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Evolution of the One-Shot Library Instruction Session

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Thank you for coming today. I like to get to know my audience, so how many of you are academic librarians? Public? School? Special libraries? How many of you teach library instruction sessions somewhat frequently? To start off, I’d like each of you to think of a memorable research question you’ve fielded recently. If you can’t remember one, make up an interesting topic that could potential be used for a college research paper. Remember this topic for use later on in the workshop.
One-Shot Instruction Challenges

- Knowing what to teach
- Teaching too much material
- Communicating with teaching faculty
- Meeting faculty expectations

(DON’T ADVANCE SLIDES) The one-shot library instruction, as most of you know, refers to a single instruction session. Typically 50 to 80 minutes. It has been the standby library instruction model for decades.

What are some of the challenges with the one-shot model? Go ahead and get together with others at your table and list some of the challenges you’ve experiences with one-shot instruction. We’ll give you a couple minutes to brainstorm ideas.

(Call on audience feedback).

Here are just a few pitfalls that I’ve listed that we’ll be addressing today (ADVANCE SLIDES).
Meeting teaching faculty expectations can be one of the biggest challenges with a one-shot session. Faculty sometimes are unwilling to take more time away from their own class-time, so you might be lucky to even get 50 minutes. For the time you are given, faculty may want to get the biggest bang for their buck and ask you to teach students on many different topics.

What are some of the teaching faculty expectations you’ve experienced? (Ask for group responses).

These are just a few expectations I’ve been asked to cover in my sessions, though this is not an all inclusive list: (ADVANCE SLIDES).
So, as you’ve expressed earlier, there are some real challenges with a one-time instruction session. Trying to meet all instructor expectations is not feasible or advisable for a successful instruction session. Taking on too much will result in information overload for your students. Most of us have relatively short attention spans. Students are relatively good at following along with a few topics. However, as more and more gets stacked on, their minds begin to wander and they checkout of the session. Seeing the glazed over eyes can be particularly frustrating for the librarian, as we often feel that all of the information we’re presenting is important for students to succeed. What’s even more problematic is when students provide negative feedback to their professors concerning the library session. Faculty may have grand, even unrealistic expectations. When these expectations are not met, they likely will not seek out help from the librarian in the future.

How to do all this in 50 minutes?

• Information overload
• Student disengagement
• Librarian frustration
• Unmet faculty expectations
The first step to avoid many of these pitfalls is to have clear, open communication with teaching faculty. It is important to set up realistic expectations of instruction sessions. As a profession, librarians are service oriented. We often bend over backwards to help our patrons, especially faculty. However, we ultimately are not doing any favors for faculty, students, or ourselves when we take on too much during our instruction sessions. As we meet with teaching faculty regarding upcoming instruction sessions, we should determine what are the most critical concepts for students to learn. What assignments will students be completing? Are there specific information sources the professor wants students to use?

Coordinate with Teaching Faculty

- Clear communication with instructors
  - Identify most critical concepts
  - Ask questions about student information needs
    - Upcoming assignments
    - Preferred information sources
Implement Learning Outcomes

• Clearly identify most critical concepts
  o Can’t cover everything in one session
  o Limit to just a few concepts

• Develop clearly defined learning outcomes
  o i.e., “Students will be able to find primary research articles using database x”
  o 2 or 3 learning outcomes sufficient

• Focus instruction on accomplishing outcomes

From our interactions with teaching faculty, we should be able to create and use learning outcomes for our instruction sessions. The learning outcomes should be based on the few concepts deemed most critical from your communications with faculty. Generally, you’ll only want to have 2 or 3 learning outcomes for a 50 minute session. More than this will bog the session down. The outcomes can be clear, concise statements of what students will be expected to accomplish. Many university classes are already required to have pre-determined learning outcomes, so this will further align library instruction with course/university objectives. It also is probably a good idea to share these learning outcomes with teaching faculty. This will help them to have more accurate expectations and gives them the opportunity to make suggestions. The learning outcomes will also help you to focus your instruction. If something you plan on saying doesn’t further a learning outcome, then you probably should toss it from the session.
Facilitate Student Involvement

• Don’t lecture entire class
• Break up lecture with student activities
• Hands on application of principles discussed

Student participation is key to successful library instruction. As library instruction often is centered around skill development (think ‘information literacy’), finding ways to allow students to apply what has been taught is critical. It is often helpful to intersperse lecture with activities. Finding ways to allow students to work together can also facilitate better learning retention.
We’ll spend some time talking about various teaching pedagogies that have been applied to one-shot library instruction. The first of these is traditional lecture. As I started off teaching, this was my standby.

Explain peer review process
Primary, secondary sources
Databases- Web of Science/Pubmed, etc.
Give assignment for attendance
   Email titles of one primary and one secondary paper and why they are useful

30 minute lecture and 20 minute activity
   Discussion on peer review/primary/secondary
   Explain databases
   Model effective search strategy
   Group activity
      Divide students into two groups
      Assign each group a topic
      Conduct search and narrow down to relevant articles
   Regroup for last 5 minutes and discuss activity
Problem-based learning was first developed for medical students back in the 1970s and 80s, but has since been adapted to other disciplines. PBL - learner-centered active instruction. Students work in groups to develop solutions to real-life scenarios. (i.e., “you are an advisor to a U.S. Senator who has a 2 minute radio interview in one hour on the topic of hydraulic fracturing and groundwater safety. The senator is uncertain of the risks/benefits of this practice and has asked you to find 5 reliable sources identifying the risks to ground water and any potential mitigating factors.” The librarian’s role is shifted to that of a facilitator, helping students complete their group assignments. Only brief introduction of topic and explanation of resources to complete assignment. Majority of time spend on case study. Conduct debriefing for 5 or so minutes at the end. Requires more work for librarian before session, understanding curriculum, etc. Students take on more responsibility during the session. Librarians need to be comfortable with some silence as students work through scenarios.  

**Have any of you had experience with Problem-Based Learning?** What are some of the benefits or challenges to this teaching model for one-shot library instruction?  
Possible benefits- real-life example/applicability; hands-on group project; more time doing, less lecture;  
Possible challenges- not all instruction sessions have great real-life scenarios; because instruction is limited, students might struggle getting on task; if scenario isn’t interested to students, might not find applicable; groups work at different speed and might finish early and be bored, etc.
Another methodology is the Independent searching with Scaffolding. This method requires students to have a specific research project or other assignment to work on during the session. The librarian provides a short introduction to the assignment with minimal instruction on resources to use to complete this assignment. Then the remainder of the time is devoted to allowing students to search independently on their research topic/assignment. The librarian provides one-on-one help (scaffolding) as needed. The idea behind scaffolding is that librarians provide as much support as needed until students are able to complete the tasks on their own and no longer require the extra support.

This is likely a more common teaching methodology for library instruction. **Who here has used independent searching with scaffolding in library instruction? What are some strengths/limitations to this approach?**

Potential strengths: Students are able to work on specific research assignment; potential time for one-on-one help; “instruction” is tailored to individual student need; little preparation required

Weaknesses: Won’t work if students don’t have specific assignment; librarian may be spread thin if many students have questions (need more helpers); conversely, if no-one has questions, librarian becomes awkward hoverer; little to no interaction between students

*Willson reported that students rated one-on-one help as most useful part of instruction session. Independent searching tied for eighth most useful.
Using education games, such as Jeopardy or trivial pursuit, can be a productive way to reinforce information literacy concepts. Using education games can potentially motivate students to actively participate in class, can reinforce students’ learning of information literacy concepts previously taught; and can add variety to class session by providing a fun environment.

The questions used for the game should be drawn from the library instruction (i.e., “The library web portal for subject specific resources and contact information for specialized librarians” “what are subject guides?”)

Have any of you used educational games? Strengths? Weaknesses?

Might be hard to incorporate for all types of instruction. Not a good option for all groups, particularly more advanced. Somewhat juvenile and may give the impression of unprofessionalism/undermining librarian credibility.
Formative Assessment
(Dunaway & Orblych, 2011)

- Pre-assessment survey/assignment
  - Gathered 2 weeks before session
  - Session tailored to gaps in student responses
- In-session assessment
  - Use iClicker to assess student understanding of concepts
  - Immediate feedback, discussion of responses

Formative Assessment requires the ability to contact students prior to their library instruction session to administer a pre-assessment survey or assignment in order to evaluate student information literacy skills. The format for the pre-assessment can vary, but may require students to complete searches and write down their search strategy, etc. This requires coordination with teaching faculty. The surveys/assignments should be collected at least 2 weeks prior to the library instruction session to allow librarian time to review student performance and understanding of concepts. Based on student responses, the librarian can develop instruction session to fill gaps in student comprehension. The librarian also develops questions to use during the session based on pre-assessment response. This may include some of the same questions, particularly if responses were poor, or it may include more advanced questions. For class interaction and discussion, these questions will need to be multiple choice/true/false. After some instruction during the library session, the librarian administers these questions using audience response software (iClicker). Advantages of using iClicker include the immediate feedback for all students to see. Responses are anonymous and allow librarian to discuss responses and address misunderstandings. Can compare potential student improvement.

**Anyone used this before? Benefits? Limitations?**

Benefits- group participation and discussion, ability to modify instruction session to meet student needs, fosters collaboration with teaching faculty

Limitations- multiple choice questions easy to game and might not show actual
understanding/improvement, requires more work at the front end, hard to administer pre-assessment

Potential modifications- use another type of in-session assessment rather than iClicker (research assignment, etc.)
The flipped classroom concept is attributed to two high school science teachers in Colorado, Jonathan Bergmann and Aaron Sams. The main idea is to have students complete traditional lecture material at home, either through online tutorials, readings, etc. During class time, students engage in hands on application of what was learned before coming to class (more traditionally what would have been homework). These applications can include group problem solving activities, etc. Librarians have been applying flipped classroom concepts for the past few years. One method (which will be discussed in more detail during the next hour) involves creating online tutorials for students to complete prior to attending library instruction sessions. The in-class activity can incorporate any of the previously mentioned methodologies, such as scaffolding or problem based learning.

**Anyone tried flipping their classroom? Strengths? Weaknesses?**

Potential strengths- frees up a lot of time during session for hands-on application. Group collaboration. Librarian doesn’t have to be sole lecturer during session.

Limitations- A lot of work to create tutorials (though these can be used over and over again). Can be uncomfortable for many librarians. Requires more advanced planning. Need to be able to distribute tutorial to students in advance, etc. What to do when students don’t watch tutorial in advance.
The title “student-facilitated reference interview” is my own, but I initially got the idea from an article by Watson on lesson study. This teaching methodology incorporates ideas from other methodologies and works rather well with a flipped classroom approach. I have used this model for the past couple of semesters for my advanced writing instruction at BYU (explain advanced writing program).

Here is the flow I used: Brief introduction. Model effect search strategy (5 -10 minutes) Briefly explain/ show relevant databases. Student Activity: Get with partner and conduct ‘reference interview’. Identify partner’s topic, search terms, synonyms, etc.- Write on worksheet. Determine relevant databases- Write on worksheet. Conduct search and narrow results. List two relevant articles on worksheet and send these to partner. Switch and repeat process. Recap last 5 minutes of class. Students turn in worksheet for attendance & evaluate student understanding.

Now it is your turn. Remember the memorable research question from the beginning of class? Go ahead and get with a partner. Take turns explaining your topic to each other. I want you to complete this worksheet for your partner’s topic. We’ll forgo searching databases/finding article, unless you have good wifi connection and are really motivated. I’ll give you 5 to 10 minutes to work on this together and then we’ll get back together as a group to discuss your experience.

Wrap-up. How was your experience? Good things about SFRI? Limitations?
Good- student involvement. Hands-on. Good to have a second set of eyes searching topic. Still relevant. Searching someone else’s topic creates some accountability (used to assign random topics). Students can help each other if stumped.

Limitations- students have to have a research topic before coming to session. Won’t work for non-research specific assignment. Have to have even number of students (I would ask teaching assistant to fill in).
References


