Evaluation of monograph selection in a health sciences library

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This article reports on an evaluation of recent monograph selections in a small academic health sciences library. Actual use of each new book was determined from date-due slips. Data were analyzed by broad subject, discipline, and number of uses. The startling result was that more than 60% of recent selections had been used little or not at all. To determine factors affecting use, the author examined aggregate data, used intuition, and assessed the raw data in more detail. Recommendations made to management were approved and implemented. The study bolstered confidence that it is possible to select materials with the highest potential for use and to depend on remote access for other needed works. It is suggested that other health sciences libraries undertake such studies and question the need to strive for comprehensive collections.

Methods of library collection evaluation can be broken down roughly into materials-centered approaches and user-centered approaches [1–4]. For academic health sciences libraries, materials-centered approaches would include the familiar methods used in responding to self-studies for accreditation. Comprehensiveness of ownership on a particular subject is checked through comparisons with core lists and standard bibliographies. Citation data also may be used. Size of the collection may be evaluated by comparing it with that of peer institutions. In other words, materials-centered approaches usually emphasize comparison of the local collection against an external standard.

On the other hand, user-centered approaches look at the actual use of a collection. The objective may be to identify items for elimination or storage, or it may be to refine collection development strategies in order better to meet user needs [5]. This article reports on a study of the actual use of each of 2,625 books selected over a twenty-seven-month period by a small academic health sciences library.

BACKGROUND

In the fall of 1989, the University of Illinois at Chicago, Library of the Health Sciences–Urbana (LHS-U) recognized the need for a collection evaluation. It had become clear that the monograph budget could not be stretched to buy all the books the library appeared to need. One reason for this problem was the rising cost of journals, requiring the diversion of monograph funds to the serials budget. Also, there was a backlog of requests for new journals. Filling those requests involved applying additional money to serials at the expense of monographs. Furthermore, the librarian sensed that not all additions to the monograph collection were being used. This was a logical possibility, considering the local situation.

The University of Illinois at Chicago (UIC) has site-based education for the health sciences at Peoria, Rockford, and Urbana. There is a health sciences library at each site. The Urbana library is based on the Urbana-Champaign campus of the University of Illinois (UIUC) but reports to and is funded by the Chicago campus. LHS-U users have full access to both UIC and UIUC libraries. The UIUC biology and chemistry libraries are in nearby buildings, and there are also veterinary medicine and applied life studies li-
braries on campus. Teaching is done at two community hospitals and a Department of Veterans Affairs hospital. All have libraries.

LHS-U's primary clientele includes the faculty, staff, and students of the colleges of medicine and nursing at Urbana-Champaign (COM-UC and CON-UC); student health center personnel; other UIUC students, faculty, and staff; and the general public. At present, all seventy-five nursing students are registered nurses enrolled in B.S.N. completion or master's programs. One hundred forty students start medical school at Urbana every year; all but thirty-five then go to Peoria or Rockford to complete their medical education in years 2 through 4. Most of the thirty-five in each class who stay at Urbana are part of the Medical Scholars Program, in which a student earns both the doctor of medicine degree from UIC and another graduate degree from UIUC. Second graduate degrees may be in any field. Medical scholars, even while enrolled in their graduate program, are considered primary clients of LHS-U. Their interdisciplinary needs must be taken into consideration in collection development.

CON-UC has 6.8 full-time equivalent (FTE) faculty. In total, COM-UC has approximately 600 faculty members, only thirty-two of which are paid full-time by COM-UC. Another 23.97 FTE hold part-time appointments with COM-UC. The rest are UIUC faculty and community physicians who hold zero-percent time appointments with COM-UC.

Due to the unusual organizational situation and the varied clientele, collection development for LHS-U is particularly complex. LHS-U was founded in 1971. A new health sciences librarian (Urbana) started work in early 1988. Her predecessor had worked at the site for twelve years and had a sense of the unique local situation, having been there during much of its evolution. The new librarian, however, had more experience in traditional academic medical centers and did not immediately recognize the nuances of the local situation.

An added factor was the inauguration of consolidated collection development by the UIC libraries in July 1988. The objective of this effort was to achieve centralized coordination and control of collections for all UIC libraries. Site librarians were asked to recommend new titles to bibliographers, rather than continue to make final selections themselves. In actual practice, the site librarians have the most familiarity with local needs and still have a primary influence over additions to the collection at the local sites. Although consolidated collection development did not result in reduced allocations for the collection, it did lead to increased expectation for resource sharing among the UIC libraries.

Taking all these factors into consideration, it became obvious that building a comprehensive monograph collection at LHS-U was not possible. Accordingly, it seemed prudent for the site library to focus on selecting only materials with a high potential for use in the unique local situation.

One way to focus selection is to determine which books have and have not been used in the past, and to modify selection accordingly. This can be accomplished through a use study. Another valid approach would be to ask clients about their use of the collection and how well it is meeting their needs. This would be a user study. The library staff decided to start with a use study, because it would provide objective data that might be helpful in countering negative reactions to future cuts. User input was not ignored; it was just not collected systematically as a first step.

**REVIEW OF RELATED LITERATURE**

Title-by-title tabulation of resource use is not a new method for evaluating current selections. A literature review revealed a study similar to the present one, conducted by Lewis Stieg at Hamilton College in the early 1940s [6]. He pointed out that collecting the data was very time consuming.

With the advent of automated circulation systems, title-by-title analysis of use of large collections is feasible. The first study of the use of current selections in a large research library, carried out at the University of Pittsburgh and reported in 1979, was made possible by the availability of complete records of all monographic acquisitions and circulation since 1968, as a byproduct of the automated circulation system [7]. A great uproar was caused by the finding that 39.8% of 1969 acquisitions did not circulate at all in the first six years and that a small proportion of the collection was responsible for most of the use [8]. In 1981, Larry Hardesty replicated the Pittsburgh study at DePauw University, a small liberal arts college, and obtained similar results [9]. He also found evidence that "careful selection helps in acquiring books that will be used" [10]. Gifts are used less than are selected books, librarian selections receive more use than do faculty selections, and some academic departments are better than others at selecting high-use books.

Recently, the University of Tennessee at Knoxville conducted an interesting study, first using automated circulation data to select frequently used titles and then using machine-readable cataloging records of those titles to look for commonalities in terms of subject headings, author, language, and date of publication [11]. Louisiana State University (LSU) also has done some work with selecting high-use titles from automated circulation records and examining the list of titles; LSU personnel are especially concerned about ensuring the continuing availability from publishers of high-use titles [12]. Virginia Bowden is studying
the automated circulation records for current monographs at five academic health sciences libraries [13]. She is looking at circulation by classification and year but not at the circulation of specific titles [14]. Annie Marie Ford of UIC is analyzing all monograph circulation records for a recent two-year period by subject classification to see if trends emerge [15].

One logical criticism of a study such as the present one is that in-house use is not taken into account. However, in 1980, Broadus concluded, based on his analysis of the conclusions of use studies, that "use within the library parallels circulation" [16]. The authors of the Pittsburgh study also reached this conclusion and were roundly criticized [17]. F. W. Lancaster maintains, "evidence exists to suggest that the books used in a library are more or less the same as those borrowed" [18]. On the other hand, the University of California, Riverside, recently found that 30% of monographs had either external use or in-house use, but not both [19].

A use study will provide valid guidance for making future selections only if past use predicts future use. Broadus concludes this is a valid assumption [20], and Lancaster and Baker agree [21–22].

STUDY METHOD

In the fall of 1989, the library staff examined each book included in the monthly new-book lists for July 1987 through September 1989. The number of times a book had been checked out was determined from the date-due slip, and the figure was recorded on the new-book lists. For books not found, circulation records were checked to see whether the book was in reference, on reserve, checked out, or missing. Books in reference, on reserve, and missing were so recorded, and those that were out were tagged and their use tabulated when they were returned. A small number of items remained in circulation at the conclusion of data collection and were so recorded.

Monthly data were transferred to sheets, one for each of 176 subjects listed on the new-book lists. The subject sheets were divided into twenty-seven rows labeled for month and year of acquisition, and nine columns were labeled "number of uses" (five categories), "reserve," "reference," "checked out," and "unaccounted for." For each cell, the number of books was counted and entered. The total number of books acquired in each subject category also was determined.

The data then were transferred to a large chart in which the rows were the names of the 176 subject categories, and the columns were labeled "number of uses," "reserve," "reference," "checked out," and "unaccounted for." Totals for each column were calculated to determine how many books had been used 0, 1, 2 to 4, 5 to 7, and 8 or more times, regardless of subject. The total numbers of books on reserve, in reference, checked out, and unaccounted for were also calculated and percentages were determined.

Sixty-one subject categories with ten or more acquisitions in the twenty-seven-month period were selected for further analysis to determine trends within specific subjects. This was done to reduce the vast amounts of data involved in working with 176 subject categories and because the author doubted that meaningful trends could be established for subject categories in which few books were purchased. The additional analysis focused on 2,306 (88%) of 2,625 total acquisitions. The sixty-one categories were classified broadly into basic sciences, clinical medicine, nursing, and "other"; and totals for each use category and percentages were calculated.

RESULTS

In the twenty-seven-month period under study, 2,625 books were acquired. Table 1 shows the number of books in each use category. Nearly 42% (1,094) of the 2,625 books added to the collection in the twenty-seven-month period had not been used at all. Another 17% (461) had been used only once, making a total of nearly 60% of recent selections that had been used only once or not at all. It should be noted that some books had been available on the shelf for more than two years at the time of data collection, and others (those added in 1989) had been on the shelf only a short time. Another point to remember is that the study focused on a mix of books selected by the former long-term librarian and others selected by the librarian hired in 1988.

Including 1989 data in the charts may have been unwise, because these books had not been on the shelf long enough for use patterns to be established. If appropriate automated circulation and date-of-acquisition data were available, it would be possible to adjust use of each book based on its time on the shelf. For a manual study, however, making such adjustments is labor intensive. In any case, if adjustments
are not made, there will always be a similar problem with books having different periods of availability, regardless of whether recent acquisitions are included or not. The advantage to gathering data for 1989 acquisitions was that it gave the new librarian some sense of the use of all the books she had selected.

Table 2 shows totals for the 2,306 books in sixty-one subject categories for which ten or more books were acquired, divided into the broad categories of basic sciences, clinical medicine, nursing, and “other” (i.e., subject categories, such as medical ethics, that did not fit into the other three categories).

Combining the totals for the first two rows reveals that for subjects in which ten or more books were acquired, 60.1% of the total number of books were not used or used only once. For basic sciences, low or no use was 63.0%; for clinical medicine 61.8%; for nursing 58.7%; and for other categories 47%. These figures make sense, because “other” includes many titles selected by the librarians for the reference collection and books in areas such as medical ethics, perhaps in demand by others on the UIUC campus, as well as by COM and CON personnel.

For the basic sciences, only a small group of books from the general stacks were used heavily. Basic science books on reserve were used heavily. For clinical medicine, high-use titles also constitute a small percentage of the total; because four times as many clinical titles were ordered as basic science books, this means large numbers of recently acquired clinical titles received little or no use. However, figures for the moderate use (two to four) category do indicate some clinical titles are being used. In nursing, where faculty actively recommend titles for addition to the collection, the percentage of moderate or high-use titles was only a little higher than for clinical medicine, where faculty rarely recommend titles for addition.

Individual tables for each of the sixty-one subjects also were developed. Scanning the totals for the basic science categories shows that anatomy, histology, and physiology books are used the most. Cytology, immunology, and virology are low-use subjects. Low-use clinical areas are communicable disease, metabolic disease, occupational medicine, clinical pathology, public health, respiratory, and urological. Among the clinical topics, AIDS, alcoholism, Alzheimer’s disease, and obstetrics and gynecology have the highest rate of use. Delivery of health care and epidemiology are the most-used topics in the “other” group.

The author determined that factors affecting book use are nature of use, method of acquisition, format, and subject. This was determined through examination of the aggregate data; intuition, informed by knowledge of the local situation; and more detailed examination of the raw data, which shows the use of each specific book. Use of reserve and reference books was not checked as part of the study. However, number of books on reserve and in reference is indicated as a separate use category. Books are not retained in the reserve collection unless they are used; hence, it is safe to conclude that books on reserve receive high use. Titles are placed in reference by librarians based on potential usefulness for answering reference questions. Those that are not used are moved from reference to the stacks; hence, it is safe to assume that most books in reference are used heavily.

Many faculty recommendations are used often, because faculty members are informed of their arrival and use these books themselves and recommend them to their students. Topic areas for automatic book shipment are chosen according to what the librarians consider to be the most important subjects for coverage in the collection. Results of this study showed that not all areas on automatic shipment were being used. Librarian selections also varied in level of use.

Examination of the aggregate data revealed which subjects were and were not being used. Apart from popular topics at LHS-U mentioned earlier, books on topics of interest to undergraduates doing term pa-
pers also are used heavily. Finally, detailed examination of the raw data also showed that basic treatments of any subject were used more than research treatments were. Hence, in terms of format, textbooks are more frequently used than monographs, proceedings, and continuations.

Recommendations were made to library management based on these findings. All recommendations were approved and implemented. Recommendations included limiting purchase of conference proceedings and continuations, checking use of the previous edition of a title before ordering the new edition, limiting purchase of titles held elsewhere on the Urbana campus to those specifically determined by faculty to be essential for duplication at LHS-U, reducing the automatic shipment plan to just basic clinical titles and a few other essential areas, consulting more frequently with nursing faculty for firm orders and with medical faculty when ordering research monographs, and instituting a series of departmental visits designed to inform faculty about selection practices and constraints and to emphasize the importance of faculty requests for titles truly needed for immediate access at LHS-U. The departmental visits also would help the librarians learn more about departmental research interests, priorities, and plans.

DISCUSSION

Title-by-title tabulation of use is significantly different from most monograph collection evaluation studies done in academic health sciences libraries because the primary indicator of excellence is use, rather than comprehensiveness of the collection. Especially for large academic health sciences libraries, it has been traditional to evaluate the collection based both on comprehensiveness and utility, with measures of the former often taking priority over measures of the latter, especially for monographs. Furthermore, this study differs from many use studies of large collections in that it examines the use of specific, recently purchased titles rather than use of an entire collection.

Title-by-title tabulation of use is very time consuming. However, availability of title-by-title use data enabled quick testing of ideas generated through intuition. It was also useful to have hard data to show the library committee when discussing changes in selection practices to be made as a result of the study.

Detailed, title-by-title analysis of use is feasible in a large library if automated circulation and bibliographic records exist and if the database is accessible to those wishing to analyze it. More detailed analysis is possible if the automated circulation system preserves date of addition to the collection, date of circulation, and user characteristics for each book used. For small libraries or small collections, such as a reference collection within a larger library, manual studies such as the one reported here could be done. Although this study covered only external use, the two major categories of in-house use, reserve and reference use, were taken into account, leaving only browsing as an unknown factor. Another point to remember concerns the assumption that past use predicts future use. Even though this assumption is likely to remain valid, a librarian still would have to be aware of new curricular and research programs and begin to buy in those areas even if there had not been past use.

A follow-up study has not been attempted because of the labor involved in gathering the data, but the author's subjective impression is that LHS-U is making better use of limited funds by taking steps to minimize the selection of potential low-use titles while at the same time ensuring timely purchase of potential high-use titles. Faculty complaints about the collection are minimal. Other improvements have complemented those resulting from the study: while the monograph use study was underway, document delivery mechanisms were examined and improved and steps were taken to sharpen the focus of the serials list. The selector's growing familiarity with the unique local situation undoubtedly would have resulted in a change in selection practices; the use data merely helped confirm that the correct steps were being taken.

CONCLUSION

Although the nearly 60% rate of low or no use for recently acquired monographs may not be precisely accurate because of varying lengths of shelf availability, it is nevertheless a startling result. It more than confirmed the librarian's subjective impression that not all additions to the collection were being used. Availability of hard data in aggregate form also made it very clear that something could be done to make better use of limited funds.

The study has bolstered confidence that it is possible to focus selection on monographs with the highest potential for use and to depend on remote access for other needed works. In the face of rising costs, resource sharing, and improved methods of transmission, the important objective for even large academic libraries increasingly has become access to as opposed to ownership of resources. More and more, the key to effective collection development is to select only materials that will be used and to ensure remote access to the rest. Small libraries, such as most hospital and college libraries, always have had to depend on access to outside collections. Selecting only items of immediate potential utility is routine. Larger libraries may have difficulty with the transition to selecting

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only items of high potential use and depending on alternative means of access for other titles.

LHS-U is particularly fortunate to have local access to a large general academic collection and to have convenient access to a large academic health sciences collection. Therefore, cutting back on acquisitions was not as difficult as it might be for other academic health science libraries of any size.

The use study of recent monograph selections has convinced the staff at LHS-U that a comprehensive collection is not needed to serve users well. Other health sciences librarians undertaking such studies also might become convinced that users could be well served without a local comprehensive collection and that space could be saved and money better spent elsewhere. It now may be valid to ask if every academic health sciences center needs to have a comprehensive collection. Maybe the day will even come when academic health sciences librarians do not want to have a comprehensive collection.

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