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Print Reference Collections in New York State: Report of a Survey

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Abstract

An up-to-date, well-managed reference collection is essential to the provision of quality reference service in all types of libraries. This article presents the results of a survey of managers of reference collections at public and academic libraries in New York State.

Introduction

New York State has made a significant investment in libraries, both public and academic. In 2006, New York had 755 public libraries and 261 academic libraries, containing approximately 183 million volumes and having annual operating expenditures of \$1.6 billion. (2008 New York State Statistical Yearbook)

Reference collections are a vital part of these libraries and the print portion usually occupies prime space. An up-to-date, well-managed reference collection is essential to the provision of quality reference service in all types of libraries. Written policies and data on resource usage can help librarians make rational decisions in their management of this important resource.

The reference environment has changed dramatically in the past decade. Many standard reference sources such as indexes, encyclopedias and dictionaries have migrated online. Users typically start their search for information on Google or another search engine. Much ready reference type information once only available in print reference sources is now easily retrievable on the Internet. All this had led to a decline in the use of print reference collections. Other challenges facing those who manage reference collections include limited budgets, and competing demands for space for other uses and collections.

Objectives

The objective of this article was to better understand how print reference collections in New York State public and academic libraries are managed and to determine if print reference collections are shrinking.

Literature Review

Much has been written about collection development and management, but the literature focusing specifically on reference collection management is not extensive. This is surprising since the nature of the reference collection is such that it presents unique management challenges, including no readily available measure of use like circulation statistics. There are a number of articles about the weeding process, but these were primarily rationales for weeding and suggestions on how to weed. The literature review for this article was limited to empirical studies, with one exception. The articles on reference collection management with empirical data focused mostly on academic libraries, the development of written policies for the collection, and use studies and weeding.

Engeldinger (1986) and Mary and Victor Biggs (1987) are advocates of a more objective approach to reference collection management. They believe that good collection management requires the

existence of policies for reference collection development and weeding as well as regular systematic weeding of reference collections based on empirical data from use studies. Writing before the widespread inclusion of online resources as part of the reference collection, they focused on management of the print reference collection.

Engeldinger (1986) surveyed academic libraries nationally about their reference collection management practices and found that the majority did not have written reference collection development policies (79.2%) or written weeding policies (88.1%). Over half reported never weeding or weeding less than every two years. Those who did weed relied upon librarian's subjective assessments of how much use an item received. In a later use study at one academic library, Engeldinger (1990) found that 51.4% of the reference collection had never been used, or had been used only once in 5 years.

In a survey of academic libraries, Mary and Victor Biggs (1987) found results that were very similar to Engeldinger. Of academic libraries, 76% did not have written collection development policies and 86.5% did not have written weeding policies. For those who reported making weeding decisions based on low use, the most often reported method of determining low use was commonsense judgment and informal observation. Very few libraries reported conducting use studies of the reference collection. Librarians also reported that they believed that over the course of a one year period, less than half of the reference collection was used. The Biggs concluded that most academic library reference collections are "too large for effective physical or intellectual access" (Biggs and Biggs, 1987, p. 67) and "tend to be too large for the thorough exploitation by librarians in the service of information and delivery." (Biggs and Biggs, 1987, p. 69)

Mary Biggs (1990) also provided a review of various types of use studies for print sources: touch techniques; re-shelving techniques; user tallies and self-administered questionnaires; unobtrusive observation; and other user questionnaires and interviews. While all methods have some limitations, Biggs encouraged the use of complementary methods to obtain useful data.

Truett (1990) looked at reference collection weeding and evaluation policies and practices in academic and public libraries and county library systems. She interviewed 14 libraries in the Midwest and West and found that 86% did not have written policies related to the reference collection. None reported conducting formal use studies, but most did continuous or year-round weeding of the collection. Librarians also noted that periodical indexes on CD-Rom were causing a decline in the use of print periodical indexes.

Individual use studies done since the advent of electronic full-text databases and the Internet show an even more dramatic lack of use of print reference collections than reported by Engeldinger and Mary and Victor Biggs.

In a study at the University of Toledo, Sendi (1996) found that 43% of the materials in the ready reference collection were not used during a one year period.

Bradford, Costello and Lehholt (2005) conducted a use study at Stetson University. They tracked reference questions and the sources used to answer the questions. Only 9.38% of the questions were

answered by consulting a reference book, which represented less than 2% of the titles in the reference collection. Almost 60% of the questions were answered with an online source. In another study done at Stetson, Bradford (2005) found that the print collection did not get much use. During one academic year, only 8.5% of the volumes in the reference collection were used. Use was low for all call numbers. These studies provided useful data for the librarians at Stetson in making collection development and management decisions, including providing a rationale for increasing the percentage of the budget devoted to electronic sources, and for sending some volumes in the reference collection to the circulating collection. Bradford agreed with Engeldinger and Biggs that most reference collections are too large, especially now that electronic reference sources are an increasingly important part of reference collections.

In a year-long study of reference book usage at the Winter Park Public Library, a medium-sized public library in Florida, Heintzelman, and Ward (2008) found that only 13% of the collection was used. They concluded that (2008, 63) “a reference collection should evolve into a smaller and more efficient tool that continually adapts to the new era, merging into a symbiotic relationship with electronic resources. Based on this theory, weeding will become less painful.” Their study also provided guidance for training and collection development.

Colson (2007) reported on a 5-year long use study begun in 1999 at a small academic library. The study used Engeldinger’s method of placing dots on items before re-shelving. Use was classified as heavy, moderate, and light. 35% of items in the reference collection were not used at all, 36% were lightly used, 17% were moderately used, and only 12% was heavily used.

Hellyer (2009) conducted a survey of law libraries and found that print reference collection usage is declining and expected to continue to decline, and collections are growing smaller relative to overall collections. He argues that (2009, 27) “the declining use of print reference collections doesn’t have to be viewed as a problem. As long as user’ needs are being met, it should make no difference whether information is found in print or online.” He suggests reallocating funds to the purchase of electronic sources by cancelling print`, creating online reference pages on the library web site, and moving less frequently used items to the stacks and allowing them circulate. He believes that smaller print collections are easier for patrons to use.

Methodology

A survey consisting of 21 questions about different aspects of reference collection management was created using Survey Monkey®. The first few questions dealt with responsibility for the collection, the existence of written collection and weeding policies and the frequency of weeding. Regarding usage of the collection, respondents were asked whether use studies were conducted and how, and to estimate the percentage of the collection they felt was used in a one year period. Additional questions focused on whether the collection size had changed in the last five years and whether they were plans to change the size in the near future. Respondents were also asked about preferences for print versus online. Finally, respondents were asked to describe their library and provide the size of their print reference and total collections.

The survey was distributed to public and academic libraries in New York State. A spreadsheet with an email distribution list was created using the 61st edition (2008-2009) of the *American Library Directory* published by Information Today. All libraries in New York coded as J (community college), C (college and university), or P (public and state) and reporting 50,000 or more book titles in their holdings were included. Law and medical college libraries were included, but cooperative library systems and special collections libraries were not. For library systems or colleges and universities with multiple libraries, all libraries within the system or college meeting the criteria were included. A very small number of libraries did not include holdings information in their *American Library Directory* entry; these libraries were not included in the survey.

If provided, the library director's name and email were recorded in the distribution list spreadsheet. If no email address was provided, the library's Web site was checked to obtain the director's email address. In cases where the email address for the library director was not listed on the Web site, the library's information or reference email address was used. For nine of the public libraries, no email address was found.

An email with the survey link was sent in October of 2009 and a reminder email was sent after several days. Undeliverable email addresses were investigated and if corrected addresses were found, the email with the survey link was resent. For college libraries, 177 emails were successfully sent. For public libraries, 219 emails were successfully sent. In total, 396 emails were successfully sent. The survey responses were anonymous.

Results

The response rate for the survey was 33.4%, with 133 surveys completed from the 396 emails successfully sent. An exact breakdown of all respondents by type of library is not available because the question on type of library was not mandatory and was not answered by all respondents. Eighty six respondents completed the entire survey. The 86 respondents were divided equally between public libraries and some form of academic library. A breakdown is shown in Table 1. Throughout this article, results are provided for all libraries responding. When appropriate, a breakdown between public and academic for those libraries who identified their category of library are also included.

Table 1 - Responses by Library Type

Library type	# responses	%
Public	43	50.0%
Community college	9	10.5%
College	20	23.3%
University	10	11.6%
Law college	2	2.3%
Medical college	2	2.3%
Total	86	100.0%

Responsibility for the Reference Collection

Overall, responsibility for the management of the reference collection lies with the Head of Reference in 44.4% of libraries, while 30.8% reported that reference librarians were responsible. Only 7.5% said that subject librarians were responsible for the management of the reference collection. Of the 16.5% who answered other, more than half indicated that the library director or branch manager was responsible. For public libraries, 51.1% reported that the Head of Reference was responsible for reference collection management, and 34.9% reported that reference librarians were responsible. For academic libraries, the Head of Reference is responsible for 30.2% of libraries, while reference librarians were cited by 25.6% and subject librarians by 18.6%.

Table 2 - Responsibility for Management of the Reference Collection

Responsibility	Overall	%	Public	%	Academic	%
Head of Reference	59	44.4%	22	51.1%	13	30.2%
Reference Librarians	41	30.8%	15	34.9%	11	25.6%
Subject Librarians	10	7.5%	-	-	8	18.6%
Reference Bibliographer	1	0.8%	-	-	1	2.3%
Other	22	16.5%	6	14.0%	10	23.3%
Total	133	100.0%	43	100.0%	43	100.0%

Written Policies

Concerning written policies for the reference collection, the majority of respondents, 58.6%, do not have a written collection development policy and 72.9% do not have a written weeding policy. Several respondents commented that there was a general collection development policy, but not one specific to reference, while a few noted that the general policy included a section on the reference collection, and some reported having a very dated policy. Public libraries reported not having a reference collection development policy in 65.1% of the responses, while academic libraries fared slightly better, with 46.5% reporting not have a policy. Similar results were found for written weeding policies for the reference collection. The majority of public libraries, 74.4%, reported not having a written weeding policy, while 69.8% of academic libraries did not have one. Some noted that there was not a separate weeding policy for reference, but there was an overall weeding policy, and a few noted that the collection development policy covered weeding.

Table 3 - Existence of written reference collection development policies

	Overall	%	Public	%	Academic	%
Have a policy	55	41.4%	15	34.9%	23	53.5%
Don't have a policy	78	58.6%	28	65.1%	20	46.5%
Total	133	100.0%	43	100.0%	43	100.0%

Table 4 – Existence of written reference collection weeding policies

	Overall	%	Public	%	Academic	%
Have a policy	36	27.1%	11	25.6%	13	30.2%
Don't have a policy	97	72.9%	32	74.4%	30	69.8%
Total	133	100.0%	43	100.0%	43	100.0%

Weeding

Weeding of the reference collection is done continuously or at least once a year by the majority of respondents, 60.8%. Only 2.3% reported weeding less than once every 5 years. For those listing other, most replied that there was no formal schedule for weeding. The percentage of public libraries who weed continuously or at least once a year was 67.4%, while the percentage of academic libraries that do so was 53.5%. Weeding is done mostly by reference librarians, but also by the Head of Reference, subject librarians, and library directors.

Table 5 - Frequency of weeding

	Overall	%	Public	%	Academic	%
At least once every year	26	19.5%	9	20.9%	9	20.9%
At least once every 2-3 years	30	22.6%	9	20.9%	9	20.9%
At least once every 4-5 years	11	8.3%	1	2.3%	7	16.3%
Less than once every 5 years	3	2.3%	1	2.3%	2	4.7%
Continuously	55	41.3%	20	46.5%	14	32.6%
Other	8	6.0%	3	7.0%	2	4.6%
Total	133	100.0%	43	100.0%	43	100.0%

Usage

The majority of libraries (66.4%) responding to the question about use studies reported not conducting use studies of the reference collection. Only 12.3% said they conducted use studies regularly, while another 12.3% said they did so infrequently. The remaining 9% reported having conducted use studies in the past but not lately. The results for public and academic libraries were similar, with 71.5% of public libraries and 61.9% of academic libraries reporting that they do not conduct use studies.

Table 6 – Responses to “Do you conduct use studies of the reference collection?”

	Overall	%	Public	%	Academic	%
Yes, regularly	15	12.3%	4	9.5%	5	11.9%
Yes, infrequently	15	12.3%	4	9.5%	5	11.9%
Yes, in the past but not lately	11	9.0%	4	9.5%	6	14.3%
No	81	66.4%	30	71.5%	26	61.9%
Total	122	100.0%	42	100.0%	42	100.0%

In terms of a subjective assessment of the percentage of the print reference collection respondents felt was used in a one year period, 41.1% thought 0-20% was used, 37.1% thought 21-40% had been used, 16.9% thought 41% - 60% had been used, 3.2% thought 61%-80% had been used, and 1.6% thought 81%-100% had been used. Put another way, almost 80% of librarians thought that 40% or less of the reference collection was used in a one year period. For public libraries, 72.1% thought that 40% or less was used and for academic libraries it was 86%.

Table 7 - Estimates of percentage of print collection used in a one year period

Percentage	Overall	%	Public	%	Academic	%
0- 20	51	41.1%	16	37.2%	20	46.5%
21 – 40	46	37.1%	15	34.9%	17	39.5%
41 – 60	21	16.9%	11	25.6%	3	7.0%
61 – 80	4	3.3%	1	2.3%	1	2.3%
81 - 100	2	1.6%	0	0%	2	4.7%
Total	124	100.0%	43	100.0%	43	100.0%

Measuring usage by some type of re-shelving tally was the most frequently cited method of measuring usage of the reference collection, at 49%. Re-shelving tallies are done manually, recorded on forms or into a spreadsheet, or by scanning the barcode of the book into the library’s ILS to record in-house circulation. Some libraries using re-shelving tallies said that they placed signs around the reference area asking users not to re-shelve books. Other methods reported were having reference librarians record reference questions and sources used to answer the questions, moving selected sources to the reference desk and recording usage when patrons requested them, and surveying patrons about which titles they use. The other large category, at 31%, did not describe usage measurement methods. Some of these respondents indicated that they use subjective, qualitative assessments of use, such as reference librarian observations and the level of dust on books.

Size of Print Reference Collection

The size of the print reference collection as a percentage of the total collection was similar in academic libraries and public libraries. The average reference collection size reported by the public libraries was 3,755 volumes, or 3.02% of the total collection. The average reference collection size for academic libraries was much larger, at 12,199 volumes, which represented 2.63% of the total collection.

Overwhelmingly, respondents reported that the size of their print reference collections had decreased in the last 5 years (82.9%). Only 6.5% said that the reference collection size had increased in the last 5 years, and 10.6% had not changed the size in the last 5 years. Both academic and public libraries had similar results (for the percentage that had decreased the size of the print reference collection) but academic libraries reported a greater percentage of increases while public libraries reported a greater percentage of no change in size.

Table 8 – Responses to “Has the size of the library’s print reference collection changed in the past 5 years?”

	Overall	%	Public	%	Academic	%
Yes, increased	8	6.5%	1	2.4%	4	9.3%
Yes, decreased	102	82.9%	36	85.7%	35	81.4%
No change	13	10.6%	5	11.9%	4	9.3%
Total	123	100.0%	42	100.0%	43	100.0%

Of the libraries that had reduced their reference collection size in the past five years, seventy eight responded to the question asking how many volumes or linear feet had been removed. The results ranged from 20 volumes to 20,000 and from 1 linear foot to 11,200 linear feet. The average number of volumes removed was 1,190 and the average number of linear feet removed was 417.

Volumes removed from the collection were discarded (94.7%); put in storage (27.4%); or moved to other collections (37.9%). Other dispositions (13.7%) included putting volumes in the library book sale, selling volumes through Better World Books, and offering them to other libraries.

Replacing print sources with online was the most frequently cited reason for reducing the size of the reference collection (80%), followed by not using print reference books (72.6%) and needing the space for other purposes (49.5%). Other reasons for reducing the size of the print reference collection were the prohibitive cost of print reference materials, moving reference materials to the circulating collection to increase usage, directives from administration, renovations or new buildings, and weeding outdated and obsolete materials.

Table 9 – Disposition of volumes removed from the reference collection

	Overall	%	Public	%	Academic	%
Discarded	90	94.7%	36	97.3%	32	91.4%
Storage	26	27.4%	8	21.6%	10	28.6%
Other collections	36	37.9%	9	24.3%	16	45.7%
Other	13	13.7%	6	16.2%	3	8.6%
# responses	95	-	37		35	

Space freed up by reducing the size of the reference collection is being used for other collections (50.5%); computers (22.0%); and reading areas (20.9%). Some libraries are using the space to incorporate Information Commons features into the library, such as a café, a Center for Reading and Writing, a math/business lab, and collaborative study space. Other libraries reported that the space was not being used for anything else at this point, or that it allowed librarians to leave bottom and top shelves empty. Academic libraries reported using the space for computers much more frequently than public libraries, while public libraries reported using the space for other collections more often.

Table 10 – Current use of space made available from reducing size of print reference collection

	Overall	%	Public	%	Academic	%
Computers	20	22.0%	4	11.4%	10	30.3%
Other collections	46	50.5%	22	62.9%	9	27.3%
Reading area	19	20.9%	5	14.3%	9	27.3%
Other	32	35.2%	11	31.4%	15	45.5%
# responses	91		35		33	

The majority of libraries (80.3%) also have plans to reduce the reference collection size in the next 5 years, while 18.0% reported that no change was planned and 1.7% plan to increase it. Responses were very similar for public and academic libraries.

Table 11 – Responses to “In the next 5 years, do you plan to change the size of the library’s print reference collection?”

	Overall	%	Public	%	Academic	%
Yes, plan to reduce it	98	80.3%	36	83.7%	31	75.6%
Yes, plan to increase it	2	1.7%	0	0.0%	2	4.9%
No change planned	22	18.0%	7	16.3%	8	19.5%
Total	122	100.0%	43	100.0%	41	100.0%

Print vs. Online

When asked if they planned to increase the amount of the reference collection budget allocated to the purchase of online sources, 64.9% said yes, with very little difference between public and academic libraries. Some respondents noted that online resources are selected and paid for by the state or local library system, and some mentioned that there is no separate budget for reference. One respondent pointed out that because of price increases, the percentage of the budget allocated to online sources increases every year automatically.

Table 12 – Responses to “In the next 5 years, do you plan to increase the amount of the reference collection budget allocated to the purchase of online sources?”

	Overall	%	Public	%	Academic	%
Yes	72	64.9%	29	67.4%	29	69.0%
No	39	35.1%	14	32.6%	13	31.0%
Total	111	100.0%	43	100.0%	42	100.0%

Only a small percentage (12.1%) of libraries reported that they are not currently choosing to buy online instead of print. 41.4% are choosing online instead of print once in awhile, 31.0% choose online over print frequently, and 7.8% choose online all the time. The remaining 7.8% noted that these choices are made at the consortia or system level. The most popular reasons for choosing online over print were that it provides access off site (89.3%) and to multiple users simultaneously (79.6%), that it doesn’t take up space (65%), and users prefer it (57%). Price was only cited by 16.5%, presumably because online sources are usually more expensive than print. Other reasons mentioned include providing access to multiple campuses, reduction of staff time to process, currency, 24/7 access, ease of use by patrons, and that online sources can’t be stolen. One respondent noted “It’s how people are living now.” For those libraries that listed their library type, there were no public libraries choosing online all the time, while 21.4% of academic libraries said they were choosing online all the time. Conversely, 20.9% of public libraries said they were not choosing online over print, but no academic libraries reported doing this.

For those who are not choosing to buy print over online, the most frequently cited reason was that users prefer print (60%). Price was mentioned by 46.7%, followed by the source not being available online (40%), and not enough computers (13.3%).

Table 13 – Responses to “Are you currently choosing to buy online instead of print for reference sources?”

	Overall	%	Public	%	Academic	%
Yes, all the time	9	7.7%	0	0%	9	21.4%
Yes, frequently	36	31.0%	11	25.6%	16	38.1%
Yes, once in awhile	48	41.4%	22	51.2%	14	33.3%
No	14	12.1%	9	20.9%	0	0.0%
Other	9	7.8%	1	2.3%	3	7.2%
Total	116	100.0%	43	100.0%	42	100.0%

Table 14 – Responses to “For what reason do you choose online over print?”

	Overall	%	Public	%	Academic	%
Price	17	16.5%	10	29.4%	4	9.3%
Doesn't take up physical space	67	65.0%	25	73.5%	27	62.8%
Provides off-site access	92	89.3%	30	88.2%	40	93.0%
Simultaneous users	82	79.6%	25	73.5%	38	88.4%
Users prefer online	57	55.3%	13	38.2%	30	69.8%
Other	20	19.4%	8	23.5%	6	14.0%
Total Responses	103	-	34	-	43	-

Discussion

Writing policies for the reference collection is not a popular activity, but this survey showed a higher percentage of libraries with collection development policies for the reference collection than past studies (58.6% compared with 79.2% from Engeldinger’s study, 76% from the Biggs’ study and 86% from Truett.) However, in all of the earlier surveys, the majority of libraries do not have written collection development or weeding policies for the reference collection, although some do cover reference in an overall collection development policy. In many cases, those responsible for the management of the reference collection also have other duties, such as providing reference service, that take precedence over writing policies. However, one could argue that now that most reference collections contain both print and electronic sources, a well- thought out collection development policy is more necessary than ever. Not only do librarians need to decide on what to include in the collection,

but decisions must also be made about whether to choose online or print if a source is available in both formats. Does the library want to choose online over print in all cases? Or only when the online price is less than or equal to the print? Or when the online price is not more than a certain percentage over the print? Or perhaps online is only preferred when there is some advantage to the format, such as additional content. Print may be preferred in some subject areas. Are there any cases in which a source should be purchased in multiple formats? Writing a policy can provide the impetus for discussing these types of issues. Specific guidelines in a policy can be very helpful in making consistent decisions for the collection and spending limited funds wisely. Collection development policies can also help maintain continuity in the collection when there is staff turnover.

This study also found a higher rate of weeding than Engeldinger's study. His results show that over half of the libraries reported never weeding or weeding less than every 2 years, as compared to 60.8% of the respondents in this study reporting that they weed continuously or at least once a year. One explanation for this could be declining use of the print reference collection. Engeldinger's survey was done in 1984, before the Internet and online reference sources. His use study published in 1990 found that 51.4% of the reference collection was not used, or used only once in 5 years. The Biggs' survey in 1987 found that the majority of librarians believed that over half their reference collection was not used. With the advent of online reference sources and free ready reference information available on the Internet, even more of traditional print reference collections go unused, as evidenced by the more recent use studies. These had much lower rates of usage of the reference collection than the studies done in the eighties and nineties, ranging from 2% to 13%. Clearly, both public and academic librarians see the necessity of not just weeding, but reducing the overall size of their reference collections. Outdated reference materials are being discarded, and materials that are still useful but not frequently consulted are being moved to circulating collections.

However, use studies are clearly still not popular, so we must conclude that most weeding is being done on the basis of subjective assessment. No questions were asked in this survey about why libraries do not conduct use studies, so we can only speculate. Use studies do take time to organize and carry out, and librarians may feel that it is not worth the effort. It should be noted that those who reported on use studies in the literature remarked on how helpful the hard data was in making decisions on what to weed, and that the information was also useful for other purposes, such as selection of new resources, training and promotion of the collection. As reference collections become increasingly digital, this may cease to be an issue, as use data is more readily available for electronic sources.

Conclusion

Reference collection managers in New York State have been responding to the changing reference environment. Online is replacing print in the reference collection, collections are being weeded and have been reduced in size, and will continue to be reduced, and the vacant space is being reallocated. Moving to more online resources in the reference collection eliminates some concerns and challenges, such as space and stealing and lack of readily available use data, but it also raises new concerns and challenges. Identifying and assessing the impact of these challenges on reference collection management is an area for further research.

References

- Biggs, Mary. 1990. Discovering how information seekers seek: methods of measuring reference collection use. *The Reference Librarian* 13 (29): 103-117.
- Biggs, Mary and Victor Biggs. 1987. Reference collection development in academic libraries: report of a survey. *RQ* 27 (1): 67-79.
- Bradford, Jane T. 2005. What's coming off the shelves? A reference use study analyzing print reference sources used in a university library. *Journal of Academic Librarianship* 31 (6): 546-558.
- Bradford, Jane T., Barbara Costello, and Robert Lenholt. 2005. Reference service in the digital age: an analysis of sources used to answer reference questions. *Journal of Academic Librarianship* 31 (3): 263-272.
- Colson, Jeannie. 2007. Determining use of an academic library reference collection: report of a study. *Reference and User Services Quarterly* 47 (2): 168-175.
- Engeldinger, Eugene A. 1985. "Use" as a criterion for the weeding of reference collections: a review and case study. *The Reference Librarian* 13 (29): 119-128.
- . 1986. Weeding of academic library reference Collections: a survey of current practice. *RQ* 25 (3): 366-371.
- Heintzelman, Nicole, Courtney Moore, and Joyce Ward. 2008. Are reference books becoming an endangered species? Results of a yearlong study of reference book usage at the Winter Park Public Library. *Public Libraries* 47 (5): 60-64.
- Hellyer, Paul. 2009. Reference 2.0: the future of shrinking print reference collections seems destined for the Web. *AALL Spectrum* 13 (5): 24-27.
- "Libraries by Type: New York State – 1995 and 2006". In *2008 New York State Statistical Yearbook*. Albany, NY: The Nelson A. Rockefeller Institute of Government, 2008, p. 429.
- Sendi, Karen A. 1996. Assessing the functionality of the reference collection. *Collection Building* 15 (3): 17-21.
- Truett, Carol. 1990. Weeding and evaluating the reference collection. *The Reference Librarian* 13 (29): 53-68.