

THE FLIPPED CANVAS: INVERTING INFORMATION LITERACY INSTRUCTION

SARA ARNOLD-GARZA AND KIMBERLY MILLER

INTRODUCTION

The flipped classroom is a teaching model that “flips” the sequence of lecture and homework activities, and has grown in popularity for both k-12 and higher education settings. Also called the inverted classroom or reverse instruction, students learning this way usually view or listen to a lecture before class and engage in homework style problem solving during class. Library instructors have begun experimenting with this model in recent years, adapting it to their teaching environment. Based on the presenters’ experiences implementing flipped information literacy sessions, *The Flipped Canvas: Inverting Information Literacy Instruction* interactive workshop sought to provide LOEX 2014 attendees with an opportunity to:

- Describe the “flipped classroom” in order to facilitate further discussion about using the model in library instruction
- Identify appropriate tools and teaching scenarios necessary for planning a flipped classroom to fit instructional needs
- Begin to design flipped information literacy instruction lessons.

THE FLIPPED CLASSROOM APPEAL

Library instruction continues to become more learner-centered, and many librarians see the flipped classroom as an opportunity to reduce direct instruction and focus classroom contact time around practical, hands-on activities. The promise of the flipped classroom as a vehicle for emphasizing active learning and reducing traditional lecture is one of the most frequently touted benefits cited when librarians choose to implement the “flip” (see for instance Datig & Ruswick, 2013). Given the anecdotal and literature-based evidence that active information literacy sessions lead to more positive student

outcomes (Detlor, Booker, Serenko, & Julien, 2012), the potential for increased active learning is a significant feature of the flipped classroom. The model also requires students to take more responsibility for learning, allows students to pace their own learning, and promotes in-class application of materials learned during at-home study (Benjes-Small & Tucker, 2013). As access to information grows and we develop library tools that attempt to make it easier for students to retrieve relevant sources, there is a need to support the nuanced steps that come after identifying sources, which engage critical thinking skills and require application for learning to take place (Brown & Simpson, 2012). The flipped classroom allows students to practice research and information literacy skills with their peers, which both supports learning and prepares them for work environments outside of the classroom (Lemmer, 2013). Finally, for many instruction librarians who provide course-integrated instruction, discussing and implementing the flipped classroom is an opportunity for enhanced faculty-librarian collaboration. In general, collaboration between librarians and classroom faculty is desirable for supporting student learning, but not always fully enacted (Meulemans & Carr, 2013). The flipped library instruction model demands faculty buy-in to transform the typical library session and is essential for motivating students to participate in pre-class assignments and in-class activities.

ALBERT S. COOK LIBRARY FLIPPED CLASSROOM PILOT

The Flipped Canvas workshop was borne out of a flipped classroom pilot at Towson University’s Albert S. Cook Library. Towson University is the largest public comprehensive university in the Baltimore, Maryland metropolitan area, with a Fall 2013 FTE of just over 22,400 students. Located in the heart of Towson University’s main campus, Cook Library is responsible for providing library services to all students, faculty, and staff. As liaisons to academic departments, research

and instruction librarians regularly conduct face-to-face, course-integrated information literacy instruction.

During the Spring 2013 semester, Sara Arnold-Garza organized a pilot implementation of the flipped classroom for library instruction. Kimberly Miller was one of seven librarians who participated in the process, including helping to plan the “flip” and sharing experiences as teaching took place. Students in disciplines ranging from art to sociology to computer science at all undergraduate levels participated. Due to the diversity of participants, librarians, and classroom faculty, each flipped class was tailored to suit the instructional need. Although pre-class materials were mostly drawn from the library’s existing set of short video tutorials, and all librarians required some mechanism for students to show that they had viewed and understood the material, in-class activities varied from independent research work sessions to paired and group exercises like guided discussions, scavenger hunts, source evaluation, concept mapping, and worksheets. Students, librarians, and classroom faculty were each surveyed about their experience following the flipped classroom instruction. Librarians participated in a follow-up group interview to explore the interesting observations shared in their survey version. While the results of this pilot have been reported elsewhere (see Arnold-Garza, 2014), the process of researching flipped instruction, planning customized learning experiences, and reflecting on our observations resulted in concrete lessons learned and shared with participants during our LOEX 2014 interactive workshop.

PRACTICAL CONSIDERATIONS FOR FLIPPED INSTRUCTION

The presenters designed *The Flipped Canvas* workshop to model a flipped classroom experience as closely as possible for workshop attendees. Although it was not possible to distribute pre-workshop materials to attendees in advance, the beginning of the workshop featured two short videos (Goodrich, 2012; Learning, 2012) to provide attendees with a shared definition of the flipped classroom. In the spirit of relying on reduced lecture-based instruction, workshop presenters limited their direct instruction to a synopsis of five important practical considerations learned during Towson University’s flipped classroom pilot.

#1: Who?

Although identifying the audience for any instruction is an important step, carefully considering both classroom learners and intended faculty partners is critical in the flipped classroom setting.

Learners: In most circumstances, this includes understanding learner characteristics like their cognitive level, where they might be on Bloom’s Taxonomy, and what access to or previous knowledge of library resources they have. In the flipped classroom context, identifying the target learners may answer additional questions like: What access and facility will they have with the technology used to deliver pre-class materials?

What evidence can they provide of their understanding of the pre-class materials? What are they capable of doing in class to build on the pre-class materials?

Classroom faculty: Collaboration between the librarian and classroom faculty is vital in the flipped classroom. This model is successful when faculty fully participate in the process of informing students of a pre-class assignment, communicating expectations of student accountability to complete the assignment, and supporting the student responsibility to engage with in-class activities. Some faculty may not be open to flipped library instruction sessions, so it is important to find those faculty members who are willing and invite them to be part of the planning.

#2: What?

The flipped classroom consists of the pre-class material and the in-class activities. In order to design these components, the librarian should determine appropriate learning outcomes, which drive decisions about the material presented before class and what activities take place in class.

Pre-class materials: Pre-class materials should be brief and emphasize the basic concepts or steps necessary to introduce an idea or process. These materials should equip a student with the tools they will need to begin practical application. Couple the pre-class materials with an assessment, for example a quiz or reflection, to confirm that they have completed the work and to gauge their understanding before beginning class.

In-class activities: Working either in groups or independently with librarian guidance allows students to discover the underlying concepts, encounter problems in class, and address complexities in a space where they can benefit from the help of their peers and the instructor. Students use the tools they have been given to engage with information literacy concepts and confront challenges. If they know the general characteristics of a scholarly article, they can identify articles that fit the criteria, and will find that some articles are not as easy to classify.

#3: How?

Transitioning to a flipped classroom requires considering how flipped classroom materials are created, organized, and delivered to students. This includes identifying or creating pre-class materials for students to review, deciding on a method for delivering materials to students, and designing material distribution. Most often, the content is a digital representation of the material that would be presented during a more traditional in-class lecture. Creating new content to meet the unique needs of each class is a frequently discussed challenge (e.g., Benjes-Small & Tucker, 2013) and librarians may decide to use their own existing tutorials or searching the web for other content sources to mitigate this concern. Providing an assessment mechanism along with the flipped materials is also essential. Librarians may consider content delivered via an online platform like a course site in the institution’s Learning Management System (e.g., Blackboard)

or a free survey platform, like Google Docs, in which an assessment can easily be constructed.

#4: When?

Time is a common concern for instructors considering a flipped classroom approach because planning and preparation are distributed differently. When is it best to communicate with the collaborating classroom faculty member? When is it best to communicate with students?

Faculty member: Understanding the classroom faculty member's information literacy priorities and assignment due dates will provide a timeline from which to work. Communication should happen early enough that the pre-class assignment can be included in the syllabus, and considered as part of the overall course workload. This strategy will also make it more likely that students get a consistent message about expectations from the classroom faculty and the librarian, and plenty of prep time exists for creation of materials.

Students: Consider when it is best for students to complete pre-class materials. Timing is key—too early and the pre-class work will not stick, too late and students will not have time to complete the exercise. Additionally, it is helpful for the librarian to be able to review any assessments students have completed before the in-class activities begin, and amend the lesson plan based on student understanding.

#5: Why?

Implementing flipped library instruction can be a challenge, and some instructors worry that the model may simply lead to more time for bad pedagogy (Nielsen, 2011). Librarians should understand their own motivations for implementing the flipped classroom. Using a flipped model is not a mandate and is not the only way librarians are accomplishing goals like focusing on active learning and student-centered instruction. Librarians may use the flipped classroom as an opportunity to give students time in class to begin engaging in the early stages of a research project. Rather than hoping students will visit the reference desk or make an appointment for a research consultation later in the term, librarians are guaranteed to be present as students begin the first steps of a research project. Other reasons may include: designing better content delivery for student understanding; creating a more “open” classroom; increasing student control and responsibility; and creating more opportunities for student interaction, peer learning, and focusing on application of course material.

Finally, the “Why” factor is critical to address with students. Learners might interpret the reduction of in-class lecture or direct instruction as a reduction in overall work or intentional teaching. A risk of the flipped classroom is the perception that if the librarian is not lecturing, they are also not teaching. Helping students clearly understand the pedagogical

motivations of the flipped classroom is a first step in generating student buy-in.

LOEX ATTENDEES DO THE “HEAVY LIFTING”

The Flipped Canvas workshop attendees were alerted to the fact that they were expected to do the “heavy lifting,” which can be disconcerting for those accustomed to learning from expert lecture. This strategy was not just useful for demonstrating some common characteristics of a flipped classroom experience, it also acknowledged that learners come with their own previous knowledge and expertise, and in this case are the best ones to craft their own learning experience and determine their takeaways.

The workshop began with an opportunity for learner control and responsibility, since attendees were asked to choose a teaching scenario table that described their own teaching environment, including: one-shots, freshman only, for-credit information literacy course, students of mixed levels, and multiple sessions. Following the reduced lecture portion, each table group read a common article, completed a reflective worksheet, and discussed their reflections with peers. The group activities used collaboration and peer learning to build knowledge. Individuals shared within groups the opportunities and challenges of implementing a flipped classroom in their teaching environment. The groups were prompted into discussion based on participants' shared understanding of the flipped classroom from the pre-class video and an in-workshop article reading. Attendees with previous flipped classroom experience or creative solutions for challenges presented were able to offer new ideas for the novice attendees. As groups worked, Sara and Kim circulated to engage in the discussions and answer or pose questions to the participants. The groups were asked to choose a prominent theme from their discussion and the points were shared out and discussed further.

WORKSHOP TAKEAWAYS

As an example of assessment, exit tickets were used to gather specific takeaways from the workshop. Each attendee was asked to write a response to the questions:

- What is the first step you can take to implement a flipped classroom in your instruction?
- What is one question you still need to answer before implementing a flipped classroom?

These questions were used to provide feedback to the workshop attendees about where they might be in the process of planning their flipped instruction, and to provide the workshop facilitators with evidence of the attendees learning.

Some felt ready to take the first step in creating a tangible flipped classroom experience. Responses to the first question described the need to identify and select tools to

construct the flipped classroom experience. They also described the need to determine objectives for assignments and decide what can be best represented in pre-class material, including those who identified their next step as reserving time for creating online content.

Others prioritized the need to communicate the value of the model to stakeholders. Other responses to the first question included identifying faculty partners and courses that might benefit from flipped instruction, starting the conversation with library colleagues, and planning how to talk to students about the model.

Many wondered about the pedagogy of designing successful flipped instruction. Questions that remained for attendees included how to encourage student participation and completion of pre-class work, how to engage specific learner populations and assess their work, and what the specific pedagogical motivation for adopting the “flip” might be.

Questions about investment and use of time were common. For example, some wondered if the return on investment was worthwhile to plan the flipped instruction. Other time-related questions included what to do with actual instruction time and what are realistic expectations for students’ time spent on work outside of the classroom.

Technology and tools were frequently mentioned as outstanding issues to be addressed. These questions included how to deal with a lack of technological skill, and which platforms or media would be best for communicating, creating videos, and assessing students.

CONCLUSION

The flipped classroom is just one of many techniques that support active, learner-centered information literacy instruction. *The Flipped Canvas* workshop provided some practical considerations from a library that has learned some lessons from their own pilot, and an opportunity for attendees to think about its potential for use within their own teaching environments.

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APPENDIX

Quotes from Participant Exit Tickets

Question 1: What is the first step you can take to implement a flipped classroom in your institution?

- Identify a course + key learning outcomes, (what activities lend themselves to flipping?) - find faculty member to work with.
- Determine which aspect of the learning objectives I will flip
- Identify class material/teachings that could become a learning objective between classes
- Discuss takeaways with colleagues about what NOT to do when flipping the classroom. Meet with faculty who have committed to flipping library instruction to discuss syllabus
- Create material for pre-class prep
- Articulate what process and procedures NEED to be taught. More procedure and interactive at flip, move up bloom in-person
- Contact a faculty member to see IF they are ok with a flipped class
- Intentionally thinking about where this could realistically implemented... then design
- Talk to course instructor
- Identify a class to be flipped, then discuss with faculty
- Determine what I can flip. What's going to save time outside of the classroom
- Speak with faculty to require "SciFinder" registration and getting screen shot of search results to instructor before class
- There is no flipped classroom without faculty buy-in/collaboration. Need to communicate with subject faculty first
- To see what class that would make the most sense to flip
- Discuss idea w/faculty member whose course it would happen in about which content to flip, why consider flipping, etc.
- Use Moodle to create an interactive module
- Start with explaining the flipped classroom to other librarians. Have a brainstorm session - not a competition
- Work with faculty to integrate into course LMS
- Revisit L.O.s for existing series of one-shots (2-shots) in English 101. Refine, simplify... Take out process oriented lecture
- Find an instructor who is on board
- Have implemented the flipped classroom
- Think about how to shift focus from instructor to students in online instruction. The instruction is already focused on students - how can I move this further along the spectrum
- Get in touch w/faculty (mostly English instructors) about creating a pre-class component for fall semester
- E-mail a professor I will be working with next year to see if he would be interested. Also, find tutorials on Primary vs. Secondary sources
- Check out Guide on the Side and Articulate Storyline
- Review my present (first attempt at flipped) syllabus to see where I can improve my assessments. I use class discussion in the 1st of 2 lectures of the week where they need to have read/viewed ahead of time
- Analyze what can be done outside class that would save time
- Find willing faculty member to partner with
- Identify instructors who will buy into the idea and be supportive/cooperative. Think about when/how/why I may use the flipped classroom.
- Block time in calendar for enhancing online content!!
- I feel like I need to collaborate with my librarian colleagues - have a meeting about our info lit course that we offer for credit and talk about how to design a flipped class. Need to start the convo.
- Work with English faculty to have students complete a pre-assignment of a brief tutorial & submit questions to me about researching.
- Contact Mike about timing & content
- Write the learning objectives!
- Want to try making a widget of a Survey Monkey form or a Google Form with the activity to embed in a class guide or course shell.
- Restructure activities Make grading more clear
- Decide what can be taught outside of class, based on class learning objectives.
- Contact instructors now if want to do some flipping activities - for Fall classes. Think about what parts I want to flip for my typical FYS class.
- Write out objectives for pre lecture assignments
- Identify one faculty member willing to talk to me about the possibilities.
- Consider how to communicate the value of the "flip" to instructors/students/dept. heads
- begin talking with potential faculty partners
- Contact faculty interested in flipped classroom
- Contact faculty member & placate them with food/coffee/chocolate.

- Start brainstorming best tools to flip (eg. video, guide on the side, etc.)
- Identify a reading dev ed class that would be appropriate for flipping.
- Brainstorm ideas for flipping a par. course and speak to the prof about their learning outcome priorities
- I need to take the flipping I already do & add the assignment so I have feedback before class

- I have an instructor I will talk to about working with for his fall classes.
- Communicate with instructors. Work with administration to bring plan to fruition.
- Talk with instructor prior to planning his/her syllabus
- Think about specific parts/learning objective to flip

Question 2: What is one question you still need to answer before implementing a flipped classroom?

- Why is flipping better than existing scenario?
- How to make sure students do the things you wanted them to do outside of the class!
- What is the ROI for the time needed to create and then maintain the learning objects? (Work-load issues)
- How will I get students to do the homework before I come to class?
- What to do during actual instruction time
- Best way to get faculty buy-in?
- How much work will it require me to do a flipped class?
- How do you deal with lack of tech skills?
- Will the course instructor buy in and encourage preclass activities
- What tools can I use to make it interactive?
- How to know that the idea worked
- How can we encourage "old timer" returning students to feel involved and engaged in generational work groups and feel comfortable and confident
- How do I prepare a flipped class for a freshman and a senior who are in the same class? The risk of students thinking it's redundant is high
- What would be the most appropriate tools to use when flipping
- How to ensure the outside part actually happens
- Will instructors actually use it?
- How to come up with useful activities to go with a video
- Will faculty be open to it?
- Just ONE?? Where to begin. Feels overwhelming with small/nil team and no experienced mentorship. Need to start small. Just me + 1 faculty?
- Have experimented with how prescriptive to make F2F lesson, how much to guide students' work, some structure is helpful to keep students on task. Have also altered out of class materials
- How to help students "get" the concept of flipped for the session (usually takes them a few times of seeing it)
- How to negotiate w/faculty in one shots to add assignment (for credit, so that students will do assignment that librarian will grade)
- How can I make the pre-class activity interactive in video form?
- How easy is "Guide on the Side" (tutorial tool). It came up in conversation and sounds promising.
- What can I flip?
- How can I overcome students' resistance to do the pre-class work? My students still fall into the "no lecture = no teaching" model
- Teacher buy-in
- How much time can I realistically ask students to spend outside of class?
- What part am I going to flip and why? What is the pre-work going to be, and how to use that to go more in-depth during class?
- Survey students pre-semester - find out what they know
- Are there other community colleges doing info lit courses for credit in a flipped model? Maybe not necessary before we do it, I'm just curious.
- How to get faculty to remember to give the pre-assignment (& give it value in their own mind so they remember)
- What are the best ways to communicate info outside class & assess (technology?)
- Can I really get students to do activities outside of class?
- Difficult to get this to happen for all of my classes. Faculty not always reachable.
- What % of faculty will buy in to the new model?
- What FYS learning outcome(s) do I want to start introducing outside the classroom - our 3: search skills, eval., citation
- How will I assess student's participation in flipped classroom assignment?
- Can I use the active learning activities in my sessions to improve or do I HAVE to flip?

- Would have liked to hear more anecdotal/personal observations on speakers' experience flipping
- what's the best medium (software, app, tool, etc.) to accomplish the out-of-class piece
- Is it possible to flip an introductory online class for returning students? If so, timing?
- Deciding which class to experiment with first.
- What would actually happen in this flipped classroom? I don't want to just create a indiv. work lab.
- How to measure? During the flipped class session & to measure afterwards
- how do I most effectively use the in class time
- In a small school, I do wonder how easy this will be to implement in more than 1 or 2 classes.
- How do I make sure that students know how to use the online sources of the flip course.
- How will I structure the lesson
- if English faculty are on board - & willing for students to have more homework