Adventures in Framework Assessment

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Abstract

Establishing a relationship between library instruction and student success is tricky at best. This paper presents the findings of librarians who created student learning outcomes based on the ACRL Framework along with assessment instruments that sought to show the positive relationship between library instruction and student success in particular classes. These librarians were not experts in assessment, but were determined to learn how best to show this relationship and also to improve sessions in which professors invited them to teach source evaluation and resource awareness. The librarians will describe the faculty contact made and how classes were designed using the framework as a guide. They will also include details about the assessment instruments designed and implemented as well as results indicating a positive relationship between the library instruction session and the students' perceived ability to apply what they learned to their class project or assignment. Specifically covered will be an English class in which librarians led students through separate sessions at two-week intervals. The first session saw students defining basic concepts such as research, primary sources, and secondary sources, as well as having hands-on exposure to different databases. Subsequent sessions were designed to help them learn search techniques within the databases and address any research skill deficiencies gleaned from their feedback on the previous session. The other class discussed is a geography class in which the librarian led students through an activity designed to help them learn how to evaluate sources and recognize different sources of information. These results will be useful to other librarians as they will learn the steps these librarians took to apply the ACRL Framework and how the results of the class assessment helped them both to show their positive impact on students and also provided feedback on improving future sessions.

In the fall semester of 2015, a faculty member reached out to both the English and history research librarians at Clemson University[1] with a daunting request: one or two library sessions for her students in the spring covering more than 15 databases, sophisticated keyword searching, and a few specific library services. The ultimate goal for the students was to help the professor curate an online exhibit similar to those produced by the Lowcountry Digital History Initiative[2] at the College of Charleston. These particular library instruction sessions were to be a part of a Creative Inquiry course at Clemson University, an in-depth educational experience in which "[s]tudents take on problems that spring from their own curiosity, from a professor's challenge or from the pressing needs of the world around them. Team-based investigations are led by a faculty mentor and typically span two to four semesters. Students take ownership of their projects and take the risks necessary to solve problems and get answers."[3] Realizing it would be impossible to walk students through that many databases in a traditional point-and-click session and that such a format would be minimally engaging anyway, we turned to the ACRL Framework concepts to help us create an interactive, foundational experience for both the students and the professor.

ACRL's Framework for Information Literacy for Higher Education encourages librarians to re-evaluate how they teach in the classroom and concentrate on building foundational skills rather than just teaching to specific tools. Creating student learning outcomes (SLOs) based on these threshold concepts allows librarians to focus on broad ideas about searching and help students understand the reason that databases are structured in certain ways, allowing them to transfer skills from one tool to the next. The threshold concepts help librarians "progress beyond teaching students how to use the library and address some of the more complex themes of information literacy."[4] There is evidence that many students do not understand the scope of the online search tools they use. For example, in a 2012 survey of middle and high school teachers, 47% rated students from fair to poor when asked if their students understood how online search results are generated.[5] Therefore, students may be entering college missing some of the foundational skills in

information literacy, a serious deficiency given the more sophisticated sources that post-secondary teachers, and the faculty member we worked with in particular, expect them to be able to locate and use.

After receiving the request to help the Creative Inquiry students find information about Samuel Aleckson and his narrative about life under slavery in Charleston, South Carolina, our first task was to identify frames and SLOs that needed to be addressed. Knowing that the request included coverage of more than 15 databases as well as a discussion about how keyword[s] "like 'negro,' 'afro American,' 'African American,' [and] 'colored' need to be thoughtfully employed in searches,"[6] not to mention showing students how to use library services such as interlibrary loan, it was apparent that clear outcomes were needed. For the initial session, the following SLO was chosen based on the "Searching as Strategic Exploration" frame: "Students will be able to distinguish between general and specialized article collections (databases) in order to select the most appropriate collection and to maximize the relevancy of search results." The idea behind this was to help students understand what was in each of the databases and how they might differ from one another. It is important for students to understand the difference between a search engine like Google and a database like Academic Search Complete—and most do not. In a 2012 Pew Report on how teens do research in the digital world, 94% of teachers surveyed said students were "very likely" to use Google versus the 17% who were using databases such as EBSCO and JSTOR.[7] By presenting multiple options, the librarians hoped the students would have more "buckets" to explore to find information on their topic.

For the second session, the following SLO was used based on the same frame of "Searching as Strategic Exploration": "Students will be able to revise search strategies based on their original results to locate the most relevant information." In the aforementioned 2013 Pew Report, the same teachers rated their students poorly when it came to their level of patience and determination when looking for information.[8] This could mean that if students do not find what they are looking for easily, they may give up. We hoped that in the second session, the Creative Inquiry students would re-visit their assigned databases and discover new search features and methods.

The ultimate goal for both sessions was to create a resource for the students to refer back to as they completed their project, so we decided to use the SpringShare LibGuides platform to create a shell students could help complete during the session. In order to ensure the students were all starting from the same place, we first asked for some very basic definitions that were then expanded into a larger discussion about research and databases. This exercise encouraged students to engage in deeper thinking than they had anticipated; many students initially thought they had the answer, but as they thought more about it, the definitions became more complex. For example, when asked "What is research?" many students answered that it was "searching for information." But when asked to expound upon their answers, they conceded that it also meant asking and formulating questions both about the topic as well as any sources that were discovered. When asked to define databases, several students were unable to articulate a clear definition beyond "a collection of information." One way to help students understand what a database can be is to tell them that if they have a cell phone, then they have created their own database by compiling names and numbers of friends and family.

After this introduction, which took about 10 minutes, we moved into the activities. Our outline looked like this:
- Activity 1 (10 minutes)
    - Hand out grid for primary and secondary sources and ask students to list what they define as primary and secondary in 5 minutes
    - Create lists as students offer feedback
    - Take up lists and post in online guide
- Activity 2 (30 minutes)
    - Give each student a database
    - Give students 10 minutes and have them look at their databases in their pairs and list the kinds of information available in each database
    - Ask students to present a 1 minute summary of their findings on each database
    - Take up lists and compile for online research guide
- Activity 3 (10 minutes)
    - Divide class into two teams
    - Using *Documents of the American South* and *Ancestry*, two databases crucial to their research, ask students to evaluate for pros and cons in 5 minutes
    - Report back

• Show interlibrary loan video (2 min)

The session went very smoothly, especially with two librarians facilitating; one would lead the discussion and the other would update the LibGuide in real time. Students were very keen to dive into their databases and made excellent observations about the content and structure of their assigned resource. The students all seemed very engaged and even though the faculty member seemed initially apprehensive about the teaching approach, by the end of the class, she was walking around observing and encouraging student interaction with the various databases.

At the conclusion of the session, the librarians assessed the students' progress by asking them to respond to the following questions on a piece of paper:
1. Make a list of the most important, useful, or meaningful points from this session.
2. In one sentence summarize the essence of these points.
3. List one or two questions that remained unanswered in this session.
4. Write a comment about what you enjoyed or found useful about this session.
5. Comment on how this session will help you in this class.

As a result of this feedback, we found students still had questions about citations, but that they found the format of the class to be very helpful. One student stated that "we walked through it and were involved, much easier to learn this way..." and another said that "I am much more comfortable navigating these databases now!" We could tell that students were more aware of other places to look for information; one student commented on "how easily searchable the various databases are if you know what you're looking for." Using this feedback, we built in extra time to cover citations and decided to continue with the same format for the next session.

The same LibGuide was used for the second session, in which students were asked to learn more about the search features in each of their databases. The session followed this outline:
• Introduction—recap of last session and review of lists and tables created in last session and provide a general introduction to keywords
• Activity 1 (10 minutes)
  - Use the group to brainstorm key words for their topics

• Activity 2 (20 minutes)
  - Give students the same databases that they examined in the first session and tell them they have 10 minutes
  - Ask them to find the "help" screens or the advanced search pages for their databases
  - Make a list of 3 search hints and tips for each database
  - Report back to class
• Activity 3 (25 minutes)
  - Divide class in half and tell them they have 15 minutes
    • Team 1: Use some of the search strategies learned to find some good online map resources using Google and Google Scholar
    • Team 2: Use search strategies to find map resources from the library webpage
  - Report back
• Show "How the Library Can Help You" video (2 min)

As in the first session, students were engaged with this process and took ownership of their individual databases. They took care to find ways to search their particular resource and did an excellent job sharing details with the class.

At the end of the second session, each student was asked to list the two search strategies they thought would help them the most in their assignments for the course. In asking this question, we hoped to ascertain the level of information the students were able to attain from the session based on our designated SLO. Examples of student responses on this assessment included:
• "You can use the 'fuzzy' option in advanced research on two of our databases to account for spelling variations."
• "I did not know that you could use an asterisk or question mark to find variations in words. Those tools will be incredibly useful in narrowing down and finding sources."
• "Using tagged subjects in a source to find other sources"
• "Search to see if a search engine categorizes search results"

As a result of both of these sessions, students indicated that they were more familiar with both the databases available and search strategies that they could use to find information.

Throwing students into the deep end of research or putting them into the databases without much instruction on how to use the interface seemed to be an effective teaching strategy, as was limiting the number of learning outcomes for each session. Situating some threshold concepts within a specific context enhanced student learning by providing a clear need for information literacy skills.[9] The students responded positively to learning independently and sharing their findings with peers. They enjoyed being involved by creating the LibGuide and looking at the databases with a mind to sharing what they learned with the class. Coupling the SLOs with student feedback made it easy to determine if the learning outcomes had been met, and it turns out that out of 10 students, only one said they still had a question about databases or searching.

Another chance to apply SLOs to the framework in order to structure a subject-related class arose from the request of a geography professor in the spring of 2016. The professor wanted 130 students in an introductory geography course to be able to find a reliable news source originating from a country each student had been assigned to research. The two learning outcomes and corresponding frames that were chosen were:
1. Students will be able to recognize indicators of authority in order to determine the credibility of sources (Authority is Constructed and Contextual)
2. Students will be able to identify multiple resources when gathering information in order to create a more complete and well balanced profile for their country (Searching as Strategic Exploration)

In order to meet these SLOs, the class was split in half: one half was asked to use Google to search for the news source, while the other half was asked to use library-subscribed news databases. Students were then asked to identify any bias in the news source, the criteria they used to determine if the source was reliable, and to provide one pro and one con to using the search tool(s) they were assigned. While this was a very large section, students were responsive when asked to discuss their experiences in both Google and the library databases. Once again, throwing them into the information and then asking them to discuss what they were (or were not) able to find allowed them to approach searching more mindfully. To determine if the SLOs were met, students were asked:

1. Will what we just talked about help you better understand how to evaluate news sources in the future?
   a. 93 students indicated yes
   b. 22 students indicated no
   c. 4 students indicated they were not sure
4. Will what we just talked about help you find more options for finding information?
   a. 100 Students indicated yes
   b. 16 students indicated no
   c. 3 students indicated they were not sure

In pairing student learning outcomes based on the ACRL Framework with assessment instruments, we sought to show the positive relationship between library instruction and student success in particular classes. We hope that by sharing these specific examples, other librarians may be able to create SLOs and assessments for subject-related sessions that are requested by teaching faculty. For future sessions, Clemson librarians will work toward creating an assessment that produces more quantifiable data. For example, a rubric may be developed or more defined assessment questions will be created. We might also do a skill-based assessment by asking them to do a search based on what they learned and then evaluate results based on a rubric created to fit the assignment. Whatever the specific strategies, this kind of threshold concept teaching will definitely continue to develop student-led activities and move toward active learning in our library instruction at the Clemson Libraries.

Notes
1. For context, Clemson University is a public institution in South Carolina with a student population of approximately 22,000. The library currently has 12 teaching librarians who each have areas of specialty and work with departments on and off campus as subject research librarians.

2. "Lowcountry Digital History Initiative," Lowcountry Digital Library at the College of Charleston, accessed 29 September 2016, http://ldhi.library.cofc.edu.

3. "Creative Inquiry and Undergraduate Research," Clemson University, accessed 29 September 2016, http://www.clemson.edu/academics/programs/creative-inquiry.

4. Lori Townsend, Korey Brunetti, and Amy R. Hofer, "Threshold Concepts and Information Literacy," Portal: Libraries and the Academy 11, no. 3 (2011): 857.

5. Kristen Purcell et al., "How Teachers Are Using Technology at Home and in Their Classrooms," Pew Research Center's Internet and American Life Project, February 28, 2013, accessed 29 September 2016, http://www.pewinternet.org /files/old-media//Files/Reports/2013 /PIP _TeachersandTechnologywithmethodology _PDF.pdf.

6. Susanna Ashton, e-mail message to authors, December 8, 2015.

7. Kristen Purcell et al., "How Teens Do Research in the Digital World," Pew Research Center's Internet and American Life Project, November 1, 2012, accessed 29 September 2016, http://www .pewinternet.org /2012/11/01/how-teens-do -research-in-the-digital-world.

8. Purcell et al., "How Teens Do Research."

9. Rebecca Z. Kuglitsch, "Teaching for Transfer: Reconciling the Framework with Disciplinary Information Literacy," Portal: Libraries and the Academy 15, no. 3 (2015): 458.