# INTEGRATED LIBRARY SYSTEM STATISTICS

The integrated library system (ILS) can function as one of the most important tools in measuring overall library activity. The current generation of ILS provides a set of built-in reports, providing the sets of statistics most commonly needed for routine operations. Most also include ad hoc reporting capabilities to produce reports on any aspect of use of the system as they are needed. Although the primary focus of the ILS reports may be measurement of traditional library activities, such as those related to the circulation of items in the physical collection, such reports also can provide useful information about the use of electronic resources and virtual services.

The library's ILS provides many functions that fall under the category of electronic use:

- Online catalog searching. Distinguish searching performed in the library from that done remotely.
- Web-based renewal of items previously checked out
- Placing holds or recalls on materials checked out to others
- Review of the user's library record, such as items currently checked out, any fines owed, or balances
- Online payment for fines, document delivery requests, or photocopying
- Interlibrary loan requests
- Document delivery requests

## Reporting capabilities

### *Documenting shifting use patterns*

Each successive generation of Web-enabled OPACs seems to offer new services that were previously accomplished only by coming into the library. As users perform these tasks remotely instead of visiting the library, the ILS is expected to provide statistics that measure these activities. As libraries provide new levels of convenience for patrons, libraries should be able to document these activities. If the provision of services to remote users results in diminished foot traffic in the library itself, developing statistical measures of the relevant electronically provided services becomes critical.

### *Measuring remote use*

People located outside the physical library building do a significant proportion of online public access catalog (OPAC) searching. Although a library user may come into the library to check out an item, most libraries provide the ability to renew items remotely. Users can review their library record to see what items they have checked out and any fines owed. With the new generation of MyLibrary-type personalized online catalog interfaces, many additional services may be possible. Users may, for example, choose to receive listings of new items the library has acquired in specific areas of interest. They may have avenues of communication provided to them with a librarian matched to their research topic in the form of e-mail, Web

forms, or online chat. Document delivery and interlibrary loan services are increasingly being integrated into online catalog systems, enabling remote users to initiate requests electronically.

### Measuring access of electronic materials

Most libraries provide catalog records for all their electronic titles in addition to their physical collections. The library's Web-based OPAC then serves as one of the primary ways that its users gain access to this material. Practically all the online catalog products available today include support for the 856 field of the MARC record that records the item's URL and can present this field to the user as a clickable link.

An ILS may be able to track the number of times that users view a catalog record. Knowing the number of times a user clicks on the 856 link and accesses the resource is more difficult. Most Web OPACs do not have the ability to count use in this way. But, by presenting the link in such a way that it passes through a pass-through script, this information can be recorded. This technique is detailed in Chapter 6.

Significant limitations exist in the level of information the ILS can capture and report regarding the items of electronic content to which it provides access. The ILS tracks the use of physical items in the library's collection through its circulation module. The use of any item can be measured through the number of times the item has been checked out or renewed. The use of materials in the library but not checked out can be counted by scanning items into the system before they are reshelved. But since access to electronic resources does not depend on the circulation system, the ILS cannot provide the same level of use statistics for these materials.

### Acquisitions of electronic materials

The ILS has long been the vehicle used for managing the library's physical collection. Most systems include an acquisitions module that automates the tasks involved with procuring new material. Library personnel use this module to order items, initiate payments, receive shipments, perform initial cataloging, track budgets, and perform a panoply of tasks related to adding new items to the collection.

The process of acquiring electronic content differs in many ways from that of physical materials. Negotiating a license for access to a Web-based resource, for example, bears few similarities to ordering and receiving a book. As the library designs its internal processes for how electronic materials are handled in the ILS, many steps in the normal workflow of tasks don't apply. Some aspects of handling electronic resources do not exactly correspond to features built into the system and need to be shoehorned into an ill-fitting structure. The library may want to create categories and codes that clearly distinguish electronic materials from others. Having budget numbers or subaccounts, item types, locations, or other applicable information established for each category of electronic materials can set up the groundwork for a comprehensive reporting structure that includes both traditional materials and electronic content. ILS vendors will likely evolve their systems over time to improve their ability to handle the acquisitions of electronic materials.

Using the acquisitions module of the ILS to manage electronic resources as well as traditional materials enables the library to maintain a comprehensive view of its spending. Some key statistics that can be known as a result of integrating electronic materials into the standard acquisitions process include counts of the number of new electronic resources purchased or continued in a year and the percentage of the budget spent in this area.

### Collection reports for electronic resources

An ILS includes a reporting module that should provide many standard reports that describe and characterize a library's collection in detail. Typical reports include summaries of the numbers of items of each type held, according to various categories. Libraries usually need to know the numbers of items in each subject or academic discipline and how many items they own of each format or media: books, journals, CD-ROMs, DVDs, videotapes, and so forth.

The management and reporting features of the ILS apply equally well to electronic materials. The acquisitions and serials modules of the ILS can be employed for ordering, budget tracking, and most other tasks related to the procurement of electronic content. To the extent that all items of electronic content are entered into the ILS and are coded in appropriate categories, reports can be generated that portray the quantity of electronic content the library owns. If electronic content is purchased through the ILS acquisition module, then the library is able to report the amounts and percentages of budgets spent in electronic versus traditional content.

As the number of electronic titles increases, the acquisitions staff develops routines that automate their management. The ILS acquisitions module likely works better for managing the procurement of licenses to electronic content than a set of home-grown spreadsheets.

### OPAC search statistics

The key function of the Web OPAC is as a search-and-retrieval system for the library's collection of resources, both physical and virtual. Ever since OPACs came on the scene, they have been the subject of studies related to their use. Careful study of the library's OPAC access logs can reveal signs of success and signs of failure and frustration experienced by users. Many quantitative measures can be obtained:

- **Number of visits to the main Web OPAC page.** This number might be a simple count of the times the page was viewed, or it could represent the number of search sessions or logins. The latter number is more meaningful, since many sessions may involve multiple searches performed from the Web OPAC's initial page. Some visits to the OPAC's main page do not result in any queries. Some users may come across this page when looking for some other resource. Exclude accesses by Web-crawler robots from the raw page counts.

- **Number of searches attempted.** A count of the number of queries entered into the system is more than the number of user sessions, given that some users perform many searches during a given sitting.

- **Counts of searches by fields specified.** These fields include author, title, subject, journal title, ISBN, general, and so on. Reports of searches

by query type (keyword, browse, exact match) help the library under-stand its users' favorite ways to search the catalog. The type of searching done can be used to inform cataloging practices and interface customizations. If a library were to observe, for example, that most users perform general all-purpose keyword searches, then adding abstracts or reviews into the catalog records might improve search capabilities.

- **Some systems record lists of search terms entered.** These search strings also can be used as the basis for statistical analysis. Information about the most frequently entered searches can be used to help in selecting new material. If the topics indicated by the OPAC's most frequent queries do not correspond to current collection strengths, new materials can be added accordingly. Query logs also can be used to identify frequently misspelled words when searching. Cross-references or other similar techniques might be used to help users find results despite such errors.

- **Number of searches with 0 results.** These searches can reflect an error in the way the user entered the search, and they can be used to identify items needed by users but not owned by the library. These searches can also be treated as indicators for sections of the library's collection that need to be strengthened.

- **Number of searches with unmanageable results.** Searches that return huge numbers of records can be difficult to interpret. Establishing a threshold of result size that is considered unmanageable might be useful. Counting and analyzing queries that result in these overlarge results may identify improvements needed in the interface design.

- **Transaction log analysis.** For just about as long as online catalogs have existed, librarians have studied their transaction logs to study their performance and efficiency. These studies can include the basic counting of transaction types, such as those mentioned above. Most go beyond counting transactions and focus on studying the patterns that emerge in search sessions. Transaction log analysis serves as a tool for understand-ing in detail the ways that users interact with the online catalog. Given the stateless nature of Web-based online catalogs, re-creating a search session can be more difficult than it was with earlier Telnet-based systems. Techniques, such as transaction log analysis originally applied in the library environment for studying use of online catalogs, as shown below, also are well-suited for analyzing the library's Web site.

The analysis of a library's online catalog can be a time-consuming activity. The number of transactions recorded in an access log can number in the tens or hundreds of thousands, or even larger in a month. Detailed analysis of these files on a continual basis is probably impractical. A more reasonable approach might involve producing basic statistical reports that provide the basic use counts as described above on a monthly basis, supplemented by performing transaction log analysis or other detailed studies only during selected dates a few times a year.

### Practical guidelines

The library's ILS can be used as a tool for measuring electronic use in many ways. What follows is a listing of the specific statistics that might be pro-duced using the reporting module of your ILS. The procedures for generat-ing the reports vary from system to system.

- **Online catalog statistics.** These counts of the total number of sessions measure the overall amount of searching done to find items in the library. Since few libraries continue to offer card catalogs, no equivalent nonelectronic comparative statistic may exist.

- **Searches by category:** author, title, subject, general keyword. If possible, collect counts and summarize for each type of searching available. These numbers help you understand how end-users approach the catalog and can help indicate whether improvements are needed for the search interface and cataloging practices.

- **Online catalog searches:** in-library versus remote. Librarians find that separating online catalog searching activity that takes place in the library versus that done externally is useful.

- **Items checked out.** Compare circulation desk requests versus requests made through a book delivery service. This number measures how library users obtain books and other physical materials. Although the vast majority are still likely checked out by in a physical visit to the library, are there trends toward providing physical materials to library users without requiring them to visit?

- **Books checked out vs. e-books read.** Compare the use numbers of printed books versus e-books. What is the relative number of each in the collection? How do the circulation statistics for books checked out compare with the number of e-books accessed?

- **Items renewed:** circulation desk versus Web service. Although visiting the library for the initial checkout of a book is usually necessary, an increasing number of libraries offer the ability to renew items through their Web OPACs. What are the relative numbers of renewals performed in person versus those accomplished remotely?

- **Holds placed.** Compare numbers for circulation desk versus Web service. This example reflects another category where the library user can perform the task in person or remotely through the Web OPAC.

- **Payment of fines and fees.** Compare numbers for circulation desk versus Web service to measure the degree that the library can conduct financial transactions electronically versus in-person.

- **Interlibrary loan requests.** Many Web-based OPACS include a way for users to initiate an interlibrary loan request for items not owned by the library.

- **ILS collection reports.** As noted above, you can use the ILS reports to create reports that summarize the categories of materials in the collection. Comparative statistics can be produced that show the number of electronic materials versus physical ones in each of the major categories, especially journal titles and books.

- **Acquisitions reports.** If the ILS acquisitions module is used for the procurement of electronic as well as traditional materials, reports can be generated that summarize the relative expenditures for electronic content versus printed materials.