2014

BRONX edTech SHOWCASE

Bronx Community College
Flipped Classroom for Teaching Business Research in a Business Management Course

A Library - Business Department Collaboration at Lehman College

Prof. Madeline Cohen
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Who Are We?

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Agenda

Flipped Classroom
- What it is
- How it’s done
- What we’ve done
- What we’ve learned
- What you can do
- Questions?
What is a Flipped Classroom? (in 60 seconds)
Trends in Higher Education

- 2007 - First documented example of flipped classroom in Woodland Park H.S. (Colorado) chemistry class (Sams and Bergmann).

- Today, many universities and colleges have embraced this approach, enabling students to spend valuable class-time immersed in hands-on activities...

Trends in Research Literature

- *Flipped Classrooms* is a subject term in *Academic Search Complete, Education Source* and *Library and Information Source* databases:

  - There are currently 181 articles indexed with this term in a combined search of these databases.
  - 2000 -- 2 articles by Lage, Platt & Treglia on Inverted Classroom
  - 2001 to 2011--1 article
  - 2012--17 articles
  - 2013—119 articles
  - 2014—42 articles (indexed so far)
Library - Business Collaboration

- Prior relationship between Library (Cohen) and Business (Sanders)
- Cohen taught one-shot Information Literacy classes for Sanders’ Business Management courses
- Cohen working on multi-semester research on flipped classroom for Information Literacy in various disciplines with library faculty colleagues
Principles of Management Course  
Company Research Project

- Course requires groups to learn about management through researching a specific company and the industry in which the company operates

- Select Specific Learning objectives
  - Gain proficiency in using library databases to collect relevant journal articles
  - Profile the target company and the industry in terms of company revenue, market share, executive management industry revenue, and competitors’ revenue
  - Characterize the target company’s business environment and identify any ethical dilemmas being faced
Methodology

- Experimental (Flipped) and control group (lecture/demo)
- Pre-test to assess student knowledge of the subject matter to be taught (both groups)
- Video and worksheet needed to complete assignment related to subject matter. (Experimental group)
- Post-test to assess the effectiveness of the flip-classroom approach (both groups)
Outcomes

- Students in the flipped classroom showed better performance (95 avg versus 64 avg) in finding and submitting journal articles.
- Students in the flipped classroom showed better performance (79 avg versus 66 avg) on Environmental/Ethical analysis research.
- Students in flipped class reported using the library resources in other classes even when it was not required.
- Experimental group exhibited greater enthusiasm about their assignments.
- Experimental group reported watching the video repeatedly as a way of drilling in the steps required to find relevant articles.
Videos - Number of “Views”

- Homework assignment video on *Lexis-Nexis Company Dossier*: 53 times
- *Lexis-Nexis Company Dossier* on Research Guide for Course: 30
- *Edgar* video on Research Guide for Course: 16
- *Business Insights* video on Research Guide for Course: 22
- *Business Source Complete* video on Research Guide for Course: 15
- *Wall Street Journal on ProQuest* video on Research Guide for Course: 18
Why the Flipped Classroom?

- Facilitates a vested interest on the part of the student
- Pre-class work prepares students to pose informed questions in class which boosts confidence
- Deepens understanding of concepts through active learning
- Strengthens communications between instructor and student
- Use of video demonstrations coincides with social media habits and current trends of younger people
- Business research lends itself to active learning
Problem Facing One-Shot Information Literacy Session

- Large amount of material
- Short amount of class time
- Lecture / Demo model is passive
- Retention can be low
- How to make classes interesting and productive?
- How to engage students in learning skills they can build on and use?
Flipped Classroom Basics

- Learning Objectives
- Homework Assignment
- In-Class Activities
- Assessment
Flipped Lesson Planning

PLAN & PREPARE LESSON

Step 1: Define Content Scope, Learning Objectives, & Instructional Strategies

The success of your flipped class depends on the alignment of what you want your students to accomplish before, during, and after the class.
Flipped - Learning Objectives

- Rank all the skills / concepts you want students to learn, from simple to most complex
- Select least complex items for the homework assignment
- Select most complex for in-class activities
Homework Planning

- Which skills / concepts to present in short (20-30 min.) assignment?
  - Are skills/concepts “building blocks” needed to advance to more complex work?
  - Do skills/concepts adapt well to homework assignment? (independent learning)
  - Is there an incentive for students to do homework?
Homework Design

- Decide on type of activity and media for delivery
  - High or Low-Tech (print or Google Form)
  - Video (your own or someone else's)
  - Podcast
  - PowerPoint (or Slide deck) Tutorial
  - Reading / Writing
  - Worksheet with Guided Steps (Q&A; Annotations)
  - Online Collaboration (BlackBoard, Google Docs)
In-Class Activities

- Pair skills/concepts with an active learning strategy:
  - Task Worksheet with Questions
  - Group assignment / presentation
  - Group discussion
  - Brainstorming
  - Role-Playing
  - Debates, Games and more
Business Flipped - Homework Assignment Example

- Learning Objectives for Homework:
  - Students will be able to determine if a company is public or private
  - Students will be able to find data on a company, e.g. executives, industry code, financials, products, competitors, etc.
Business Flipped - Homework Assignment

- Format: Video tutorial (Camtasia) and worksheet:
  - http://libguides.lehman.edu/BBA204assignment
Business Flipped - In-Class Activities - 3 Learning Objectives

- Students will be able to retrieve journal articles on companies and business topics from *Business Source Complete*

- Students will be able to find financial data on companies and industries, e.g. revenue and market share

- Students will be able to locate a company 10-K report
Activities for Project Groups

- 3 Activities to achieve learning objectives
- Each activity focused on searching one database
- Worksheets for each database searching activity
- Cohen introduced each activity with explanation
Example - Activity Worksheet

1. Click on link to the Business Insights Essentials database

2. Enter the name of your Company, and select the company’s proper name from the list of choices offered.
   a. Find the TOTAL REVENUE of the company
   b. Enter Total Revenue for past 2 years:
      
      | 1st Year | 2nd Year |
      |----------|----------|
      |          |          |

   c. Enter the names of two COMPETITORS:
      

   d. Enter ANNUAL REVENUE of the PRIMARY INDUSTRY for your company
Post - Test

- Both sections (flipped and lecture) were asked to take the same test at the end of the class
- 10 Content questions (same as pre-test)

- 3 Questions were added for student reactions:
  1. Did you enjoy today’s class?
  2. [For Flipped Section] If you completed the pre-class assignment, how helpful was it?
  3. Comments
Student Attitudes

- **Flipped Class: 19 students**
  - When asked “Did you enjoy today’s library session?”
    - 17 checked “liked” or “Liked a lot”
    - 2 checked “Neutral”
  - When asked if the homework was helpful
    - 14 checked “Very Helpful”
    - 4 checked “Helpful”
    - 1 checked “Neutral”

- **Control Group: 11 students**
  - When asked “Did you enjoy today’s library session?”
    - 10 checked “Liked” or “liked a lot”
    - 1 checked “Neutral”
Student Comments

- Flipped Class: Out of 19 students, 8 wrote comments
  - Sample comments:
    - “This will help me and my group out a lot.”
    - “We need to know [on] how to use the library database because it can be [very] helpful than using search engine.”
    - “This was a great library session. I found this very helpful and supportive towards the project. I feel more confident in my ability to find research for the project.”
Follow-Up Resources and Session

- Research Guide with Video Tutorials made available 24/7
  - http://libguides.lehman.edu/BBA204
- Each group came to library for follow-up session with Cohen and Sanders
- Hands-on searching of databases for project
- Students expressed opinion that more library follow-up time would be beneficial (another session)
- They like active learning!
Lessons Learned

- Modify the assignment for greater clarity of expected deliverables.
- Use the flipped classroom approach for other complex concepts to be taught. e.g. BCG matrix
- Modify worksheets for greater clarity of terminology
- Video format for learning goes hand-in-hand with young peoples’ learning habits
Next Steps - Repeat Research in Fall 2014

- Try Other Technologies
  - Guide on the Side ([http://code.library.arizona.edu](http://code.library.arizona.edu)) for online tutorials
  - Video Annotating software ([Vialogues](https://vialogues.com))
  - Clickers or Online Quizzes ([Poll Everywhere](http://www.polleverywhere.com)) for Quick Assessment
Questions?

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- Library Research Guide
- http://libguides.lehman.edu/flipped