Multi-Section Assessment: Bibliographic Instruction

**BACKGROUND**

As an academic support area and a provider of instruction in research methods and bibliographic techniques (249 sessions in 2010 and 243 in 2011), the Library has had many opportunities to engage in assessment. We have participated in national assessments for decades, such as those required by the Association of College and Research Libraries (ACRL), the National Center for Education Statistics (IPEDS), and the Federal Depository Government Documents program, and we are able to compare our holdings, instruction sessions, service hours and reference interactions with peer-group benchmarks and national standards. Since 2002 the Library has conducted a biennial library services survey to gauge user satisfaction and identify areas for improvement.

In all bibliographic instruction sessions the Library has always engaged in mostly formative assessment techniques in order to improve outcomes. Anecdotal notes about students’ in-class responses were made; we spoke with instructors about the required assignment and sources consulted; and for the Introduction to College classes, the answers to the required quiz were analyzed. We reexamined every aspect of what we were presenting so as to make meaningful changes before a new academic year and updated instruction at the beginning of a new semester if it seemed important and relatively easy to accomplish; however, we had never conducted a multi-section assessment. Introduction to College offered an opportunity to assess students to better understand the skills with which they came to us and measure how well some basic concepts were being conveyed.

**Fall 2011: 58 sections—972 students**

*How do you conduct research for a paper? What library resources have you used?*

- **Advanced Skills**: 1%
- **Unclear**: 5%
- **Never Terminology**: 6%
- **Books**: 24%
- **Computer / Internet**: 42%
- **Some Library**: 14%
- **No Library**: 18%

*List three concepts or resources that you learned about today that might help you with college-level research:*

- **Library / Librarian**: 10%
- **College Level Research**: 7%
- **Books Catalogs**: 22%
- **Website Evaluation**: 25%
- **Article Databases**: 32%
- **Other**: 4%
The Library has been teaching a research session for the Introduction to College and Mastering the College Experience classes since the inception of those classes in the fall of 2007. Initially, individual instructors decided about whether or not to incorporate the Library and librarians into their classes. However, after receiving overwhelmingly positive student and instructor feedback, the Library session became a requirement for all sections. For the Introduction to College sections, the Library portion of the class consisted of an assignment that would demonstrate basic familiarity with library resources and would be turned in and graded by the instructor. Additionally, students enrolled in Introduction to College had to complete a quiz in Blackboard assessing basic information literacy skills. Mastering the College Experience students were not always receiving points for the assignment and they were not required to take the quiz in Blackboard. As of Fall 2012, all students are now required to complete the assignment for points.

**Initial Assessment**

In the fall of 2011, using methods that our colleagues at Washington University's Olin Library had shared with us, the Library implemented a multi-section assessment incorporating seven librarians at all four campuses. 972 students enrolled in 58 sections of Introduction to College and Mastering the College Experience were given pre- and post-tests. The goal was to gather useful data on the efficacy of this one-shot library instruction session presented to the majority of Jefferson College students. We wanted to see reported research skills and know what concepts students were gaining by the end of this short session.

Anecdotal evidence of student learning had always been used to modify bibliographic instruction sessions. We could tell from reactions to questions, responses to in-class exercises, reference interactions, and feedback from instructors, that students were often very unfamiliar with the research materials necessary for success in college-level courses. However, we needed quantifiable results to add to our informed impressions and we wanted to see how we were conveying some basic information to new students. After the first semester's results were tagged and tallied (a very time-consuming process but important part of the process), our previous impressions were confirmed. Because of the sheer volume of data, we were able to feel confident in the choices we were making about the level of content to include and the learning outcomes to reasonably expect in such a short session. As a group we continued to examine what we expected students to learn in what might be their only session with a librarian. (*Continued...*)

**Spring 2012: 27 Sections—417 Students**

*Have you ever conducted research for a paper? If so, what resources did you use?*

- **PRE-TEST**
  - No Library 7%
  - Some Library 16%
  - Computer/Internet 37%
  - Books 23%
  - Advanced Skills 0%
  - Unclear 8%
  - Never Researched 9%

*List three concepts or resources that you learned about today that might help you with college-level research?*

- **POST-TEST**
  - Library/Librarian 20%
  - Website Evaluation 27%
  - College Level Research 7%
  - Article Databases 24%
  - Book Catalogs 20%
  - Other 2%
The first attempt at this multi-section assessment revealed some issues with our methodology. Upon reviewing the answers to the question about previous research experience, we saw that students were answering the question rhetorically, that is, they were saying how one “should” conduct research for a paper rather than their actual research experiences. Many students talked about appropriate research methods (e.g. use books or the Internet), and then went on to say that they had never actually conducted research. So, in spring 2012 we reworded the pre-test to include a simple yes or no response to a question about having written a research paper. We then asked students about materials used and resources consulted. Our percentages seemed to persist even with this change, but we received fewer indications that students were telling us just what they thought we wanted to hear.

Another change that was made was the addition of an in-class activity that we hoped would allow students the opportunity to become familiar with the fact that we have dozens of databases that can be used for very specific purposes. The post-test answers indicated a jump in the number of students listing article databases, but this seemed to be because it was the last activity of the class. After looking at the results of all sections and talking about the lack of research skills most students illustrated during the class, we decided to scale back our expectations and really concentrate on those things needed to successfully complete the Introduction to College assignment.

Continued...
Fall 2012: 47 Sections—907 Students

Have you ever conducted research for a paper?
If so, what resources did you use?

PRE-TEST

POST-TEST

Observations

• The percentage of students indicating very limited or non-existent research experience remained at around 20% for each of the semesters, no matter how the pre-test questions were worded. Fall 2012 had the highest number of students indicating limited skills with a total number of 537 responses indicating no library knowledge, no research skills, or that gave no intelligible answers.

• Keeping in line with study findings, our students have great confidence in their research abilities, even when specific skills are lacking. The most popular response to the question about resources used was a generic reference to Google, the Internet, or computers—this has been a consistent 30-40% of the responses.

• Students frequently cited their own minds, the experiences of people they know, or random Google results as research materials.

• The higher number of students indicating somewhat “advanced” skills in the Fall 2012 semester was a result of many psychology, English, sociology, and other classes bringing students into the library for instruction prior to Introduction to College sessions.

• Students who visited the library with their dual-enrollment classes during high school understandably showed the most familiarity with library resources and college-level research techniques.
Changes

• After the first semester we reworded our pre-test questions to better capture self-reported research experience.
• Written answers on both the pre-test and post-test showed challenges with basic literacy. We kept this in mind when redesigning the assignment, quiz questions, and in-class exercises.
• After the spring 2012 semester an exercise that required students to read two paragraphs and summarize the information was eliminated and replaced with an exercise that required less reading but still emphasized the mastery of basic concepts.
• Information previously presented in the form of a true-false activity utilizing Clickers (Student Response devices) was presented during other parts of the class, thus freeing up time for additional hands-on practice of skills.
• Utilizing a “tell-show-do” method of instruction that is especially helpful for teaching research techniques and database strategies allowed us to concentrate on the assignment at hand and gave students a chance to practice research in class. We tried to avoid the temptation to show students too much during this introductory session and we made sure that we addressed the most common questions about the assignment.
• Subsequent bibliographic sessions for English Composition I & II, Sociology, History, and Oral Communications gave us opportunities to expand instruction to more advanced resources and further assess retention of materials presented in the Introduction to College classes.
• Spring 2012: after noticing students were often completing the post-test question during the class, we began displaying the question on the SMART board at the end of class; students seemed to spend more time thinking about their responses.

Looking Forward

This foray into assessment provided useful information about our students, but rather than surprising us with unforeseen characteristics of our new students, it confirmed existing suspicions about student readiness for college-level research. Additionally, we established best practices for the way we conduct assessment and how to present assessment questions to the students in order to maximize honest responses. Our next step is to create an assessment tool for students enrolled in English Composition I so that we can assess what research skills have been retained by students over time. Using this data, we will be able to modify the bibliographic instruction for the many other subjects requiring library instruction.