

Using Database Use Reports to Assess Library Instruction

by Judith Garrison

The statistics documenting how electronic databases are used hold potential for assessing the impact of library instruction, especially in the case of online tutorials. Database use statistics are collected by the database vendors unobtrusively, they are readily available, and they are increasingly standardized. As such they offer the possibility of reliable indicators of the behavior of the users of electronic databases, and usefulness in the assessment of library instruction.

In 1999, with the launch of the Texas Information Literacy Tutorial (TILT), instruction librarians embraced the online tutorial and never looked back. Using Web-based, interactive tutorials, librarians have been able to deliver instruction to distance education students who cannot come to the library. Being able to assign an online library tutorial can also appeal to instructors in face-to-face classes, especially those who have little time to schedule a traditional library instruction session for their students. Furthermore, online instruction often suits the learning styles of some adult learners as well as Gen Y students who want to find what they need on the Web. For these reasons and more, over the past ten years Web-based library instruction has become a staple of many library instruction programs.

Ten years, however, encompasses a remarkable evolution in the software, hardware and infrastructure that supports online instructional tutorials. Today, YouTube has become part of our daily conversation and nearly every commercial Web site offers audio-video clips. Software applications like JING (<http://www.jingproject.com/>) and Captivate (<http://www.adobe.com/products/captivate/>) make screen capture videos fast and easy to produce, and sound tracks and narration can be added with little effort. Plus, we expect most of our students to have the devices that will display what we create. Short instructional videos appeal to a wide audience and can be accessed when and where students need the information provided. All in all, screencasts still present a valuable tool for instructional librarians, but one that has an increasingly diverse application.

In our library we have two tiers of online tutorials, and to clarify the differences I will refer to them as type A

and type B. Our type A tutorials are the instructional pieces modeled after the Inflite program (<http://inflite.ulib.iupui.edu/>) at Indiana University-Purdue University Indianapolis (IUPUI) which teach basic research and information literacy concepts and skills. These tutorials require substantial amounts of time and effort to develop. They are intended to be used for a period of years and be available to students from a wide variety of disciplines. Conversely, type B tutorials are products that are created quickly and have a narrow, skill-based objective. Constrained by time or distance, instructional librarians are often developing these short screencasts that provide the instruction traditionally done in a customized "one shot" visit to the classroom. They are usually intended for a single course or department and used for a limited amount of time.

What we don't have, however, are two tiers of assessment. With type A tutorials, multiple assessment methods are used to ensure usability and attractiveness to students and faculty, including surveys, focus groups and usability tests. Frequently, pre- and post-tests are included for direct assessment of student learning. Considering the resources necessary to create this type of tutorial, and the amount of use it is expected to receive, these assessment measures are appropriate.

Type B tutorials are quick to produce and pushed to a targeted audience. The investment of time and resources for development does not justify the time-consuming assessment measures used in the past for type A tutorials. Instead, librarians need to expand the array of assessment tools we use so that we can gauge the impact of this newer form of instruction.

A Case in Point

Assessing the impact of one of these type B tutorials was the problem I faced during the summer of 2008. Early in the summer I was approached by an instructor teaching an online business course. Based on her experience in teaching the distance education class the year before, she had a very specific need. She wanted a short tutorial demonstrating the use of a business database to find and retrieve full-text scholarly journal articles.

Using screen capture software, I quickly created a short tutorial that showed the steps students would be required to take. (This is what I would describe as a type B tutorial.) The instructor linked it to her class Web pages and strongly encouraged her students to view the instruction provided.

Typically, my assessment of the screencast would be inferred from the instructor's comments. In this case, however, I also asked our electronic resources librarian for a report on how often the database was used during the time the class was taught in 2007 (without the tutorial) and 2008 (with the tutorial). My colleague was able to direct me to a variety of reports I was surprised to find available. In this case, I was able to document an increase in the number of times the database had been used compared to the previous year the instructor had taught the class. In addition, by comparing different categories of data, I found evidence indicating that the tutorial helped students use the database more efficiently, finding and retrieving articles more quickly than before the tutorial had been available.

These findings were possible because of the trend for database vendors to provide standardized reports to their customers. Standard categories and methods for documenting the use of electronic sources are developing and gaining support in the industry and among database clients. Thanks to the work of a collection of groups who have promoted clear standards in how database vendors document the use of their products, librarians are beginning to have access to an enormous amount of reliable information about how users interact with information resources.

Trends in Reporting Use of Electronic Resources

Many organizations are involved in developing standards for documenting usage of online information resources. The associated sidebar may serve as a guide to the organizations—and their acronyms—that are most actively involved. For the purposes of this article, it is the reports and standards developed by the Counting Online Usage of Networked Electronic Resources (COUNTER) initiative that are of most interest. COUNTER is a not-for-profit company with a membership that represents libraries, library consortia, publishers and other industry organizations (COUNTER, 2009c). Since its founding in 2002, COUNTER has developed and released two codes for use in documenting electronic access to periodicals (Codes of Practice for Journals and Databases, 2005 and revised in 2008) and the Code of Practice for Books and Reference Works (COUNTER, 2009b).

These codes describe the standards COUNTER mem-

ber organizations have agreed upon for collecting and reporting the use of electronic information resources. When an online resource is found to be meeting the COUNTER standards, the vendor of the resource is included in the COUNTER Register of Vendors (COUNTER, 2009d). Compliance is determined on a product-by-product basis and does not extend to all the products and services offered by a vendor. Increasingly, more database vendors are bringing their products into COUNTER compliance, providing libraries the ability to compare usage over time and between products. With these standardized reporting formats, the value the database product provides to an organization becomes more transparent. As reports become more reliable, librarians have the opportunity to explore a variety of ways for using the data. One application may be in the area of assessing library instruction.

In the case of assessing the impact of the tutorial described above, I looked at two categories of data defined by COUNTER; sessions and searches. A session starts when a user opens the database and ends when the user disconnects from the service. A search is "a specific intellectual query..." (COUNTER, 2009a, paras.3.1.4.2, & 3.1.2.10). In other words, the database vendors are unobtrusively collecting the number of times the database is accessed during the month, and the number of times users hit the "search" button. With this data available, I had a new way of looking at the behavior of database users.

Findings

In June 2007, with 20 students enrolled in the business class, the database was accessed (number of sessions) 316 times. In 2008 the class enrollment rose to 42 students and after the introduction of the tutorial, the number of sessions rose to 402. The increase in the number of sessions could be attributed to the increase in enrollment. When I looked at the count of searches conducted, however, the numbers decreased. With 20 students enrolled in the class, the COUNTER report documented 816 searches. The following year, with 42 students enrolled and encouraged to use the tutorial, the number of searches dropped to 737 (Figure 1).

In examining the ratio of searches to session, I found that there were fewer searches per session in 2008. In fact, in the seven months following the introduction of the tutorial the number of searches per each session continued to be lower than in the same seven months the year before. (Figure 2) This ratio poses a question: Are students finding the information they need with fewer searches? If so, the change in searches per ses-

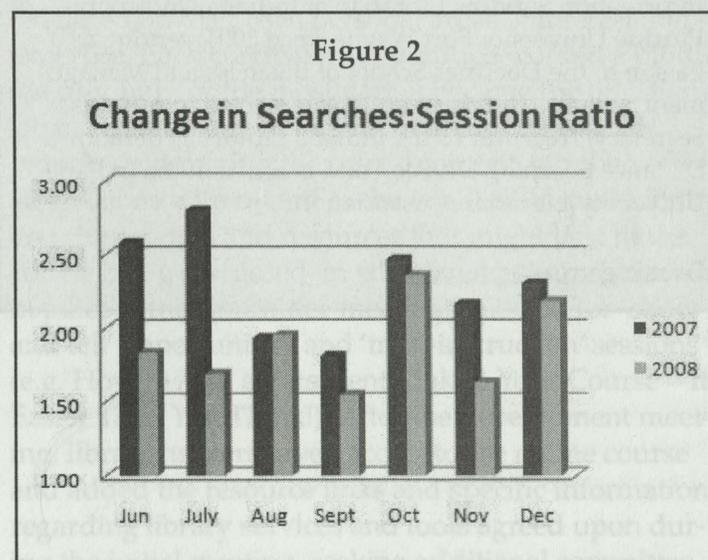
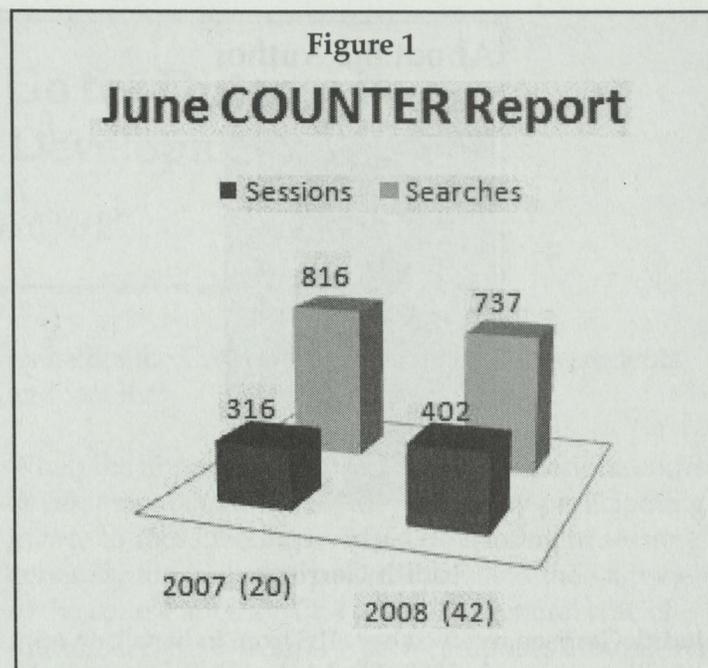
sion ratio could be an indicator that the efficiency of students using the database improved.

During the summer sessions, the class in my study represented a much larger proportion of the potential database users than during the spring and fall semesters, so it is possible that the change can be attributed to instruction. It was enough of an indicator for me to believe that the time spent in creating the online lesson was well spent.

Conclusion

There is much to consider in looking at these data. The study represents database usage statistics and student enrollment that are lower than usual due to the time of year the classes were offered. In addition, I could not control for other, unknown groups that might have used the database during the summer sessions involved, however no other sections of the course I studied were scheduled during the time period. Although the data presented can't be depended on as a robust measure, it does open a door to new assessment possibilities. In this case I looked at database usage to gauge the impact of one tool, a type B tutorial. Perhaps COUNTER data would be better used to assess the impact of an instructional program over a much longer term. As the data becomes more available, will the search:session ratio tell us more about the usability of a database? If instruction librarians begin to look at the data available, could we track trends that give us insight into our students' abilities and use patterns? By sharing data from COUNTER reports, we may be able to identify benchmarks for our libraries in the same way that businesses compare themselves to industry ratios.

Wherever the possibilities take us, it is time to begin the journey. The information is increasingly available and growing in depth and reliability. By unobtrusively collecting information on how our users interact with information sources, database usage data offer a wealth of opportunities to instruction librarians.



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