Flipping the Lecture

A 5-minute Teaching Model

Scott Toney
Flipping the Lecture

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Course Background

• Blended/Hybrid sections of 2 introductory business classes
• Analytics I – about half IT and half Introductory statistics
• Analytics II – traditional introductory statistics
• Both are required in the business core
• Part of 3 course sequence
Course Background

- Offered in multiple formats
- Online
- Hybrid
- Face to Face
- About 500 first-year students per year across many ~ 20 sections

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Course Setup

• Hybrid setup – lectures are online
• Homework, reading, and quizzes are done before class meeting (know what they know before class)
• Flipped classroom – class time used for deeper exploration/group work
• No lecture in class (Ok, maybe just a bit)
• Lots of Pluses
Online Lectures

• Around 5 minutes each
• PowerPoint, Excel, and Online Links
• Screencasts (Think Kahn Academy)
• 3 to 15 “Lectures” per week

Association

• Covariance
  • Positive value means positive association
  • Negative value means negative association
  • 0 is no association
  • Size of value is dependent on scale of x and y
• Formula
  =covariance.s(range,range)
  =covariance.p(range,range)
Online Lecture Benefits

• Hybrid setup – 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
Why 5 minutes?

- Easily digestible by student?
- Reduced fear of re-recording
- But what if there is no break in my material?
Technical Details

• Blackboard is my LMS
• Camtasia Relay is my main recording software (no editing)
• Camtasia Studio is my new technology
• Hosted internally, could be YouTube
Hybrid Development

• This details my process for porting a course to hybrid
• Learning objectives, lectures, homework, and tests have been used by me in earlier quarters
• Focus on what is better in each environment
Hybrid Development

• Re-organize the 2 weekly lectures
• Almost all content moves to online lecture for the week (PowerPoint)
• Shorter in class PowerPoint created to act as guide for in class activities
Hybrid Development

• 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
• What traditionally happens at home?
Hybrid Development

- 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
Hybrid Development

- Along with PowerPoints, other relevant files are prepared
  - Spreadsheets
  - Lists of web links
  - Assignment documents

- All of these things are done at home, to prep for class
Hybrid Development Activity

• Work through handout
  • Envision one week of a class you are familiar with
  • Identify what parts can be moved online (think passive information delivery first)
  • Identify what parts can be expanded in class (think coaching opportunities)
• Work for 10 minutes with a partner
• Share with each other what can be moved
Record Videos

- Set aside some quite time
- Be ready with supporting files, examples, texts, prompts
- Just start (it is less painful than it seems before you start)
Organize Videos

- I keep the videos in a spreadsheet
- Titles are numbered and informative
- I track video lengths
- Capture the URL
Post Online Content to LMS

- I attach the links behind the video titles
- They open in a browser
- Students can watch them all at once or a few at a time
- Resources are posted near videos (confusion leads to more work for you!)
Creating Week Page/Item

1. Content Information
   - Name: Week 7 Lecture - Descriptive Statistics
   - Color of Name: Dark Dull Magenta
   - Text:

   1010 Week 7 - 5 Dispersion
   1010 Week 7 - 6 Excel Dispersion
   1010 Week 7 - 7 COV and Shape
   4010 Week 7 - 8 Excel Real Estate Descriptives - 1
   1010 Week 7 - 9 Excel Real Estate Descriptives - 2
   1010 Week 7 - 10 Data Analysis Toolpack

2. Attachments
   If you select a file you do not want, click Do Not Attach to remove the attachment from the content item. The file itself is
   
   Attach File
   Browse My Computer  Browse Course
Week Layout at Home
At Home Weekly Quiz

Preview Test: Week 7 Quiz

Description: This quiz relies on knowledge from Chapter 3 and data from the provided spreadsheet (Chapter 3 quiz (Week 7)).

Instructions: This quiz relies on knowledge from Chapter 3 and data from the provided spreadsheet (Chapter 3 quiz (Week 7)).

Multiple Attempts: This Test allows multiple attempts.

Force Completion: This Test can be saved and resumed later.

Question 1

1. What is the maximum z-score (standardized score) for the sale_price variable? (pick closest value)

   - -1.55
   - 0.05
   - 10.8
   - 3.01

Question 2

Which best describes the skewness of the land_square_feet variable?

   - Skewed Left
   - Symmetric
   - Skewed Right
   - None of these
Post In Class Elements to LMS

• Before class, the in class work needs to be posted
• All PowerPoints and docs, spreadsheets, links, and what not that are needed
• Students are expected to have access to the web and LMS during class (at least by me)
Recording Tips

• Don’t be perfect
• Get a good microphone
• Budget your time
• Seek feedback
• Convey Excitement (consider standing while recording)
Next Time Through

• Reuse and Revise
• First and last segment can have timely information
• Other segments should be “Time Free”
• Write notes to your future self
Drawbacks

• Time consuming at first
• Less time in class feels “strange”
Best Plusses

• In class feedback to students
• Re-usable modules
• Custom learning pace
• Can find other sources for videos
• Students Express Appreciation!
Questions?

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