

WHAT I LEARNED FROM TEACHING TWO HYBRID COURSES: COMPUTER SIMULATION AND PROGRAMMING

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FALL 2013 COURSES

Sun/Mon	Tue – F2F (Face-to-Face)	Wed	Thu – F2F (Optional)	Fri/Sat
Reading	Top Hat ("Clicker") Assessment in Class	Watch Group Solution Video	Walk-through of how I Solve Problems (in class and videos posted)	Finish and Submit Homework by Monday
Watch Online lectures	Group Assignment	Start Homework	Ask Homework Questions in Person	
Quiz over Reading and lectures		Post Homework Questions to Discussion Board		(Next week's lectures available Saturday)
		(Optional) Practice problems		
		(Optional) Help others on Discussion Board		

- First "full implementation" of hybrid courses
- Undergraduate Statistics Majors/Minors & MS Graduate students

Previous Flipped Models

- Began Hybrid teaching 2 years ago - flipped my data mining classroom - students watched lectures on their own time – class time group collaboration to solve problems.
- Took Summer OTL Hybrid class and as a result "revamped" what I considered having a hybrid class.
- These courses were cross-listed for undergraduate and graduate students.

My Thoughts on Top Hat

- Students can see questions/pictures/ tables/code on their own screens
- I can leave a question up and add the next one.
- I can show something else on my screen while they still have the questions.
- No clicker devices to deal with being not purchased yet, left at home, out of battery.

Student Comments on Top Hat

- It was great to have **practice that we could do separately outside of class** through Top Hat
- I liked the software, and I think that it was a **good and easy way to help make sure people did the reading and watched the videos.**
- Top hat is an efficient method of **engaging the participation of the quiet students** in the class.

SELF-DIRECTED LEARNING

Support students in becoming more intentional, independent, and/or self-directed learners

- watching the lecture videos on their 'own time'
- use them as reference for the more technical parts either during the in-class group assignment or while working on their homework.
- optional second class during the week
 - time for those who wanted to work alone on their homework to do that outside of class
 - Time for those who wanted help to either stay for the class (I typically had 50% attendance rate) or drop in for a short time with their questions
 - time for those groups who needed extra help finishing the group assignment with their peers.
- optional top hat questions and practice problem allowed extra practice for those who needed it.

NEW MODEL:

Video Lecture: Top Hat Tech. Assess
Reading: Reading Quiz
1 Homework per Module

What are the biggest challenges you've faced in getting students to become more independent, intentional, self-directed learners?

- Student sense of having to "teach themselves"
- Students not being prepared for class
 - Group members dragging along others
- Students pace during class
 - Group members going too fast (just get it done!) for those who want to really digest

FUTURE

Changes that have occurred

- Original model placed too much burden on me with weekly homework
 - Winter (Forecasting & Visualization)
 - Changed it to 3 homeworks (one per module)
- Tried to get more ahead of students and post materials earlier

Spring Quarter 2014 changes trying

- Another new class Complex Data Analytics
 - Added an individual assessment on technical knowledge to help make sure students prepared for class after reading/lecture videos
 - Reorganize in-class time to have Top Hat checkpoints throughout the class to keep things on track and help with self-reflection
 - Mindfulness breaks....