Research from the ERIC Files [minor94]
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A search of the ERIC database for research on school library media programs for the 12-month period beginning July 1, 1992 retrieved 49 reports of research on the status of school library media programs, library media resources, the use of technology in school library media centers, the role of the school library media specialist, and professional training. Sixteen ERIC documents as well as annotations for 33 articles and papers were entered into the ERIC files during that time period, although some had originally been published somewhat earlier. These studies include two that were reported twice: One appeared in both a journal and a yearbook, and the other in a journal article and as an ERIC document.

It should be noted that the ERIC Clearinghouse on Information & Technology (formerly the Clearinghouse on Information Resources) began to index both School Library Media Annual and the Proceedings of the American Society for Information Science for Current Index to Journals in Education during that period. This review of the literature includes references from both the 1991 and 1992 editions of both publications.

In addition to reports on individual projects, the references retrieved from School Library Media Annual include two summaries of research. The first, "Summaries of Research from Library Literature," reviews 16 research reports on various topics including collections, censorship, and technological applications.1 The second, "Studies from Dissertation Abstracts International," summarizes three Ph.D. dissertations that concern school libraries.2 The first of these studies examines patterns of acquisition and use of microcomputer software in high school media centers; the second reviews the development of public school library programs in Puerto Rico; and the third identifies librarians who have significantly influenced library work with children.
In the third article, Bernhard analyzes the content of the research section of School Library Media Annual since its first edition in 1983.3 Highlights include numbers of pages devoted to research; the structure of SLMA; numbers of documents, dissertations, and articles cited; research reported through the ERIC system; research reviews; and research needs.
This review of reports on individual projects is divided into three main sections: Library Media Programs, Library Media Resources, and School Library Media Personnel.

LIBRARY MEDIA PROGRAMS

Current Status

Ten reports on the status of library media programs range from the results of national and state surveys to a description of a centralized school library management system in Nigeria and the status and utilization of special education learning materials centers in Michigan.

A survey was commissioned by the Millbrook Press to determine the state of public school libraries today at all school levels, to identify major trends, and to gain perspective on the critical issues facing school library media specialists in the 1990s.4 In line with a specific focus on elementary school libraries, it also investigated the attitudes and awareness levels of elementary school administrators regarding the school library media center and staff. Analyses of interviews with 117 school librarians, 30 elementary school principals and superintendents, and a small group of library leaders indicated that 1) while budgets have not increased much over the past five years at any of the three levels, high school libraries tend to fare better than elementary school libraries; 2) all the high schools and 92 percent of the middle schools reported having a full-time certified librarian on staff, though the certified librarians in 84 percent of the elementary schools include some professionals who are shared with other schools in the district; 3) the amount and quality of curricular and instructional involvement by the librarian could be directly related to whether or not he/she was a graduate of a master's degree program in library science; 4) school library media specialists who are involved in curricular activities with faculty are more likely to be recognized as partners of the instructional staff; 5) although elementary school administrators recognize the impact of strong library media programs and qualified personnel on students' ability to do research as well as on their reading levels, standardized test scores, quality of book reports, and overall quality of education, this is not necessarily reflected in funding levels for the media center or staff salaries; and 6) high school library media centers have the largest collections and elementary school libraries the smallest. Understaffing and the need for more books and resource materials to increase and update collections were identified as major problems facing librarians at all school levels.

The results of a follow-up to a 1991 midyear survey of state funding for school library media centers are reported by DeCandido and Mahony, who summarize the responses received from 38 states to two questions: 1) the numbers of school children enrolled in public education and school library media specialists in the state, and 2) the current condition of educational funding in the state, particularly for school library media centers.5 Based on the data, they report that Wisconsin has the highest proportion of school library media specialists to students, one for every 58 pupils, while a district in California has one school librarian to serve 8,511 students. This article provides a summary of the information provided by a respondent from each of the individual states together with comments from some of them.

Citing the philosophy of the Wisconsin Department of Public Instruction that every student in public elementary and secondary schools in the state has a right to a comprehensive program of library media services, Grover summarizes facts from a fall 1988 building-level survey that was used as the basis for recommendations by the State Superintendent's Task Force on School Library Media Issues.6 The survey sought information on whether 1) school buildings have central library media centers, 2) media programs coordinate library skills instruction with classroom instruction, 3) media specialists help integrate resources into classroom teaching units, 4) media specialists coordinate use of computers for teaching, 5) media specialists coordinate the use of cable television, 6) personnel designated as district media directors are given time for this responsibility, 7) schools provide a facility smaller in size than one classroom for their media center, and 8) school administrations provide the minimum staffing level

recommended by the Department of Public Instruction. Excerpts from the 1990 Task Force report include its recommendations to the State Superintendent.

Beving reports on a study that was conducted to determine the level of implementation of 12 criteria proposed by a statewide library media advisory group in selected public schools in Alabama, and to determine the degree to which building-level practitioners value each criterion.[7] The criteria were related to 12 program elements: 1) policy and procedure, 2) program plan, 3) evaluation report, 4) student and staff access, 5) materials and technology expertise, 6) information skills instruction, 7) resources correlated with curriculum, 8) operational equipment, 9) minimum collection levels, 10) minimum budget, 11) organization of materials, and 12) facility features (space, storage, lighting, and telephone line). Analyses of 116 usable responses suggest that, although the criteria were valued as essential for good library media programs, implementation was limited for many items. Demographic factors were shown to affect both implementation and level of value, but neither the educational level of the library media specialist nor system-level coordination seemed to have much impact.

Hysong surveyed library media specialists in 195 schools that had been selected as Georgia Schools of Excellence from 1984 to 1991 to compare these programs and determine how they contribute to the overall success of their schools' instructional programs.[8] Analyses of the responses indicated that 1) a majority of the qualitative services identified in the questionnaire were provided at least occasionally by more than three-fourths of the library media programs, 2) about three-fourths of the library media specialists exhibited most of the specified leadership characteristics at least periodically, and 3) about half of the respondents indicated that they implemented services or engaged in activities that brought recognition to their library media programs. School level and size were shown to significantly affect the frequency with which some of the services or leadership activities were performed. It was concluded that continued progress needs to be made in the areas of nonprint media production and use of computer technology, and that, although library media specialists are active supporters of the instructional program, they need to take a stronger leadership role in curriculum development, activities of professional organizations, and student activities outside the confines of the library media center.

A study reported by Thrash investigated the services provided by elementary and middle school media centers to support whole language instruction and to determine how the media program contributes to the goals, resources, and teaching strategies of the whole language movement in the Atlanta, Georgia City School System.[9] Responses from 78 percent of the media specialists surveyed indicated that 1) media center services to support whole language instruction included storytime, library displays, assisting pupils with research, book fairs, creative writing activities, and book reviews; 2) resources provided by the media program included media committee minutes, media memos, professional articles, whole language bibliographies, and a handbook of services; 3) cooperative planning between the classroom teachers and media specialists infused library skills into whole language instruction; and 4) assisting pupils with research was a priority. It was concluded that the whole language approach affords the library media center the opportunity to provide educational leadership and promote research and learning.

A survey of public schools in Maine was conducted by Soule in 1990 to obtain information on how library resources and delivery of services varied across school level and size of school, between schools with and without a certified school library media specialist, and across the state's three library districts.10 The three-stage study included a mass survey mailed to all 730 public schools serving grades K-12, a more in-depth study of 150 randomly selected schools, and visits to 138 schools by 143 volunteers. Findings indicated that, although most schools reported having a library media center, the extent of the resources varied greatly from school to school. Areas investigated included 1) the number of staff hours per week; 2) whether the library media program had a planned year-to-year library skills curriculum; 3) whether the library media center was headed by a full- or part-time certified librarian; 4) the facilities provided for the library media center; 5) whether the library media center provided a curriculum-coordinated program; 6) expenditures per pupil for library resources at the high school, middle school, and elementary school levels; 7) whether schools with certified librarians provided more services to students and teachers; and 8) whether there were library materials available to support the classroom curricula. This detailed report provides a wealth of data on the variables involved at each of the three school levels.

A comprehensive study of Massachusetts libraries conducted by Griffiths and King assessed the current state of library services and cooperative activities in the state and recommended strategies for developing an action plan for the improvement of such services.11 In their discussion of school libraries, they point out that these libraries had severe budget and service problems, and that there was no coordinating mechanism for library cooperation in such areas as purchasing, acquisition, materials examination, cataloging, and physical processing. The level of school library involvement in interlibrary lending was low; few school libraries had cooperative programs with local public libraries; and few of the schools reported having fully adequate instructional and curriculum involvement with teachers and students. Although most of the schools reported having centralized or classroom collections, the adequacy and strength of these collections received low ratings; about one half of the library media centers had a planned program of activities and services; and only about one quarter had computers for use by teachers and students. The researchers attribute part of these problems to inadequate budgets and library staffing, and part to the lack of support for school libraries from superintendents and school committees.

Christmas reports on an evaluation of the current status and utilization of the Michigan Special Education Learning Materials Centers (SELMCs), which were mandated by the state legislature in 1970 to assist administrators in future decision making.12 One hundred forty-eight of the 368 special educators surveyed indicated that they used the system often; they had little involvement in media selection; and the SELMC offered in-service workshops and had adequate holdings but provided little support for their instructional planning needs. The remaining teachers had no knowledge of SELMCs or had no SELMC in their area. Most of the 15 active SELMCs surveyed reported using federal grant funds and communicating with teachers via catalogs, newsletters, and word of mouth. Most used a computer or combination card catalog/computer system to maintain their holdings, most of which were print materials, multimedia kits, films/videotapes, and microcomputer software. It was found that more than

three-quarters of the holdings and 90 percent of the circulation were accounted for by three SELMCs.

Jam conducted a survey to determine the status of 60 post-secondary government school libraries in Benue State, Nigeria, which are scattered over a large geographical area with poor road networks, few funds, and a poor, largely illiterate population.13 Topics covered included the extent of cooperation between the school libraries and their relationship to the central administration and other library authorities elsewhere. All 70 respondents to the survey questionnaire indicated that they had inadequate staff to cover services efficiently and that 86 percent of the staff in charge of the libraries were assistants/attendants. Inadequate funding was also reported by all the respondents, who said further that no financial incentive was offered to teachers who assumed the duties of librarians. All the libraries were funded by the Ministry of Education, which also suffers from inadequate funds. Only 10 respondents said that their school library collection was adequate for the required services. Sixty percent reported that the central administration took care of processing their library stock, while 10 respondents did their own processing. Only 10 of the respondents felt that their library accommodations were adequate, and only two, both formerly mission schools, reported any form of cooperation between libraries. All the respondents reported having good relationships with both the central administration in the Ministry of Education and the principals of their schools.

Library and Information Skills Instruction

Two reports on information skills instruction provide 1) a review of research in the area and 2) a description of a program for training fifth-grade student media volunteers in a specific library procedure.

Eisenberg and Brown's review of the research literature focuses on the status of four major themes from a research perspective.14 Noting that they found "surprisingly few" reports on the first theme—the positive impact of library media programs on student achievement and overall skills development—they summarize several studies that they feel would be of value to library media specialists seeking support and resources for their programs. Discussion of the second theme—the nature and scope of library and information skills—focuses primarily on a process approach to skills instruction as opposed to the traditional skills related to sources. Four current models—Kuhlthau (Information Seeking), Eisenberg/Berkowitz (Information Problem Solving), Irving (Information Skills), and Pitts/Stripling (Research Process)—are compared and their similarities are noted. The development of a common process model is advocated. Widespread acceptance of the desirability of the third theme—teaching library skills in the context of subject area curriculum—is noted, and several studies of some aspects of the topic are described. A number of studies on the fourth theme—alternative methods of teaching library and information skills—are cited. The need for additional research in each of these areas is emphasized, and some priorities for such research are suggested.

The study described by Stofsky addressed the need to train fifth-grade student volunteers to shelve nonfiction books correctly according to the Dewey Decimal System.15 The 12-week

training program consisted of student experiences in organizational thinking and applications of the Dewey Decimal System in such activities as the creation of Dewey Decimal collage posters, participation in an "Adopt-a-Shelf" program, and the development of a student media volunteer handbook. A secondary objective of the program was to interest fourth-graders in becoming media aides. By the end of the project period, the fifth-grade aides had reduced shelving errors by more than 10 percent, the media center was visited more frequently by volunteers, and the fourth-graders showed more awareness of and interest in becoming media aides.

Cooperative Planning

Three reports on studies of factors involved in cooperative planning for instruction by classroom teachers and school library media specialists focus on teacher characteristics and teachers' perceptions of resource-based learning.

Bell and Totten report on an investigation of possible relationships between the number of times teachers voluntarily choose the library media specialist to cooperate with them on instructional problems and such teacher-related factors as overall teaching competence, gender, grade taught, and the peer-determined status of the teacher as an instructional leader.[16] Almost half of the 458 classroom teachers in Texas public elementary schools who participated in the study came from academically unsuccessful schools; the remainder came from academically effective schools. Of the teacher variables studied, peer-related instructional leadership status was the only one that had any relationship to the extent to which teachers indicated they would call on the library media specialist for cooperation on instructionally related school problems. However, the study reconfirmed an earlier finding that teachers employed in academically successful schools tended to choose the library media specialist for such cooperation significantly more frequently than teachers in academically unsuccessful elementary schools. It is concluded that the findings of this study lend support to the hypothesis that the characteristics of the organization may affect the potential for cooperation between classroom teachers and library media specialists in the instructional program.

Bell and Totten also studied 12 certified and 7 paraprofessional school library media specialists and 415 classroom teachers in 19 academically high-achieving Texas public elementary schools to determine whether there were significant differences in the basic personality traits of professional and paraprofessional media specialists that would affect the degree of their interaction with classroom teachers, and whether teachers would choose the library media specialist rather than other teachers for cooperation on instructional problems.[17] The teachers were given 10 hypothetical school instructional problems—five low-level, information-oriented problems and five high-level problems requiring cooperation in the design of instruction—and asked to select other school staff to cooperate with them on each of the problems. Media specialists completed a personality factor questionnaire. While the two groups of media specialists were found to differ significantly on four basic traits likely to impact the operation of the school library media center, these differences did not affect the degree to which they were selected by the teachers to cooperate on the hypothetical problems. All the media specialists except one were chosen proportionately more by teachers for cooperation on the low-level

problems, while 11 of the 19 were chosen more by classroom teachers for cooperation on the high-level problems. Of the 11, 9 were professionals with degrees and two were nondegreed paraprofessionals. The apparent differences were not found to be significant.

The study reported by Meyer and Newton sought information on teachers' concepts of resource-based learning and the factors that affected their implementation of resource-based teaching.[18] Data were collected by interviewing 18 teachers in four schools of similar size and age in the same school system, all of which had fully qualified teacher-librarians and well-stocked learning resource centers. In addition, interviews were conducted with the principals and the teacher-librarians, and participant activities in the learning resource centers were observed. It was found that teachers' beliefs ranged from feeling that their students would really be missing out if they did not use the resource-based learning approach to fearing that their students would not learn anything using this method. Integration of resource-based learning strategies ranged from non-use through routine use of these strategies with a borrowed collection to a teacher/teacher-librarian partnership. Administrative support was found to be a strong factor in bringing about adoption of the new teaching strategies, though the teacher-librarian's personality and rapport with the staff significantly influenced the teachers' use of cooperatively planned resource-based teaching. It was concluded that school systems wishing to implement such an innovation need to 1) provide leadership at all levels in terms of expectations, professional development, and monetary support; 2) expect administrators to actively support the system innovations in their schools; 3) encourage teachers to implement the innovation and share their ideas and successes with other teachers in the school; 4) address concerns about lack of time for planning, working rapport with the teacher-librarian, and covering the curriculum; and 5) guard against threats to implementation by sharing leadership, monitoring impact on students, and providing orientation for new teachers and administrators.

Use of Technology

Twelve reports on technology in school library media centers included surveys of the status of automation in schools as well as studies of the use of automation for reference, the attitudes of users of automated systems, and library networking.

Keable, Williams, and Inkster report the results of a survey of school media centers in 200 selected Minnesota elementary and secondary schools that was undertaken to determine the extent of the progress they had made towards meeting the Information Power[19] guidelines for automation.[20] Forty-eight percent of the 114 respondents indicated that they lacked an automated circulation system, 75 percent had no automated catalog, and 84 percent were not using automation in reference services. Keable et al. concluded that 1) there is a direct relationship between the size of a school and whether it is likely to have automated catalog, circulation, or reference services; 2) schools are likely to implement automation in the following sequence—circulation, the catalog, reference services; and 3) library media specialists are basically satisfied with the circulation system and automated catalog that they have selected. It is noted that those library media specialists who had not yet automated cited lack of money and no perceived need for automation.

A survey was conducted by Baggett to determine what automation was present in the library media centers in Georgia secondary schools and how it had been funded.21 Responses to a three-part questionnaire were received from 141 of 180 randomly selected schools. The respondents indicated that 53 (38 percent) of these schools had catalog/circulation systems, 47 (34 percent) were using CD-ROM, and most funding was from traditional tax sources.

The status of automation in Illinois school libraries is reported by Howrey for public schools and Morrison for the private and parochial schools.22 A survey of the public schools was conducted to determine the extent of existing library automation and a review of research projects undertaken by other states. Responses from 1,894 single schools in Illinois expressed strong interest in school library automation even though not much was in place at the time of the survey. A review of activities in other states revealed that 26 states were engaged in school library networking, resource sharing, or automation, and the system(s) used by each state and a contact person for additional information are included in the report. The 109 respondents to a survey of private and parochial schools serving high school or K-12 indicated that a significant number of libraries in both groups had personal computers and that many of them favored Apple products. Use of the computers ranged from overdue notices (28 percent) and catalog card production (29 percent) to online public access catalogs (1 percent). As in the public schools, great interest in library automation was expressed and many librarians were moving in that direction, but there was still much to be done. Networking activities were not reported by either the public or private/parochial schools.

Lighthall reports that the third annual survey of automated systems in Canada's school libraries surveyed more vendors and more products, and that more replies were received.23 The primary purpose of this survey was to identify which vendors and which products had an impact on the market in 1991; the secondary purpose was to provide information on systems suitable for automating school library functions. Both microcomputer and minicomputer/mainframe systems were studied, and most of the vendors indicated that their systems were specifically designed or had been substantially modified to meet the needs of a school library. Responses also showed that at least 501 automated systems were installed in Canadian school libraries in 1991, bringing the overall total to more than 2,000 sites. The top six systems in 1991 were Utlas's M/Series 10, CTB/Columbia, Eloquent Systems, TKM Software Limited (MicroCAT), Follett Software Company (Circulation/Catalog Plus), and Bibliofiche (Mandarin). Additional topics discussed include LAN software, union catalog capabilities, French-language capability, and new features of the various systems. Information provided on 15 systems includes functions and modules available for each system and the names and addresses of the vendors or representatives.

The results of a survey of 21 producers of automated systems provide information on the systems of the 10 respondents.24 In addition to the name of the system, each description contains the name and address of the producer and the hardware and software required to run it. This includes the computer, the operating system, the processor, hard disk capacity, video display, printer, network software, floppy ports, and types of barcode readers available. A chart displays additional information on the presence or absence of 14 features for each of the 10 systems. These range from password security to different levels of search capabilities for

different levels of users to alternative screen displays for different languages and access to external databases from keyboard commands.

Jacobson examined gender differences in library anxiety, computer anxiety, and using-computers-for-library-research anxiety in 40 academically talented high school seniors in a university-affiliated laboratory school.25 Gender gaps were found in all three areas, with boys having significantly higher library anxiety than girls, and girls having significantly higher anxiety than boys in the other two categories. At the end of a year of intensive library experience, it was found that both sexes had improved significantly in all three areas except for girls in using-computers-for-library-research anxiety. Jacobson suggests that placing computers in a "nonmathematical" educational setting may result in less computer anxiety for girls, but that negative feelings about computers may affect girls' attitudes toward computer-mediated activities such as library research.

Mendrinos conducted a study of secondary school library media specialists in Maine and Pennsylvania to establish a baseline of data relating to the use of CD-ROM databases for reference purposes.26 Descriptive survey questionnaires were sent to library media specialists who had been identified as being involved with CD-ROM for statewide retrospective conversion by their state agencies. Ten of the 379 respondents to the survey were selected for telephone interviews. Analyses of the data indicated that 1) 80 percent of the respondents used CD-ROM for reference purposes, 2) three-quarters of this group planned to acquire more CD-ROM workstations, 3) one-third of those not using CD-ROM for reference planned to do so by 1992, 4) the major obstacle for those not using CD-ROM for reference was funding, and 5) only 4.5 percent of the media centers were networking from their CD-ROM workstations. The most popular CD-ROM laserdiscs were those that provide ready-reference, direct the user to other accessible sources of information formats, and/or provide full-text articles. It was also found that CD-ROM use for reference seems to increase as the library budget increases, and that additional funds are sometimes available to the library media center for this purpose. Patrons seem to prefer CD-ROM to online searching, and 98 percent of the media specialists using CD-ROM in reference offer point-of-need training, with 78 percent also offering formal classroom instruction to students.

Butterworth examines the reports of two projects carried out under the auspices of the British Library (Wider Horizons: Online Information Services in Schools and CD-ROM in School Libraries), describes a unit for teaching information skills, and discusses the significance of the new technologies in the development of information skills teaching.27 The Wider Horizons project investigated the feasibility of online searching of large commercial databases rather than school-oriented ones in the normal classroom situation. Participants in the two-year project, which included both primary and secondary school children, used some of the databases made available by DIALOG, PROFILE, BLAISE, DATASTAR, and OCLC. The schools taking part were enthusiastic about the educational benefit to their pupils, noting that many of them were able to extract relevant information from the online systems with little supervision after initial training was completed. The second study, an investigation of the educational value of CD-ROMs, compared the costs and information available with those of online services and

observed the search procedures and strategies used by the participating secondary school students. The discs used were Grolier Electronic Encyclopedia, BOOKBANK (British Books in Print on disc), McGraw-Hill Science and Technology Reference Set, BOOKSHELF, NERIS (National Educational Resources Information Service), and ECCTIS (Educational Counselling and Credit Transfer Information System). Teachers reported favorably on the students' research and the up-to-date scientific and technical information available on discs. Comparisons with online searching showed that schools particularly liked the ability to browse on CD-ROMs, but that online had an edge if the latest information was vital. The need to set aside time for staff training was also observed. The CHIRP (Computer Hotline for Information Re-Packaging) project, which was developed by Butterworth and Grey in 1989-90, was designed as a unit to teach information skills to 13- and 14-year-old students using traditional printed sources as well as the newer electronic sources. Two CD-ROMs were used—Grolier Electronic Encyclopedia and Guinness Disc of Records—as well as vertical file materials and newspaper articles. Activities included a pupil-created database and a choice between a concise factsheet on the selected topic or an oral presentation in class. The project involved the librarian and English teachers working together with 10 classes. Students were taught to use the CD-ROM in small groups, and some returned to use it on their own time for other classes. Some of the students also mastered the ability to download the results of their searches into a word processing package.

A comparison of elementary school children's searching behavior in hypertext and in a Boolean keyword search system is reported by Borgman, Walter, Rosenberg, and Gallagher.28 The results of children's use of the Orion system-based online catalogs were compared with their success rate using version 2.0 of the Science Library Catalog, a component of Project SEED (Science for Early Educational Development). The latter uses a hierarchical structure drawn from the Dewey decimal classification and is implemented in HyperCard on the Macintosh. Though the success rate for information retrieved was the same for the two systems, the use of the faster online catalog was preferred by 12-year-olds, and the SLC, which requires lesser typing and spelling skills, by 10-year-olds. These interaction effects by age are attributed to computer experience and some effects of gender on attitudes toward the computer. Additional research to be carried out in a public library and an elementary school library will study the effects of population, database size, and library environment on children's attitudes as well as their ability to retrieve information.

Solomon explores the development of skills in the use of an online open access catalog over a school year by a few children from each of grades two through six and a group of first-graders to measure their progress, backsliding, and stasis over time.29 The study was designed to raise the issue of dynamics of system users as they progress from novices to experts and suggest some implications of the study results for both the design of systems responsive to changing user skills and further research. It was found that lack of procedural skills in using the OPAC, reading, spelling, and keyboarding accounted for more than half of the children's failures, followed by problems with rules of systems syntax, search-term form, and search focus, and by knowledge-based breakdowns. Solomon suggests that OPACs or other information systems can be designed as instructional tools, showing children the correct spelling of words and

providing signals, suggestions, and overviews when children encounter previously unexplored areas.

A preliminary model of the stages of school system participation in library networks developed by Kester has four primary aspects: 1) technological support, 2) financial support, 3) human support, and 4) activities and applications.30 Anticipated events in each of the three stages of network participation were identified for each aspect. A questionnaire based on this model was mailed to school systems involved in one or more of three types of networks: OCLC vendors, state regional multitype networks, and statewide school networks. Profiles of the respondents were developed, and each of the 19 variables in the questionnaire was tested for significance in relation to the level of involvement they reported. Sixteen of the 19 variables were found to be significant, and it was concluded that this model can serve as a guide to understanding the process and provide a pattern for other school systems that wish to explore resource sharing. Van Orden and Wilkes conducted an exploratory study of building-level school library media centers belonging to at least one multistate, multitype library network to investigate the impact of networks on 1) cataloging, classification, and processing practices; 2) interlibrary loan patterns; 3) resource sharing; and 4) teacher and student attitudes toward networking.31 Analysis of the data received from 361 respondents revealed a pattern of haves and have-nots reflecting priorities within districts. For example, in some districts only high schools have been funded to automate and participate in formal networking; in other districts, a number of operations, including those involved in resource sharing, are handled at the district level and are not accessible at the building level. Other factors involved in enabling networking by building personnel were identified as the strength and commitment of district supervisors and staffing and scheduling patterns. Though several respondents commented on a need for standardization in automation and networking, pride in their networking activities was also reflected by some of the library media specialists. One rural librarian commented that networking both removed isolation and expanded the resources available through the school library media center.

LIBRARY MEDIA RESOURCES

Censorship

Three reports on censorship address factors that influence the outcome of challenges to school library materials, censorship in child-choice book-award programs at the state level, and challenges reported to the Oregon Intellectual Freedom Clearinghouse in 1990-91.
Hopkins reports on a national intellectual freedom survey that was conducted by questionnaire in spring 1990 to identify the major factors that determined whether challenged library media materials in public secondary schools were retained, restricted, or removed.32 It was found that six general factors were influential in the outcome of challenges to materials: 1) the existence of a school-board-approved district materials selection policy and the degree of its use in responding to challenges; 2) the school environment, including support from the school principal and classroom teachers; 3) support received from the community; 4) whether the initiator of the challenge was from the school system or from the community; 5) such characteristics of the

library media specialist as gross degrees of dogmatism and internal/external locus of control; and 6) the background of the complaint, presence of active support for retention or removal of materials, and whether the complaint was oral or written. It was found that there were important differences in the resolution of oral and written challenges. Most challenges at the secondary level were made orally, and oral challenges were more likely to result in removal of the challenged materials. Complaints from district administrators, principals, and teachers were more likely to be oral and more likely to result in removal. However, selection policies for written materials were used more frequently when complaints were written, and more support for retention of materials was received from outside the school system for written challenges. The data showed that more than twice as many of the challenges received were oral, and that 49 percent of these materials were retained, with 22 percent restricted and 30 percent removed. Data for written complaints indicated that 61 percent of the materials were retained, with 21 percent restricted and 18 percent removed. Hopkins concluded that written challenges were more likely to result in due process, and that the results of due process were more likely to be retention on open shelves. However, she also raised questions about the perceived importance of internal challenges, the relationship of such challenges to the written selection policy, and whether internal complaints place more pressure on the library media specialist.

Storey conducted a survey of randomly selected school library media specialists participating in the Colorado, Kansas, Nebraska, South Carolina, and Texas state child-choice book award programs to identify any censorship taking place in these programs and the attitudes of the library media specialists toward such censorship.33 In most of these states, both children and adults nominate books to be placed in competition following specified guidelines. However, the master list to be distributed throughout the state for voting is created by a selection committee of adults, and, in some states, comes with a disclaimer designed to handle problems that could arise because of different local areas and beliefs. Analysis of data received from 55 media specialists indicated that censorship was in operation in all five state programs; such censorship was expected and accepted by many of the respondents. Problem areas in which censorship was condoned included unacceptable language, subject matter, and situations, and contemporary realistic fiction. The censorship that occurred in the preselection of books to be voted on by children was found to be influenced by 1) teachers' concerns about the suitability of materials for reading aloud; 2) librarians' concerns about the possibility of offending teachers; 3) the omission of controversial books from the master list; and 4) the practice of expurgation of the original book from a paperback edition.

Twenty-one of the 54 formal challenges to library materials received by the Oregon Intellectual Freedom Clearinghouse in 1990-91 were reported by school libraries and 33 by public libraries.34 Of these materials, 33 were designated as children's and young adult materials, while 21 were materials for adults. Decisions were made by staff, committees, library boards, or school boards to retain the materials in 45 of these challenges; one book was reclassified as adult; and seven complaints resulted in materials being removed. Sexual references and themes and graphic language were the reasons cited in 21 cases; books were challenged six times on the grounds that they were too violent or scary for children; and 11 challenges were received for books that were perceived to have occult, witchcraft, or satanic references.

Reasons given for additional objections included religious materials being purchased with public funds, racial stereotypes, portrayal of drug use, undermining of parental authority, and stories considered to lower children's self-esteem. This annual report includes lists of the specific materials challenged together with the library where the complaint was made and summaries of the objections and the actions taken for each title. It also provides an index by title to materials challenged between 1987 and 1991, the disposition of each case, and the annual report in which the complaint is documented.

Collections

Three reports on school library media collections are concerned with the use of awards as selection criteria, the assessment of the library collection, and the use of circulation sampling as a collection management technique.

Storey surveyed 55 library media specialists in each of the five states that have organized child-choice state award programs—Colorado, Kansas, Nebraska, South Carolina, and Texas—to ascertain their positions on whether they should purchase Caldecott/Newbery or state-award books.[35] The results suggest that the respondents would purchase Caldecott/Newbery books in varying degrees, although a high percentage of them indicated some hesitancy in relying on Caldecott or Newbery books as the primary award books to purchase. It was also observed that the popularity of a book was an important selection factor.

Bell describes a systemwide library collection assessment that was carried out in the Birmingham, Alabama public school system during the 1990-91 school year to determine the age of materials and whether the collection met the needs of the curriculum.[36] A collection assessment survey formula was selected, and a form was developed to ensure uniform reporting by all of the schools. Areas in which the currency of materials would be of the greatest concern—reference, social sciences, science, and applied science—were targeted by the study. Filled and unfilled requests were recorded by each library media specialist over a two-week period, and it was found that the collections could not support student and teacher curriculum needs because the books were either out-of-date or lacking; for example, more than 66 percent of the books in the categories studied were at least 10 years old. The report was accepted by the superintendent, who recommended that a three-year plan be implemented to purchase the necessary new materials. However, full funding for such a plan was not possible during the first year, and future prospects remained uncertain at the time this report was written.

Garland discusses circulation sampling as a technique for library media program management and describes a study that compared the circulation of nonfiction over short periods of time with circulation activity over a school year in an elementary library media center.[37] The circulation of books was sampled from one week in each of the four grading periods, and three- and four-day subsets were also taken during the two periods when the library was open all five days. Correlations between circulation during the sample periods and over the entire year ranged from .81 to .98, with the higher correlations occurring during the two full weeks. It was observed that the greater variation in daily circulation could be attributed to the time of year that the

sample was taken. Comparison of the circulation of the Dewey classes in the sample showed little variation in the 500s, 600s, and 700s between the sample and the year; these were also the most highly circulated books in both categories. It was concluded that purposive circulation sampling over a short period of time provides a fairly accurate representation of circulation activity that can be used to determine how well the library media program is supporting the school curriculum by charting the use of curriculum-related materials. It is suggested that collection-use statistics can be used not only to support budget requests but also to identify areas for future joint planning and consulting with teachers.

Use Studies

The first of two use studies described a three-phase study of children's services statistics and compared the use of the children's collections in public and school libraries. The second focused on the use of women's biographies in elementary school libraries.

In the first phase of her study, Garland discovered that, although few statistics on children's services were collected by state agencies, circulation statistics on juvenile materials appeared to be widely available at the local level.38 Findings in the second phase, a survey of a random sample of individual elementary and middle school library media specialists, indicated that 53 percent of the school respondents were collecting circulation statistics while not quite half of the state agencies regularly collected any library media program statistics. The third phase investigated similarities and differences in the use of children's collections in two paired sets of elementary school and public libraries in one urban and one suburban community. It was found that public libraries circulated significantly more easy fiction while the school library media centers circulated significantly more fiction and nonfiction. The most highly circulated juvenile nonfiction books were in the 300, 500, 600, and 900 Dewey classes, with local variations within these classes.

Harvey-Slager examined collections of biographies of women in four elementary school libraries representing a diverse population.39 She began by creating a 662-item database of women's biographies appropriate for elementary school reading and making a count of the male and female biographies in each of the library media center collections. Quality points were assigned to each of the 662 titles in the database that had been recommended in a reviewing source. Other variables included copyright dates, student population figures, male and female biography tallies, print status, and ethnicity. Based on numerical data and statistical tests, the researcher found that 1) the women's biography collections in the four schools were not adequate to meet the role-model needs of the female student population, 2) the collections provided more male role models than female and were not gender-balanced in proportion to the population of the school, and 3) the women's biography titles in the database were not generally of good literary quality. Several recommendations for ameliorating this situation and a list of highly recommended women's biographies for grades K-5 are included in the report.

SCHOOL LIBRARY MEDIA PERSONNEL

Role of the Library Media Specialist

The role of the library media specialist was examined from very different perspectives in two studies. The first study analyzed and compared their work activities in different settings, and the second study addressed the role of the library media specialist in a specific academic area. Everhart used a special form of work sampling called self-sampling to analyze the time spent in 14 task categories by nine high school library media specialists using automated circulation systems and nine using nonautomated systems.40 There were two major findings of the study: 1) library media specialists who had automated circulation systems spent significantly more time in the overall development of the educational program, including instructional development and use of technology, and 2) library media specialists without automated circulation systems spent significantly more time in production and circulation activities. No difference was observed for such activities as administration, instruction, selection, processing, clerical duties, providing access, reference, organization, or personal time.

Piersma and Allen examined the role of both elementary and secondary school library media specialists in Alabama public schools in promoting reading growth, assisting classroom teachers, and teaching reading skills.41 Three specific questions were addressed: 1) ways in which the library media specialist contributes to the school reading program, 2) how the media specialist contributes to the development of a literate environment, and 3) the academic preparation of media specialists in the area of reading. The data were analyzed to determine the academic preparation of the respondents and to compare their perceptions of their actual and ideal responsibilities. There were five major findings: 1) library media specialists would like to be more involved in reading-related activities, such as planning with teachers for the coordination of reading programs; 2) they thought they should devote more time to promoting recreational reading; 3) they felt that more time should be spent in reading to children; 4) they would like to spend less time checking books in and out, managing audiovisual equipment, and instructing children in non-library-related fields; and 5) they wished to spend more time with the Young Readers Choice Award program.

Certification Requirements

Perritt presents the results of her 1992 survey of the certification and licensing offices in all 50 states and the District of Columbia and 51 agencies that consult with school library media specialists.42 Detailed data for the individual states are presented in two tables: 1) Certification Requirements and 2) Knowledge/Subject Areas/Competencies/Skills. Two changes from the report on the 1990 survey are noted: Testing requirements are now included in the first table, and the category of "Audiovisuals" in the second table has been expanded to include "Technology." Perritt concludes that, although there have been no dramatic changes in certification since 1990, increasing attention is being paid to the changing role of library media specialists, and requirements have expanded in response to increased emphasis on their role as teachers and instructional technologists.

Continuing Professional Education

The three studies reviewed in this section examine the training needs of library media specialists, their motivations for participating in continuing education programs, and their professional reading in relation to their continuing education needs.

Ceperley reports on a survey of school library media specialists in Kentucky, Virginia, and West Virginia that was conducted in 1990 to determine their perceptions of their training needs as they are being called upon to use the latest information technologies to access, transfer, and store information.[43] The questionnaire contained 42 statements on the role of library media specialists; factors that enable them to fulfill their professional roles; and the skills, knowledge, and experience they need to further their professional development. Analyses of the more than 2,000 responses indicated that, although the respondents consistently agreed with the survey statements and showed a high degree of interest in professional trends and in staying abreast of new developments in their field, they were less interested in specific items of change and specific information technologies. It was also found that elementary library media specialists tended not to agree that their role in the school included non-teaching tasks and/or that technology could help them fulfill their professional role, while high school media specialists tended to agree with both statements. Bachelor's degree holders were also found to value certain professional competencies, such as skills facilitating teaching, less highly than did the holders of master's degrees.

Smith and Burgin examined the reasons given by professional and paraprofessional librarians for participating in continuing education programs offered by the North Carolina Library Staff Development Program.[44] Analyses of data collected from 731 participants in the program over two semesters identified four underlying components—personal concerns, patron service, collegiality, and professional competence. Respondents rated reasons associated with professional competence and patron service more highly than other reasons. Paraprofessional librarians gave significantly higher ratings than the professional librarians on each of the four components, and librarians who had been in their positions for seven or more years rated personal concerns significantly higher than those who had been in their positions for one year or less.

A random sample of the members of the Oklahoma Association of School Library Media Specialists were surveyed by Latrobe in 1991 to determine how they continue their professional education.[45] More than 80 percent of the 80 respondents identified professional reading as either important or very important to their job performance, with each of them regularly reading an average of 2.8 journal titles. The most frequently read journals were School Library Journal and School Library Media Quarterly. Only 8 percent reported regularly reading Journal of Youth Services in Libraries, but 45 percent indicated that they read journals not reported by 96 percent of the other respondents. Fifteen topic areas were identified as being among the three highest priorities for continuing education, five of which were named in more than half of the responses: 1) literature activities, 2) computer utilization for management, 3) materials for children and young adults, 4) networks and resource sharing, and 5) curriculum. Articles in the three above-mentioned journals from 1987 through 1991 were categorized and compared with the topics

most frequently identified by respondents. It was found that literature activities, computer utilization for management, and networks and resource sharing received less coverage in articles. The area of curriculum received more coverage in School Library Media Quarterly, while articles on materials for children and young adults appeared more frequently in the other two journals. It is suggested that technology may present special problems because it does not receive major coverage in any of the most frequently read journals.

Library Media Specialists' Attitudes

In their study of the organizational commitment of library media specialists, Rubin and Buttlar begin by positing that individuals who are committed to their organization are more likely to put in extra effort, accept change and adversity, and produce high-quality work.46 They then report on their survey of Ohio library media specialists, which used a three-part questionnaire consisting of demographic questions, questions on organizational commitment, and specific job-related questions. Their major findings were that a large percentage of the respondents have a high level of commitment to their particular jobs and that this commitment is related to such factors as 1) autonomy; 2) job security, salary, and benefits; 3) working conditions and job variety; 4) recognition and respect from teachers and administrators; 5) intellectual challenge of the job; and 6) ability to make friends. Respondents also indicated that their current jobs were meeting their career goals and that they strongly preferred their jobs to teaching positions in the same school.

Library Media Skills and Information of Principals and Student Teachers

Two studies are reviewed in this section: an investigation of the library media skills of student teachers and a study of the attitudes of professors of educational administration toward including school library media program information in preparation programs for school principals.

The study of the current status of student teachers' library media skills reported by Thurman was designed to be a replication of a 1966 survey by the Knapp Foundation that examined student teachers' knowledge of library resources and services.47 Subjects were 444 student teachers from five major schools of education in Arkansas. Data gathered included 1) their major field of study; 2) library/media skills instruction; 3) perceptions of effectiveness of library use; 4) bibliographic skills, including knowledge of the card catalog and journal indexes; 5) mediagraphic skills, including knowledge of audiovisual equipment, copyright laws, and resources for locating media and software; 6) bibliographic/electronic sources, including knowledge of electronic reference sources and databases; and 7) perceptions of the library and librarian, including expectations of services, materials, and competencies. It was found that the students overall seemed to have a good sense of both information genre and electronic bibliographic resources, but responses to mediagraphic skill questions varied widely.

Veltze describes a study that examined the attitudes of professors of educational administration toward the inclusion of information on school library media programs in the school principalship

program, the personal characteristics of the professors, and the factors that influenced their attitudes.48 The respondents reported very positive attitudes toward including school library media program information in the principalship preparation program, and a significant independent relationship was found between the professors' positive attitudes and the date of their last school administrative experience. The two groups with the most positive attitudes were those with school administrative experience before 1970, when the school library was transformed into a media center, and those with the most recent experience with the implementation of new technological advances in the library. Although a significant independent relationship was also found between the respondents' attitudes and recent library guidelines, 90 percent of the professors failed to recognize the importance of the principal's influence in increasing the involvement of library media specialists in curriculum development and their collaboration with classroom teachers, including making time available for cooperative planning.

CONCLUSIONS

The topics that received the most attention by far in this compilation of research reports and reviews were the current status of school library media programs, with 10 reports, and use of technology in library media centers, with 12.

Reports on the current status of library media programs include surveys of six states and one city school system as well as two national studies. The aspects of school library media services focused on by the various studies included 1) current status, trends, and critical issues for school library media specialists; 2) the ratio of students to school library media specialists in individual states; 3) the level of implementation of criteria for successful library media programs in individual schools; 4) how school library media programs contribute to the instructional success of highly rated schools; 5) support for whole language teaching; 6) budget and service problems and resource sharing; and 7) services for special education.

Studies of technology use fell into several categories as three reports focused on the level of automation in school library media centers; two on surveys of vendors of automated systems; one on gender differences in library and computer anxiety and anxiety in using computers for library research; two studies involving CD-ROM, one concerned with use of this technology for reference and the other with its use in teaching information skills; two studies of the use of automated information retrieval systems by elementary school children; and two on networking and its impact on resource sharing.

Two other topics in the category of school library media programs received considerably less attention: library and information skills instruction and cooperative planning. Library and information skills instruction was the topic of only two studies. The first reviewed research on the value of library and information skills instruction, the nature and scope of library skills, and the integrated approach and alternative methods of teaching library skills. The second described a program for teaching student aides a specific library skill. Two of three studies on cooperative planning addressed the effects of characteristics of librarians (and paraprofessionals) on the likelihood of their being selected by classroom teachers to assist them with instructional

problems. The third studied teachers' concepts of and reactions to resource-based learning, including cooperative planning with the teacher-librarian.

Of the eight studies in the area of school library media resources, three addressed censorship from different perspectives. The first was concerned with the factors involved in resolving challenges to school library materials, the second with censorship in state child-choice book award programs, and the third with actual challenges to materials in Oregon in 1991. One study on collections focused on the use of book awards as selection criteria, and two studies investigated the assessment and management of collections.

Nine studies focused on various topics related to school library media personnel and other staff. Two were concerned with the changing role of the library media specialist, one with certification requirements, three with continuing education, one with library media specialists' attitudes toward their jobs, and one each with library media skills in preparation programs for principals and the library media skills and information brought with them to their field experience by student teachers.

The impact of the school library media program on student achievement and overall skill development is addressed as one component of The Millbrook Report,[49] one of four themes covered by Eisenberg and Brown,[50] and the potential outcome of various activities of school library media specialists by Hysong.[51] Eisenberg and Brown point out the importance of and need for such research.

Three new topics appeared in this review: 1) the level of commitment of school library media specialists to their jobs, 2) the attitudes of professors of school administration toward including material on school library media programs in the preparatory curriculum, and 3) the library media background of student teachers. Elementary school library media centers were singled out for special attention in several of the studies.

The most numerous reports were found in the journals, conference proceedings, and yearbooks. Of the 33 reports retrieved, 12 appeared in School Library Media Annual; four in School Library Media Quarterly; three each in School Library Journal and Library and Information Science Research; two each in Proceedings of the ASIS Annual Meeting and Journal of Youth Services in Libraries; and one each in The Book Report, Canadian Library Journal, Education for Information, Emergency Librarian, International Information and Library Review, Library Resources and Technical Services, and Library Quarterly. The inclusion of the two editions of School Library Media Annual was a significant factor in the total number of reports retrieved, which was 49 as opposed to 39 in 1993 and 32 in 1992.

The 16 documents included reports on four master's and specialist degree projects; two conference papers; five reports on studies conducted by or for state agencies; and five survey reports.

The ERIC Clearinghouse on Information & Technology (formerly the ERIC Clearinghouse on Information Resources) is always interested in acquiring reports on action research conducted at the local level to address specific problems as well as papers presented at conferences, official reports on funded research, and the results of national or statewide surveys. School library media specialists are encouraged to submit reports on any research projects undertaken in their schools to the ERIC system so that their peers may benefit from or build on their experiences.

NOTES

1. "Summaries of Research from Library Literature," School Library Media Annual 9 (1991): 105-13, EJ 444 737.

2. "Studies from Dissertation Abstracts International," School Library Media Annual 9 (1991): 114-16, EJ 444 738.

3. Paulette Bernhard, "Trends and Issues in Research: Analyses of School Library Media Annual," School Library Media Annual 10 (1992): 68-76, EJ 454 765.

4. The Millbrook Report: The Changing Role of the School Library (Brookfield, CT: Millbrook Press, 1990), ED 340 392; "Changing Role of the School Library," School Library Media Annual 9 (1991): 147-51, EJ 444 742.

5. GraceAnne A. DeCandido and Alan P. Mahony, "Overworked and Underbudgeted: Staff and Funds for School Library Media Centers 1992," School Library Journal 38 (June 1992): 25-29, EJ 447 520.

6. Herbert J. Grover, "Wisconsin's Challenge: Leadership for the 90s," School Library Media Annual 9 (1991): 68-80, EJ 444 734.

7. Linda Morton Beving, "Compliance with Accreditation Criteria Study," School Library Media Annual 9 (1991): 117-28, EJ 444 739.

8. Deborah L. Hysong, "Library Media Programs in Georgia Schools of Excellence: A Comparative Study" (Requirement for Degree of Specialist in Education, Georgia State University, 1992), ED 345 867.

9. Blanche Carter Thrash, "Whole Language and the Media Center" (Requirement for Degree of Education Specialist, Georgia State University, 1992), ED 346 828.

10. Margaret Soule, Maine School Library Survey. "Statistics of Public School Libraries in Maine Serving Grades K-12, from Data Gathered February 1990" (Augusta: Maine State Library, 1991), ED 345 719.

11. Jose-Marie Griffiths and Donald W. King, "Massachusetts Libraries: An Alliance for the Future." A Technical Report for the Massachusetts Board of Library Commissioners (Knoxville, TN: King Research, 1991), ED 351 028.

12. Oren L. Christmas, "Special Education Learning Materials Centers" (Lansing, MI: Michigan State Department of Education, Bureau of Information Management, 1991), ED 348 780.

13. Zawua Jam, "Centralized School Library Management System in Benue State," Interational Information and Library Review 24 (September 1992): 253-68, EJ 456 175.

14. Michael B. Eisenberg and Michael K. Brown, "Current Themes Regarding Library Skills Instruction: Research Supporting and Research Lacking," School Library Media Quarterly 20 (winter 1992): 103-10, EJ 441 731.

15. Irma Sue Stofsky, "Preparing Fifth Grade Student Media Volunteers to Correctly Shelve Non-Fiction Books According to the Dewey Decimal System" (M.S. Practicum Report, Nova University, 1991), ED 350 015.

16. Michael Bell and Herman L. Totten, "Cooperation in Instruction between Classroom Teachers and School Library Media Specialists: A Look at Teacher Characteristics in Texas Elementary Schools," School Library Media Quarterly 20 (winter 1992): 79-85, EJ 441 729.

17. Michael Bell and Herman L. Totten, "Interactional Patterns of School Media Specialists with School Instructional Staff," Library and Information Science Research 13 (October-December 1991): 367-84, EJ 443 255.

18. Jeanette Meyer and Earle Newton, "Teachers' View of the Implementation of Resource-Based Learning," Emergency Librarian 20 (November-December 1992): 13-18, EJ 456 149.

19. American Association of School Librarians and Association for Educational Communications and Technology, Information Power: Guidelines for School Library Media Programs (Chicago: American Library Association, 1988).

20. Doreen M. Keable, Sandra Q. Williams, and Christine D. Inkster, "Facing the Library Media Challenge of the Nineties: A Survey of Automation in Minnesota Schools" (unpublished paper, College of Education, St. Cloud State University, 1992), ED 352 996.

21. Ann Utsey Baggett, "Automation and Its Funding in the Library Media Centers in Secondary Schools in Georgia: A Survey" (master's thesis, Georgia State University, 1992), ED 345 745.

22. Mary N. Howrey and Carol Morrison, "Partners in Illinet: A Study in Two Parts," School Library Media Annual 9 (1991): 155-63, EJ 444 744.

23. Lynne Lighthall, "Automated Systems in Canada's School Libraries: The Third Annual Survey," Canadian Library Journal 49 (October 1992): 378-88, EJ 453 308.

24. "Essentials, Bells & Whistles: A Survey of Automated Systems," The Book Report 11 (September-October 1992): 33, 35, EJ 450 325.

25. Frances F. Jacobson, "Gender Differences in Attitudes Toward Using Computers in Libraries: An Exploratory Study," Library and Information Science Research 13 (July-September 1991): 267-79, EJ 441 769.

26. Roxanne Baxter Mendrinos, "CD-ROM Technology for Reference in Secondary School Library Media Centers," School Library Media Annual 10 (1992): 158-63, EJ 454 774.

27. Margaret Butterworth, "Online Searching and CD-ROM in British Schools," Education for Information 10 (March 1992): 35-48, EJ 447 537.

28. Christine L. Borgman, Virginia A. Walter, Jason Rosenberg, and Andrea L. Gallagher, "The Science Library Catalog Project: Comparison of Children's Searching Behavior in Hypertext and a Keyword Search System," Proceedings of the ASIS Annual Meeting 28 (1991): 162-69, EJ 450 381.

29. Paul Solomon, "On the Dynamics of Information System Use: From Novice to . . . ," Proceedings of the ASIS Annual Meeting 29 (1992): 162-70, EJ 454 818.

30. Diane D. Kester, "Modeling the School System Adoption Process for Library Networking" (paper presented at the Convention of the Association for Educational Communications and Technology, 1992), ED 348 003.

31. Phyllis J. Van Orden and Adeline W. Wilkes, "School Library Media Centers and Networks," Library Resources and Technical Services 37 (January 1993): 7-17, EJ 458 010.

32. Dianne McAfee Hopkins, "Put It in Writing: What You Should Know About Challenges to School Library Materials," School Library Journal 39 (January 1992): 26-30, EJ 457 966.

33. Dee Storey, "Censorship and Child-Choice State Book Award Programs" (unpublished report, Saginaw Valley State University, 1992), ED 345 721.

34. Oregon Intellectual Freedom Clearinghouse: Fourth Annual Report. July 1, 1990-June 30, 1991 (Salem, OR: Oregon State Library, Library Development Services, 1992), ED 344 607.

35. Dee Storey, "Which Award Books Would You Buy? Caldecott/Newbery or State Award Books?" (unpublished report, Saginaw Valley State University, 1992), ED 345 687.

36. Geraldine Watts Bell, "Systemwide Collection Assessment Survey," School Library Media Annual 10 (1992): 135-47, EJ 454 772.

37. Kathleen Garland, "Circulation Sampling as a Technique for Library Media Management," School Library Media Quarterly 20 (winter 1992): 73-78, EJ 441 728.

38. Kathleen Garland, The Use of Children's Materials in School and Public Libraries (Ann Arbor, MI: University of Michigan, School of Information and Library Studies, 1992), ED 346 873.

39. Norma D. Harvey-Slager, "Left Out, Way Back, and Catch-Up: The Positions Played by Women's Biographies in Four Elementary Schools," Journal of Youth Services in Libraries 5 (summer 1992): 385-97, EJ 448 979.

40. Nancy Everhart, "An Analysis of the Work Activities of High School Library Media Specialists in Automated and Nonautomated Library Media Centers," School Library Media Quarterly 20 (winter 1992): 86-99, EJ 441 730; "An Analysis of the Work Activities of High School Library Media Specialists in Automated and Nonautomated Library Media Centers Using Work Sampling," School Library Media Annual 10 (1992): 148-57, EJ 454 773.

41. Mary L. Piersma and Diane Allen, "Role of Library Media Specialists in Reading Promotion," School Library Media Annual 9 (1991): 152-54, EJ 444 743.

42. Patsy H. Perritt, "School Library Media Certification Requirements: 1992 Update," School Library Journal 38 (June 1992): 30-49, EJ 447 521.

43. Patricia E. Ceperley, Information Needs 2000: Results of a Survey of Library Media Specialists (Charleston, WV: Appalachia Educational Laboratory, 1991), ED 340 393.

44. Duncan Smith and Robert Burgin, "The Motivations of Professional and Paraprofessional Librarians for Participating in Continuing Education Programs," Library and Information Science Research 13 (October-December 1991): 405-28, EJ 443 257.

45. Kathy Latrobe, "Continuing Education Needs and the Professional Reading of School Library Media Specialists," Journal of Youth Services in Libraries 5 (summer 1992): 407-10. EJ 448 981.

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47. Glenda B. Thurman, "A Study of Student Teachers' Library Media Skills: A Replication" (paper presented at the Convention of the Association for Educational Communications and Technology, 1992), ED 348 033.

48. Linda Veltze, "School Library Media Program Information in the Principalship Preparation Program," School Library Media Annual 10 (1992): 129-34, EJ 454 771.

49. Millbrook Report.

50. Eisenberg and Brown, "Library Skills Instruction."

51. Hysong, "Library Media Programs."