Faculty Development Workshop

May 9th and 10th, 2013
Presented by Mary Frances Ypma-Wong, Ph.D.
"The Flipped Classroom— if lectures become podcasts, then what do you do in class?

Created by Mary Frances Ypma–Wong, Ph.D. along with the Student/Faculty Teaching Enrichment Task Force
Learning Objectives for Today

1. Create interactive class sessions (associated with a podcast)

2. Describe how the flipped classroom in used in other medical schools

3. Complete a worksheet helps the faculty member coordinates own podcast with in–class activities.

4. Use our audience response systems to monitor student participation during session

5. Familiarize themselves with equipment which connects with SOM campus with UCIMC
Standard Course Planning vs. Backward Design

Choose textbook
Write syllabus
Write/Revise lectures
Prepare PowerPoints
Write exams/problem sets
Instructor centered

Formulate broad learning goals
Set specific learning objectives
Design assessments (formative & summative)
Develop learning activities (lectures, homework, etc.)
Student centered

Podcast/classroom & small groups

Rob Lue, NE SI, 2011
Flipped VS Traditional

Flipped
- Teacher instructs lesson at home (video / podcast / book / website)
- Students work in class.
  - Deeper understanding of concepts, applications, and connections to content are made.
  - Students receive support as needed.

Traditional
- Teacher instructs
- Students take notes
- Students follow guided instruction
- Teacher gives assessment
- Students have homework

Guide on the side
Sage on the stage

http://www.edtechtips.org
Flipping the Classroom
Three Basic Components of Each Module

1. Record– Video record short modules using screencast software (5–15 minutes).
   - Camtasia Relay (UCI Replay)
   - Khan Academy Examples

2. Online Guidance– Provide modules online, require students to watch, give instruction on effective viewing and provide supplements to guide learning.

3. Spend following class time talking about the video and/or continuing with more complex tasks.
Examples of these activities include:

- Vignettes or case studies
- Question and answer sessions
- A multi-station exercise
- Groups/Team-based problem-solving
- Live patient presentations
- Standardized patient interviews/examinations
- Simulations
- Point/counterpoint debates
- Game playing
Examples of Medical Schools Using Flipped Classroom

- UC Davis – Microbiology Course
  - Reading week
  - 1 hour lectures to podcasts (50 min to ~35 min)
  - Case studies in small groups

- UC Irvine
  - GI portion of Physiology
  - CF2 lectures – sometimes by clinical case discussions

- We are using several of the previous scenarios in place of lecture.
Examples of these activities include:

- Vignettes or case studies
- Question (USMLE) and answer sessions – with clinicians
- A multi-station exercise
- Groups/Team-based problem-solving
- Live patient presentations
- Standardized patient interviews/examinations
- Simulations
- Point/counterpoint debates
- Game playing
Reimagining medical education
Charles Prober, Sal Khan and other educational leaders discuss the value of interactive learning

Watch video

http://med.stanford.edu/smili/
Curricular Resources

https://www.medeportal.org/browse/
Curricular Resources

International Association of Medical Science Educators

Welcome

The International Association of Medical Science Educators (IAMSE) was founded in 1997 based on the guiding principle that all who teach the sciences fundamental to medical practice should have access to the most current information and skills needed to excel as educators.

IAMSE is a nonprofit professional development society organized and directed by medical faculty members. Together we provide opportunities to enhance excellence and innovations in teaching, student and program assessment, computer technology, human simulation, learner-centered education, and in many other areas.

Through IAMSE, medical science educators have a trustworthy source of information and mutual support, and can belong to an organization dedicated to their professional development. The ultimate beneficiaries of our combined efforts are the subsequent generations of health care providers around the globe - our students - who are trained in both the art and science of modern medicine.

With members in over 40 countries, including basic science and clinical specialties, the Institute for the Advancement of Medical Science Education is dedicated to advancing the education of medical students, residents, fellows, and long-term learners.

http://www.iamse.org/
**Additional Resources**

- **Creative Commons (images, music, other materials)**  
  [http://search.creativecommons.org/](http://search.creativecommons.org/)

- **NIH Image Bank**  
  [https://imagebank.nih.gov/](https://imagebank.nih.gov/)

- **CDC Public Health Library of Images**  
  [http://phil.cdc.gov/phil/home.asp](http://phil.cdc.gov/phil/home.asp)

- **NCI National Biomedical Imaging Archive**  
  [https://imaging.nci.nih.gov/ncia/login.jsf](https://imaging.nci.nih.gov/ncia/login.jsf)

- **University of Washington listing of open image materials (multi-disciplinary)**  
Locations

- Colliquium Room
- Telemedicine Room
- Multilabs
- Basement Classrooms
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4. **Use our audience response systems** to monitor student participation during session

5. Familiarize themselves with equipment which connects with the medical school with UCIMC
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Video Conferencing Systems

- Fuzebox (Commercial)
- JoinMe (free)
- NearPod
- Polycom
  HIPAA compliant
Questions?

Contact Mary Frances Ypma-Wong, Ph.D. at 824-2029 or mypmawon@uci.edu
Games, Sims, Cases and Clickers: Classroom Activities for Hybrid Learning

Joe Benfield, Stanford University School of Medicine

The Online Component

There are many ways online materials or activities can be paired with classroom activities. Learning management systems and other tools can provide a great place for delivering information, fostering discussion, playing games, or checking for understanding.

Groups or Team-Based Learning

Groups and Team-based learning can help students explore concepts in new ways, hold each other accountable, and gain new perspectives on material. They can also help in building communication and collaboration skills.

Case Studies

Case studies are a great way to engage students and to encourage them to apply new and existing knowledge by making it feel more “real.”

Simulation

Simulation is an excellent tool for application of new knowledge or demonstration of a concept. It can also aid in building better teamwork and communication among learners. When paired with online resources.

Discussion/Question and Answer

Discussion and Q&A sessions after students have taken in new information can be a great way to take deeper dives into content and check for student understanding.

Games

Whether electronic or simple in-class activities, using games can help students learn and apply new concepts and can also be used to check for student understanding and engage them with the material in a new way.
Component #1 – Recording

1. Video record module using screencast software.
   - Insert videos
   - Include animations
   - Tablet to annotate

   Example: 2 minute recording via Recorder

2. Self-created or other videos
   - Video labs, results, etc.
   - Video whiteboard

   Examples: 3 Fuse recordings

   http://replay.uci.edu/media/public/spring2013/Whiteboard_2--Flash%28Large%29--20130404_10.04.09AM.html
   http://replay.uci.edu/media/public/spring2013/Micro_Lab_Results--Flash%28Large%29--20130403_01.00.13PM.html
   http://replay.uci.edu/media/public/spring2013/Preparing_for_the_Neuroscience_lab--Flash%28Large%29--20130403_01.03.18PM.html
Component #2–Guidance

1. Guide students to associated core notes.

2. Have students complete handout, supplemental materials– serves as ticket to class.

3. Create quiz for each module.
   A. EEE Quiz
   B. EEE Survey
Component #3– In the Classroom

Spend following class time reviewing questions about the video and continuing with more complex tasks and/or enriching sessions.

1. Continue with more complex material
2. Tutorials with clinical emphasis
   Invite clinical faculty/in person or virtual
3. Small Group work
4. Work through cases/NBME-type questions
5. Patient Presentations
“Flipped” Courses @ UC Irvine
Teaching, Learning & Technology Center

- **Fall 2012 Bio 93 Section F**
  Prof. Adrienne Williams

- **Summer Session 2012 Chemistry 51A**
  Prof. Renee Link

- **Fall 2012 PHYSICS 12: SCI FICT & SCI FACT**
  Prof. Mike Dennin
Isn’t this more work?

- Creating podcasts…
  - UCI Replay (Camtasia Replay) is straightforward

- More grading…
  - Use more sophisticated gradebook (EEE)

- Students need to engage in class!
  - Use LiveClassTech
  - Use EEE tools (quiz, survey)

- More emails…
  - Use a class messageboard
  - Answer with a podcast
Resources for Flipped Classroom

- Online Resources
  - The Flipped Classroom Infographic by Knewton
  - Trends of 2012: Flipped Classroom by Audrey Watters, Hack Education
  - AirTalk: Flipped Learning Network by Aaron Sams
  - American RadioWorks: Rethinking the Way College Students Learn by Emily Hanford
  - 7 Things You Should Know About Microlectures by Educause
  - 7 Things You Should Know About Screencasting by Educause
  - Screencasting to Engage Learning by Michael F. Ruffini for Educause
  - 7 Things You Should Know About Digital Storytelling by Educause

Courtesy of Teaching, Learning & Technology Center–UC Irvine
Rest of the workshop