Return on Instruction: Methods for Assessing the Impact of Information Literacy Instruction on the Use of Electronic Resources

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Introduction
Studies show that teens and young adults are less likely to turn to library databases than to other sources when conducting research. For example, Zichichi (2013) drew on data from multiple Pew Research studies on how teens conduct research to show that teens are more likely to turn to Google (94%), Wikipedia (75%), YouTube (52%), and even their peers (43%) at much higher rates than they do to electronic databases like those published by EBSCO or JSTOR (17%). A Project Information Literacy study, led by Heid & Eisnerberg (2000), demonstrated that college students frequently continue to turn to the open web or other resources, such as their course readings, before they seek new information using library databases or resources. Yet, the successful transition from secondary-school-level research to college-level research necessitates the use of specialized databases and other information sources. Instruction librarians strive to raise awareness of library databases through in-person classes and specialized research guides, but what works? Does providing in-person library instruction paired with an online resource guide translate to increased likelihood of using library resources over previous habits?

Most studies that examine this question look at how college students are conducting research by surveying and interviewing students about their behavior and then rely on self-reported data. Santa Clara University librarians wanted to explore a method to collect behavioral evidence so they could look at what students actually do, rather than what they say they do. By examining “asset clicks” — hits on databases via online guides — librarians tested how this data might be used to explore the relationship between instruction and database use.

Methods
- Collected quantitative data through the LibGuides statistics module for the spring 2013 quarter (March 26-June 12, 2013)
- Recorded assets on a LibGuide per student for each course
- Analyzed the number of “asset clicks” from each guide
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- Combined LibGuides statistics with data collected through an instruction tracking form (number of students, date, type of instruction, length of library instruction session) to explore how we might use this data to look for trends in usage.

Sample
- Examined seven undergraduate courses in Spring of 2013:
  - Business Management (MGT 161 & MGMT 162)
  - Critical Thinking & Fine Writing Composition (ENG 2A)
  - Engineering (ENG 1)
  - English (ENG 11)
  - Public Health Science (PHSC 150)
  - Religion & Society (HIST 116)
- A total of 244 students participated in library instruction in the sample classes (out of a total of 261 students enrolled in these courses)
- The sample includes a range of upper and lower division courses
- Library instruction included a variety of instructional techniques, such as active learning, brainstorming, and small group instruction.
- Library instruction sessions ranged in length from 20 to 90 minutes, with an average length of 65 minutes.
- Two classes included multiple library sessions throughout the course.

Key Research Question
What can instruction and usage data tell us about the relationship between in-person library instruction and the likelihood that students will turn to library resources rather than revert to fallback sources such as the open web?

Objectives
- With this small sample, we identified that it is feasible to look at student access of databases and other library resources in relation to elements such as:
  - Integration of assignments
  - Type of instruction provided
  - Length of instruction session
  - Intensity of instruction (multiple sessions, embedding, etc.)
- We were not surprised to see that asset clicks were highest in all cases on instruction days, and then, clustered around assignment due dates in many of the classes we reviewed.
- We were surprised that multiple instruction sessions did not appear to increase sustained access to assets from the guides.
- The Management courses represented the kind of sustained usage activity that could be an indicator of successful instruction.
- Systematically examining a larger sample could demonstrate correlations between instruction elements and sustained usage activity to inform our teaching practices.
- Using database asset list in LibGuides is important, and keeping the list clean is essential.

Limitations
- This is a great place to initial exploration; we did not integrate other usage data to try to determine where students were accessing resources outside of the guides.
- We were able to view the data we needed in the LibGuides statistics module, but download options were limited, requiring time consuming manual data entry, which impacted our sample size.
- The sample size was small, in order to determine feasibility of the methodology.
- Recognize that our database assets were created in LibGuides presented us in some cases from getting database-specific metrics.

Conclusions & Next Steps
- This method has potential to help librarians explore how teaching techniques, assignment integration, time provided for instruction, and multi-asset impact use of resources.
- This method could be used in conjunction with other usage data to tell us more about what our students are (or are not) using and how they are getting to our resources.
- The next sample should include a larger number of courses, allowing for better analysis by discipline or course level.
- Assignment integration and instructional techniques should be codified to create a quantifiable way to look at these elements in relation to database use post-instruction.
- Other student products (such as bibliographies) could be analyzed to explore where students are ultimately turning for courses, as well as the overall quality of sources used.

Bibliography