Traditional instruction reformed with flipped classroom techniques

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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

   ![Three Myths about Plagiarism](https://example.com/three-myths-plagiarism)

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

3. **Source evaluation**
   - Distinguish between scholarly, reliable, and popular sources
   - The CRAPsy Song (aka, the C.R.A.P. Test Song)
     ([https://example.com/crap-song](https://example.com/crap-song))
   - Popular vs. scholarly sources video (James Madison University)
     ([http://example.com/pop-sch-sources-video](http://example.com/pop-sch-sources-video))

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](https://example.com/annotating-paraphrasing)

Pre-class activity and quiz

- Customized, interactive video on quotations and citations
- Created by the Student Success Centre
- Created with Articulate software

In-class activity

- Refine search terms – search a database, then use results to discover new terms
- Compare database content and search features

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%
- Instruction increased students’ confidence. *Since attending, how confident are you in your…*
  - ability to write an annotated bibliography. 94%
  - ability to use library resources to find information for a research project. 94%
  - ability to find appropriate scholarly sources. 94%
  - ability to properly cite sources. 83%
  - ability to paraphrase sources while avoiding plagiarism. 82%
  - ability to evaluate resources. 91%
  - ability to use library databases in my research. 91%
- Instruction increased likelihood of future behaviors. *Since attending…am likely to…*
  - apply the strategies for summarizing to my future assignments. 94%
  - annotate sources while reading. 91%
  - use library databases in my research. 91%
  - use library resources to find information for a research project. 94%
  - use library databases in my research. 91%

The course: Science, Technology, & Society 201

- Inquiry-based learning
- Semi-flipped: only library and writing sessions used flipped techniques
- 50 students
- Incorporate 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

- [The CRAPsy Song](https://example.com/crap-song) (aka, the C.R.A.P. Test Song) (University of Washington — Center for Teaching and Learning and Office of the Provost 2012. Reproduced with permission)

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