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The Flipped Classroom and Media for Library Instruction: Changing Library Instruction

by **Diane Fulkerson** (Director of Information Commons/Assistant Librarian, University of South Florida Sarasota-Manatee)

Abstract: *New instructional technologies provide librarians with opportunities to enhance their library instruction by incorporating media. Library instruction may consist of a one-shot class with students. The librarian will have an hour or maybe less to work with students to teach them how to find sources for their assignment. Incorporating media into their instruction through the use of the flipped classroom will allow the librarian to spend more time with students on active learning. The flipped classroom model also provides the opportunity to collaborate with faculty to develop the materials students will need for the instruction session. The use of media for library instruction used with the flipped classroom model leads to improved student learning.*

Introduction

Library instruction has evolved from skill-based bibliographic instruction focused on teaching students how to use a print reference book such as an index or demonstrating how to use a database to

competency-based library instruction. The competencies used for library instruction are drawn from the **Association of College and Research Libraries (ACRL)** Information Literacy Competency Standards for Higher Education. Using the **ACRL** standards for library instruction allows librarians to work with students on critical thinking, evaluating information, and the ethical use of information.

The majority of academic librarians will tell you their library instruction each semester consists of one-shot classes at the start of the semester that can be anywhere from fifty minutes to one hour. During this one-shot class they are expected to provide learner-centered and active learning for the students. In less than an hour it can be a daunting task. New technology and pedagogy can make active learning in the fifty-minute one-shot feasible. One method to maximize the time spent with students is through the use of the flipped classroom. The flipped classroom provides librarians the opportunity to collaborate with faculty to develop library instruction sessions with pre-instruction session assignments and other materials. A flipped classroom allows

the librarian to create a pre-instruction session assignment along with videos or other media students will use prior to the session. Librarians and faculty using the flipped classroom model spend the classroom time on active learning with the students.

The 2014 NMC (New Media Consortium) Horizon Report for 2014 lists the flipped classroom as one of the “important developments in educational technology” with an expected adoption within higher education of one year or less. For instruction within higher education this type of teaching allows the incorporation of media such as recorded lectures, tutorials, podcasts, and digital readings. The use of media in the flipped classroom leads collaborative classroom learning and the ability of the instructor to address difficult concepts covered in the online materials.¹

To Flip or Not to Flip

A literature review reveals several articles about the use of flipped classrooms for library instruction and the opportunity to collaborate with faculty to design the instruction session.

continued on page 18

Making library instruction sessions engaging and interactive, especially in a classroom without computers, can be challenging. One opportunity to create engaging library instruction sessions is through the use of the flipped classroom. The flipped classroom allows you to incorporate different types of media into library instruction both online and in the classroom.

Some disciplines such as the humanities use the flipped classroom model with their students. Students are assigned readings or other work that needs to be completed before class. The class time is spent on active learning rather than a lecture from the instructor.² The flipped classroom idea was taken to a new level by two high school chemistry teachers, **Jonathan Bergman** and **Aaron Sams**, in Colorado. Students often missed classroom instruction because of their participation in extracurricular activities. In order for their students to complete the course they began to record their lectures. This led **Bergman** and **Sams** to record all their lectures for the 2007-08 school year. Students would watch the videos at home and class time was spent helping students with concepts they did not understand.³ By changing their classroom model the two teachers were able to spend more of their class period working with students to help them understand difficult concepts they were struggling with from the video lecture.

Using the flipped classroom model provides a level of personalized teaching or point of need instruction. Students who are still struggling to understand key concepts after completing the online portion of instruction can receive more individualized instruction based on their needs. The flipped classroom model also provides opportunities for peer teaching and collaboration. Instructors using the flipped classroom model have a variety of choices when it comes to creating the materials students will use prior to coming to class. It might not be necessary for you to create your own videos.

Technology or Instructional Material Choices

Software such as Camtasia Studio or Captivate allow anyone who teaches to create screencast videos. Once the video is created and edited it can be embedded into a Website or uploaded to a YouTube channel. Incorporating videos into instruction allows the students to pause and replay the video as many times as necessary and take notes while they are watching it. Creating quality videos can be time consuming and you need to find a method to determine if students watched the video prior to class.

One method is to include some type of assessment such as a quiz. Both Camtasia and Captivate include the option to create a quiz or other interactive tools for the screencast videos. Another option to create screen capture software is Jing. Jing is free and allows you to create screen capture videos up to five

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minutes in length or capture an image from your screen. Unfortunately, it does not provide any options to edit the videos unless you have Camtasia Studio.

There are other options for using media in the classroom with library instruction. One of them is Prezi. (<http://prezi.com/>) If you are a student or faculty member you can use your campus email address to sign up for an education account that provides you with 500MB of cloud storage and the ability to create, collaborate, and present online as well as manage your privacy and sharing options at no charge. Prezi allows the user to insert a YouTube video, add background music, or a voice-over to your presentation.⁴ Your Prezi presentation can be embedded into a course management system, blog, or Website. The ability to collaborate and share makes it useful for students working on a group project.

Many colleges and universities have a YouTube or iTunesU account for faculty to upload videos or podcasts to the campus account. A search of YouTube for videos about database searching yields numerous results from several different academic libraries. If you do not have the time or money to purchase screencast software, finding materials created by another academic library is an excellent alternative. In addition to YouTube there are three resources that provide links to open access library instruction materials and learning objects.

If you do not have the resources to create your own library instruction materials you can search MERLOT, ANTS, or PRIMO to find learning objects or tutorials for use in your flipped classroom. MERLOT (Multimedia Educational Resource for Learning and Online Teaching) (<http://www.merlot.org/merlot/index.htm>) is a database of peer-reviewed and open access collections of online instructional materials. ANimated Tutorial Sharing Project (ANTS) (<http://ants.wikifoundry.com/>) is an open source collection of online tutorials. PRIMO (Peer-Reviewed Instructional Materials Online) (<http://primodb.org/>) is a committee of the **Association of College and Research Libraries (ACRL)** Instruction Section. To find instructional materials you can search by keyword, category, intended audience, technology used, title, or author.

Recent updates to PowerPoint provide users with the ability to embed sound and video into their presentations. Rather than having a

static slide show, adding voice-over narration or video allows you to turn your Prezi and PowerPoint into engaging and dynamic presentations. One thing to keep in mind when creating a narrated PowerPoint, Prezi, Camtasia, or Captivate video is ensuring they are accessible for students with disabilities. Prezi is not ADA-compliant, and you will need to create a transcript for the presentation. PowerPoint, Camtasia, and Captivate allow you to add captions to your videos.

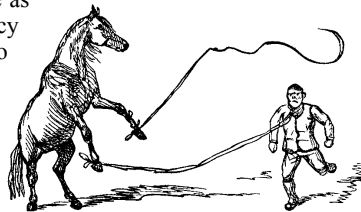
Another option is to use tutorials produced by the database publishers. Many of the database publishers provide tutorials you can push out to the students. **LexisNexis** has a YouTube channel, and **EBSCO** provides links to their tutorials through the "Help" section of their databases. **Elsevier** provides links to their tutorials for Science Direct through the help section of the database. These are just a few examples of tutorials available from database publishers for use with a flipped classroom library instruction session. Using materials created by someone else requires you to develop a methodology to determine if students viewed the materials prior to class. This can be done in a face-to-face class with a few questions about the materials they were supposed to view prior to class. The in-class active learning exercises can also be another way to determine if students viewed the materials before coming to class.

Posting the videos or other media online is one part of creating a flipped classroom. Another part of the project requires the instructor, librarian, or both to create some type of feedback such as a quiz and incorporate it into the online portion of the class. Using a quiz provides students with immediate feedback but also help the instructor to determine if students are completing the online component prior to their coming to class and identifies concepts students may be struggling to understand. Grading the quizzes is an incentive for students to complete the online activities prior to class.⁵

Things to Consider before you Flip

Before you decide to flip your classroom there are a few things to take into consideration. The first is getting the faculty to buy into the flipped classroom model. Librarians using the flipped classroom model for library instruction will need to collaborate with the faculty member teaching the course. Librarians at **Towson**

continued on page 19





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The Flipped Classroom... from page 18


University's Albert S. Cook Library worked with faculty to have the pre-library instruction assignment included in the course syllabus. Their pre-library instruction assignment required students to watch video tutorials focused on library research topics. Each assignment included a quiz or other form of assessment.⁶ The librarians at **Towson** asked for feedback from librarians, students, and faculty who participated in the flipped classroom instruction sessions, and the responses indicated positive outcomes as a result of the change in their library instruction model. Their expectation is it will lead to improvements in their instruction program.⁷

The librarians at **Mary Baldwin College** during the spring 2012 semester began flipping their library instruction classrooms and focused on four activities — database searching, keyword searches, Website evaluation, and identifying sources — for their flipped instruction sessions.⁸ The librarians at **Mary Baldwin** had similar results to those of the librarians at **Towson University**; the flipped classroom resulted in more time spent on active learning during the library instruction session. Both groups of librarians noted the need for collaboration with faculty to implement the flipped classroom for library instruction.⁹

Designing the materials used within a flipped classroom can be time consuming. A learning curve for effectively using new software needs to be included in the process for creating the materials. When creating the materials for use in a flipped classroom it is necessary to have learning outcomes for the out-of-class and in-class activities. Students may not complete the out-of-class activities, which will require the librarian to review those materials at the start of the instruction session and reduce the time for active learning. A student may have no access to the technology or a poor Internet connection, which prevents them from viewing or listening to the tutorials prior to class.¹⁰ When creating materials for use in the flipped classroom they need to be ADA-compliant. Narrated videos or PowerPoints should have closed captioning, a transcript, or both. If you use software that does not provide closed captioning then a transcript of the recording will need to be included with the completed video.¹¹

Assessment needs to focus not only on the learning outcomes for the library instruction session but also on the effectiveness of the flipped classroom. Another consideration is the cost of software to create materials for a flipped classroom. There is free software available, but it may have limited functionality such as not allowing you to edit your video or create closed captions. If the library has limited resources to purchase software then the best option is to

explore tutorials created by database publishers or other academic libraries.

Flipping the classroom for library instruction creates new opportunities for librarians to collaborate with faculty and other librarians to develop materials for library instruction sessions. It can be adapted for classroom or online library instruction. Since many library instruction sessions are one-shot classes it allows the librarians to maximize the time spent with the students on active learning. Providing materials integrated to the learning outcomes for the library instruction session prior to the class allows the students to view tutorials or other materials that will be the basis of the in-class session. In class the librarian will have the opportunity to focus on hands-on learning activities that will allow students to develop a better understanding of the concepts from the materials they viewed prior to the class session. Other benefits of the flipped classroom include the ability of students who may be unable to attend the instruction session but can still view the materials and contact the librarian for additional help. While the flipped classroom model has some problems, this model of instruction provides librarians with the benefit of maximizing class time for active learning. Change can be difficult, but the flipped classroom for library instruction provides librarians with the opportunity to use a variety of media to create engaging library instruction sessions. 

endnotes on page 21