To Flip or Not To Flip? Lessons from the Trenches

2013 Villanova University Tech Expo

Susan Mackey-Kallis, PhD, Villanova University
Michael A. Posner, PhD, PStat®, Villanova University
http://homepage.villanova.edu/michael.posner

Overview

- My Flipped Classroom
  - Michael Posner, Assoc Prof of Statistics
    - What is a flipped classroom?
    - My flipped classroom
    - How do students learn?
    - Reflections on flipping
  - Susan Mackey-Kallis, Assoc Prof of Communication
    - Active "lab" classrooms
    - Class structure: Flipped and Blended
    - "Survey Shows": What the students thought
    - Questions to each other
- Questions/Discussion with Participants

What is a Flipped Classroom?

- Discipline-specific
- Students do work ahead of time
- Class-time spent clarifying misconceptions and “high-touch” activities
- Leverages power of technology

Past vs. Present

My Flipped Classroom

- Statistical Methods for quantitative majors
- Each module designed around two classes
  - Class 1: "Pre-learning" (Past)
  - Class 2: "Lab" (Present)
  - Class 3: Return HW
  - Class 4: Weekly quizzes during lab

Traditional vs. Flipped Classroom

<table>
<thead>
<tr>
<th></th>
<th>Traditional</th>
<th>Flipped</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time on Task</td>
<td>Class-time, homework</td>
<td>Pre-learning, Class-time, studying for quiz</td>
</tr>
<tr>
<td>Making Connections</td>
<td></td>
<td>More time on real-world applications (during lab) Individual connections</td>
</tr>
<tr>
<td>Real-time feedback</td>
<td>Homework feedback given 1+ weeks later</td>
<td>Misconceptions clarified in class Quiz feedback given next class</td>
</tr>
<tr>
<td>Competing Mental load</td>
<td>Learning time controlled by professor</td>
<td>Allows (but relies on) student-centered learning</td>
</tr>
<tr>
<td>Formative assessment</td>
<td>Optional</td>
<td>Optional</td>
</tr>
</tbody>
</table>

Reflections on Flipping

- My Reflections
  - Preparation time is different and much more (at beginning)
  - Student-centered learning works well if students are motivated
  - Be clear regarding expectations/assignments
  - I covered more material and had time for student projects
- Student Feedback
  - I don’t like it. I like learning in class.
  - Complain to Chair – “no teaching” going on and he didn’t warn us about the class
  - I’ve been challenging adjusting, but I have faith in the idea
  - It was hard at the beginning but became easier
  - I like it! I wish more classes, especially math and science ones, ran this way. It just makes sense - particularly at a college level, that you as an individual spend more time learning the basics and then come in to class where the professor serves to help fine-tune what you’ve learned and make sure you have your cards in the right order.
  - I like this setup because it allows me to spend as much time as I need to learn the material and then stop once I understand the material. In many classes, teachers either spend too much time or too little on topics making the classes harder to follow and sometimes harder to complete. I also like the flipped because it allows me to do more problems in class where I can get help from classmates or the teacher if needed.
Active “Lab” Classrooms

– Defining active learning
– Flipping and performance based classes like Public Speaking
– Every class can be a “Lab” class

Class Structure: Flipped & Blended

– Recorded video lectures
– Pearson’s e-leaning platform
– Online chapter quizzes
– How class time was spent
– Use of Mediasite “lecture capture” classroom

“Survey Shows:” What Students Thought

– Prior experience w/ format
– Did they like it?
– Amount of work required
– Perceived ease of learning
– Increase in instructor hands on guidance?
– What they liked and didn’t like
– If they would take another “flipped” class

Discussion

– Questions to Each Other
– Questions/Discussion with Participants