists of accurate, succinct information such that a patron has little or no trouble finding an item that the bibliographic record says we own.	1			1
I define quality cataloging as creating or adapting a bibliographic record that contains all required and appropriate tags with accurate information and appropriate classification and subject headings. The rules and rule interpretations are not static and the record should reflect this, including maintaining authority control for names, subjects, and series. The attention to accuracy and completeness is the objective so that the library user-- including other library staff, faculty, students, and the public-- have the ability to locate, evaluate, and select, or not select, an item for use	1	1		1
Creation of full and reliable metadata, consistent with international standards	1	1		

APPENDIX E

RESULTS OF THE CHI-SQUARE TESTS COMPARING PERSONAL QUALITY
CATALOGING DEFINITIONS TO SPECIFIC DEMOGRAPHIC DATA

Cataloging experience chi-square test

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
row * column	609	100.0%	0	.0%	609	100.0%

row * column Crosstabulation

			column				Total
			1.00	2.00	3.00	4.00	
row	1.00	Count	84	47	17	63	211
		Expected Count	83.5	54.0	13.5	59.9	211.0
		% within row	39.8%	22.3%	8.1%	29.9%	100.0%
		% within column	34.9%	30.1%	43.6%	36.4%	34.6%
		% of Total	13.8%	7.7%	2.8%	10.3%	34.6%
		Std. Residual	.1	-1.0	.9	.4	
2.00	Count	63	48	12	45	168	
	Expected Count	66.5	43.0	10.8	47.7	168.0	
	% within row	37.5%	28.6%	7.1%	26.8%	100.0%	
	% within column	26.1%	30.8%	30.8%	26.0%	27.6%	
	% of Total	10.3%	7.9%	2.0%	7.4%	27.6%	
	Std. Residual	-.4	.8	.4	-.4		
3.00	Count	50	33	4	32	119	
	Expected Count	47.1	30.5	7.6	33.8	119.0	
	% within row	42.0%	27.7%	3.4%	26.9%	100.0%	
	% within column	20.7%	21.2%	10.3%	18.5%	19.5%	
	% of Total	8.2%	5.4%	.7%	5.3%	19.5%	
	Std. Residual	.4	.5	-1.3	-.3		

4.00	Count	44	28	6	33	111
	Expected Count	43.9	28.4	7.1	31.5	111.0
	% within row	39.6%	25.2%	5.4%	29.7%	100.0%
	% within column	18.3%	17.9%	15.4%	19.1%	18.2%
	% of Total	7.2%	4.6%	1.0%	5.4%	18.2%
	Std. Residual	.0	-.1	-.4	.3	
Total	Count	241	156	39	173	609
	Expected Count	241.0	156.0	39.0	173.0	609.0
	% within row	39.6%	25.6%	6.4%	28.4%	100.0%
	% within column	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	39.6%	25.6%	6.4%	28.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.485 ^a	9	.790
Likelihood Ratio	5.803	9	.759
Linear-by-Linear Association	.215	1	.643
N of Valid Cases	609		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.11.

$$\chi^2(9) = 5.485, p < .790$$

Age range chi-square test

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
row * column	609	100.0%	0	.0%	609	100.0%

row * column Crosstabulation

			column				Total
			1.00	2.00	3.00	4.00	
row	1.00	Count	68	48	15	49	180
		Expected Count	71.2	46.1	11.5	51.1	180.0
		% within row	37.8%	26.7%	8.3%	27.2%	100.0%
		% within column	28.2%	30.8%	38.5%	28.3%	29.6%
		% of Total	11.2%	7.9%	2.5%	8.0%	29.6%
		Std. Residual	-.4	.3	1.0	-.3	
	2.00	Count	138	88	18	97	341
		Expected Count	134.9	87.3	21.8	96.9	341.0
		% within row	40.5%	25.8%	5.3%	28.4%	100.0%
		% within column	57.3%	56.4%	46.2%	56.1%	56.0%
		% of Total	22.7%	14.4%	3.0%	15.9%	56.0%
		Std. Residual	.3	.1	-.8	.0	
	3.00	Count	35	20	6	27	88
		Expected Count	34.8	22.5	5.6	25.0	88.0
		% within row	39.8%	22.7%	6.8%	30.7%	100.0%
		% within column	14.5%	12.8%	15.4%	15.6%	14.4%
		% of Total	5.7%	3.3%	1.0%	4.4%	14.4%
		Std. Residual	.0	-.5	.2	.4	
Total	Count	241	156	39	173	609	

Expected Count	241.0	156.0	39.0	173.0	609.0
% within row	39.6%	25.6%	6.4%	28.4%	100.0%
% within column	100.0%	100.0%	100.0%	100.0%	100.0%
% of Total	39.6%	25.6%	6.4%	28.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.579 ^a	6	.859
Likelihood Ratio	2.540	6	.864
Linear-by-Linear Association	.008	1	.929
N of Valid Cases	609		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.64.

$$\chi^2(6) = 2.579, p < .859$$

Professional vs. Non-professional chi-square test

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
row * column	509	100.0%	0	.0%	509	100.0%

row * column Crosstabulation

			column				Total
			1.00	2.00	3.00	4.00	
row	1.00	Count	110	143	37	149	439
		Expected Count	121.6	134.5	33.6	149.2	439.0
		% within row	25.1%	32.6%	8.4%	33.9%	100.0%
		% within column	78.0%	91.7%	94.9%	86.1%	86.2%
		% of Total	21.6%	28.1%	7.3%	29.3%	86.2%
		Std. Residual	-1.1	.7	.6	.0	
	2.00	Count	31	13	2	24	70
		Expected Count	19.4	21.5	5.4	23.8	70.0
		% within row	44.3%	18.6%	2.9%	34.3%	100.0%
		% within column	22.0%	8.3%	5.1%	13.9%	13.8%
		% of Total	6.1%	2.6%	.4%	4.7%	13.8%
		Std. Residual	2.6	-1.8	-1.5	.0	
Total		Count	141	156	39	173	509
		Expected Count	141.0	156.0	39.0	173.0	509.0
		% within row	27.7%	30.6%	7.7%	34.0%	100.0%
		% within column	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	27.7%	30.6%	7.7%	34.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	14.368 ^a	3	.002
Likelihood Ratio	14.528	3	.002
Linear-by-Linear Association	2.361	1	.124
N of Valid Cases	509		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.36.

$$\chi^2(3) = 14.368, p = .002$$

Number of institutions chi-square test

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
row * column	609	100.0%	0	.0%	609	100.0%

row * column Crosstabulation

			column				Total
			1.00	2.00	3.00	4.00	
row	1.00	Count	72	43	13	56	184
		Expected Count	72.8	47.1	11.8	52.3	184.0
		% within row	39.1%	23.4%	7.1%	30.4%	100.0%
		% within column	29.9%	27.6%	33.3%	32.4%	30.2%
		% of Total	11.8%	7.1%	2.1%	9.2%	30.2%
		Std. Residual	-.1	-.6	.4	.5	
2.00	Count	69	46	14	46	175	
	Expected Count	69.3	44.8	11.2	49.7	175.0	
	% within row	39.4%	26.3%	8.0%	26.3%	100.0%	
	% within column	28.6%	29.5%	35.9%	26.6%	28.7%	
	% of Total	11.3%	7.6%	2.3%	7.6%	28.7%	
	Std. Residual	.0	.2	.8	-.5		
3.00	Count	52	35	6	39	132	
	Expected Count	52.2	33.8	8.5	37.5	132.0	
	% within row	39.4%	26.5%	4.5%	29.5%	100.0%	
	% within column	21.6%	22.4%	15.4%	22.5%	21.7%	
	% of Total	8.5%	5.7%	1.0%	6.4%	21.7%	
	Std. Residual	.0	.2	-.8	.2		
4.00	Count	24	20	4	12	60	

	Expected Count	23.7	15.4	3.8	17.0	60.0
	% within row	40.0%	33.3%	6.7%	20.0%	100.0%
	% within column	10.0%	12.8%	10.3%	6.9%	9.9%
	% of Total	3.9%	3.3%	.7%	2.0%	9.9%
	Std. Residual	.1	1.2	.1	-1.2	
5.00	Count	24	12	2	20	58
	Expected Count	23.0	14.9	3.7	16.5	58.0
	% within row	41.4%	20.7%	3.4%	34.5%	100.0%
	% within column	10.0%	7.7%	5.1%	11.6%	9.5%
	% of Total	3.9%	2.0%	.3%	3.3%	9.5%
	Std. Residual	.2	-.7	-.9	.9	
Total	Count	241	156	39	173	609
	Expected Count	241.0	156.0	39.0	173.0	609.0
	% within row	39.6%	25.6%	6.4%	28.4%	100.0%
	% within column	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	39.6%	25.6%	6.4%	28.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.623 ^a	12	.814
Likelihood Ratio	7.861	12	.796
Linear-by-Linear Association	.174	1	.677
N of Valid Cases	609		

a. 2 cells (10.0%) have expected count less than 5. The minimum expected count is 3.71.

$$\chi^2(12) = 7.623, p < .814$$

Taken cataloging course for credit chi-square test

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
row * column	609	100.0%	0	.0%	609	100.0%

row * column Crosstabulation

			column				Total
			1.00	2.00	3.00	4.00	
row	1.00	Count	34	15	2	22	73
		Expected Count	28.9	18.7	4.7	20.7	73.0
		% within row	46.6%	20.5%	2.7%	30.1%	100.0%
		% within column	14.1%	9.6%	5.1%	12.7%	12.0%
		% of Total	5.6%	2.5%	.3%	3.6%	12.0%
		Std. Residual	1.0	-.9	-1.2	.3	
	2.00	Count	207	141	37	151	536
		Expected Count	212.1	137.3	34.3	152.3	536.0
		% within row	38.6%	26.3%	6.9%	28.2%	100.0%
		% within column	85.9%	90.4%	94.9%	87.3%	88.0%
		% of Total	34.0%	23.2%	6.1%	24.8%	88.0%
		Std. Residual	-.4	.3	.5	-.1	
Total		Count	241	156	39	173	609
		Expected Count	241.0	156.0	39.0	173.0	609.0
		% within row	39.6%	25.6%	6.4%	28.4%	100.0%
		% within column	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	39.6%	25.6%	6.4%	28.4%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.686 ^a	3	.297
Likelihood Ratio	4.107	3	.250
Linear-by-Linear Association	.279	1	.597
N of Valid Cases	609		

a. 1 cells (12.5%) have expected count less than 5. The minimum expected count is 4.67.

$$\chi^2(3) = 3.686, p < .297$$

APPENDIX F

MARC FIELDS AND SUBFIELDS RANKED BY LEVEL OF IMPORTANCE

Answer Options	Very important	Quite important	Important	Somewhat important	Not important	I don't know what this means
008 (Fixed Fields)	137 (46%)	56 (19%)	65 (22%)	28 (10%)	10 (3%)	0
010 (LC Control Number)	60 (20%)	45 (15%)	60 (20%)	78 (26%)	52 (18%)	1 (0.3%)
020 (ISBN)	203 (69%)	37 (13%)	39 (13%)	14 (5%)	2 (0.7%)	1 (0.3%)
022 (ISSN)	196 (66%)	34 (12%)	42 (14%)	18 (6%)	5 (2%)	1 (0.3%)
041 (Language Code)	68 (23%)	61 (21%)	92 (31%)	53 (18%)	22 (7%)	0
042 (Authentication Code)	27 (9%)	25 (8%)	42 (14%)	88 (30%)	93 (31%)	21 (7%)
043 (Geographic Area Code)	27 (9%)	26 (9%)	70 (24%)	100 (34%)	72 (24%)	1 (0.3%)
050/090 (LC Call Number)	192 (65%)	45 (15%)	26 (9%)	20 (7%)	13 (4%)	0
082/092 (Dewey Call Number)	68 (23%)	33 (11%)	39 (13%)	45 (15%)	111 (38%)	0
100 (Personal Name Main Entry)	278 (94%)	16 (5%)	2 (0.7%)	0	0	0
110 (Corporate Body Main Entry)	258 (87%)	23 (8%)	11 (4%)	4 (1%)	0	0
111 (Meeting Name Main Entry)	216 (73%)	38 (13%)	26 (9%)	14 (5%)	1 (0.3%)	1 (0.3%)
130 (Uniform Title Main Entry)	183 (62%)	47 (16%)	39 (13%)	22 (7%)	5 (2%)	0
240 (Uniform Title)	167 (56%)	58 (20%)	44 (15%)	22 (7%)	5 (2%)	0
245\$a (Title Proper)	291 (8%)	4 (1%)	0	0	0	1 (0.3%)
245\$b (Remainder of the Title)	213 (72%)	57 (19%)	16 (5%)	7 (2%)	2 (0.7%)	1 (0.3%)
245\$c (Statement of Responsibility)	202 (68%)	51 (17%)	23 (8%)	17 (6%)	3 (1%)	0
245\$h (General Material Designation)	145 (49%)	46 (16%)	65 (22%)	24 (8%)	16 (5%)	0
245\$p (Name of Part/Section)	143 (48%)	62 (21%)	53 (18%)	32 (11%)	6 (2%)	0
246 (Variant Title)	128 (43%)	96 (32%)	50 (17%)	22 (7%)	0	0
250 (Edition Statement)	184 (62%)	55 (19%)	49 (17%)	7 (2%)	1 (0.3%)	0
260\$a (Place of Publication)	128 (43%)	57 (19%)	57 (19%)	40 (14%)	14 (5%)	0
260\$b (Name of Publisher)	192 (65%)	57 (19%)	29 (10%)	16 (5%)	2 (0.7%)	0
260\$c (Date of Publication)	233 (79%)	36 (12%)	19 (6%)	7 (2%)	1 (0.3%)	0
300\$a (Extent of Item, such as pagination)	148 (50%)	60 (20%)	57 (19%)	22 (7%)	9 (3%)	0
300\$b (Other physical details, such as illustrations)	85 (29%)	71 (24%)	73 (25%)	49 (17%)	18 (6%)	0
300\$c (Dimensions)	81 (27%)	46 (16%)	67 (23%)	74 (25%)	28 (10%)	0
440/490 (Series Statement)	132 (45%)	71 (24%)	63 (21%)	26 (9%)	4 (1%)	0
500 (General Note)	72 (24%)	63 (21%)	96 (32%)	58 (20%)	7 (2%)	0
501 ("With" Note)	64 (22%)	36 (12%)	78 (26%)	78 (26%)	35 (12%)	5 (2%)
502 (Dissertation Note)	96 (32%)	50 (17%)	85 (29%)	49 (17%)	14 (5%)	2 (0.7%)
504 (Bibliography, Etc. Note)	66 (22%)	55 (19%)	81 (27%)	66 (22%)	28 (10%)	0
505 (Formatted Contents Note)	97 (33%)	69 (23%)	72 (24%)	54 (18%)	4 (1%)	0
520 (Summary, Etc. Note)	45 (15%)	50 (17%)	96 (32%)	77 (26%)	28 (10%)	0
521 (Target Audience Note)	9 (3%)	17 (6%)	59 (20%)	101 (34%)	108 (37%)	2 (0.7%)
533 (Reproduction Note)	57 (19%)	58 (20%)	72 (24%)	82 (28%)	24 (8%)	3 (1%)
546 (Language Note)	77 (26%)	61 (21%)	85 (29%)	57 (19%)	15 (5%)	1 (0.3%)

600 (Personal Name Subject Heading)	248 (84%)	31 (11%)	14 (5%)	3 (1%)	0	0
610 (Corporate Body Subject Heading)	236 (80%)	39 (13%)	14 (5%)	6 (2%)	1 (0.3%)	0
630 (Uniform Title Subject Heading)	198 (67%)	43 (15%)	29 (10%)	18 (6%)	8 (3%)	0
650 (Topical Subject Heading)	268 (91%)	24 (8%)	3 (1%)	1 (0.3%)	0	0
651 (Geographic Subject Heading)	250 (85%)	33 (11%)	9 (3%)	4 (1%)	0	0
655 (Form/Genre Subject Heading)	94 (32%)	70 (24%)	60 (20%)	53 (18%)	18 (6%)	1 (0.3%)
700 (Personal Name Added Entry)	238 (80%)	31 (11%)	22 (7%)	3 (1%)	2 (0.7%)	0
710 (Corporate Body Added Entry)	216 (73%)	42 (14%)	28 (10%)	8 (3%)	2 (0.7%)	0
730 (Uniform Title Added Entry)	163 (55%)	56 (19%)	50 (17%)	21 (7%)	5 (2%)	1 (0.3%)
740 Uncontrolled Related/Analytical Title Added Entry)	88 (30%)	71 (24%)	71 (24%)	43 (15%)	19 (6%)	4 (1%)
776 (Additional Physical Form Entry)	15 (5%)	41 (14%)	79 (27%)	94 (32%)	60 (20%)	7 (2%)
800 (Personal Name/Series Added Entry)	121 (41%)	47 (16%)	65 (22%)	41 (14%)	18 (6%)	4 (1%)
830 (Uniform Title/Series Added Entry)	142 (48%)	57 (19%)	58 (20%)	27 (9%)	12 (4%)	0
856 (Electronic Location & Access, such as a URL)	197 (67%)	42 (14%)	31 (11%)	15 (5%)	11 (4%)	0

APPENDIX G

QUALITY CATALOGING ATTRIBUTES RANKED BY LEVEL OF IMPORTANCE

Answer Options	Very important	Quite important	Important	Somewhat important	Not important	I don't know what this means
Technical details of bibliographic record						
Creating a bibliographic record that is free of typographical errors	212 (72%)	60 (20%)	19 (6%)	5 (2%)	0	0
Creating a bibliographic record that is as complete as possible, created with all present and future users in mind	135 (46%)	67 (23%)	53 (18%)	26 (9%)	12 (4%)	3 (1%)
Transcription of bibliographic data is as accurate as possible	238 (80%)	39 (13%)	18 (6%)	1 (0.3%)	0	0
Creating a bibliographic record that is as perfect as possible	81 (27%)	57 (19%)	75 (25%)	45 (15%)	30 (10%)	8 (3%)
Creating a bibliographic record that best represents the item in-hand	233 (79%)	38 (13%)	22 (7%)	2 (0.7%)	1 (0.3%)	0
Creating a bibliographic record that has the appropriate level of description (not too much information/not too little)	141 (48%)	87 (29%)	46 (16%)	15 (5%)	5 (2%)	2 (0.7%)
Creating a bibliographic record that goes beyond basic description	112 (38%)	90 (30%)	59 (20%)	26 (9%)	6 (2%)	3 (1%)
Call number is included and accurate	206 (70%)	51 (17%)	26 (9%)	9 (3%)	4 (1%)	0
Subject headings are included and accurate	246 (83%)	39 (13%)	9 (3%)	2 (0.7%)	0	0
Subject headings are at the appropriate level of specificity	156 (53%)	86 (29%)	44 (15%)	10 (3%)	0	0
Record includes links to information outside of the catalog that are relevant to the item	28 (10%)	40 (14%)	84 (28%)	98 (33%)	45 (15%)	1 (0.3%)
Fixed fields (008 field) are included and accurate	133 (45%)	69 (23%)	64 (22%)	26 (9%)	4 (1%)	0

Answer Options	Very important	Quite important	Important	Somewhat important	Not important	I don't know what this means
Adherence to standards (local, national, professional, network)						
Access points are correctly identified & formulated according to AACR2	236 (80%)	32 (11%)	20 (7%)	7 (2%)	1 (0.3%)	0
Access points conform to authority records/controlled vocabulary used by library	243 (82%)	31 (11%)	18 (6%)	3 (1%)	1 (0.3%)	0
MARC tags are correct	193 (65%)	65	32 (11%)	6 (2%)	0	0
Punctuation conforms to AACR2	73 (25%)	41 (14%)	85 (29%)	70 (24%)	27 (9%)	0
Creating a bibliographic record that conforms to local standards	127 (43%)	74 (25%)	66 (22%)	21 (7%)	6 (2%)	2 (0.7%)
Creating a bibliographic record that conforms to OCLC standards	124 (42%)	90 (30%)	54 (18%)	17 (6%)	11 (4%)	0
Creating a bibliographic record that conforms to AACR2	136 (46%)	83 (28%)	51 (17%)	18 (6%)	8 (3%)	0
Creating a bibliographic record that conforms to Library of Congress Rule Interpretations (LCRI)	79 (27%)	88 (30%)	69 (23%)	44 (15%)	12 (4%)	4 (1%)
Creating a bibliographic record that is transliterated according to Library of Congress Romanization tables	71 (24%)	76 (26%)	79 (27%)	33 (11%)	20 (7%)	17 (6%)
Using catalogers' judgment in choosing whether or not to adhere to standards (local, AACR2, etc.)	104 (35%)	72 (24%)	80 (27%)	12 (4%)	15 (5%)	13 (4%)

Answer Options	Very important	Quite important	Important	Somewhat important	Not important	I don't know what this means
The cataloging process/workflows/staff						
Little or no duplication of bibliographic records in the catalog	122 (41%)	72 (24%)	75 (25%)	24 (8%)	2 (0.7%)	1 (0.3%)
Items are cataloged and shelved quickly	47 (16%)	61 (21%)	112 (38%)	57 (19%)	18 (6%)	1 (0.3%)
Items are cataloged and shelved in a timely manner	90 (30%)	107 (36%)	77 (26%)	21 (7%)	0	1 (0.3%)
Items are cataloged in a cost-effective manner	50 (17%)	75 (25%)	99 (33%)	51 (17%)	19 (6%)	2 (0.7%)
Enough time is allowed for complex/original cataloging	154 (52%)	89 (30%)	45 (15%)	6 (2%)	1 (0.3%)	1 (0.3%)
Backlogs are kept to a minimum	70 (24%)	66 (22%)	99 (33%)	54 (18%)	7 (2%)	0
Initial training of cataloging staff is comprehensive	128 (43%)	85 (29%)	63 (21%)	14 (5%)	3 (1%)	3 (1%)
Support staff is trained to adhere to national/local standards and supervised appropriately	154 (52%)	84 (28%)	44 (15%)	9 (3%)	2 (0.7%)	3 (1%)
Complex/original cataloging is performed by professional catalogers	92 (31%)	59 (20%)	61 (21%)	36 (12%)	47 (16%)	1 (0.3%)
Administration is responsive/supportive of cataloging process/needs	184 (62%)	71 (24%)	32 (11%)	7 (2%)	2 (0.7%)	0
Administration is trained in/knowledgeable of cataloging	46 (16%)	57 (19%)	92 (31%)	70 (24%)	31 (11%)	0
Needed cataloging resources are provided by employer	191 (65%)	76 (26%)	27 (9%)	2 (0.7%)	0	0
Continuing education is encouraged by employer	124 (42%)	83 (28%)	67 (23%)	22 (7%)	0	0
Support of overall cataloging community	80 (27%)	78 (26%)	87 (29%)	27 (9%)	5 (2%)	19 (6%)
Possessing good subject domain knowledge of material cataloged	60 (20%)	73 (25%)	102 (35%)	53 (18%)	8 (3%)	0

Answer Options	Very important	Quite important	Important	Somewhat important	Not important	I don't know what this means
Impact upon users/findability/accessibility						
Creating a bibliographic record that is helpful/useful to the user	279 (94%)	13 (4%)	3 (1%)	1 (0.3%)	0	0
Enough access points are included so that the record can be found	268 (91%)	22 (7%)	5 (2%)	0	0	1 (0.3%)
As many access points that are needed are included	204 (69%)	58 (20%)	28 (10%)	6 (2%)	0	0
The user is able to find records in the catalog quickly	197 (67%)	64 (22%)	30 (10%)	4 (1%)	0	1 (0.3%)
The user is able to find records in the catalog efficiently	264 (89%)	23 (8%)	9 (3%)	0	0	0
User complaints/comments about catalog are addressed quickly	180 (61%)	79 (27%)	25 (8%)	10 (3%)	1 (0.3%)	1 (0.3%)
Having some record in the catalog, even if it lacks full description	74 (25%)	35 (12%)	90 (30%)	73 (25%)	21 (7%)	3 (1%)
Awareness of user needs and skills	186 (63%)	65 (22%)	38 (13%)	6 (2%)	0	1 (0.3%)

REFERENCES

- American Library Association. (2011). *Becoming a librarian*. Retrieved April 20, 2011, from <http://www.ala.org/ala/educationcareers/careers/paths/librarian/index.cfm>
- American Society for Quality. (2011). *Glossary entry: Quality*. Retrieved May 24, 2011, from <http://asq.org/glossary/q.html>
- Andrews, M. (2007). Changing markets, changing relationships. *Library Hi Tech*, 25(4), 562-578.
- Avdoyan, L. (1993). The good cataloguing record, or, When cataloguing records go bad. In *Cataloging quality is...five perspectives: Opinion papers, no. 4* (pp. 3-6). Washington, D.C.: Library of Congress Cataloging Forum.
- Bade, D.W. (2008). The perfect bibliographic record: Platonic ideal, rhetorical strategy or nonsense? *Cataloging & Classification Quarterly*, 46(1), 109-133.
- Barnwell, J.G. (1876). A universal catalogue: Its necessity and practicability. *Library Journal*, 1(2-3), 54-58.
- Beall, J. (2000). The impact of vendor records on cataloging and access in academic libraries. *Library Collections, Acquisitions, & Technical Services*, 24, 229-237.
- Bell, L. (1993). Quality standards in a new era of cataloging. In *Cataloging quality is...five perspectives: Opinion papers, no. 4* (pp. 7-9). Washington, D.C.: Library of Congress Cataloging Forum.
- Bernstein, D. A., Clarke-Stewart, A., Roy, E.J., Srull, T.K., & Wickens, C.D. (1994). *Psychology* (3rd ed.). Boston & Toronto: Houghton Mifflin.
- Billington, J.H. (1990, Feb. 26). Librarian of Congress testifies before House Committee on 1991 budget. *Library of Congress Information Bulletin*, 49(5), 82-95.
- Billington, J.H. (1992, Feb. 24). Librarian delivers budget message to Congress: Stresses science, storage, health for fiscal year 1993. *Library of Congress Information Bulletin*, 51(4), 67-71, 82-83.
- Boissonnas, C.M. (1979, Winter). The quality of OCLC bibliographic records: The Cornell Law Library experience. *Law Library Journal*, 72, 80-85.
- Boston Athenaeum & Cutter, C.A. (1880). *Catalogue of the Library of the Boston Athenaeum. 1807-1871. Part IV*. Boston.

- Bowker, R.R. (1883, Sept./Oct.). The work of the nineteenth-century librarian for the librarian of the twentieth. *Library Journal*, 8(9/10), 250.
- Breeding, M. (2007). It's time to break the mold of the original ILS. *Computers in Libraries*, 27(10), 39-41.
- Bruce, T.R. & Hillmann, D.I. (2004). The continuum of metadata quality: Defining, expressing, exploiting. In D.I. Hillmann & E.L. Westbrook (Eds.), *Metadata in practice* (pp. 238-256). Chicago: American Library Association.
- Cataloging Forum begins February 27. (1990, Feb. 12). *Library of Congress Information Bulletin*, 49(4), 77.
- Cataloging quality: A Library of Congress symposium: Opinion papers, no. 6.* (1995). Washington, D.C.: Library of Congress Cataloging Forum.
- Chan, L.M. (2007). *Cataloging and classification: An introduction* (3rd ed.). Lanham, MD: Scarecrow Press.
- Chapman, A. & Massey, O. (2002). A catalogue quality audit tool. *Library Management*, 23(6/7), 314-324.
- Charlton, A. (1949). Changing emphasis in cataloging. *Journal of Cataloging and Classification*, 5(5), 81-86.
- Contu, A. & Willmott, H. (2003, May-June). Re-embedding situatedness: The importance of power relations in learning theory. *Organization Science*, 14(3), 283-296.
- Cutter, C.A. (1904). *Rules for a dictionary catalog* (4th ed.). U.S. Bureau of Education. Special Report on Public Libraries—Part II. Washington: Government Printing Office.
- Davis, C.C. (1989). Results of a survey on record quality in the OCLC database. *Technical Services Quarterly*, 7(2), 43-53.
- Deeken, J. (2006). Quicker, cheaper, better: Pick two. A report on the ALCTS Heads of Technical Services at Medium Sized Libraries Discussion Group meeting. American Library Association Midwinter Meeting, Boston, January 2005. *Technical Services Quarterly*, 23(3), 81-89.
- Delsey, T. (2006, Apr. 6). *Functional analysis of the MARC 21 bibliographic and holdings formats*. Retrieved March 15, 2010, from <http://www.loc.gov/marc/marc-functional-analysis/functional-analysis.html>
- Dewey, M. (1877, Jan. 31). Co-operative cataloguing. *Library Journal*, 1(4/5), 170-175.

- Dowling, T. (2010, Jan. 22). *Libraries on the web: USA academic libraries*. Retrieved March 28, 2010, from http://lists.webjunction.org/libweb/Academic_main.html
- Edlund, P. (1976, Oct.). A monster and a miracle: The Cataloging Distribution Service of the Library of Congress, 1901-1976. *Quarterly Journal of the Library of Congress*, 33(4), 383-421.
- El-Sherbini, M. (2010). Program for Cooperative Cataloging: BIBCO records: Analysis of quality. *Cataloging & Classification Quarterly*, 48(2), 221-236.
- Elrod, J. M. (2008). The case for cataloguing education. *Serials Librarian*, 55(1/2), 1-10.
- Ferris, A.M. (2008). The ethics and integrity of cataloging. *Journal of Library Administration*, 47(3/4), 173-190.
- Field, A.P. (2009). *Discovering statistics using SPSS (and sex and drugs and rock 'n' roll)*. (3rd ed.). Los Angeles: Sage.
- Fineberg, G. (1990, Oct. 22). Cataloging Directorate to be reorganized: Whole Book Cataloging gets OK. *Library of Congress Information Bulletin*, 49(21), 356-357.
- Fischer, R. & Lugg, R. (2009, Oct.). *Library of Congress study of the North American MARC records marketplace*. Washington, D.C.: Library of Congress.
- Fontana, A. & Frey, J.H. (1994). Interviewing: The art of science. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 361-376). Thousand Oaks, CA: Sage Publications.
- Graham, P.S. (1990). Quality in cataloging: Making distinctions. *Journal of Academic Librarianship*, 16(4), 213-218.
- Gross, T. & Taylor, A. G. (2005) What have we got to lose? The effect of controlled vocabulary on keyword searching results. *College and Research Libraries*, 66(3), 212-230.
- Hafter, R. (1986). *Academic librarians and cataloging networks: Visibility, quality control, and professional status*. New York: Greenwood Press.
- Handley, K., Clark, T., Fincham, R., & Sturdy, A. (2007, April). Researching situated learning: Participation, identity and practices in client-consultant relationships. *Management Learning*, 38(2), 173-191.
- Heisey, T.M. (1976, July). Early catalog code development in the United States, 1876-1908. *Journal of Library History*, 11(3), 218-248.
- Hernon, P. (1994). *Statistics: A component of the research process*. (Rev. ed.). Norwood, N.J.: Ablex Publishing Corporation.

- Hider, P. & Tan, K. (2008). Constructing record quality measures based on catalog use. *Cataloging & Classification Quarterly*, 46(4), 338-361.
- Hill, J.S. (2008). Is it worth it? Management issues related to database quality. *Cataloging & Classification Quarterly*, 46(1), 5-26.
- Hoffman, G. L. (2008). Negotiating normative institutional pressures and maintaining legitimacy in a complex work environment: A multiple case study of three academic cataloging units. *Dissertation Abstracts International*, 69 (04). (UMI No. 3311786)
- Hopkins, J. (2002). The community of catalogers: Its role in the education of catalogers. *Cataloging & Classification Quarterly*, 34(3), 375-381.
- Horny, K.L. (1985, Sept.). Quality work, quality control in technical services. *Journal of Academic Librarianship*, 11(4), 206-210.
- International Federation of Library Associations and Institutions. ISBD Review Committee Working Group. (1992). *ISBD(G): General International Standard Bibliographic Description*. Retrieved March 28, 2010, from <http://archive.ifla.org/VII/s13/pubs/isbdg.htm>
- International Federation of Library Associations and Institutions. (1998). *Functional Requirements for Bibliographic Records - final report*. Retrieved July 12, 2011, from <http://www.ifla.org/files/cataloguing/frbr/frbr.pdf>
- Intner, S.S. (1989, Feb. 1). Much ado about nothing: OCLC and RLIN cataloging quality. *Library Journal* 114(2), 38-40.
- Intner, S.S. (1990). Copy cataloging and the perfect record mentality. *Technicalities*, 10(7), 12-15.
- Joint Steering Committee for the Revision of AACR. (2002). *Anglo-American Cataloguing Rules* (2nd ed., 2002 rev., 2005 update). Chicago: American Library Association.
- Joudrey, D.N. (2002). A new look at US graduate courses in bibliographic control. *Cataloging & Classification Quarterly*, 34(1/2), 57-99.
- Kinner, L. & Rigda, C. (2009). The integrated library system: From daring to dinosaur? *Journal of Library Administration*, 49, 401-417.
- Knutson, G. (1990). A comparison of online and card catalog accuracy. *Library Resources & Technical Services*, 34(1), 25-35.
- Lave, J. & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge: Cambridge University Press.

- Leedy, P.D. (1997). *Practical research: Planning and design* (6th ed.). Upper Saddle River, N.J.: Merrill.
- Level, A. (1993). Citations in cyberspace: Quality cataloging in the electronic world. In *Cataloging quality is...five perspectives: Opinion papers, no. 4* (pp. 19-21). Washington, D.C.: Library of Congress Cataloging Forum.
- Library of Congress. (2009, Oct. 30). *LC Acquisitions and Bibliographic Access Directorate Program for Cooperative Cataloging Statistics -- NACO/BIBCO/CONSER/SACO. Annual Compilation FY2009 (October 1, 2008 - Sept 30 2009)*. Retrieved March 15, 2010, from <http://www.loc.gov/catdir/pcc/stats/FY2009/totals09.pdf>
- Library of Congress. (2009, Nov. 23). *Implementation of the BIBCO standard record for books*. Retrieved March 15, 2010, from http://www.loc.gov/catdir/pcc/bibco/BSR_ImplementationDoc.pdf
- Library of Congress. (2009, Dec. 18). *Frequently asked questions: Implementation of the BSR for printed books*. Retrieved March 15, 2010, from http://www.loc.gov/catdir/pcc/bibco/BSR_FAQ.pdf
- Library of Congress. (2010). *Program for Cooperative Cataloging*. Retrieved March 15, 2010, from <http://www.loc.gov/catdir/pcc/>
- Library of Congress. (2011). *Report and recommendations of the U.S. RDA Test Coordinating Committee (executive summary)*. Retrieved July 12, 2011, from <http://www.loc.gov/bibliographic-future/rda/rda-execsummary-public-13june11.pdf>
- Luquire, W. (1976, Aug.). *Selected factors affecting library staff perceptions of an innovative system: A study of ARL libraries in OCLC*. Unpublished doctoral dissertation, Indiana University.
- MacEwan, A. & Young, T. (2004, Summer). Quality vs. quantity: Developing a systematic approach to a perennial problem. *Catalogue & Index*, 152, 1-7.
- Maciuszko, K.L. (1984). *OCLC: A decade of development, 1967-1977*. Littleton, CO: Libraries Unlimited.
- Mann, T. (1991). *Cataloging quality, LC priorities, and models of the Library's future*. Opinion Papers, No.1. Washington, D.C.: Library of Congress Cataloging Forum.
- Mann, T. (1994). *Cataloging and classification quality at the Library of Congress*. Opinion Papers, No.5. Washington, D.C.: Library of Congress Cataloging Forum.
- McGurr, M.J. & Damasco, I.T. (2010). Improving the practicum or internship experience in cataloging. *Technical Services Quarterly*, 27, 1-16.

- Miksa, F. (1989). Cataloging education in the library and information science curriculum. In S.S. Intner and J.S. Hill (Eds.), *Recruiting, educating, and training cataloging librarians: Solving the problems* (pp. 273-297). New York: Greenwood Press.
- Miller, K.D. (2011, June 25). *What's that keyword search finding? Subject headings, tables of contents, and more*. Presentation at the ALCTS CCS Cataloging Norms Interest Group Meeting, ALA Annual Conference, New Orleans.
- Moen, W.E., Miksa, S.D., Eklund, A., & Polyakov, S. (2006, May 3). *MARC content designation utilization project: Inquiry and analysis - preliminary analysis of commonly occurring elements in MARC21 records from OCLC WorldCat*. Retrieved March 28, 2010, from <http://www.mcdu.unt.edu/wp-content/CoreElementsAnalysisae3May2006.pdf>
- Morita, I. (1983). Quality control of copy cataloging in an online environment. *Research Libraries in OCLC: A Quarterly*, 11, 1-3.
- Morris, S. (1993). Maintaining a quality cataloging service. In *Cataloging quality is...five perspectives: Opinion papers, no. 4* (pp. 11-16). Washington, D.C.: Library of Congress Cataloging Forum.
- Myers-Hayer, J. (1993). What is quality cataloging? In *Cataloging quality is...five perspectives: Opinion papers, no. 4* (pp. 17-18). Washington, D.C.: Library of Congress Cataloging Forum.
- Nardi, P.M. (2006). *Doing survey research: A guide to quantitative methods* (2nd ed.). Boston: Pearson.
- Neuendorf, K.A. (2002). *The content analysis guidebook*. Thousand Oaks, CA: Sage Publications.
- OCLC. (2009). *Online catalogs: What users and librarians want: An OCLC report*. Dublin, OH. Retrieved April 21, 2011 from, <http://www.oclc.org/reports/onlinecatalogs/fullreport.pdf>
- OCLC. (2010). *OCLC worldmap*. Retrieved March 28, 2010, from <http://www.oclc.org/research/activities/worldmap/prototype.htm>
- OCLC. (2011a). *ELvl: Encoding level*. Retrieved July 14, 2011, from <http://www.oclc.org/bibformats/en/fixedfield/elvl.shtm>
- OCLC. (2011b). *Full, core, minimal, and abbreviated-level cataloging*. Retrieved July 14, 2011, from <http://www.oclc.org/bibformats/en/onlinecataloging/default.shtm#BCGGBAFC>
- OCLC. (2011c). *WorldCat facts and statistics*. Retrieved August 2, 2011, from <http://www.oclc.org/worldcat/statistics/default.htm>

- Orr, J. E. (1990). Sharing knowledge, celebrating identity: Community memory in a service culture. In D. Middleton & D. Edwards (Eds.), *Collective remembering* (pp. 169-189). London: Sage.
- Osborn, A.D. (1941). The crisis in cataloging. In M. Carpenter & E. Svenonius (Eds.), *Foundations of cataloging: A sourcebook* (pp. 92-103). Littleton, CO: Libraries Unlimited.
- Paiste, M.S. (2003). Defining and achieving quality in cataloging in academic libraries: A literature review. *Library Collections, Acquisitions, & Technical Services*, 27, 327-338.
- Pool, R.B. (1877, April 30). [Letter to the editor]. *Library Journal*, 1(8), 290.
- Primary Research Group. (2008). *Academic library cataloging practices benchmarks*. [Rockville, MD]: Primary Research Group.
- Reeves, C.A. & Bednar, D.A. (1994). Defining quality: Alternatives and implications. *Academy of Management Review*, 19(3), 419-445.
- Reitz, J. (2010). Paraprofessional (definition). *ODLIS: Online Dictionary for Library and Information Science*. Retrieved April 20, 2011, from http://www.abc-clio.com/ODLIS/odlis_p.aspx
- Rhee, S. (1986, Jan.). Minimal-level cataloging: Is it the best local solution to a national problem? *Journal of Academic Librarianship*, 11(6), 336-337.
- R.M.D. (1977, July). Data base pollution. *Journal of Academic Librarianship*, 3(3), 127.
- Ross, R.M. & West, L. (1986, Jan.). MLC: A contrary viewpoint. *Journal of Academic Librarianship*, 11(6), 334-336.
- Santamauro, B. & Adams, K.C. (2006, Oct./Sept.). Are we trained monkeys or philosopher-kings? The meaning of catalogers' judgment. *Technicalities*, 26(5), 11-16.
- Schoenung, J.G. (1981). *The quality of the member-input monographic records in the OCLC online union catalog*. Drexel University. (UMI No. 8122003).
- Scott, E. (1976, July). The evolution of bibliographic systems in the United States, 1876-1945. *Library Trends*, 25(1), 293-309.
- Shedenhelm, L.D. & Burk, B.A. (2001). Book vendor records in the OCLC database: Boon or bane? *Library Resources & Technical Services*, 45(1), 10-19.
- Snyder, W.M. & Wegner, E. (2010). Our world as a learning system: A communities-of-practice approach. In C. Blackmore (Ed.), *Social learning systems and communities of practice* (pp. 107-124). London: Springer.

- Stamm, A.L. (1996). Minimal level cataloging: Past, present, and future. In L.C. Smith & R.C. Carter (Eds.), *Technical services management, 1965-1990: A quarter century of change and a look to the future: Festschrift for Kathryn Luther Henderson* (pp. 191-207). New York & London: The Haworth Press.
- Statistics Canada. (2002). *Statistics Canada's Quality Assurance Framework*. Retrieved June 14, 2011 from <http://www.statcan.gc.ca/pub/12-586-x/12-586-x2002001-eng.pdf>
- Soules, A. (1983, Jan. 1). The deterioration of quality cataloging. *Library Journal*, 108(1), 27-29.
- Task Group on BIBCO Standard Record Requirements. (2009). *Final report of the Task Group on BIBCO standard record requirements (Update August 10, 2009)*. Retrieved July 7, 2011 from <http://www.loc.gov/catdir/pcc/bibco/BSR-Final-Report.pdf>.
- Taylor, A.G. & Simpson, C.W. (1986, Oct./Dec.). Accuracy of LC copy: A comparison between copy that began as CIP and other LC cataloging. *Library Resources & Technical Services*, 30, 375-387.
- Taylor, A.G. (2006). *Introduction to cataloging and classification*. Westport, CT: Libraries Unlimited.
- Thomas, S.E. (1996, Winter). Quality in bibliographic control. *Library Trends*, 44(3), 491-506.
- Thomas, S.J. (1999). *Designing surveys that work! A step-by-step guide*. Thousand Oaks, CA: Corwin Press.
- Vinton, F. (1877). Hints for improved library economy, drawn from usages at Princeton. *Library Journal*, 2(2)
- Yee, M.M. (1987, Jan.). Attempts to deal with the "Crisis in Cataloging" at the Library of Congress in the 1940s. *Library Quarterly*, 57(1), 1-31.
- Wasylenko, L.W. (1999, Spring). Building quality that counts into your cataloging operation. *Library Collections, Acquisitions, and Technical Services*, 23(1), 101-104.
- Weber, R.P. (1990). *Basic content analysis* (2nd ed.). Newbury Park, CA: Sage Publications.
- Wegner, E. (2001, March). *Supporting communities of practice: A survey of community-oriented technologies*. (Draft, Version 1.3.). Retrieved July 17, 2011, from <http://www.ewenger.com/tech/>
- Wegner, E. (2010). Communities of practice and social learning systems: The career of a concept. In C. Blackmore (Ed.), *Social learning systems and communities of practice* (pp. 179-198). London: Springer.

Wurangian, N.C. (2003, Spring). Dressing the part...*OLA Quarterly*, 9(1). Retrieved March 15, 2010, from http://data.memberclicks.com/site/ola/olaq_9no1.pdf

Zeng, L. (1993). Quality control of Chinese-language records using a rule-based data validation system-Part 1: An evaluation of the quality of Chinese-language records in the OCLC OLUC database. *Cataloging & Classification Quarterly*, 16(4), 25-66.