Mind the Gap: Using Patron Actions to Identify Holes in a Library's Collection

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Abstract

If you ask users about what collection resources they need for their research, often they seem to need access to everything. But is this a case of shooting for the moon or is there a demonstrable need for access to everything? Even if libraries wanted to, limited financial and space resources keep them from supplying every resource users may need. Libraries have done significant work to assess their collections based on the materials they have purchased or licensed. But how do libraries know what they do not have? Can the use of indirect observation methods determine users' most critical unmet collection needs? This lightning talk will discuss the pros and cons of various techniques for identifying unmet needs including interlibrary loan statistics, library catalog or discovery system searches, and turn-away statistics, among others.

Collection development is often a series of educated guesses about the research needs of faculty and students and the acquisitions of materials needed to support the curricular needs of the university. Libraries have a history of assessing the materials that have been purchased to determine if they are meeting the needs of their patrons. Less formalized work has been done to identify gaps in library collections. Libraries have examined requests for materials as well as anecdotal information from staff at service points about requested resources that were unavailable. Asking patrons about their resource needs through surveys or other techniques could lead to a large number of requests spread across a number of different subjects. But does that reflect actual research or curricular need—or more pie-in-the-sky dreaming? This paper outlines sources of information that can allow libraries to take advantage of user behavior to identify gaps in the collection.

Literature Review

The literature demonstrates a variety of techniques libraries have used to assess their services as well as their collections. One such method is examining responses placed into library suggestion boxes. Andrew K. Shenton outlined some of the advantages and disadvantages of gathering information through suggestion boxes. These disadvantages can range from ethical concerns of how the information will be used to what the suggestions are actually reflecting. He writes, "Furthermore, if suggestions do merely reflect dissatisfaction with the library, the ideas contributed may well be as much expressions of wants as actual needs, although, as Shenton and Dixon note, LIS commentators have for years debated the precise differences between the two concepts."[1] In their article, Cecile M. Farnum, Catherine Baird, and Kathryn Ball discussed some of the benefits of suggestion boxes as an assessment tool, including, "Since most libraries already have a suggestion box in place, it can be a low cost method of gathering user feedback. Surveys, by comparison, can be very expensive to administer."[2] They later identified the primary conditions under which the data gathered from library suggestion boxes would be used:

- Libraries are more likely to use the suggestion box as a gauge of user satisfaction and in decision making if the suggestion box is on their homepage.
- Libraries are more likely to use their suggestion box as a gauge of user satisfaction and in decision making if they post suggestion responses publicly.
- If more than one person is involved in responding to suggestions, the suggestion box is more likely to be used in decision making.[3]

Suggestion boxes have been demonstrated to be a low-cost tool for gathering user feedback. However, the feedback has most often been about services or facilities.

Libraries have frequently examined use of the collection to gauge how well it is serving its user population. George S. Bonn detailed a number of techniques libraries could use to evaluate their collections, including compiling statistics, checking lists, catalogs, and bibliographies, obtaining user opinions, direct observation, and applying standards. Some of the statistics Bonn mentions reflect observations of user behavior—interlibrary loan requests and circulation.[4] Paul Metz and Charles A. Litchfield noted the number of use studies that had been generated in the library literature while also noting the difficulty in generating generalizable conclusions from the studies. In order to try to address the need for more generalizable information, they studied the use of materials by subject at the Virginia Tech Library. In the study, they hoped to answer the questions:

1. How do various kinds of use differ at the subject level? Specifically, how similar are in-library use and circulation patterns? How different is the use of current periodicals from other use?
2. How stable are circulation patterns, by subject, across a time period as long as five years?
3. How large a sample is the minimum size required to yield reliable estimates of use?
4. To what extent do differences in library holdings across subjects artificially affect the correlations among use measures differing in kinds of use measured, technique or measurement, or time period?[5]

Another use-based study was Karen C. Kohn's study focusing on the library's support of parts of the undergraduate curriculum. For this study, use was based on circulation. By assigning a call number range to a selection of undergraduate courses, Kohn examined the number of books the library owned in those particular ranges and circulation data about those ranges. After analyzing the data, she found a small number of courses for which the library had no materials supporting them. The majority of the courses, however, had an average of 175.15 books supporting them.[6] The information was not gathered with an eye to assessment, but "rather to enable our collection development activities to become better informed."[7] Like many other studies, collection information has often been gathered to learn about the collections themselves. Other usage studies have looked at particular parts of a library collection and measure use through different methods. Jane Kessler studied use of reference materials over the course of a fall semester. Use in this case was determined by the number of times an item was re-shelved. Unlike circulation statistics, re-shelving statistics are not able to capture multiple uses of an item before it is re-shelved.[8]

Another technique libraries have used in collection development has been citation analysis. In her paper, Linda C. Smith discusses the development of citation analysis and possible uses in libraries. She later goes on to discuss critiques of citation analysis ranging from the assumption that "citation of a document implies use of that document by the citing author"[9] to "all citations are equal."[10] Even with these critiques, she describes some uses of citation analysis, including collection development, primarily for journal collections.[11] Citation analysis has been used for collection development in particular subjects or looking at library support of particular types of students. Sherri Edwards used citation analysis to examine the University of Akron's polymer science collection, using it to gauge title dispersion, format of materials cited, and cost effectiveness of journals.[12] Reba Leiding examined the bibliographies of upper-level undergraduate papers to assess the library collection at James Madison University. She examined the types of sources cited over time and their availability at the library.[13]

Interlibrary loan borrowing statistics is another tool libraries have used to evaluate their collections. Gary D. Byrd, D. A. Thomas, and Katherine E. Hughes compared book acquisitions to interlibrary loan requests at three health sciences/medical libraries to examine if this information could be used to assess collection balance.[14] William Aguilar developed a ratio of library holdings to circulation and a ratio of library interlibrary loan borrowings and library holdings. With these ratios, he posits four rules about a library's collection and how a library might respond. Those responses range from purchasing additional materials to support a subject to determining if a subject is a "dead" subject and materials in this area should no longer be purchased.[15] More recent articles have been examinations of the use of circulation and interlibrary loan statistics by subject[16] and articles examining circulation and ILL data to assess how well library collections are filling user needs.[17]

Techniques for Identifying Collection Gaps

While much of the literature has addressed the various methods that can be used to assess materials that have already been acquired by the library, there has not been as much specifically written about identifying gaps in the collections. With a slight change in focus, many of the techniques used to evaluate an existing collection can be used to identify gaps. One such technique is looking at library catalog or discovery services search logs. One way libraries can use these logs is by examining searches that revealed no results. These searches show resources that patrons were trying to access that the library did not have access to. Libraries may not want to acquire materials that were only searched for one or two times; however, titles that continue to come up may warrant examination by collection development librarians. Another technique that could be used with catalog search logs is a textual analysis of subject or keyword searches that produce few results. These searches could represent areas of new curricular or research interest at the university that have not been brought to the attention of the library. While catalog or discovery service logs can be useful for identifying holes in the collection, there are some caveats to keep in mind. Some of the zero result searches may be typos. Other zero or low-number result searches may indicate a misunderstanding of how the system can be searched as well as the types of materials that can be located through it. These searches may indicate more of a need for increased user instruction than a need for additional library materials.

Libraries have often used usage statistics for their electronic resources as a metric for determining whether or not to continue subscribing to a resource. These usage numbers, combined with other data sources, can give libraries the opportunity to identify changing needs. By examining usage numbers over years, libraries can see when minor fluctuations in use become marked decreases in use. This decrease can signal to the library that a closer look needs to be done at this resource. Marked decrease in circulation of materials in a particular subject is also a tool that can be used to identify parts of the collection that need to be examined more closely. Decreases in use of an electronic resource or decrease in a library's collection in a particular subject might say more about the particular resources themselves. However, by looking at this information together, libraries can get a picture of changes in research and curricular focus. Does a decrease in the use of a subject-specific electronic resource combined with a decrease in circulation of print materials reflect a decrease in the number of patrons these materials are supporting? Has the focus of research in this area changed such that materials libraries are currently collecting no longer meet the current research needs? While examining decreases in materials use will not provide libraries with a list of new titles to acquire or define new research areas of interest, it can identify parts of the collection where the library may want to take a closer look for possible adjustments to the collection strategy. Some things to keep in mind with examining usage numbers, particularly electronic resource usage numbers, are that a complete stoppage of use may reflect an access issue. If patrons are not able to access a resource, that will correspond with a lack of use. However, if access has been lost for several months and the library was not made aware of it, collection development staff may want to examine if there is a desire for this resource. Also, curricular requirements in a program may change and require less research from the students. These changes can manifest themselves in a decrease in usage of both print and electronic resources.

A related technique to examining usage numbers is citation analysis. Libraries can examine the materials cited in the bibliographies of faculty research, dissertations and theses, and undergraduate honors papers. Libraries have frequently used this information to gauge how well the library has supported student and faculty research by the number of materials cited that are owned or accessible through the library. By looking at materials that were not owned or licensed by the library, collection development staff can identify trends in frequently used titles or subject areas where the library's collection is not able to fully support the community's research needs. By looking at where faculty are publishing their research and determining if the library has an active subscription or license to the content, libraries can identify titles that they may want to add subscriptions to. By adding these subscriptions, the library provides access to faculty members who may want to study a journal before deciding to publish there. Subscribing to the journals where faculty frequently publish also makes sure that the library is preserving the scholarly output of their faculty. In order for this information to be most useful, citations will need to be analyzed for an extended period of time in order to determine if a resource was used for a single, specialized research project or if there is more widespread need for the resource.

Another source of information about gaps in the collections is interlibrary loan statistics. While ILL statistics have been used to look at the balance of a library's collection or how well it is supporting user needs, these analyses are reflective. By looking a bit closer at what is being requested, libraries can react to this information and identify materials that might be valuable to add to the collection. Interlibrary loan requests are concrete examples of materials that users wanted to access that the library did not have. As with searches in the catalog or the discovery system, requests for materials through interlibrary loan that receive a small number of requests most likely reflect that patrons are being well-served by the materials that the library is collecting. Items, however, that have a large number of requests reflect a continuing need that the library is not serving. Unlike selecting materials in a subject hoping that they will fit the curricular and research needs of the patrons, with interlibrary loan requests, the library has a strong indicator that these materials are needed and wanted. While interlibrary loans can be particularly valuable for filling in collection holes on a title-by-title basis, subject analysis of materials that have been requested can help libraries identify areas where there is a need to increase focus. After examining the subjects of materials frequently requested through interlibrary loan, libraries can determine if the requests are for materials in a new area of research within the university. Are the requests in a growing subfield of a subject that the library currently collects in? In addition to gathering information about the subjects for materials being collected, information about who is producing that information can also be helpful. Are interlibrary loan requests coming in for subjects where the library is already strongly invested? If they are, are the requested materials clustered around particular publishers? Taking this information, libraries can make adjustments to their approval plans to include materials from these publishers, or collection development librarians can add analysis of these publishers into their title-by-title decisions. Examining both frequently requested titles and frequently requested subjects can give libraries a place to start in looking at how and why things might have been missed in other collection development efforts. Title and subject information gives the library targeted places to look at current collection development strategies in order to make adjustments.

Interlibrary loan statistics can be useful to libraries in filling collection gaps, but they should be used with care. If possible, libraries should try to determine if the requests reflect a short-term need. Were the materials requested for a class that will only be offered once? Were the materials supporting a visiting scholar? While it is important to understand if requests are being born of a short-term need, respecting patron privacy is also important. While interlibrary loan requests are beneficial for identifying patron needs, they will only reflect the needs of patrons who were willing to expend the effort to place the request. ILL stats will not give a picture of the material needs of those who opted not to use or did not know about the service.

Another useful gauge of patron need is turn-away statistics. By examining the journal titles that patrons tried to access, libraries can get a picture of resources that patrons might have wanted to access. Again, by looking at these statistics over time, libraries can begin to gauge the possible need to add subscriptions to these journals. While these statistics can be useful for identifying materials patrons had wanted to access, examining these statistics over time will be most useful to identify continuing needs as opposed to a short-term need that might be best met by interlibrary loans. Another question that collection development librarians will want to keep in mind is whether or not the attempt at access represents a "real" need or more of a curiosity because an article came up as a related article. Also, like with stoppages of usage, turn-away statistics may reflect content access issues. Sometimes access to resources can be accidently turned off and patron need for the resource is reflected in turn-away statistics. However, presence of turn-away statistics for materials the library should have had access to can be used to demonstrate continued patron need for the resource. Patron use of books through patron-driven acquisitions (PDA) can also be helpful for identifying holes in a collection. Collection development librarians can examine materials selected by subject, publisher, or other methods. The library can then work to determine if these types of materials would have come into the library through other methods such as the approval plans or through title-by-title selection. While PDA may be supplementing the materials that are already coming in, they may be materials that the library would have not known to collect. PDA gives patrons the opportunity to vote with their feet as it were.

As noted in many of the techniques possible for identifying gaps in the collection, many of them require the use of statistics over a number of years in order to identify long-term needs. Looking at the variety of sources for information about holes in the library's collection, library staff will need to develop ways to prioritize which holes to fill. Will the library focus on filling holes in collections supporting larger departments? Or will the library focus on departments that are growing? Another strategy would be to focus on holes in collections supporting newer departments. Or the library can focus on disciplines or areas of focus in the university's strategic plan. These are just a few of the areas libraries could use to determine where to start. And once an area or two has been decided upon, many of these techniques, such as changes in usage patterns or examining interlibrary loan statistics, may benefit from conversations with patrons served by these collections. The identification of gaps can provide a conversation starter with patrons.

But some may be asking, is the effort to identify these holes worth it? Using these varied techniques can be labor intensive and often are only useful over the long term. Individually, libraries will never be able to meet every need. Wouldn't it be better to rely on interlibrary loans to meet those needs that the library collection budget does not? And even if libraries identify collection needs that they would like to fill, will there be funding in order to do that? This is where having a plan to prioritize which collection gaps the library would like to fill can be beneficial. If the library is able to identify collection gaps that, by filling them, would support university goals, a stronger case can be made for requests for additional funding. Or could libraries use information about decreasing use of particular parts of the collection to redeploy those financial resources to newer areas of research and curricular interest? With the various collection management statistics available—interlibrary loan statistics, electronic resource usage statistics, circulation statistics, and others—libraries can gauge how well the collection is meeting users' needs and identify collection gaps in an effort to put collection dollars where they are more needed. The use of these statistics combined with partnerships through library consortia for services such as reciprocal borrowing and interlibrary loan allow libraries to extend the resources they are able to offer to their patrons.

Endnotes

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