

A Review of the Research Related to School Library Media Collections: Part II

SLMQ Volume 19, Number 2, Winter 1991

Daniel Callison, Associate Professor and Associate Dean, School of Library and Information Science, Indiana University, Bloomington.

Evaluation of Collections

Studies conducted in the 1960s and 1970s that attempted to evaluate the quality of school library collections centered on the use of quantitative measures. The basic assumption was “more is better.” This reflected the context of the times and the need to grow, to invest, and to collect extensively to demonstrate the potential of media center programs supported with a wide variety of materials.

In 1977, the National Commission on Libraries and Information Science reported, “while media centers held over 500 million volumes, this was only 40 percent of the need expressed through national standards.”(1) One hundred million nonprint items were owned by the public schools, reflecting only 10 percent of the need. Studies in individual states found similar evidence that collections did not measure up to the high expectations of the national standards.(2)

One study in Michigan used a more qualitative measure.(3) In addition, the study used a checklist to compare biology titles held to those titles listed by experts in the field. This qualitative measurement was a numerical measurement of the proportion of biology books to the total number of books in the collection and the number of biology books per student. It was assumed that the higher the number of recommended titles held in the collection, the greater the quality of the collection. The study did identify some collections as being exceptional, but no attempt was made to tie the collection to excellence in science education or to various curricular activities in biology based on the collection.

A second study in Michigan a year later concentrated on mathematics and added to the evaluation criteria “proportion of the collection with a recent copyright.”(4) The recentness of the school library book collections in mathematics did not equal that of the standard used for comparison, The High School Mathematics Library. Sixty-five percent of the librarians’ responses rated their mathematics collections as “fair/poor.” Sixty-three percent of the teachers’ responses rated their collections “excellent/good,” and 54 percent indicated they used the mathematics collection “very little,” 25 percent “not at all.”

Analysis of “what materials students actually use” was studied to some degree over the past ten years. These “use studies” are based on bibliometric methods or citation analysis of the references found in the students’ completed term papers. Such analysis is based on tabulation of the frequency of types of materials (books, magazines, pamphlets, etc.) and date of materials listed in the student’s bibliography or notes. Using these methods, Drott and Mancall found

- heavy use of book materials by students;
- little use of nonprint, pamphlet, or government document materials;
- little discretion used by students concerning dated materials; and
- extensive use of common news or general science periodicals;
- extensive use of materials located at local school or public libraries, with many students investigating materials at other libraries.(5)

These findings do not translate directly into collection development decisions, as we might expect at the academic or research library setting, where the user is assumed to know what he or she wants and needs. Thus the record of what the researcher uses becomes a map for what should be purchased in the future. Collection development decisions in the elementary and secondary school setting, based on citation analysis, require the educated and professional expertise of the media specialist, who understands the need for information education of young people and the need to expand the information opportunities for students. Bibliometric studies must be analyzed carefully in any environment. False conclusions can easily lead to misguided adjustments in the collection patterns.(6)

Citation analysis will tell us what is used and to what extent the materials are used by our young adult patrons, but it does not tell us if their information needs have been met. Thus, much of the citation analysis work from Drott and Mancall may tell us as much about what we should be teaching students in the selection and use of information as about what we should purchase. For example, library media specialists need to teach students about the range of resources available and the inherent merits of using particular resources before one could expect students to cite resources other than books in a bibliography.

Callison used citation analysis to identify specific titles students selected through online databases, acquired from collections outside their local school, and used extensively in order to complete a term paper.(7) Information from such analysis, leading to key or essential sources, provides a guide to specific titles ‘ for purchase, even though many of those titles may be out of print. Identification of key sources is based on the assumptions that a high percentage of research topics are repeated from class to class and from year to year and that frequent reference to a source means that the source has been of value to the student.

As automated circulation systems evolve, the potential for gathering data that will support collection decisions increases. The tools for gathering circulation data are increasingly available; the number of schools with automated circulation systems doubled between 1986 and 1988.(8) Bertland documented some methods for circulation analysis by determining the “use factor” for general areas of the collection.(9) As with citation analysis, use factors based on circulation must be examined with an open and educated mind. Relatively low use of one area of the collection that represents a relatively high portion of the collection should not lead to the immediate conclusion that one should greatly reduce the amount of money and attention given to that area. It may be that students are not aware of these materials, or teachers may not be aware of possible activities that would lead to the increased use of these materials. Evidence provided from use factor reports helps us to identify collection areas that may need weeding and updating along with promotion of that area of the collection. We know that weeding the collection in small public libraries results in more circulation.(10)

High circulation for a small portion of the collection may not necessarily mean there is a need to accelerate the investment for new materials in that area. Paperback cartoon books, for example, may prove to have high circulation figures; however, there would be a limit as to the amount one should invest in these books no matter how popular they might prove to be.

Aversa and Mancall(11) and Callison and Daniels(12) have documented methods for maintaining a record of student use rates of materials identified through various computerized databases. Such data must be maintained for several user groups on a variety of projects and over several semesters in order to be meaningful. Research activities and information demands change over the span of a school year, and the most used databases may not become apparent until several semesters of activity. Use records will help the library media specialist select those databases that provide the greatest number of leads to materials for the largest number of students.

Use studies can be easily replicated, and researchers are encouraged to study further the disadvantages and merits of citation and circulation analysis. In addition, researchers can work with practicing school librarians to implement promotional and user education projects, weeding plans, and/or budget adjustments and to document results of changes based on use studies. One valuable aspect of documenting use of the collection and recording adjustments recommended is the potential for greater communication between librarian and administrator as to the future collection needs and additional funding required.

Networking and Collection Mapping

The collections found in school libraries will evolve dramatically as more and more schools join resource sharing networks. In 1982, Weeks reported that cooperative purchasing arrangements between school and public libraries was ranked as a low need;(13) however, Rogers reported in 1984 that cooperation among all types of libraries will be almost essential over the coming decade.(14)

Do school libraries own titles that are not housed in their local public libraries? Several recent overlap studies indicated that not only do schools have unique titles to share with public library patrons, but there even seems to be a great deal of nonoverlap in title holdings among schools in the same district.(15)

Do students benefit from interlibrary loan? Greenberg found that there is a high relationship between amount of materials available and the quality of other services provided in school libraries.(16) Those who tended to supply a great many materials in-house also tended to extend beyond their collection by borrowing from others. Walker reported that interlibrary loan, when provided and promoted, is used extensively by high school students, teachers of all grade levels, and also by school administrators.(17) The service was used to provide access to materials for assignments and professional presentations. A majority of the requests, 78 percent, were filled within a twelve-day period.

Studies of student use of online systems also give evidence of student acquisition of materials. Some reported that a low percentage of the borrowed materials were actually used by the

students.(18) Others have reported that items identified through online searching and borrowed from other libraries were essential to the completion of several student assignments.(19)

Collection mapping allows for local resource communication among public libraries, other schools, and local curriculum planning committees. Results of collection mapping studies by Ho and Loertscher(20) and Murray(21) show:

- an increased focus on reference and periodical collections;
- a vast variety in the contents of collections among schools;
- a need to build the numbers and variety of material in selected areas of the curriculum-beyond just literature, science and social studies; and
- a lack of support for and a need to update professional development collections for teachers.(22)

These studies found that collection mapping: encourages a complete review and weeding of the collection; allows for the setting of collection goals to match the curriculum and the formation of a long-range acquisition plan that includes input from teachers.

Student Preferences

Research studies report that among elementary school children, boys prefer biographies, books on science, social studies, and sports while girls prefer adventure, fantasy, humor, and poetry.(23) Children's own preferences of reading selections often differ from what adults would select for them to read. Caldecott winners are seldom the child's first choice.(24) Bard and Leide report the following conclusions about library books selected by elementary school children in Hawaii:

- Girls seem to read more than boys (at least they charge out more books).
- Girls prefer fiction while boys prefer information books.
- Older children choose fewer books categorized as imagination literature and more realistic fiction, mysteries, and information books.
- A few authors are extremely popular with children, and children tend to ask for books by such authors.
- Children do not choose poetry books for independent reading.
- Children charge out fewer books from the school library in grades five and six than in grade four. (This does not mean they read less. They may be more frequent patrons of the public library and read more books, magazines, and newspapers available at home. They may also purchase more paperbacks than when younger).
- Children do not tend to charge out books concerning local history or ethnic history unless assigned to do so.(25)

From an examination of sources used by high school students, Mancall and Drott concluded that the typical student will

- use materials from other libraries, and often use materials from a "home library" extensively.

- tend to use dated, inappropriate materials unless otherwise required or instructed.
- favor books as an information source over journals, newspapers, pamphlets, or documents.(26)

Special Collections

Although there is a great deal written about “how we provide good materials for the low achiever” or “special reading collections for individuals whose second language is English,” very little appears in the school library research concerning methods for development of collections to meet the special information needs of various minority groups.

Schon, Hopkins, and Davis reported that Hispanic students display increased enthusiasm and improved attitudes when provided a wide selection of books in Spanish.(27) Spanish-speaking high school students who immigrate to the United States tend to display more desire to read books in Spanish than U.S.-born Hispanic students. Furthermore, Schon and Glass reported that the new “English-only” law (Proposition 63) in California did not appear to alter librarians’ positive attitudes toward and increased acquisition of Spanish language materials.(28)

Clarke found that the reading tastes of Indian, black, and white high school students vary widely and that ethnic origin does have a major influence on the student’s interest in materials selected for reading.(29)

Stevens reported that the reading choices of gifted students in elementary school resulted in students giving the highest rating to Newbery Award books, while classics received the lowest ratings.(30) There was a close correlation between books chosen by the students and those chosen by adults for students. More recent studies reported that there is a considerable difference of opinion between student review groups and adult review groups, especially in the area of contemporary fiction.(31)

Finally, one can raise questions concerning the development of collections for handicapped students, both in areas of access and collection content. Public Law 93-112 (1973) and Public Law 94-142 (1975) have certainly had an impact on general school facilities and curriculum, but there is little documentation on the impact of these public laws on school media center collections.

Vinson reviewed the history of school library media service for handicapped students from 1950 to 1980.(32) She noted that library services and special education programs developed quite separately over those three decades, and it is only in the past decade, because of the equal rights and equal access legislation, that services and collections for the handicapped student are being seriously considered.

Opocensky surveyed fifty schools listed as public residential schools from the American Annals of the Deaf: Directory of Programs and Services. (33) She found that the schools failed to meet the minimum collection requirements for deaf students as stated in the 1967 Standards for Library Media Centers in Schools for the Deaf. Collections of professional materials were minimal in spite of the fact that most of the schools also had teachers in training. Print

collections for students were generally considered adequate even though they fell short of the numbers recommended. Captioned films and filmstrips were plentiful in the nonprint collections, and transparencies were reported in large numbers. Selection guides specifically developed and published for use with the deaf were needed. Fewer than one-fifth of the schools specifically serving the deaf student met or exceeded the minimum recommendations of the standards.

Buckley surveyed selected southern states to determine the status of library media services for exceptional students enrolled in public schools.(34) She reported that media specialists perceived the collections of resources to be “moderately adequate.” School library media specialists perceived a need for more knowledge and training on their part in access to materials for the exceptional students and in general knowledge about special education programs. Buckley recommended future study of model programs which have more fully developed services and collections to support mainstreamed environments.

Davie(35) conducted a descriptive survey of school library resources and services to exceptional students in Florida. She found that investment in library media materials seemed to take place to a greater degree by those media specialists who had access to an above-average budget. Thus, investment in special materials was more likely if money remained in the budget after the necessary expenditures were made. In other words, materials for the special student are not seen as an essential or basic part of school library collections.

Davie concluded that appropriate materials and equipment are generally available to meet the needs of exceptional students, but additional amounts and more variety are needed to enable such needs to be met more adequately. She also concluded that few media centers have the materials and equipment in their own collections to meet adequately many of the special needs of exceptional students; thus they utilize other sources such as special and public library collections. Implications from the study indicate that heightened awareness of resources and their potential use for exceptional students can be implemented through communication between media personnel and those persons who are more directly involved with exceptional students.

This concludes the review of the literature relating to collections and collection development (see also *SLMQ*, Fall 1990). The review revealed a number of practical implications for collection development which are summarized in Appendix A. Suggestions for further research are offered in Appendix B.

References

1. Ladd Boyd, *National Inventory of Library Needs, 1975: Resources Needed for Public and Academic Libraries and Public School Library Media Centers* (Washington, D.C.: National Commission on Libraries and Information Science, 1977).
2. Ola Mae Hutchison, “A Study of Secondary School Library Media Programs in the Public Schools of Alabama as Compared to National Standards of Media Resources for the Period 1967 through 1972” (unpublished Ph.D. diss., University of Alabama, 1977); Carol Jean Veitch, “An Analysis of School Library Media Resources in Kentucky as Compared with State and National Standards” (unpublished Ph.D. diss., University of Pittsburgh, 1978).

3. Norma Louise Jones, "A Study of the Library Book Collections in the Biological Sciences in Fifty-four Michigan High Schools Accredited by North Central Association of College and Secondary Schools" (unpublished Ph.D. diss., University of Michigan, 1965).
4. Eugenia Evangeline Schmitz, "A Study of Library Book Collections in Mathematics and the Physical Sciences in Fifty-four Michigan High Schools Accredited by the North Central Association of Colleges and Secondary Schools" (unpublished Ph.D. diss., University of Michigan, 1966).
5. M. Carl Drott and Jacqueline C. Mancall, "Magazines as Information Sources: Patterns of Student Use," *School Media Quarterly* 8:240-50 (Summer 1980).
6. Danny P. Wallace, "A Solution in Search of a Problem: Bibliometrics & Libraries," *Library Journal* 112:43-47 (May 1, 1987).
7. Daniel Callison, "Methods for Measuring Student Use of Databases and Interlibrary Loan Materials," *School Library Media Quarterly* 16:138-42 (Winter 1988).
8. Marilyn L. Miller and Marilyn L. Shontz, "Expenditures for Resources in School Library Media Centers, FY '88-'89," *School Library Journal* 35:31-40 (June 1989).
9. Linda H. Bertland, "Usage Patterns in a Middle School Library: A Circulation Analysis," *School Library Media Quarterly* 16:200-03 (Spring 1988).
10. Stanley J. Slote, *Weeding Library Collections* (Littleton, Colo.: Libraries Unlimited, 1975); Loriene Roy, "An Investigation of the Use of Weeding and Displays as Methods to Increase the Stock Turnover Rate in Small Public Libraries" (unpublished Ph.D. diss., University of Illinois, 1987).
11. Elizabeth S. Aversa and Jacqueline C. Mancall, *Management of Online Search Services in Schools* (Santa Barbara, Calif.: ABC-CLIO, 1989).
12. Daniel Callison and Ann Daniels, "Introducing End-User Software for Enhancing Student Online Searching," *School Library Media Quarterly* 16:173-81 (Spring 1988).
13. Ann Carlson Weeks, "A Study of the Attitudes of New York State School Library Media Specialists Concerning Library Networking and Technology" (unpublished Ph.D. diss., University of Pittsburgh, 1982).
14. Joann V. Rogers, "Progress in Access to Nonprint Materials," *School Library Media Quarterly* 12:127-35 (Winter 1984).
15. E. O. Altman, "The Resource Capability of Public Secondary School Libraries to Support Interlibrary Loan: A Systems Approach to Title Diversity and Collection Overlap" (unpublished Ph.D. diss., Rutgers University, 1971); Vincent J. Aceto, "Library Film Collections: Can a Review Committee List Make a Difference?" *Top of the News* 40:343-51 (Spring 1984); Carol Doll, "A Comparison of Children's Collections in Public and Elementary School Libraries," *Collection Management* 7:47-59 (Spring 1985); Carol A. Doll, "School and Public Library Collection Overlap and the Implications for Networking," *School Library Media Quarterly* 11:193-203 (Spring 1983); Carol A. Doll, "A Study of Overlap and Duplication among Children's Collections in Selected Public and Elementary School Libraries," *Library Quarterly* 54:277-89 (July 1984).
16. Marilyn W. Greenberg, "Availability of Library Materials in Thirteen Secondary Schools" (unpublished Ph.D. diss., University of Chicago, 1981).
17. H. Thomas Walker, "Networking and School Library Media Centers: A Report of a Pilot Project of the Howard County (Maryland) Public School System and the Maryland Interlibrary Organization," *School Library Media Quarterly* 12:20-28 (Fall 1983); H.

- Thomas Walker, "A Study of the Participation of a Public School System in a Large Public and Academic Library Consortium" (unpublished Ed.D. diss., University of Maryland, 1982).
18. Lucy Anne Wozny, "Online Bibliographic Searching and Student Use of Information: An Innovative Teaching Approach," *School Library Media Quarterly* 11:35-42 (Fall 1982); Jacqueline C. Mancall and Dreama Deskins, "High School Students, Libraries, and the Search Process," 1984 ERIC Document ED 262 823.
 19. Ellen Pruitt and Karen Dowling, "Searching for Current Information Online," *Online* 9:47-60 (Mar. 1985); Callison, 1988.
 20. May Lein Ho and David Loertscher, "Collection Mapping in School Library Media Centers," *1986 Annual Conference of the Association for Educational Communications Technology*, Las Vegas. 1986. ERIC Document ED 267 775; May Lein Ho and David V. Loertscher, "Collection Mapping: The Research," *Drexel Library Quarterly* 21:22-39 (Spring 1985).
 21. William Murray and others, "Collection Mapping and Collection Development," *Drexel Library Quarterly* 21:40-51 (Spring 1985).
 22. Michael B. Eisenberg and Robert E. Berkowitz, *Curriculum Initiative: An Agenda and Strategy for Library Media Programs* (Norwood, N.J.: Ablex, 1988); Philip M. Turner and Janet N. Naumer, "Mapping the Way Toward Instructional Design Consultation by the School Library Media Specialists," *School Library Media Quarterly* 12:29-37 (Fall 1983).
 23. Lian-Hwang Chiu, "Reading Preferences of Fourth Grade Children Related to Sex and Reading Ability," *Journal of Educational Research* 66:369-73 (April 1973).
 24. Joan K. Oksas, "First-, Second-, and Third-Grade Children's Picture Preference of Caldecott Award Winners and Runners-Up, 1972-1984 in Selected Schools" (unpublished Ed.D. diss., Loyola University of Chicago, 1986).
 25. Therese Bissen Bard and John E. Leide, "Library Books Selected by Elementary School Students in Hawaii as Indicated by School Library Circulation Records," *Library & Information Science Research* 7:11543 (Apr.-June 1985).
 26. Jacqueline C. Mancall and M. Carl Drott, *Measuring Student Information Use* (Littleton, Colo.: Libraries Unlimited, 1983).
 27. Isabel Schon, Kenneth D. Hopkins and W. Alan Davis, "The Effects of Books in Spanish and Free Reading Time on Hispanic Students' Reading Abilities and Attitudes," *NABE Journal* 7:13-20 (Fall 1982).
 28. Isabel Schon and Gene V. Glass, "Effects of an English-only Law on Public Library Acquisition Policies, Practices, and Librarians' Attitudes Toward Books in Spanish for Children and Young Adults," *Library & Information Science Research* 10:411-24 (Oct.-Dec. 1988).
 29. Polly S. Clarke, "Reading Interests and Preferences of Indian, Black, and White High School Students" (unpublished Ed.D. diss., North Texas State University, 1973),
 30. Mary E. Stevens, "The Recreational Reading Book Choices of Gifted Children in Grades Four, Five, and Six in Dade County, Florida Public Schools" (unpublished Ed.D. diss., University of Miami, 1977).
 31. Betty Carter and Karen Harris, "The Children and the Critics: How Do Their Book Selections Compare?" *School Library Media Quarterly* 10:54-58 (Fall 198 1); Robert

- Swisher and others, "Involving Young Adults in Fiction Selection," *Top of the News* 40:163-70 (Winter 1984).
32. Rhonda J. Vinson. "School Library Media Center Service for Handicapped Students" (unpublished Ph.D. diss., Southern Illinois University, 1983).
 33. Virginia Belle Larson Opocensky, "A Comparison of Library-Media Centers in Public Residential Schools for the Deaf with *Standards for Library Media Centers in Schools for the Deaf*" (unpublished Ph.D. diss., University of Nebraska at Lincoln, 1975).
 34. Cozetta White Buckley, "Media Services for Exceptional Students: An Exploratory Study of the Practices and Perceptions of Library Media Specialists in Selected Southern States" (unpublished Ph.D. diss., University of Michigan, 1978).
 35. Judith Fields Davie, "A Survey of School Library Media Resources for Exceptional Students in Florida Public Schools" (unpublished Ph.D. diss., University of Michigan, 1978).

Appendix A: Summary of Practical Implications for Collection Development in School Library Media Centers

Practicing professional school library media specialists should:

- Increase their knowledge as to how local budget allocations are determined and establish themselves in an influential role in the budgeting process.
- Establish a record of per pupil expenditures in categories such as books, periodicals, audiovisual software, online services, and equipment and compare their budget allocations to similar library settings locally and nationally.
- Document collection areas that have become out of date and show evidence that funding to replace, update, and expand critical areas of the collection has not been substantial when inflation and growth in the amount of quality instructional materials available are taken into account.
- With input from teachers and administrators, write long-range plans and policies for more effective collection development based on such techniques as collection mapping, curriculum mapping, circulation analysis, citation analysis, and community (learner) analysis.
- Involve teachers and students more in the preview and selection process, especially in the areas of microcomputer software and video programming.
- Test and document systematic methods for evaluation (weeding, reconsideration, building special emphasis areas) of the collection.
- Expand their knowledge of review and selection tools beyond the traditional guides published within the library field.
- Develop policies that lead to networking and the sharing of materials among schools locally and among other library systems statewide and nationally and document the impact of electronic databases on the demand for materials beyond the local school's collection.
- Increase their knowledge of the reading (information and entertainment) preferences demonstrated by their students and document what students use, what they do not use, and what they should use.

- Advocate increased investment in special collections for the disabled student and the minority student populations, as well as growth of the professional collection to support greater understandings by teachers and administrators about resource-based education and equal access to materials for all students.

Appendix B: Suggested Research Agenda in Collection Development for School Library Media Programs

Although the research agenda should not be limited to the following areas, researchers should consider investing time and effort to explore and document:

- Formulas for budget allocations.
- Standard, baseline collection and budget data.
- Techniques in budget review and negotiation.
- Techniques in collection evaluation.
- Methods of data gathering and analysis related to collection management, information use, and patron information needs and preferences.
- Case studies in writing and implementing collection policy.
- More extensive, but practical, review and selection processes including local previewing, local field testing, and use of a wider spectrum of professional review aids.
- Procedures for increasing the involvement of school library media specialists, at all levels, in policy development, budget decisions, and long-range planning for local, state, and national resource networks.
- Development of special, extensive subject area collections to meet specific curricular needs and the effects, if any, on teacher expectations for learners and on curricular objectives.
- A wide spectrum of outlets for publication and dissemination of the findings that result from both theoretical and applied research relevant to collection development in school libraries.