Traditional instruction reformed with flipped classroom techniques

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Traditional instruction reformed with flipped classroom techniques
Jennifer Lee, Susan Beatty, Patrick Feng, Nadine Hoffman, Brenda McDermott

Flipped classroom techniques | Multiple sessions | First-year interdisciplinary course

The traditional vs. the flipped classroom
- The flipped classroom moves away from a traditional lecture-then-homework model.
- Pre-class: students prepare by watching short content-based videos or doing readings. Assessment may also be included.
- In-class: content and learning is reinforced with in-class activities—assessment results can be used to inform in-class work.
- Students: held responsible for learning. Increased attendance, engagement.
- Instructors: less traditional lecturing, more facilitation.

Library & writing learning goals

1: Plagiarism, Citations, and Citation Searching
- Read a citation and identify its major components
- Identify the type of resource from a citation
- Cite a resource
- Read and summarize a source and assess it in relation to your research
- Video by the Student Success Centre: reading for abstractions, annotating, and paraphrasing
- Practice annotating and paraphrasing a student-supplied paper
- Use databases to generate synonyms and other terms
- Distinguish between scholarly, reliable, and popular sources
- Identify proper citation
- Search exercise/tutorial of the library homepage
- Compare database content and search features
- Convert references from various styles into APA
- Customized, interactive video on quotations and citations
- Created by the Student Success Centre
- Created with Articulate software
- Refine search terms—search a database, then use results to discover new terms
- Three Myths about Plagiarism
- Search exercise/tutorial of the library homepage
- The CRAPsy Song (aka, the C.R.A.P. Test Song) [https://youtu.be/CMaLgec2XWY]
- Popular vs. scholarly sources video [http://www.lib.jmu.edu/resources/connect.aspx?id=3247]
- Are sources found scholarly, reliable, or popular?
- Incorporation of library and writing sessions in course design
- Pre-class activity and quiz

2: Research Process and Accessing Information
- Choose, and search a database by combining search terms
- Use database features: full-text links, emailing references
- Use databases to generate synonyms and other terms
- Search exercise/tutorial of the library homepage
- The CRAPsy Song (aka, the C.R.A.P. Test Song) [https://youtu.be/CMaLgec2XWY]
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3: Source evaluation
- Distinguish between scholarly, reliable, and popular sources
- The CRAPsy Song (aka, the C.R.A.P. Test Song) [https://youtu.be/CMaLgec2XWY]
- Popular vs. scholarly sources video [http://www.lib.jmu.edu/resources/connect.aspx?id=3247]

4: Writing/Annotated Bibliography
- Read and summarize a source and assess it in relation to your research
- Video by the Student Success Centre: reading for abstractions, annotating, and paraphrasing
- Practice annotating and paraphrasing a student-supplied paper
- Compare database content and search features
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Pre-class activity and quiz
- Search exercise/tutorial of the library homepage
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In-class activity
- Refine search terms—search a database, then use results to discover new terms
- Compare database content and search features
- Convert references from various styles into APA
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Reflections and Findings
- Students benefit: instruction is linked to the skills needed for assignments.
- Time-intensive: course goals, sequencing, content prep, grading.
- Decreased workload: resource sharing for overlapping areas: citation and plagiarism.
- Tip: ensure detailed written instructions (step-by-step is not too much)

What did students think about the flipped classroom?

Agree (n=33)
- Pre-tests were helpful in preparing for the research skills sessions: 79%
- In-class exercises were helpful to reinforce the content of the research skills sessions: 70%
- Use library resources to find information for a research project: 94%
- Find appropriate scholarly sources: 94%
- Evaluate resources: 91%
- Properly cite sources: 92%
- Avoid plagiarism: 82%
- Write an annotated bibliography: 79%
- Ability to use library databases in my research: 91%
- Apply the strategies for summarizing to my future assignments: 94%
- Use library databases in my research: 91%
- Annotate sources while reading: 67%

Selected references
Carnegie Council on Adolescent Development. 2001.青少年学习科学、技术与社会课程：科学、技术与社会课程。

The course: Science, Technology, & Society 201
- Inquiry-based learning
- Semi-flipped: only library and writing sessions used flipped techniques
- 50 students
- Incorporating library and writing sessions in course design
- 4 sessions, each a week apart, alternating with instructor lectures
- First Writing Centre-Library collaboration within a course
- Assessment: 25% of final grade
- 10% Pre-class quizzes
- 15% Summative assessment (in-class)

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Selected references