

## Where This Technique is Used

- All Undergraduate Students in the Daniels College of Business are required to take 3 courses on "Analytics"
- This method has been used in the first 2 courses of the 3 course sequence
- Few of the students want to study Analytics for their major, but all have to be there
- I have used this technique for approximately 10 sections
- Others in my department are starting to use this technique as well
- The course material is both theoretical and applied/ technical.

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### **One Class Meeting Per Week**

Class meets for about 2 hours we week, instead of the traditional 4



### **Outside Class Responsibilities**

Students are expected to come to class having already "done" a lot of the learning of the week's topics

### **Online Lectures – Screen Captures**

The 5 minute lectures are the key part of the outside of class responsibilities – Sometimes as many as 15 of them, including relatively easy, detailed examples

### **Other Pre-Class Activities**

Students are expected to do homework and reading – They are also expected to take a quiz before class time

### In Class is Different

So far this sounds like hybrid learning (it is) - they key to making it flipped as well is the way we use class time

### Hard, Hands on Problems in Class

No real lecture in class – Hard problems are given to students the build on the examples from the online lectures and homework

### **Group work and Immediate Feedback**

Students can work together or on their own – either way they get immediate feedback when they get stuck

# Flipping the lecture: A 5-minute teaching model Scott Toney

## Department of Business Information and Analytics, Daniels College of Business, University of Denver

# Instructor Role – My Experience

## Re-organize the 2 weekly lectures

- Almost all content moves to online lecture for the week (PowerPoint and Excel examples, mostly)
- Shorter in class PowerPoint created to act as guide for in class activities

### Think hard about what goes online and what to do in class

- Information Delivery goes online
- Skill practice goes online
- Easy examples go online
- Designed for students to work at own pace
- Class time deadline for completion of quiz

### Tougher exercises go in class

- Opportunities for group work go in class
- Provide challenges that lead to coaching
- Hope for chances for students to get stuck and receive immediate feedback
- Think teachable moment

## Instructor Hurdles

- Develop comfort with recording and posting lectures
- Work hard to break up the activities between online and in class
- Think about assessment from the beginning (I test on a few Fridays a quarter)
- Be organized (you have to manage a lot of links (to videos), documents, and due dates
- Just dive in, it is easier that it seems

## Recording Tips

- Don't be perfect
- Get a good microphone
- Budget your time
- Seek feedback
- Convey Excitement (consider standing while recording)



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schedule

# Blackboard Data Tells All



#### Count of Visits by Week of Quarter





# Self-Directed Students

- Students manage learning on their time at their pace
- Students held accountable with weekly (self graded) quizzes
- Technical examples can be watched over and over as needed for mastery
- Project based work helps re-enforce the materials learned in class

## **Online Lecture Benefits**

- Content delivery at student pace
- Fewer "deer in headlights"
- Fewer "Facebook faces"
- Students are responsible for learning (they may not like this)
- Class time is used better

We hope for this



We don't like this

Students know what they understand of the new material by class time

In Class they get feedback and help from peers and instructors on tougher, more applicable problems

# By The Numbers

- 1. 15 to 20 sections of each class per year
- 2. 30 to 40 students per section
- 3. 1 book for all 3 courses (compiled from 3 books)
- 4. Around 500 students per year
- 5. Many students are freshmen
- 6. 25% or so of this year's Analytics I and II sections were (are) taught this way