

## Collection Management in Light of Electronic Publishing

Eileen Hitchingham

In Virginia we have been doing a lot of rethinking about higher education in the last several years. There is a general restructuring going on. Many programs in higher education are being examined, with the intent of focusing our goals and learning to maximize what are likely to be stable or slowly growing resources. Libraries are a part of that, too. Since I am new to Virginia, having been at Virginia Tech for just the last several months, thinking about collection management was a fruitful exercise for me. I hope it will be useful to you also.

I would like to start with a little bit of personal history. Almost thirty years ago I took my first job at Harvard as a MEDLARS Analyst at the Countway Library of Medicine. MEDLARS was the early version of MEDLINE. I would like to walk you through what was involved in doing a search at that time.

We would interview physicians, hospital staff, researchers, and students who were interested in getting information to solve research or clinical problems. We would try to talk to them about all the parameters of their search. Then they would walk away. Afterward, we would go through the MESH thesaurus and map out terms that described, or at least we hoped described, the kinds of information that they were looking for. When we had selected the terms we then formulated them into what was usually a fairly complex Boolean statement, often with lots of nested parentheses. The piece of paper, with the terms and the statement combining the

terms, was then carried down to the nether regions of the Countway. Down there, on a large machine that looked something like a casket-sized rolodex, we had thousands of punched cards representing all the terms in the MESH thesaurus. An assistant would pick out the cards that matched those on the search form, arrange the cards, and then keypunch a statement card with the ands, ors, and nots to match the way that the terms were to be searched.

The search cards would then be bundled up with other searches, shipped off to the National Library of Medicine in Washington, and if all went well, a week or ten days later, I would get the citation results back. If lucky, and if I hadn't used "or" when I should have said "and," and if I had selected good representative terms, the search was successful. The results would be mailed to the client, or they might come over and pick it up in a few days. Generally we had a process that could take from two to three weeks from the time that the user first wanted the information.

When I had been searching like this for approximately six months, I experienced what I think of now as one of the most significant events in my entire professional life. On that day, they rolled in our first terminal, we hooked up that acoustic coupler, zapped in some terms, and had instant gratification with instant information. The results were immediate. We could change our strategy based on what we were finding. We could give something to the users with no delays. We could even have the user present as the search was being done, so that she or he could also become part of the process.

I think you would agree with me that as similar events happened in libraries all across the country, as we all slowly went "online," we were experiencing the initial tremors of a change process that had a profound effect on us, on our user expecta-

tions, and on how we view library services.

Today, thirty years later, we see the emergence of technologies that seem destined to cause not tremors, but cataclysmic earthquakes across the familiar topography of library operations and services.

I am talking today about collection management and electronic publications. I say management, rather than development, because I see this as being more inclusive of the concepts of what we do in libraries.

I would first like to go through a traditional understanding of libraries and their roles, and then look at how the emerging age of electronic publishing is changing this tradition. For many years, perhaps most of our history, we have had the concept of the library as a place—bricks and mortar. If we look at what activities we did and what we traditionally provided in those libraries, I think we could say that we focused on selection of resources or collection—the purchasing or getting of materials, how to organize them once we had them, how to disseminate the information that was in our collections, how to instruct others so that they could use our collections, and how to preserve the collections that we had.

Our new vision has the concept of the library as many places. We have the ability, via our Web pages, to connect our users with resources that are all over the world. A collection—our collection—is no longer bound by the structure of four walls. For example, we can direct our users to an electronic version of selected news from the *London Telegraph* that is available today rather than waiting for a mailed publication. This creates the opportunity and an envi-

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ronment for new services unlike any we have had before.

How, then, does this affect the functions that I previously mentioned as traditional for libraries? Actually, I don't think it is terribly different in a functional sense. Selection is still important. We have a collection function that now might be expanded to include a connection function as we consider collecting by "connecting." We still have an organizational function. We have a dissemination function. The need to instruct is still there. The need to preserve is still there. We will be doing the same things, but we will do them in very different ways.

## Selection

In selection, we are seeing a great multiplication of the resources that we can consider for our users. Today approximately 2 percent of the publishers account for 75 percent of the U.S. titles produced. Within an electronic environment the opportunity for publication, particularly private publication, is much greater. Private publication will not necessarily have the vanity connotation that it often does now. Instead, we are likely to see a number of extremely useful electronic resources emerge because of need or the personal interest of the originators. You may be familiar with examples like *Current Cites*, edited by Teri Andrews Rinne; the *Hot-List of K-12 Internet School Sites—USA*, edited by Gleason Sackman; and the *Directory of Scholarly Electronic Conferences*, edited by Diane Kovacs and others.

We also have a broadened range of media available to us. Over the years we have given lip service to selecting all types of media that are appropriate for our users, but in practice most of our selections have focused on traditional print. Of the twenty million items held by the Library of Congress, perhaps thirty

thousand or so are digitized materials. Our library selection now emphasizes print resources, but we are quickly moving to an environment in which we will have a multiplicity of media that we cannot push to the bottom of our selection lists. If we wanted, we could make linked connections to the actual resources from our catalogs, with instant presentations of the theses, oral histories, or archival photographs that the catalog record refers to.

We will have to know our users better. Niche knowledge of users, with tailored services based on our knowledge, is increasingly important. It is important in the academic environment. We have fewer resources—not just dollars, but people. We have to understand how our collections are being used, who is using them, who needs them for what, and what they are going to do with them. We will have the opportunity, as we look at electronic publications, to more clearly understand what people actually use as opposed to what may fill emotional needs. In some cases we may find that the emperor has no clothes, i.e., if use is one measure of importance, we might realize that some important publications are actually less important to our users than we might expect.

## Collection/Connection

If we look at collecting as connecting to resources, some of the first questions that we need to clarify are things like where is the collection and how permanent is its location? Just before I came to Virginia Tech, a team was commissioned to look at the issue of cataloging electronic texts for the online catalog. The report considered electronic texts to be any network-accessible electronic text, whether it was stored on a server locally, or was stored at some location external to the Virginia Tech campus. With this viewpoint we

might formally catalog *The Journal of Computer-Aided Environmental Design and Education*, a publication originating at Virginia Tech, and also *Current Cites*, mentioned earlier, giving a URL, or with some catalogs, creating linked access.

From the user's perspective, I would want to be careful of doing a formal cataloging process on resources that were outside Virginia Tech's management domain—not because I'm a control freak, but because we still exist in an environment where some electronic resources, particularly on the Web, may exist for a very short time, or may move around a lot. We do not want to create catalog pointers to thousands of things that are no longer "there."

Another opportunity that will come with electronic publications is the ability to become serious about joint purchasing. We have talked about this one forever and ever. Too often with print we finally say "but I need it on my shelf, too." And if we are dealing with our constituents, they also may say "but I want it at my place, too," despite use patterns or cost indicators that might show that joint ownership could benefit all.

Virginia, like some other states, is looking at collective electronic purchasing. The VIVA project—the Virtual Library of Virginia—is a legislatively funded consortium of public academic libraries. The purpose of VIVA is to create a network of shared electronic resources for students and faculty, and to facilitate cooperation among its members. With cooperative electronic purchasing VIVA participants have been able to offer such publications and indexes as *Britannica Online*, FirstSearch databases, and full-text offerings from Chadwyck-Healy to their users at costs less than if each institution had purchased them separately. Full-text access to a significant number of periodicals is also being explored.

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## Organization

Our perspective on how we organize our collections may also change with electronic publications. Paul Saffo has suggested that neither conduit nor content providers will be the most important information players in the future; rather it will be those who provide the filtering, searching, and sense-making services for users. Users suffer less from lack of information than they do from information overload. Our users may look to us to make those judgment calls that will allow us to hand them the *ten best* things that will meet their information need, rather than to point to *all* the relevant information and asking them to sift through it.

Earlier I mentioned the difficulty of pointing from our catalogs to things that might no longer be there. I think we have an even bigger issue to consider with our catalogs. We are quickly creating a generation of users whose understanding of information searching will be programmed by how they have learned to interact with apparently easy-to-use Web search engines like Lycos, Alta Vista, or Infoseek. To the extent that our traditional catalogs are unlike these services—no live links, no Web interface—they are increasingly in danger of being search sites of last resort, rather than the one information source that all our users will first turn to. We are already seeing a movement to centralization on library home pages, with the catalog as only one of several organized information services—databases, how-to handouts, reference request forms—that are offered.

## Instruction

A recent *Campus Trends* issue (American Council on Education) gave the results of a survey of technology pre-

dictions at colleges and universities. The report indicated that 68 percent of the colleges and universities see more courses using electronic materials in the next year, 47 percent foresee more courses offered through distance learning, and 34 percent see more assignments submitted electronically. The trends suggest that many academic institutions have reached a point of critical mass with their incorporation of electronic publication and other information technologies in teaching.

This growing change in the way we are teaching gives additional support to the movement I noted earlier away from a bricks-and-mortar concept of libraries. We not only will be called upon to get the publications to users who may be quite distant from our campus, but we will also have to reconsider the ways that we work with students to give them the skills that make them successful users of the information resources they need. Interactive instructional segments on our web sites can replicate a significant part of the show and tell part of our current instructional efforts, and can be available as and where students need to use them. I can imagine, for example, a webbed introduction to FirstSearch techniques that might incorporate some live connections to the database. For example, at Virginia Tech one of the collegiate librarians has worked with faculty teaching in the Clothing and Textile department to design a web page that incorporates information searching techniques into the general structure of the course program and assignments.

Our concept of electronic reserve systems is also growing out of the need to make many kinds of materials accessible to both local and remote users. For our local students it is a convenience not to be undervalued, and for remote students it may be a significant part of what we can offer them.

## Dissemination

Dissemination of information has always been an important role for us and will continue to be important. In an age of electronic publications, however, the issue of copyright, copyright, copyright continues to dog us. We do not have the answers yet. Our professional organizations are working in conjunction with publishers, the Commerce Department's Information Infrastructure Task Force, and other key players in the copyright arena.

We have many wants. We want to use electronic technologies to preserve copyrighted materials. We want to provide copyrighted materials as part of electronic reserve. We want to provide copyrighted materials as part of interlibrary loans. We want to avoid liabilities for what our users may do, after posting appropriate copyright notices. We expect that the terms of licenses will not restrict the materials that we purchase electronically in ways that were not restricted in more traditional purchases. We want our compliance mechanisms to be easy to administer. We expect that U.S. Government works will be made accessible to those who have paid for them once through our taxation system.

Many wants, few definitive answers. One special challenge associated with the dissemination of electronic publications will be to remain proactive and informed regarding the rights and responsibilities that are evolving as we create new products and services for our users.

## Preservation

Preservation has been at the core of library activities for all of our history. Right now this may be one of the more active ways that we can build our worldwide collections. Almost every library has exciting and unique materials that are be-

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yond the copyright timeframe. Local history, special letters, fashion illustrations, old postcards—many beautiful and rich resources that chronicle how we looked and what we thought many years ago. With the appropriate technologies, large and small libraries can begin to make these publications available. Distance will no longer be a factor for accessing these rich resources. Our challenges will lie more with assuring that what we have published or preserved in an electronic format remains accessible as technologies change.

With electronic preservation we may also be able to tackle some of the thornier issues of storage that have haunted us. I believe that we may be

experiencing the last wave of library building expansions. Increasingly, libraries will be asked why many of us should keep the same materials. We know that for some of these materials, particularly journals, there is a short period of active use and then access falls off sharply. Although it would deplete our volume counts we may finally agree to store fewer of our older, replicated-everywhere resources. With joint agreements about who keeps what, we can learn to rely more heavily on things like the Ariel technologies to get these materials to our users' desktops—maybe even more conveniently than if we continued to hold the original materials.

Finally, I think that our planning

windows are becoming increasingly smaller. Where earlier we might have thought about doing five-year planning, I think we are now more in the range of working with "long range plans" that might consider operations for the next year or so. Some of the most important collection management skills will call for us to be aware of changes in publications and technologies, aware of changes in our user environment, and to be flexible enough to adapt to these changes within an increasingly tightened timeframe.

The challenge of doing all of this seems to me to be equally exciting as mastering that first MEDLINE terminal many years ago.

## Public Services in a Telecommuting World

Jordan M. Scepanski

Society today is amidst profound change, change of a political, social, economic, and technological nature, change in educational and cultural institutions, change that is affecting everything. And the changes underway in the information professions and the institutions with which they are associated may be the most far-reaching of all. In the corporate sector significant restructuring is occurring. Whether it be the automobile, computer, fast food, or pharmaceutical industries, or any of hundreds of others, competitive forces and a vastly different environment are resulting in radically new ways of do-

ing business, ways that center significantly on satisfying the customer. In their book *Reengineering the Corporation*, Michael Hammer and James Champy write "... American corporations must undertake nothing less than radical reinvention of how they do their work ..."<sup>1</sup> Such radical reinvention they term "reengineering," which they define as "the fundamental rethinking and radical redesign of ... processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed."<sup>2</sup> They stress that reengineering is not intended to result in things being done faster or better or at lower cost, although all of these may indeed happen. Rather reengineering raises the question of why something is done at all.<sup>3</sup> It is about radically changing what is done by an organization. They suggest that there are three types of organizations that undertake reengineering: (1) those that are in deep trouble, (2) those not yet in trouble but which have the foresight to see it coming, and (3) those that are in

peak condition.<sup>4</sup> It is instructive to think about libraries, or the parent institutions of libraries, in these terms. How many libraries would undertake radical reorganization when they are doing well?

Change is all about us, forced by economic considerations, prompted by technological opportunity. But controlling that change and directing it is a most difficult proposition. This is especially so if significant rethinking or reorganization is not occurring in the parent organization. Higher education supplies good examples of that problem. So many of the professorate think that recent economic difficulties represent just one more down cycle from which there will eventually be recovery and a return to business as usual. They have always been valued and protected by society; why should that not continue? Too many just don't see that higher education is as vulnerable as any societal institution and that the good old days are indeed gone forever. They certainly are for libraries. A university president on the VTLS board of directors

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