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Experimenting with "Flipping" the Classroom

Elizabeth McCormack
Bryn Mawr College, emccorma@brynmawr.edu

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Elizabeth F. McCormack is a professor of physics and department chair at Bryn Mawr College. She served as Chair of the Faculty 2006-2007 and Dean of Graduate Studies in 2008-2011. She received her BA in astronomy and physics from Wellesley College in 1983 and her Ph.D. in physics from Yale University in 1989. She was a Postdoctoral Research Fellow and Physicist with the Laser Photophysics and Photochemistry program at Argonne National Laboratory before joining the faculty at Bryn Mawr College in 1995. Her research focuses on fundamental aspects of molecular excited state-structure and dynamics using a variety of laser spectroscopy techniques, and has been supported by NSF and NASA. In 2005 she was elected a Fellow of the American Physical Society and in 2007 received the college's McPherson Award for Excellence. She currently serves on the Board of Advisors to Project Kaleidoscope, which is working with the AAC&U to share and promote effective approaches to undergraduate STEM education.

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“Flipping” a class

Elizabeth McCormack
BMC Physics
emccorma@brynmawr.edu

Blending Learning Conference 2013, Bryn Mawr College
Digital and Blended Learning

- Flipping a classroom: welcome to the academic remix

- The “flipped” label is relatively new, but the approach has been around a long time

- My course

- Questions for you
Are you part of the academic remix culture?

- Remix: to use or quote a wide range of texts and/or media to produce something new.

- [http://www.makingjgb.com/blog/2012/01/21/remix/](http://www.makingjgb.com/blog/2012/01/21/remix/)
Do you look to the work of others for inspiration?
Do you build your courses on borrowed parts?

• Do you quote passages?
• Copy and paste images?
• Embed video?
Electricity and Magnetism

Learning Goals:
Conceptual and operational understanding of electrostatics, electric currents, magnetic fields, electromagnetic induction, Maxwell’s equations, electromagnetic waves, and unit systems of E&M theory.

Extensive practice using the mathematical framework of vector calculus to model various electromagnetic scenarios.

Skills in effective presentation of solutions to physics problems

Format: Weekly reading and podcast assignments, quizzes, assigned problems, and problem solution write-ups.

Evaluation: Three mid-term exams, a complete portfolio of all worked problems.

Course Elements
- Introduction of material
- Explanation of material
- Demonstration of techniques
- Reading a text
- Researching papers
- Practicing problem solving skills (synthesis and applications)
- Writing (synthesis and application)
- Preparing for exams/assessments
What to Flip?

SOLO

IN

OUT

TOGETHER
What to Flip?

- Introduction of material

SOLO

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TOGETHER
What to Flip?

- Explanation of material
  - Demonstration of techniques
- Practicing problem solving skills (synthesis and applications)
- Researching papers
  - Writing papers (synthesis and application)
- Introduction of material
- Reading a text

SOLO

IN

OUT

TOGETHER
What to Flip?

- Explanation of material
  - Demonstration of techniques
- Practicing problem solving skills (synthesis and applications)
- Researching papers
- Writing papers (synthesis and application)
- Studying for exams/assessments
- Introduction of material
- Reading a text**

SOLO

IN

OUT

TOGETHER
Doing what we do, but better with technology

“What matters is how students learn—what they do—rather than where they do it” Stephen Ehrmann, How Technology Matters to Learning, Liberal Education, Winter 2013

“The question to ask about any course is not how good the lectures were, but how well-designed and on-target the student assignments were.” Carol Geary Schneider, Holding Courses Accountable for Competencies Central to the Degree, Liberal Education, Winter 2013.

I learned the importance of being active in a multi-dimensional learning space that spans individual and group work and interactive introductions of new material and skill-building in and out of class.
“Flipping” and MOOC Mash-Ups

Bad MOOCs - maintain some of the worst aspects of “teaching” (passive lectures, tests, no formative assessment, and a hierarchical division of labor)

Good MOOCs - sustain the social dimension of learning and use high-impact, active teaching and learning practices

Check out:  
And

The work of Siemen and Downes
http://www.huffingtonpost.com/stephen-downes/connectivism-and-connecti_b_804653.html
Discussion Questions

• What does a flipped classroom look like in your field? What content and skills can be learned independently, what needs intervention and practice in community?

• What would a flipped classroom look like for an introductory course, for an advanced course? What changes as students move through a curriculum and how do those trajectories intersect with a flipped approach?

• What incentives and challenges are there to flipping small and large classes?