How One Library Realizes New Efficiencies and Opportunities for Collecting and Using Instruction Statistics

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As the instruction coordinator at the Tisch Library (the main arts and sciences library) at Tufts University, I'm charged with thinking about the data we gather and how best to use it. I admit it – I spend an inordinate amount of time fretting about instruction statistics. Am I developing methods that my colleagues and I can use to gather the most appropriate statistics to tell our story? What does "appropriate" even mean? Also, are we gathering a sufficient amount of detail? And what happens when my supervisor asks for data on the previous year's instruction sessions broken out by students who have been to previous instruction sessions, whether they are right or left-handed and how the outcomes changed when they sat next to someone who wore a long-sleeved Kelly green t-shirt or a short-sleeved black and white horizontally-striped sweater?

With the entry of tools like LibAnalytics and Qualtrics into the data-keeping and management market, it's become obvious over the last few years that the way we keep our annual instruction data could benefit from an extreme makeover. In thinking about and talking to numerous colleagues about this makeover, it became clear that we should be using our data to tell our story: to describe who we reach, how we use our time and our resources and how we are integral to Tufts' teaching mission. Read on for my story.

The Old Days

Librarians use a variety of collection methods but evidence shows that we don't feel we're collecting a complete view of our instruction work[1]. At the Tisch Library, this was certainly true. For many years, my Tisch colleagues and I relied on a simple Word document tallying annually the number of non-reference desk interactions we had with patrons, including course-related instruction, drop-in workshops, individual or small group sessions, email and phone calls. As time went on the Word document became a less effective tool. Except for a master chart where annual totals were listed the numbers weren't analyzed or reported further than the library's annual report. No systematic analysis of the numbers was conducted. And every year that I reported, at least two colleagues would point out my math mistakes! Clearly, a more robust data-gathering tool needed to be found, ideally one that would help me think about additional data to be gathered.

The More Recent Days

In the fall of 2011 we began testing LibAnalytics, a Springshare product, as a way to both gather and present our instruction data in a more dynamic way. I felt simultaneously like a kid in a candy store and an elephant skating on thin ice. (After all, the Tufts mascot is Jumbo, the famous P. T. Barnum pachyderm.) LibAnalytics presented a huge number of possibilities that came close to overwhelming, due at least in part to the fact that I've never been schooled in survey design. If I had thought more carefully about what I wanted to learn about our instruction program ahead of time I would have been less concerned about offering every possible answer scenario. A few examples: I listed 12 values (aka answers) in the "type-of-session" question and 14 values in the "location-of-instruction" question. However, over 80% of the responses to the location-of-instruction question used only four of the 14 choices. See below the LibAnalytics form that my colleagues and I settled on (see Image 1).

With survey design experience and reflection on the story(ies) I wanted our data to tell, I would have approached LibAnalytics differently. A Google search of "library instruction statistics form" delivers many great ideas. Perhaps I would have created something like Samford University's Librarian's Reflection at http://samford.libanalytics.com/tw.php?i=270&d=202&w=118, a thoughtful use of LibAnalytics that both collects quantitative and qualitative data and assesses instruction sessions. Stephanie Rollins, its developer notes, "LibAnalytics has definitely streamlined our process and helped us see trends as well as demonstrate our value[2]." Or, I may have created something similar to UCSB's Davidson Instruction Statistics form, at http://www.library.ucsb.edu/form/instruction-stats which elegantly and simply collects quantitative data.

Image 1: Tisch Library's instruction data form in LibAnalytics

The Present

After two years of use, my library colleagues and I felt some dissatisfaction with LibAnalytics. We felt there were too many data points and that some of them weren't logical and/or overlapped with other fields, especially the group/patron description and delivery mode. Another byproduct of the excess of data points was that the form appeared visually chaotic to some of us. All these reasons caused some of us to wait until the end of the year to enter our data. Imagine sitting down in late June to review your entire year of instruction interactions. Even the best record-keeper would find this a daunting task.

In early 2013, in preparation for the next fiscal year, three things happened:

1) I asked my colleagues for feedback about our current form: What did they like about it and what could be improved? Comments (both positive and negative) ranged from structural aspects that I had no control over such as "easy to edit entries," and "limited customizability," to design aspects that I could change such as "too many boxes to be checked."

2) Tufts purchased a site-wide license to Qualtrics.

3) Tisch hired Josh Quan, a social sciences data librarian with the patience of Job and a great working knowledge of Qualtrics, who created a sandbox for us to experiment in.

I have nothing negative to say about either LibAnalytics or Springshare. Librarians at Tufts extensively use some of their other products (e.g., LibGuides; LibAnswers) and find great value in them. However, after two years of using LibAnalytics, the evidence showed it was not the right tool for the job. In spring of 2013 a small task force was charged to move our data form to Qualtrics. In addition to trying to addressing some of the negative comments above, the primary reason we moved to Qualtrics is that it employs branching, which directs respondents to different questions based on previous answers. In other words, if Librarian X answered that an interaction was of the 1:1 variety, the next question would ask if the meeting occurred face-to-face or virtually thereby bypassing questions irrelevant to a 1:1 interaction. This technique allowed for streamlining of the data form. Remember the 12 "type-of-session" values in LibAnalytics? Through branching in Qualtrics, with Josh's vision and a study of two years' worth of LibAnalytics data, we now list only four types of sessions: course preparation, class presentations/workshops, research assistance/consultations and orientation of library services (see Image 2 at this link, http://bit.ly/1jjzHit).

Branching lets us customize surveys to a point that LibAnalytics didn't allow; thus, based on a particular answer, subsequent questions are displayed or not displayed. "I appreciate the branching feature that allowed for tracking

of first year writing program outcomes[3]," says Erica Schattle, our coordinator of first year library instruction. The form can be customized such that an individual librarian can gather very specific data. For example, I could track every instance of a student who followed up with me after an instruction session, and the content of those follow-up questions. I could also use the data to discuss various instruction topics with faculty. If I notice numerous individual appointments with students from the same class I can use this information to persuade an instructor to reserve a period so I can meet with the entire class. One final scenario: if the data tells me that after an instruction session I've had half the students email me with the same question, I realize that topic was a muddy point and that I could use video, email or an additional instruction session to clarify.

We're in the second semester of Qualtrics use and I am confident that it's working well for us. At the end of the fiscal year I'll offer some of the above customizations to my colleagues. I'm also thinking of borrowing my colleague Erica's idea and adding portions of the ACRL information literacy standards in the form of a checklist so that we can individually gauge how much, if at all, we're keeping the standards in mind when we teach. While I don't like to predict the future, the flexibility that Qualtrics provides us tells me that my colleagues and I will be comfortable with it for some time to come.

How I Want to Use the Data to Tell our Story: The Future

Once the data has been collected, it can't just sit there in a repository or even just circulate among library staff. It needs to be brought to life, shaped and utilized to tell the value of our activities to the larger university community and used to make decisions. Stephanie Rollins aforementioned *Rethinking Library Instruction Statistics* presentation offers great suggestions and I'll supplement here with some of my own.

Annually, Tisch librarians distribute numbers-based reports (met with xx classes, held xx appointments, etc.) to decision makers detailing our instruction work. I believe we need to move past this kind of publication to show results of authentic assignments we've given in classes-- comparing pre- and post-instruction assessment results and conducting studies of student bibliographies are just a couple ways that we can supplement the initial findings from our data.

The data we gather can also be used as a foundation for communicating with faculty in support of discipline-based accreditation standards. Where a teaching department has a set of accreditation standards, (see the *ACRL Information Literacy in the Disciplines* wiki at http://wikis.ala.org/acrl/index.php/Information_literacy_in_the_disciplines)[4] we can connect our work in the classroom in support of those accreditation goals. For example, the Education and Behavioral Studies Section has given us the helpful *ACRL Psychology Information Literacy*

cat videos and the like, he also offers an optimistic take on the potential for creative collaboration. Librarians who are familiar with the tools and concepts of Library 2.0, which focuses on user participation and collaboration, will recognize tools such as wikis, Flickr, tagging, and social bookmarking sites, among other tools. Rheingold offers plenty of support for his ideas. He cites Dunbar's work on primates and language, for example, as well as Ostrom's "institutions of collective action." The findings of these and other scholars are seamlessly woven into an overview of his own work on online collaboration over the years.

Rather than positing the Internet as either a Utopia or the cause of society's ills, Rheingold addresses both positive and negative aspects: the exciting solutions created by massive online collaboration (think crowdsourcing to help solve pieces of scientific and medical puzzles) versus privacy concerns, information overload, and the lack of coordinated information literacy instruction, for starters.

Chapter five deals with what Rheingold calls the knowledge of networks. "Most people in the world recognize, at some level, that a massive shift is taking place in the way" we use our attention. He mentions exciting innovations in the world of gaming, such as "massive multi-player 'alternate reality' games that take place in the physical world as well as cyberspace, involve thousands of people worldwide, and tackle real global-scale problems through collective intelligence." Personal learning networks (informal learning environments that individuals use to direct their learning, whether on and offline) are also addressed. He gives excellent etiquette tips for online groups and collaboration, such as "offer help freely "and "assume goodwill." He also discusses how to start and manage

online groups so that they don't become unruly. Online privacy and "dataveillance" (the surveilling of online activity) are touched upon. Rheingold doesn't believe it's possible to escape surveillance by the government and marketers, but he does offer suggestions to increase awareness. Remixing and copyright are also discussed. There is a brief section for concerned parents, offering advice and resources on digital citizenship.

Librarians will find a plethora of interesting topics covered, from cognitive science to crowd sourcing, gaming, social media, and aspects of information literacy. Of immediate use are the wealth of tips on attention focusing, online collaboration, networking and the development of personal learning networks. For example, I've used his "focus on your breath" tip when I feel overwhelmed by a large number of upcoming tasks. He seamlessly brings in the work of others (including Lawrence Lessig and danah boyd) to strengthen his points and includes detailed references so that readers may find out more about issues beyond the scope of the book. Many of the aspects of cognitive science discussed, such as attention filtering and executive control, have applicability for library instruction. Instruction librarians who teach for-credit courses will especially appreciate the wide variety of interdisciplinary sources Rheingold uses for his research, along with metacognition tools such as infotention and mindfulness that can be passed along to their own students. One of the book's advantages is that it does not need to be read sequentially for enjoyment—rather, the reader can dip into various areas of interest as needed. A further advantage to the e-book edition is that readers interested in related topics can skip directly to the hyperlinked references.

Standards (http://www.ala.org/acrl/standards/psych_info_lit), by mapping the information literacy standards to the undergraduate psychology major.

As a visual learner, I'm very interested in learning how to display our data in graphic ways and hope to learn more from the informative and thought-provoking LOEX 2013 conference presentation *Remix Your Data: Visualizing Library Instruction Statistics*, given by Brianna Marshall and Ted Polley from Indiana University. To download the speakers' slides, see http://bit.ly/1kHeope

While data visualization has some current buzz, there's nothing new about presenting numerical findings in a way that both visually appeals to and immediately impacts the receiver of the information. Talk about proclaiming our value: a particularly compelling graphic, *School Libraries & Student Achievement*, issued by the Library Research Ser-

vice, can be seen at http://blogs.slj.comneverendingsearch/2013/03/06/school-library-infographics-research-and-advocacy.

I hope I've provided a little food for thought. Once you decide what part of your library instruction program you want to describe to your stakeholders it's just a matter of developing the appropriate methods to use to tell that story. Good luck!

Footnotes

1 Rollins, S. (2012). *Rethinking Library Instruction Statistics: Going Beyond the Numbers to Tell Our Story* [PowerPoint slides #5 and 6]. Retrieved from http://blogs.library.msstate.edu/msuleets/materials/leets/2012/rollins.pdf

2 Rollins, S. (personal communication, April 10, 2013)

3 Schattle, E. (personal communication November 21, 2013)

4 While this wiki is updated irregularly, it is still a useful document