

The Inversion Conversion: Applying Flipped Teaching to Library Instruction

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Our Instructional Context



- South Dakota BOR general-education IL mandate
- Developmental IL program
- Large, multiple-section IL-mandated courses include:
 - Freshman Composition
 - Advanced Writing
 - Intro to Speech



Our Instructional Challenges



- High-volume teaching (Fall 2013):
 - 56 Freshman Composition sections
 - 28 Freshman Speech sections
- Workload and scalability issues
 - 11 librarians share this instruction on top of their departmental and liaison duties, including liaison instruction



Our Instructional Challenges



- Pedagogical challenges
 - Faculty issues
 - Burden of repetitive instruction
 - Workload of planning instruction
 - Lack of pedagogical training
 - Departmental issues
 - Uniformity of content across sections
 - Quality control across library faculty



These tensions are enough to make anyone...

flip out!

Our Solution: Inverted Instruction



- Deliver lecture content in online learning modules accessible outside of class
- Use class time for interactive learning activities
- For inverted instruction to work it must...
 - be applied appropriately and strategically.
 - be both meaningful and interesting.
 - include student accountability for interacting with the outside materials.

**THE FLIPPED
CLASSROOM**

**Turning the traditional
classroom on its head**

Our Solution: Inverted Instruction



- Some subjects are traditionally taught in an inverted fashion (for instance, literature).
- Inverted instruction has been discussed in higher education since 2000.
- In 2004 Salman Khan created a library of free online tutoring videos (Khan Academy).
- In 2008 Bergmann and Sams applied “flipped” instruction in their high-school chemistry classes.



Our Solution: Inverted Instruction



Library media specialists and academic librarians have used “flipped” instruction since 2012.

- Enables the delivery of critical instruction despite lack of face-to-face time with students
- Enables the delivery of “just in time” instruction in response to specific challenges of research assignments
- Allows more extensive use of libraries’ virtual IL lessons
- Allows librarians to combat “lecture fatigue” and concentrate on active learning
- Enables library instruction outside of library sessions (absent students, distance students, review of instruction,

Our Solution: Inverted Instruction



The literature focuses on the benefits of this technique for students.



What are the benefits for educators?

Why the Inversion Conversion?



- Pedagogical challenges
 - Faculty issues
 - Burden of repetitive instruction
 - Workload of planning instruction
 - Lack of pedagogical training
 - Student issues
 - Desire to take responsibility for learning
 - Advantages of hands-on learning
 - “Been there, done that” of generic library instruction



Why the Inversion Conversion?



- Pedagogical solutions
 - Faculty issues
 - Instructional librarians, trained in IL pedagogy, create learning objects
 - Removes the onus of class preparation from librarians, lightening workload
 - Allows librarians to be “guide on the side,” engaging in active learning with students
 - Makes the best use of instructional resources (librarians and technology)
 - Student issues
 - Removes repetitive lecturing and/or passive observation of demonstrations
 - Allows the incorporation of real-world scenarios or case studies into the classroom
 - Engages students in the research process
 - Makes students responsible for their learning
 - Scaffolds student learning within active-learning activities

Why the Inversion Conversion?



- Departmental issues

- Uniformity of content across multiple course sections
- Quality control across library faculty

I hate to ask this,
but could you do
all the instruction?



- Departmental solutions

- Ensures uniformity of content across all course sections
- Ensures uniformity of instructional quality across all librarians
- Ensures that all students receive planned instruction
- Enables all librarians to participate in all general-education instruction

Example: SPCM 101



- Assignment = annotated bibliography entry on scholarly article
- [Learning module](#)
 - videos
 - scripts
 - rubric
- Course quiz to ensure accountability
- Brief in-class clarification
- In-class writing of annotation
- Active-learning exercise = APA journal citation style
- Evaluation

Evaluation



Compared to other library instruction [at USD], in the flipped instruction class, I learned... (answers from students with previous USD library instruction)

- significantly more
- somewhat more
- neither more nor less
- somewhat less
- significantly less



$$23/72 = 31.9\%$$

$$33/72 = 45.8\%$$

$$14/72 = 19.4\%$$

$$1/72 = 1.3\%$$

$$1/72 = 1.3\%$$

Evaluation



How useful did you find the video lessons for completing your annotated bibliography assignment? (answers from all students)

- very effective $26/83 = 31.3\%$
- somewhat effective $44/83 = 53.0\%$
- neither effective nor ineffective $10/83 = 12.0\%$
- somewhat ineffective $3/83 = 3.6\%$
- very ineffective $0/83 = 0\%$



Student Evaluation Comments



“Didn’t like it as much.”

“I actually learned instead of falling asleep in the library. Thank you for giving us the responsibility to learn and the hands-on activities.”

“I feel like I learn more when I am actually doing an assignment and not just being lectured.”

“The flipped instruction provided a sense that the professor trusts that I’ll further my education by myself because without it I would be lost in the next class.”

“I really enjoy this style more than any previous interactions I have had. The hands-on learning approach is much more effective in my opinion because actually doing it is the way we get better.”

Librarian Evaluation Comments



- I think that students benefit from guided practice and the videos allowed more time for this activity.
- Providing videos and requiring them to view beforehand is excellent. Students are prepared for discussion when prompted; in the past they were not particularly engaged.
- The flipped learning model allows for more one-on-one teaching time which is beneficial to both instructor and student. It also allows students the opportunity for self-directed learning — they work at their own pace and are usually able to finish the assignment during class. The videos are a resource for the students all the time, which is another benefit of using the videos for this assignment.
- I think the flipped learning model, in this case, might render the librarians obsolete. Since the TA's are capable of teaching how to write an annotation, they might wonder why they are taking time out of their teaching schedule to bring them to the library.
- Each instructor said that it seemed that students grasped concepts and were able to create their annotation during guided practice faster than during previous semesters.

Flipster How-To's



- For inverted instruction to work it must...
 - be applied appropriately and strategically.
 - be both meaningful and interesting.
 - include student accountability for interacting with the outside materials.
- Not all instruction can be inverted.
- Assume you won't find exactly the learning modules you need online.
- Be prepared to create your own learning modules.
- Keep it simple, keep it short.
- Be prepared to invest lots of time in creating modules (especially at the beginning).

Flipster How-To's



- Creating modules
 - Choose technology according to pedagogical needs.
 - Identify limited, specific pedagogical goals for each module.
 - Address differing learner styles and needs.
 - Keep modules short to engage student attention spans.
 - Create learning modules that are deliverable to different platforms.
 - Make sure teaching faculty are “on board” with module content.
 - Make modules that meet functional needs but are as subject-neutral as possible.

Flipster How-To's



- Student accountability
- Planning
 - Make effective use of the beginning of class for activating student knowledge gleaned from the learning modules
 - Spend some time on Q&A about the learning modules
- Evaluation
 - Student survey
 - Librarian debriefing
- Assessment
- Revision/improvement of videos, quizzes

Flipster How-To's



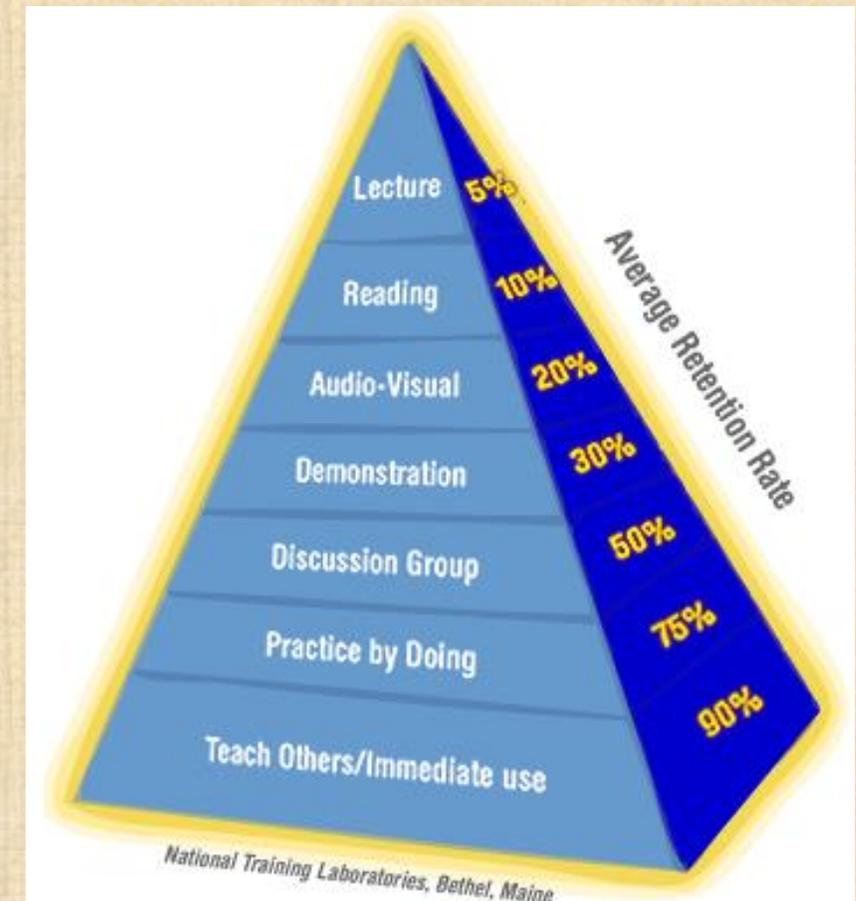
- Collaboration/cooperation is key.



- Collaborate with teaching faculty on pedagogy, module content, accountability measures, evaluation, assessment, and improvement of instruction.
- Collaborate with library faculty on implementation, teaching, evaluation, and improvement of instruction.

ROI

- Time invested in creating learning objects = c. 60 hours
- Benefits of time invested
 - Time saved for 11 librarians in 22 sections for 1 semester x multiple semesters x multiple courses
 - Uniformity of content and quality of instruction across all course sections
 - Heightened student engagement and responsibility for learning
 - Increased student retention of material
- Instructional librarians can position themselves as IL pedagogy experts



ROI: Scalability/sustainability

- Allows all librarians to participate in general-education instruction
- Ensures uniformity and quality without placing the burden of instruction on particular librarians
- Learning objects can be taken up by faculty/librarians in other courses/disciplines

Happy librarians, faculty, students!



Convert to invert!



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