Overall circulation as an indicator of library use is less important than the behavior of the individual library user at your college or university

By Rick Anderson

Everyone knows, or assumes, that use of academic libraries' physical collections—especially of printed books—is dropping. It's been a topic of discussion for years, and statistics bear out the conventional wisdom: the 2007-08 statistical report of the Association of Research Libraries (ARL) indicates a 26% drop in initial circulations for its member libraries since 1991, while the National Center for Education Statistics' 2006 report on academic library data reports 144.1 million circulation transactions among academic libraries generally, down from 229 million reported by that agency in 1992—a decline of 37%.

Reading behind the numbers
Standard circulation figures don't tell the whole story, however. Raw traffic and usage numbers do matter, but more important to the future of libraries are trends in the behavior of individual library users.

It's possible to tease out those trends from the available data but only if we control circulation figures for changes in the size of user populations. In other words, knowing how many books circulate in a given academic library is important, but since it's the behavior of individual patrons that will determine the future of libraries, it's much more meaningful to know how many books the average patron checks out.

At most academic institutions, enrollment tends to rise over time. If enrollment rises while circulation numbers remain the same, then the borrowing behavior of individuals is not actually remaining the same—it's declining.

With these issues in mind, the data for this study were collected as follows:

1. Initial circulation data were gathered for each ARL institution beginning in 1995 and ending in 2008 (the most recent data available as of this writing)
2. Full-time student enrollment numbers were gathered for the same years
3. For each year in the study period, initial circulations divided by full-time students yielded a per student circulation rate
4. For each ARL institution, the annual numbers describe a circulation rate trend for the period 1995–2008.

There is not room in this article for a full presentation of all the data, but a spreadsheet with the complete dataset is publicly available at bit.ly/m79H1K. All circulation and enrollment source data are taken from annual ARL statistical reports, available online at bit.ly/jCc5kF.

Table 1 (p. 39) presents three data points for a handful of ARL members (a complete table representing all ARL institutions is available at bit.ly/k7cDPN). The first data point, labeled "% Change (Raw)," indicates the change in initial circulation numbers between 1995 (or earliest available date, as indicated in parentheses following the library name) and 2008. Initial circulations are used because total circulation figures would include renewals, and the purpose of this particular study was to look only at changes in the average number of items checked out per student over time. The second data point, labeled "% Change (Rate)," indicates the degree to which the number of circulations per enrolled student has changed between 1995 (or earliest available date) and 2008.
The third data point indicates the difference (in percent) between the previous two numbers. So, for example, the University of Houston, TX, saw a 54% decline in initial circulations between 1995 and 2008; however, the rate of decline in initial circulations—the decline in the number of initial circulations per enrolled student—during that same period was 64%. In this case, the decrease in circulation rate is 19% steeper than the decrease in raw circulations.

Moving beyond circ
What do these data tell us—and what do they fail to tell us?

While the percentage of change for each column is interesting, perhaps the more compelling data point is the difference between the raw number and the rate. In a few cases, there's hardly any difference: when adjusted for enrollment, the University of Cincinnati's circulation decline steepens from 63% to 67%, for example, and MIT's goes from 56% to 58%. However, in most cases the difference is significant, and in quite a few it's dramatic. The University of Alabama saw a decline of 31% in initial circulation transactions during the period studied; the adjusted rate of decline, however, is 50%.

Even greater differences can be seen between the raw and controlled circulation data reported by Columbia University (-16% vs. -50%), the University of Illinois at Chicago (-52% vs. -80%), and, most dramatic of all, the University of California, San Diego. There, shallow circulation growth and exploding enrollments have created perhaps the most misleading raw circulation figures of all: initial circulation transactions there have increased by 13% since 1995; however, the number of initial circulations per student has dropped during the same period by 35%. Controlling for enrollment reveals dramatic percentage differences between the change in raw circulation and the per student rate in quite a few cases: UCLA (233%); UC-San Diego (369%); Oklahoma (414%); Pennsylvania (600%); and, most spectacular of all, Johns Hopkins (617%). Not all of these percentage differences represent huge disparities in real numbers, of course—the 600% difference at the University of Pennsylvania is between a 1% increase and a 5% decrease over the period examined—but where large differences exist between apparent and actual circulation trends, they illustrate a real problem with at least one of our traditional measures of library use.

Clues to change
This discussion raises a question, though: Why does per student rate matter more than raw circulation figures? One could argue that circulation is circulation and what keeps a store in business is the amount of merchandise sold, not the number of customers doing the buying. The problem with this view is that it ignores the central importance of individual behavior to the future of libraries. If the average user in 2008 checked out 80% fewer books than the average student in 1995, then there is an important message in that fact for libraries. If enrollment drops, students won't magically start checking out more books.

Even the specific, individual numbers themselves are not accurate representations of the actual circulation behavior of any typical student: the circulation figures reflect the behavior of faculty members and (in many cases) members of the general public as well, which means that they are artificially high as far as student behavior is concerned. What matters to the future of each library is not so much whether the “typical” student checks out 55 or 58 books per semester but whether the number of items checked out is growing or shrinking and how quickly. What this study seeks to measure for each institution isn't the exact amount of per student circulation at each institution in any given year but rather the rate of change over time in the number of average per student circulations—in other words, the shape of the curve rather than the exact height of the curve.

It's also important not to misunderstand the significance of circulation numbers. A library that circulates fewer books isn't necessarily doing anything "wrong," nor is it necessarily serving fewer patrons or offering its patrons less service. Actually, a library that moves large amounts of its collection online is likely to see drastically fewer physical circulations even as it fosters greater use of the collection overall by making it available more easily, remotely, and around the clock. Exposing the real extent of circulation declines in ARL members isn't just to sound an alarm about decreasing use of print collections but rather to expose more fully the shape of changes in patron behavior. Those changes have generally been more radical (in many cases dramatically so) than an examination of the raw circulation figures alone can reveal.

The data in Table 1 strongly suggest that the trend away from print books is even more pronounced than we've often understood or assumed. But for each individual library, the trends in the world at large matter less than the trend in that institution. These data, which are general and leave many, many other variables unexamined, should prompt a broader and more rigorous study at each individual library.