

Learning to be Lost in (Research) Space

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When trying to cover as much territory as possible in an information literacy session, librarians often sacrifice deeper, more meaningful assessment and the emotional side of the research process to fit in content. Experiential learning approaches can be used to address the nonlinear and iterative nature of research (i.e., “messiness”) and prepare students for their emotional reactions to the research process while still fitting in the needed content. Students are left to navigate the process on their own, not fully understanding that the research process is filled with successes, pitfalls, and emotions. Being unprepared for the emotional side-effects of the research process has the potential to lead to a lack of persistence, negative feelings about research, and reliance on shortcuts. This piloted approach demonstrated that students can learn to appreciate the ambiguity of research and become more comfortable with emotions that coincide with the process, while still learning the basic mechanics of information searching. Active learning requires some level of engagement, ideally including reflection on the part of the students. These reflections can turn into a way to assess student learning to capture a deeper, more meaningful understanding of content.

ANTH/SOC 3001: Qualitative Research

Qualitative Research is a junior-standing course for anthropology and sociology students. Students have a semester-long assignment to create a comprehensive literature review based on their field observations and complete an IRB application. Students are to choose a setting and observe behaviors/experiences in that setting throughout the semester. Students choose a wide variety of settings that have included the university greenhouse, the university library, places of worship, the local bar, and a country club.

The goals of the course that are information literacy specific are: students will demonstrate proficiency in obtaining, reading, comprehending, critiquing and synthesizing peer-reviewed literature as evaluated by the creation of a literature review on a selected research topic, and students will understand the ambiguous and non-linear nature of the research process. Each part of these goals could be its own standalone library session.

The session request from the faculty member was a typical library instruction request asking that only one session be devoted to the library instruction, that the session occur early on in the semester (second or third week), and that the librarian would show students how to find scholarly materials, especially qualitative research. The professor also had additional concepts they wanted covered in the session: how to synthesize research, and research as a messy process.

This is a typical information literacy/library instruction request; however, this librarian believes where the session ended up was atypical and that was in part due to the conversations they had with the faculty member prior to the session.

During the librarian’s sit-down meeting with the professor, they found some compromises. The librarian informed the professor that while the learning outcomes for the course were very information literacy heavy, they could not cover all of them in a single session. Since additional instruction sessions could not be built into the schedule, the professor added required work that took place outside of class. Together, the librarian and professor determined that the single session would focus on keyword development and database mechanics. The required work included a pre-assessment survey about previous library knowledge that would dictate what areas would be covered in more depth and which ones could be covered briefly during the session. Students were also required to meet with the librarian for a consultation at midterm if their project grade fell below a certain percentage. By negotiating this early on, the librarian was able to anticipate the volume of students who would be coming to them during a busy time of the semester. Finally, students would also be required to come to the library session.

Based on the pre-assessment, the professor and the librarian agreed to focus the required follow-up meetings on revising searches, critical thinking, and synthesizing the material in one-on-one consultations. This was a compromise because not everyone would see the librarian in an individual meeting. However, the professor and the librarian felt that if a student scored high enough that would indicate they had a higher level of understanding how to synthesize materials and demonstrate critical thinking skills.

Pedagogical Decisions and Compromises

The session primarily utilized two different learning models. First, David Kolb’s (1984) Experiential Learning Model was used throughout the entire session. There are four main parts to Kolb’s model: concrete experience, reflective observation, abstract conceptualization, and active experimentation. The use of these parts in the library session are identified in detail later in this article. Second, the emotional aspects of the searching process were addressed and conceptualized by using Carol Kuhlthau’s (1991) Information Search Process Model. In this model, Kuhlthau identifies the affective, cognitive, and physical aspects that coincide with the research process.

With this collaboration, the librarian used a backward design approach; that is, they developed learning outcomes

and assessment measures before planning the actual activity. While it may not appear to be different from the student perspective, this approach brought a level of intentionality to how the librarian taught and provided them with actual data to assess student learning.

The session planning process began with the realization that not everything can be covered effectively in a single session. It was a switch in the librarian's approach from quantity to quality where their focus was more on depth of the topic rather than breadth. This informed how many learning outcomes the librarian would have for the session. Once they established that reflection is a key part of evaluating students' learning, the librarian knew that they needed to minimize the session learning outcomes to two or three. They needed to minimize the amount of time they lectured and talked about database mechanics to allow time for the reflection component. The session was intentionally designed to de-emphasize traditional searching mechanics, rather allowing students to learn these skills experientially.

Library Session Details

The 75-minute session was broken up into three sections: identifying keywords, creating effective database searches, and assessment. The keyword exercise followed Kolb's Experiential Learning Model. In this activity, the librarian and the professor first modeled how the activity would run including verbalizing the thought process behind adding keywords. Using the provided word map, students brainstormed keywords for their research question for one minute. After that minute of brainstorming, they passed their word map to the student next to them. For an additional minute, students brainstormed additional keywords on the word map they were given. This rotation continued every minute until students received their own work back. This exercise allowed students to practice developing keywords while also developing the foundation of their search process that would be targeted in the next exercise. The activity ended with a self-reflection on the word map and identifying any gaps, additional keywords, or areas of strength within the student's research question.

The majority of the session was spent on creating effective database searches. The librarian broke this down into three parts with students doing self-reflections in between each part. First students completed a database search without any instruction from the librarian and recorded that search on the worksheet provided. This was done in part to establish a baseline so change could be seen over time. It was also intended to provide students with an opportunity to actively experiment with their topics which is part of Kolb's model.

Unbeknownst to the students, this experiential approach implicitly and intentionally addressed emotional aspects of the research process as identified by Kuhlthau (1991) in the Information Search Process Model, primarily: frustration,

confusion, and doubt. This experiential approach allowed the librarian to support students through the emotional roadblocks as they happened. By beginning with students brainstorming on their own to develop search strategies, students naturally encountered difficulty with the task, thus addressing the inflated confidence students reported prior to the session. It also set the stage for the culture of the session, in which students would naturally encounter frustration but would be supported by the librarian and professor talking them through the emotional aspects of the research process.

After students reflected on their initial search, the librarian gave a brief overview of how to take keywords and set up a search strategy in databases to get qualitative results. This portion of the lesson only lasted 10-15 minutes. While the librarian provided a LibGuide for examples and additional information, the overview did not necessarily cover all the details of Boolean operators, subject searching, and other typical topics covered when teaching database mechanics. Meaning, even though the librarian demonstrated typical database mechanics, they did not cover them extensively. This followed the "concrete experience" portion of Kolb's (1984) Learning Cycle where students were able to observe a live search and see the process step-by-step.

Following a brief database demonstration, students looked at their initial search and revised it given the new training they received as well as natural feedback from the quality of results in their initial search. Students completed an additional search following the same process above with the librarian's support. This followed the "active experimentation" portion of Kolb's Learning Cycle where students practiced what they had learned.

Between each searching attempt, students completed reflection questions provided by the librarian. The reflection portion was the "reflective observation" part of Kolb's Learning Cycle. These reflections allowed the students to analyze the quality of their search strategy as well as the quality of the resources they found. As part of this reflection process, students were encouraged to problem solve how they might adjust their search to improve the search results. During the final reflection portion of the exercise, students were asked about the research process as a whole for the session in an effort to draw out the emotional aspects of the process. This final reflection portion was the "abstract conceptualization" part of Kolb's Learning Cycle where students not only reflected on their search results, but also their learning process as a whole.

The session concluded with more reflection on the part of the student using the 3-2-1 assessment technique where students identified three things they learned, two things they were still confused about, and one thing they planned to implement or use during the course of the semester for their project. While there are various ways to close the loop on this assessment technique, the librarian and professor used this feedback to identify areas of further instruction and to

identify areas of learning.

Classroom Observations and Lessons Learned

There were many things observed during the session not only about student learning but also about how the session went as a whole and whether or not it met the needs of the students. By minimizing the amount of lecturing by the librarian, it allowed more time for students to explore their topics and encounter searching issues in an organic way with librarian support nearby.

First, students demonstrated inflated confidence in the pre-assessment survey. This disconnect between students' perceptions compared to the reality of their abilities is confirmed by previous research (Freeman, 2004; Gross & Latham, 2009; Gross & Latham, 2012; Maughan, 2001; Serap Kurbanoglu, 2003; Vickery & Cooper, 2003). These studies found that students assess themselves with higher information literacy skills than they actually demonstrate. Meaning, students' information literacy skills are not as good as students think they are.

The librarian was surprised by how quickly students became frustrated with their researching, and their lack of persistence or "grit." After one to two inadequate searches, students were contemplating changing their topics because they had determined that there was "nothing on their topic." While some of their topics took more effort than normal, it was not usually the topic that was the problem. Based on observing their searches, the common problem was identifying keywords. This problem surprised the librarian the most as these were junior-standing students, and had done a lot of college research before this point. This observation made the librarian realize their own assumptions about students' abilities.

The librarian also made some personal observations about this process. First, it was difficult to give up control and allow students to lead the session through experiential learning. Allowing students time to reflect on their own and not spoon feed them was additionally hard because the issues that arose could not be predicted. However, after seeing that this approach created a more meaningful learning experience for the students, it was easier to move away from a lecture model. Finally, the librarian was pleasantly surprised how easy negotiating with the professor was. It was also good to have alternative ideas for meeting the professor's needs without having to give up more classroom time.

Assessment

The librarian assessed student learning in multiple ways. A meaningful lesson they learned was to create their own "artifacts" so they had something to assess. Typically, librarians do not always get to see the final products of students work. By creating your own, you have a mechanism to measure student achievement of learning outcomes. First, the librarian used a survey, completed prior to

the library session, with confidence scales to measure students' prior knowledge. Second, they created a worksheet with blank search boxes, blank word map, and reflection questions. On that same worksheet, they incorporated the 3-2-1 technique which is a variation on the one-minute paper. Finally, they intentionally checked in with the professor after each assignment was due to see anecdotally how students were performing.

Coinciding with the assessment tools, the librarian developed assessment criteria. The criteria included: multiple (i.e., four or more) keywords listed on the word map; use of Boolean operators and truncation; use of system facets; quality of their searches e.g., qualitative and peer-reviewed articles; lingering questions, "aha moments," or something beyond a basic response of "it was good."

Overall, students performed well. Students' searches dramatically improved after their initial search and reflections. Students demonstrated feelings of uncertainty, doubt, frustration, and satisfaction. In a short period of time, many experienced the whole spectrum of emotions, but were able to break through those emotions with the assistance of the professor and librarian. The professor reported that all of the students had ten peer-reviewed articles in their initial draft which the professor said was a huge improvement from previous semesters. The professor also reported that ninety percent of the class had quality sources and enough resources to complete a well-rounded literature review.

Conclusion

Intentional lesson design focused on active learning enriches student learning. The use of self-reflection in a library session opens doors to meaningful, deeper learning and teaching. It takes negotiation and compromise between the librarian and faculty member to come together to create these meaningful experiences for students. Addressing the emotional aspects of the research process can be addressed in a one-shot library session without compromising stereotypical library content, and is important to consider in teaching students persistence throughout the process.

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or concepts. Still, common skills were acquired including formation of topics into viable projects, refining the process of searching for information, revising written work and somewhat unexpectedly, various reading skills such as strategies to understand and manage their reading as well as how to read within their own discipline.

Utilizing the ACRL Framework as well as the Council of Writing Program Administrators (WPA) Framework for Success in Postsecondary Writing, Kaletski-Maisel and O'Neil found correlations between the student needs and the goals listed in the frameworks.

The session ended with an overview of future studies (e.g., analyzing students' junior year seminar work), along with a question and answer session focused on how and if librarians collaborate with writing centers or instructors to teach students the importance of academic reading, writing and research practices.

 For more information about the conference, and the PowerPoints and handouts for many of the sessions, including from all the sessions listed in this article, visit the website at <http://www.loexconference.org/2018/sessions.html>

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