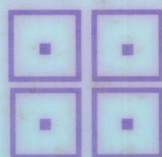


**AUTOMATING**

**SCHOOL  
LIBRARY  
CATALOGS**

**A READER**

Edited by  
Catherine Murphy



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# **AUTOMATING SCHOOL LIBRARY CATALOGS**

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1992  
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Englewood, Colorado

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P.O. Box 6633  
Englewood, CO 80155-6633

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**Library of Congress Cataloging-in-Publication Data**

Automating school library catalogs : a reader / edited by Catherine Murphy.

xvi, 211 p. 17x25 cm.

Includes bibliographical references and index.

ISBN 0-87287-771-X

1. School libraries--Automation. 2. On-line bibliographic searching. 3. Cataloging--Data processing. 4. Catalogs, On-line.  
I. Murphy, Catherine (Catherine Ann)

Z675.S3A92 1992

027.8'0285--dc20

91-39329  
CIP

# **Automating School Library Catalogs**

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## Preface

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The idea for developing a collection of articles about automating the school library catalog stemmed from the awareness that there is still little written about the subject specifically for this audience. In a broad sense, the automation process is the same for school library media centers as it is for other libraries—planning, selecting the system, converting catalog records, going online, and continuing to develop access. In reality, however, the school library often has less funds and fewer support staff than other libraries, and these factors impact the type of automated system and retrospective conversion process selected. The issues of access also tend to be different because of the younger age of catalog users and the need for information related to K-12 schooling.

With these perspectives in mind, the articles selected for *Automating School Library Catalogs* were culled almost entirely from the school library literature of the past three years. The one exception is the second section, “Evaluating OPAC Systems,” which contains two excerpts from mainstream library literature to supplement Lynne Lighthall’s comprehensive checklists. Each author has reviewed the information so that it is current as of publication date. In total, I believe that the collection is a comprehensive and unique compilation of the practical and theoretical literature on the topic of online public access catalogs (OPACs) in school libraries.

I have followed the online catalog market since 1982 when I began my doctoral investigation of standards and practices in cataloging in microcomputer OPACs. By 1988 it was apparent that sales of systems to school libraries were escalating because by then the technology and vendor services were becoming more compatible with school library budgets and needs. That impression spurred me to write the lead article in part I, “Overview of OPAC Development,” which outlines major issues and presents a sample of school library automation development. This article was selected for *The Best of Library Literature 1988*. Robert Skapura’s article is characteristic of the style of this leader in the field; the decision-making process, for simplicity, is broken down into a choice between three hardware configurations—minicomputer, hard disk, and compact disk. However, more

significant variables influence final selection, and this will be evident in the case studies in part 3, "Implementing OPAC Systems." The last two pieces in this first section are authored by two other well-known observers of school library automation. Mary Holloway places the emphasis on the online catalog as an instructional tool as she describes several pilot projects on which she served as a consultant. Lynne Lighthall, a professor at the University of British Columbia, profiles the school library OPAC market in Canada. Many of the systems are also selling in the United States. The data confirms that sales are increasing and that integrated systems continue to be desirable.

Another article by Lighthall leads part 2, "Evaluating OPAC Systems." It continues the theme established in part 1 about careful planning preceding the selection of a system and offers basic checklists to evaluate separate modules. Skapura's cost comparison of eleven OPACs is also a companion piece to his decision-making article in the first section. This article and the one in part 3 listing retrospective conversion vendors are meant to be representative rather than inclusive of the market. Henry Barnard's checklist for vendors is comprehensive without becoming overwhelming and might be adapted. The summary of observations and matrix of comparative data from *Library Technology Report* prepared by Joseph Matthews, Joan Williams, and Allan Wilson for twenty-four systems is unique and may serve as a series of benchmarks for any system.

Part 3 is concerned with implementing the OPAC system. Skapura's primer of retrospective conversion compares the amount of work or time spent by library staff on each method versus the cost of the service or product. Questions for the library staff and for vendors, as well as an updated comparison chart of vendor services, were originally prepared by me for the first of two preconferences on automation that Skapura and I cochaired for AASL in 1989 and 1990. I wrote the final article about the MARC record mainly to address the issue of content versus format of the record. In the push for school libraries to adhere to standards, the quality of the catalog record has sometimes been overlooked. Now that we are further along the path to automation, minimal content is recognized as unacceptable.

Several case studies in this section demonstrate that there are a number of ways to automate. The current recommendation in the literature is to develop an integrated catalog existing within a local or distributed network. Many smaller libraries may still be choosing the path described by Holloway in her article about a stand-alone circulation station (although a system at this level is very limited). If an interface with a bibliographic database on a compact disk is added to the system, this will minimize some data entry tasks and ensure the development of an integrated catalog with full MARC records. Ann Daniels's case study demonstrates that an existing cooperation between school and public library can facilitate the development of a minicomputer-based union catalog and interlibrary system. Doris Epler and Richard Cassel describe a statewide CD-ROM database project, completing three distinct and historical profiles of online catalog development in this section.

Part 4, "Issues in OPAC Development," is about general issues in access. My paper about the impact of automation on access was written for a research retreat preceding the AASL conference in 1989 and offers general background on the two levels of catalog development, implementing standards, and improving access for young users. Additionally, there are recommendations for practitioners and researchers in the field. Two issues that have received little treatment in the school library automation literature—collection development and screen

design—are also included here. Skapura looks at catalog screens and search terms while Patricia Hooten also offers suggestions for designing screens understandable to children as well as making a plea for school and public libraries to coordinate catalog instruction. Linda Bertland reports on circulation analysis while I review the OPAC as a tool for collection development.

Part 5, the last section, “OPAC Research,” pulls together the little research that has been done in the field of OPAC development in schools. My findings point to the need for the market to support *Anglo-American Cataloging Rules*, second edition (*AACR2*) standards as well as for enrichment of catalog records. The issue of OPAC systems and software conforming to MARC has been realized to a greater degree; it is in the 1990s that there will be more attention paid to particular needs of students and staff for information about literature and curriculum-related material in the catalog record. In another doctoral investigation, Kathleen Craver looked at the effect of access to an online catalog in neighboring academic institutions by college-bound high school seniors and found a positive impact in their increased use of materials and, overall, found implications for change in bibliographic instruction in high schools. Leslie Edmonds and her colleagues report on the results of the first Baber grant in which students’ use of the catalog was determined by developmental level, experience, and training; they make recommendations for simplifying the catalog and improving training in its use. Roberta Lewis, an elementary school librarian, describes the results of an informal survey of fourth graders which bears out the pleas made elsewhere for more detail in the catalog record.

It is my hope that this collection will serve as a useful resource for all those who are developing online catalogs in school libraries. The recommended readings list contains other materials that provide more information about the broad topic of OPAC development. Because the readings come from a variety of previously published sources, no attempt has been made by the publisher to conform in these readings to a particular standard. For example, MARC is referred to in its extended form as both “machine-readable cataloging” and “Machine Readable Cataloging.”

Catherine Murphy

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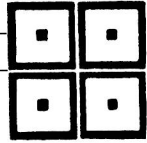
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# Part 1

## Overview of OPAC Development

Catherine Murphy



### The Time Is Right to Automate

# 1

In 1988, automation of the card catalog has become a reality for many school library media centers. In 1985, when I was conducting research on the standardization of cataloging in microcomputer online public access catalogs (OPACs) in school library media centers, I found that only about 160 school sites with stand-alone circulation and catalog systems could be identified by vendors selling to this market in the United States and Canada.<sup>1</sup> The reasons for today's increased interest in automation can be attributed to technological developments that permit easier use of systems, expanded capabilities in searching and reporting, and interfaces between stand-alone microcomputers and distributed networks or compact disks. In addition to these improvements in the technology, vendors are providing services for retrospective conversion options that are geared to different budgets in the school market.

It is barely 10 years since the Apple was introduced in 1978, presenting an alternative to automation that was affordable for small libraries. The big online circulation systems had been introduced into university and other large libraries in the early 1970s and several years later some of these systems had grown into online catalogs for the public, influenced by the growth of online Machine Readable Cataloging (MARC) databases available from bibliographic networks and utilities, e.g., the Online Computer Library Center, Inc. (OCLC).<sup>2</sup> But, almost exclusively, the OPACs were turnkey systems developed by vendors into complete packages of hardware, software, training, and support. The minicomputer systems were too powerful and expensive for most school library media centers or any small library to consider. By 1981, *Computer Cat* was developed by the Costas for an elementary media center in Mountain View, Colorado;<sup>3</sup> and soon after that, there were a number of scaled-down OPACs designed for the microcomputer.

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## 2 Part 1—Overview of OPAC Development

The early software for microcomputer catalogs promised new directions for school library media centers via improved library management and enhanced services to clientele. Most of the systems were essentially replicas of the card catalog, with searching options limited to first word or letters of the author, title, and subject, perhaps with other fields available in the nonpublic mode. Few of these stand-alone microcomputer OPACs offered key word or Boolean searching, processing was slow, and conversion of card records to electronic format was limited to manual data entry. In the last seven years, the technology has advanced, and the market has been tested enough by both vendors and school library media specialists to have caused an increase in sales of both microcomputer stand-alone systems and distributed network systems.

Although it is difficult to get exact figures for these sales, a few microcomputer systems vendors estimate their numbers of users in the thousands, while a number of others report hundreds of sales. It is probable that at this time there are 10,000 automated circulation and/or catalog sites in schools.

School library media specialists must plan carefully for automation, considering global issues as well as specialized needs, not only to participate in the automation revolution but to take a leading role. As sales increase, the market is correspondingly anxious to meet those special needs.

### Preparing for Automation

The items that follow are a broad checklist of the considerations in planning for any automated system. Knowledge of these issues should be expanded by reading the literature, examining different systems at conferences or perhaps through purchasing demo disks, and finally, when the selection process has narrowed the choice, those systems should be reviewed in greater detail at a school site using the program.

1. *Standards.* There is only one standard for bibliographic records, the *Anglo-American Cataloging Rules*, second edition (AACR2), which includes the format for MARC records. School library media centers were not early subscribers to cataloging standards, evidenced in the research of Rogers and Truett and attributed to school library media specialists' lack of training in cataloging, lack of support staff in the building, and/or lack of endorsement by state supervisors.<sup>4</sup> The development of online catalogs in school library media centers that might be interfaced in multilibrary networks focused new attention on the school library media specialists' lack of awareness of mainstream standards. The fact that record conversion to electronic format in the pioneer days of microcomputer OPAC development was largely accomplished by keying in all data from shelf-list cards at the local site did not contribute favorably to adherence to standards. My doctoral research, mentioned earlier, confirmed that the lack of awareness of cataloging standards that existed in the card catalog era had been continued into the microcomputer online age; by contrast, those schools belonging to bibliographic utilities and networks were influenced to conform to cataloging standards.

All of this has changed in 1988. The microcomputer stand-alone systems, as well as the minicomputer systems, provide for storage of the full MARC record although vendors' claims for data storage should be verified. Automated system vendors as well as specialized data conversion vendors offer varied retrospective conversion options. There are still a few microcomputer software systems on the



market that do not conform to the mainstream standard for bibliographic records and these programs should not even be considered for purchase.

2. *Networking.* Multilibrary networking offers to members various cataloging and interlibrary loan services as well as union catalog products that are online, on microfiche, or in CD-ROM format. School library media centers participate in many state and regional networks but only those that are automated provide direction, and sometimes financial support, in the development of local cataloging and OPACs. Examples of these automated database networks are ACCESS PENNSYLVANIA's LEPAC, Wisconsin's WISCAT, Minnesota's TIES, and the Western Library Network's LASER CAT. Just as critical is local area networking, the cabling of terminals in an on-site multiuser system, which has just come of age. (Recent technology allows several different stations to access the database simultaneously.) This development permits processing in one location and public access from several terminals in another area. It is also possible (though still in the experimental stage) to customize network software to access from the same menu both a MARC record online catalog database and a non-MARC record database of perhaps a film collection.

3. *Hardware—micro or mini.* The debate is between a system with terminals linked to a remote bibliographic database or a microcomputer stand-alone system (IBM, or more recently, Macintosh). There is a correlation between large school districts and extensive computer systems because of the greater cost of a distributed bibliographic network, but sometimes there are joint school and public library automation projects that favor the selection of an online system by a smaller school. The smaller library usually chooses a microcomputer system because both the start-up and maintenance programs are less expensive. The greatest advantage of the online system is that it has the most current database, but the distinctions between the two types of systems are blurring as the technology provides for off-line, more frequently updated databases on compact disks that can be interfaced with different computer systems.

4. *Cost.* Cost includes software and peripherals such as a bar wand or scanner, as well as hardware, but even more significantly, the retrospective conversion of the library's shelf list to machine readable cataloging. Once the decision is made between minicomputer and microcomputer systems, there are further variations in the price of single and multiuser networks, software programs, and retrospective conversion options. There are also vendor charges for yearly maintenance and support. The budget for automation should be based on planned obsolescence of hardware (perhaps 20 percent replacement cost per year over a period of five years) and software updates (change is constant as the vendor receives input from users and also tries to be competitive). An important aspect of the budget should be a one-time retrospective conversion of records, which may be transferred to a different system as needs change (this incurs far less expense than reentry of data). It should be remembered, however, that automation does not usually save money. The result of automation is an improvement in services. This improvement justifies any increase in costs.

5. *Order of conversion.* Many more circulation systems than public access catalogs have been sold, but this is changing. It was considered less costly and easier to begin automating by typing in a brief bibliographic record for a circulation system than to develop full bibliographic records for a public access catalog. Because the program vendors, as well as companies dealing strictly with retrospective conversion, are providing more options, school library media