Automated Workstations for Professional Catalogers: A Survey of ARL Libraries

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Abstract
A survey of ARL libraries was conducted in the spring of 1988 to determine how many libraries had, or soon would have, individual automated workstations for their professional catalogers. The number of libraries expecting to acquire these workstations at some future time was determined as well. The study also covered: (1) costs and types of equipment being used or considered for this purpose, (2) current and projected uses of automated workstations, and (3) their impact on cataloger productivity, processing costs, and the quality of catalog records.

Introduction
When libraries first began using bibliographic utilities for cataloging some years ago, the prediction was made that catalogers would have their own terminals at their desks. That prediction would become a reality sooner for paraprofessional catalogers doing derived or copy cataloging than for professionals doing primarily original cataloging. The costs of providing each professional cataloger with an OCLC terminal, for example, would have far exceeded the benefits in most libraries.

Only recently, as microcomputers have become more affordable and local online catalogs more common, have libraries finally begun automating this "last frontier"--the work done by professional catalogers. In fact, an increasing number of libraries are taking this next step along the automation continuum. However, the automated workstation (a terminal or microcomputer, possibly with peripherals attached) still represents a significant investment, which presumably must be justified by a significant benefit.

The purpose of this study was (1) to find out which members of the Association of Research Libraries already have provided (or will soon provide) automated workstations for their professional catalogers and (2) to examine expected and actual effects of this change. A third goal was to determine how many of the remaining ARL libraries intended to acquire automated workstations at some as yet unspecified time.

The Literature
As Randall Scott wrote in "An Original Catalog Librarian's Perspective on Library Automation,"

There is very little to be found in current library literature about the life of the original catalog librarian, or about the adjustments we are making in the new electronic order of things.¹

Because having automated workstations for professional catalogers is a relatively recent phenomenon, I found only a few articles on related issues and none on that specific topic.
Scott discusses the creation of electronic workforms on IBM PCs by original catalogers at Michigan State University. Susanne Nevin reports on GTO-RLIN testing (Generic Transfer & Overlay) at the University of Minnesota libraries as part of their planning for implementation of NOTIS. And Marie Bednar gives an excellent description of the effects of automation on cataloging operations at Penn State, where all staff have been creating catalog records directly on the local online system (LIAS) since 1981.

THE HYPOTHESIS

My hypothesis was that only a small minority (perhaps less than 10%) of ARL libraries would already have terminals or microcomputers at their professional catalogers' desks but that the majority of ARL libraries would expect to have this equipment at some future time. I expected cost to be the primary reason why more libraries were not getting these automated workstations now. I also assumed that the libraries getting workstations would need to justify the expense by showing increases in productivity and/or reductions in processing costs as a result of automation.

DATA COLLECTION METHODS

I selected the membership of the Association of Research Libraries (as of Feb. 1988) as the population to be studied and contacted the "head of cataloging" in each ARL library (with the exception of the Library of Congress) during March and April 1988. Not every library had a position clearly defined by the title "head of cataloging." Therefore, some of the survey respondents had broader or narrower responsibilities than that title implies or were primarily responsible for areas other than cataloging, e.g., automated systems.

A telephone survey was used to sort the ARL libraries into four groups with respect to individual automated workstations for professional catalogers:

- Group A: Already automated
- Group B: Being automated soon
- Group C: Could not say when, but expected to automate
- Group D: Did not expect to automate

A follow-up questionnaire was designed for Group A asking for information about specific types of equipment, costs, etc. This questionnaire was modified slightly for Group B to explore expected conditions when automation was completed. A third questionnaire was used for Groups C and D to examine alternatives to automated workstations and related issues.

DATA ANALYSIS

The data collected in both phases of the study was analyzed manually. Of the 118 ARL members, only one declined to participate in the telephone survey. Since I was aware that the Library of Congress was in the process of conducting an in-house experiment with online cataloging, I did not include LC in my study at this point. The responses of the remaining 116 libraries could be broken down as follows:
(See Table 1 for a list of libraries in Groups A and B.)

When I asked each of the telephone respondents whether he or she would be willing to answer a follow-up questionnaire by mail, two people declined. I did not send a questionnaire to the library in the "Other" category (University of Illinois) since the questions were primarily intended for libraries with centralized cataloging operations. Also, no questionnaire was mailed to the library where I work (a Group C library). Of the 112 questionnaires mailed, 93 (83%) were completed and returned. The responses broken down by group were:

<table>
<thead>
<tr>
<th>Group</th>
<th>Returned</th>
<th>(Percentage of Group)</th>
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<tbody>
<tr>
<td>Group A</td>
<td>11/14</td>
<td>79%</td>
</tr>
<tr>
<td>Group B</td>
<td>13/15</td>
<td>87%</td>
</tr>
<tr>
<td>Group C</td>
<td>49/58</td>
<td>84%</td>
</tr>
<tr>
<td>Group D</td>
<td>20/25</td>
<td>80%</td>
</tr>
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</table>

**Equipment**

In the 11 libraries which have already automated, there are 8 different types and 12 different models of terminals or microcomputers being used at professional catalogers' workstations. The 8 types included DOBIS, Geac, IBM, Northern Telecom, OCLC, Telex, Wyse, and Zenith. In the 13 libraries being automated soon, there are 6 different brands of terminals or microcomputers being considered for that purpose. Less than half of the Group A libraries have printers at the catalogers' workstations.

In Group A, hardware costs quoted per workstation ranged from a low of $600 for a Wyse WY50 and a Hewlett-Packard ThinkJet printer to a high of $3,478 for a Geac terminal and Epson printer with a Geac interface. In Group B, expected hardware costs ranged from $200 for a Wyse model 20 or 30 to $5,500 for an OCLC M310F workstation plus Epson printer, Hitachi CD-ROM reader, and Hayes Smartmodem. Most of the workstations being used or considered were equipped for $2,000 to $2,500.

Six of the 11 libraries in Group A did not get new furniture to accommodate their computer equipment. However, 8 of the 13 Group B libraries expected they would get at least some new furniture for use with their equipment.

In response to the question, "Is there a CD-ROM player in your area?" which was addressed to all groups, only 18% said Yes. Uses cited included Bibliofile, Books in Print Plus, AGRICOLA, retrospective conversion, and expected use of CDMARC Subjects (Library of Congress Subject Headings on CD-ROM).

**Usage of Equipment**

All groups were asked whether ALL, SOME, or NONE of their professional catalogers created new records at a terminal or microcomputer in lieu of writing or typing paper workforms when their own workstations were not automated. The majority of libraries in all groups reported no catalogers doing direct input. However, when the 24
libraries in Groups A and B were asked the same question with respect to the situation (or expected situation) after automation, 11 reported ALL and 7 reported SOME catalogers doing direct input.

When this issue was discussed during the telephone interviews, most respondents considered direct input of data by catalogers to be more efficient and thought it might reduce the incidence of error. Some felt, however, that having another person do the inputting imposes a measure of quality control which is lost when catalogers input their own data.

The catalogers who are doing direct input in Group C and D libraries must share workstations. Fifty-three percent of the Group C libraries and 47% of the Group D libraries said their professional catalogers have blocks of time scheduled for terminal use. The number of hours scheduled varied greatly from 1 to 15 hours per week. Some respondents felt sharing made the most efficient use of terminals, while a number of others complained about the nuisance of having to schedule time and batch work.

When I asked how catalogers had responded to doing more work on computers, the typical answer was that most catalogers reacted favorably, even enthusiastically, to the change. Some of the more experienced catalogers, however were reluctant to accept the new technology.

A related trend identified during the telephone interviews is the move toward

**TABLE 1**

<table>
<thead>
<tr>
<th>GROUP A LIBRARIES</th>
<th>GROUP B LIBRARIES</th>
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<tbody>
<tr>
<td>(Professional catalogers already have automated workstations)</td>
<td>(Professional catalogers soon will have automated workstations)</td>
</tr>
<tr>
<td>University of California, Berkeley</td>
<td>University of California, Irvine</td>
</tr>
<tr>
<td>Canada Institute for Scientific and Technical Information</td>
<td>University of California, Los Angeles</td>
</tr>
<tr>
<td>University of Florida</td>
<td>University of California, San Diego</td>
</tr>
<tr>
<td>Florida State University</td>
<td>University of California, Santa Barbara</td>
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<tr>
<td>University of Guelph</td>
<td>University of Chicago</td>
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<td>University of Hawaiai</td>
<td>Indiana University</td>
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<tr>
<td>University of Minnesota</td>
<td>McGill University</td>
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<tr>
<td>National Library of Canada</td>
<td>University of Michigan</td>
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<tr>
<td>National Library of Medicine</td>
<td>National Agriculture Library</td>
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<tr>
<td>Newberry Library</td>
<td>University of Oklahoma</td>
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<tr>
<td>University of Notre Dame</td>
<td>Virginia Polytechnic Institute and State University</td>
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<tr>
<td>Queen's University</td>
<td>University of Virginia</td>
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<tr>
<td>Smithsonian Institution Libraries</td>
<td>University of Virginia</td>
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<tr>
<td>University of Utah</td>
<td>University of Waterloo</td>
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<tr>
<td>Vanderbilt University</td>
<td>Wayne State University</td>
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<td>York University</td>
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Creating cataloging records on the local online system, with or without contributing them to a bibliographic utility. Libraries are evidently finding it less cumbersome and/or less costly to build their local databases in this manner. Many continue to use the bibliographic utilities for copy cataloging and for finding information to assist original catalogers. As more libraries start using local online systems, this trend could have a negative impact on the utilities if fewer members are contributing new records and the
network databases become progressively outdated. I had the impression that libraries want to contribute their records to the networks if they can do so economically and efficiently. At present, compatibility of data can be a problem if a library tries to have locally created records tape-loaded into a bibliographic utility's database.

**Related Issues**

Productivity and quality were two areas of concern expressed during the telephone interviews. When asked how the productivity of professional catalogers was affected by having terminals or microcomputers at their desks, 4 Group A libraries said productivity had increased; and 2 more said productivity decreased initially but later increased. Two others felt productivity was not affected and 3 were not yet able to assess the impact.

Among Group B libraries, 5 expected productivity to increase, and 3 more expected an increase following an initial decrease. Four felt productivity would not be affected, and 1 did not respond to the question.

When asked if any steps had been taken recently in their libraries to help professional catalogers improve their productivity and/or to reduce the cost of original cataloging, 72% of the libraries in Group C and 58% of those in Group D said Yes. When asked to describe specifically what had been done and how well it worked, these libraries provided some interesting comments. The three most common methods cited were: (1) shifting work being done by professional catalogers to paraprofessionals, (2) reviewing departmental organization, job descriptions, procedures, etc., and (3) streamlining authority work. Other ideas included minimal level cataloging, individual goal setting, provision of more computer equipment, and having catalogers do their own inputting.

When asked if it had been (or was expected to be) possible to cut costs in any area as a result of purchasing automated workstations, 4 Group A libraries said Yes; 5 said No; and 2 were not sure. Of the Group B libraries, only 2 said Yes; 7 said No; 2 were not sure; and 2 did not respond to the question.

When asked how the quality of information being added to the library's catalog had been (or was expected to be) affected by professional catalogers having terminals or microcomputers at their desks, 5 of the Group A libraries said the effect was positive, 5 said there was no effect, and 1 was not sure how quality had been affected. Among Group B libraries, 8 expected a positive effect, and 5 expected no effect.

**LC's Online Experiment**

When I talked with Robert M. Hiatt at the 1988 American Library Association annual conference, the experiment with online cataloging begun by the Library of Congress in April 1987 was coming to a close. About 170 staff members from all areas of cataloging participated in the test.

The most positive reaction came from the descriptive catalogers who entered data directly online, creating no hard copy. Productivity in this area, which decreased when the test began, had not returned to its former levels by the end of the test--not surprising, perhaps, given the complexity of operations at LC. Some catalogers had terminals at their desks, but others had to share equipment. Carrying materials needed for cataloging to terminals away from their own desks proved to be extremely inconvenient.

The most negative reaction came from staff responsible for assigning Dewey
numbers. Unlike descriptive catalogers who create the bulk of the cataloging record, the Dewey staff members add only one element of information to the record. Consequently, they found working online very detrimental to their productivity.

The reports evaluating the online experiment will be discussed at LC and a decision will be made whether or not to proceed with online cataloging.5

CONCLUSION

Twenty-six percent of the ARL libraries surveyed already have or soon will have automated workstations for each of their professional catalogers. An additional 52% expect to have these workstations sooner or later, the timing being largely dependent on the cost of automating and budget conditions. The remaining 22% did not expect to get automated workstations but were not necessarily anti-automation. Some simply felt that a one-to-one ratio of catalogers to terminals was not desirable and that their shared-workstation arrangements were working quite well.

It is perhaps too soon to draw any conclusions about the effect automated workstations for professional catalogers will have on the catalogers' productivity and the quality of the records being added to libraries' catalogs. However, it is encouraging that a few libraries did report automation had a positive impact on these areas and no libraries reported a negative impact. If automating catalogers' workstations does not significantly affect productivity or quality or allow libraries to cut processing costs, will libraries still automate? They may, because as at least one respondent put it, "Automated workstations are the wave of the future."

The theme of this conference is building on the first century. One of the major accomplishments of that century has been the progress made toward cooperative cataloging. Standardization has been the byword, beginning with the distribution of LC catalog cards and continuing through the development of bibliographic utilities and network standards.

As we reflect on the last 100 years, we may wonder how we are going to continue to build on the foundation that has been laid. There are indications that libraries may be moving away from what has been so laboriously constructed to date. If the trend toward abandoning the use of bibliographic utilities for cataloging in favor of local systems continues, dedication to standardization is likely to diminish. A definite lack of consistency is already very apparent when one considers the variety of equipment and systems being used, not only at automated workstations for professional catalogers, but throughout libraries. The computer systems once hailed as the ultimate facilitators of library cooperation are now the very things which may threaten, in one sense, the past century's accomplishments.

It is time to reevaluate our achievements and reassess our goals. We cannot go back, but it is also very likely that we cannot continue to go forward along the same path we have been following for a number of years now. We must decide which elements from our past will serve us well in the next century and hope that participants in ACRL's bicentennial meeting will have cause to praise us for our wisdom and foresight.

ACKNOWLEDGEMENTS

I would like to thank all of the ARL "heads of cataloging" who took time from their busy schedules to talk with me and to answer my questionnaires. Without their cooperation, this study would not have been possible.
REFERENCES
2. Ibid., p. 48-54.