

# TEACHING: ART, SCIENCE OR MAGIC?

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# Why I teach...

- I have heard the old saying that "those who can do, and those who cannot teach". I would like to believe that I am capable of both doing (valuation, corporate finance) and teaching.
- I will leave that judgment for you to make, since my valuations are in the public domain (on my blog and in my lecture note), and I have been open about how I have acted on them.
- If your query is why I would continue to teach rather than seek out more lucrative careers in investing or banking, my answer is a simple one. I love teaching and if you follow my classes, I hope it shows

# My Teaching Philosophy

1. Preparation is key: Paraphrasing Edison, teaching is 90% perspiration and 10% inspiration. If you are prepared for your class, you are well on your way to being a good teacher.
2. Respect your students: I did not care for those teachers that I had, when I was a student, that looked down on their students, either as being less learned than they were or less motivated.
3. Be fair: I don't believe that students dislike or punish tough teachers, but I do believe that they dislike and punish teachers who are unfair.
4. Have empathy: I try to keep my memory fresh by remembering the things I liked and disliked when I was a student, and trying not to repeat them.
5. Teaching is not just in the classroom: Your impact on students is affected just as much but what you do outside the classroom, in your office hours and in your interactions (online and in person) with your students.
6. Have fun: If you look at the joy that young children show when they learn something new, it is obvious that human beings enjoy learning . I want my classes to be meaningful, impactful and profound, but I also want them to be fun.



# The Perspiration

The Dark Side of Teaching?

# Testing and Grading

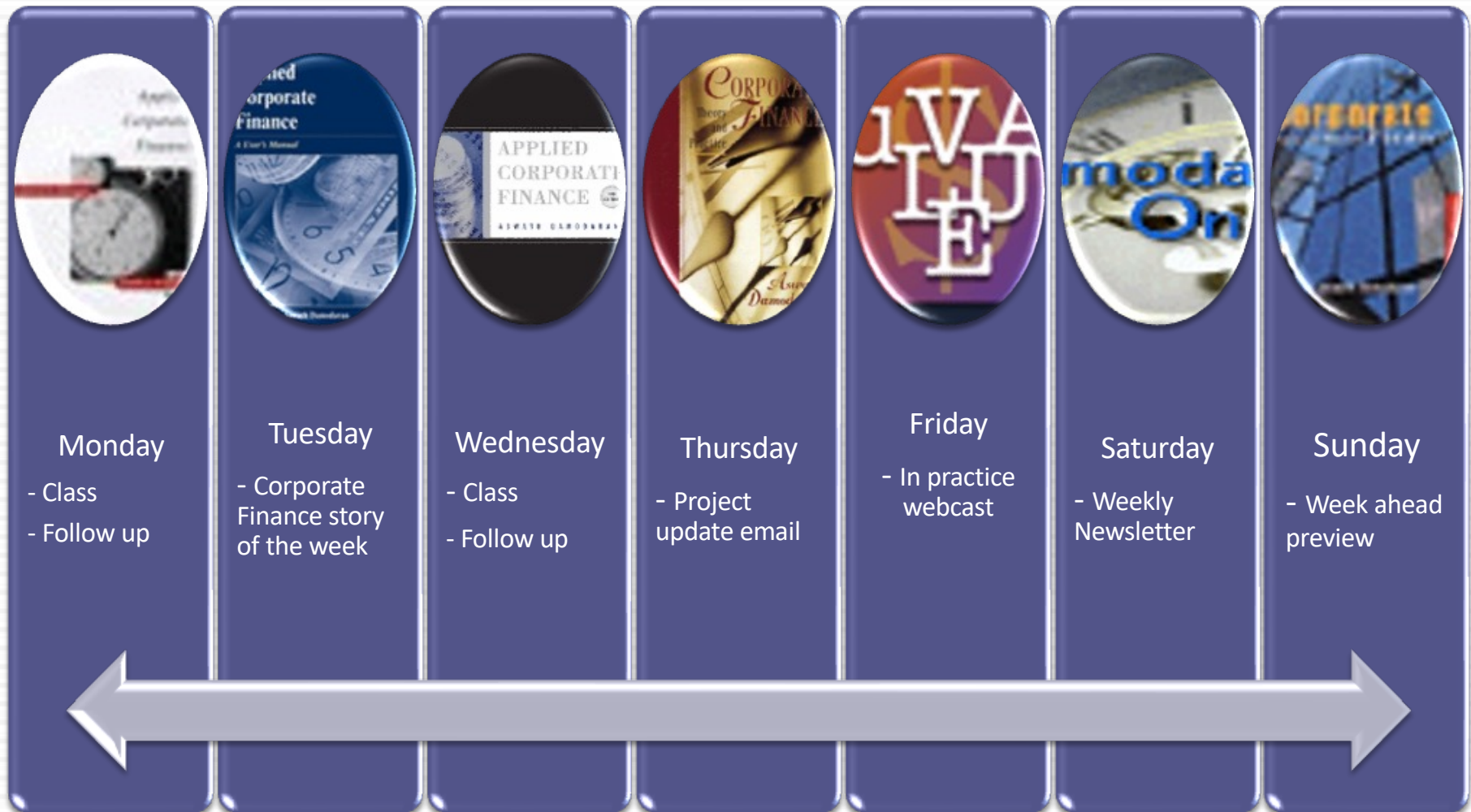
- Tie exams to your course objective: Structure exams around what you want students to learn and not from ease of grading or other objectives.
  - ▣ Corollary: Unless you plan to religiously follow a textbook, avoid test banks.
- Make it difficult to cheat: People cheat... and even a few cheaters can create the perception that the grading is not fair.
  - ▣ Assume that every past exam and its solutions are in the public domain
  - ▣ Create multiple versions of the same exam.
  - ▣ Have rules and enforce them.
- Speedy noisy feedback is better than perfect delayed feedback: Quick feedback is even more important for a large class than for a small one. Students have a much tougher time gauging how well or badly they are doing.
  - ▣ Give quizzes early and often in a class.
  - ▣ Grade and return exams as quickly as you can
- Be fair: Listen to grading grievances and admit your mistakes.

# Office hours and other delights...

- Minimize administrative issues: Be as clear and decisive as you can be about the administration of the class and how you will be grading students.
- Learn from doubts/questions: Reduce the proportion of your office hours you are spending answering the same question over and over.
  - If you are asked the same question more than three times by different students, either open a class by posing the question for the whole class and answering it (or)
  - Developing a help manual for the class, where you start listing the questions with your answers and make the manual available to all students (or)
  - Use technology. Put your help manual online. It makes searching easier
- Have an open-door policy. Being available does not mean that you will be inundated by students.

# Class structure

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# Keep track of those who are having trouble with your class..

- Teachers tend to be drawn to those students who are most excited to be in their classes, and who are doing well. That is natural and one of the joys of teaching!
- However, it is very much part of your job to track those who are not doing well in your class, or worse, are not interested in whatever you are teaching.
- If you leave the latter group “untended”, and it is easy to do so in large or online classes, they will live up to your low expectations, and end up as the “dementors” of your classrooms.





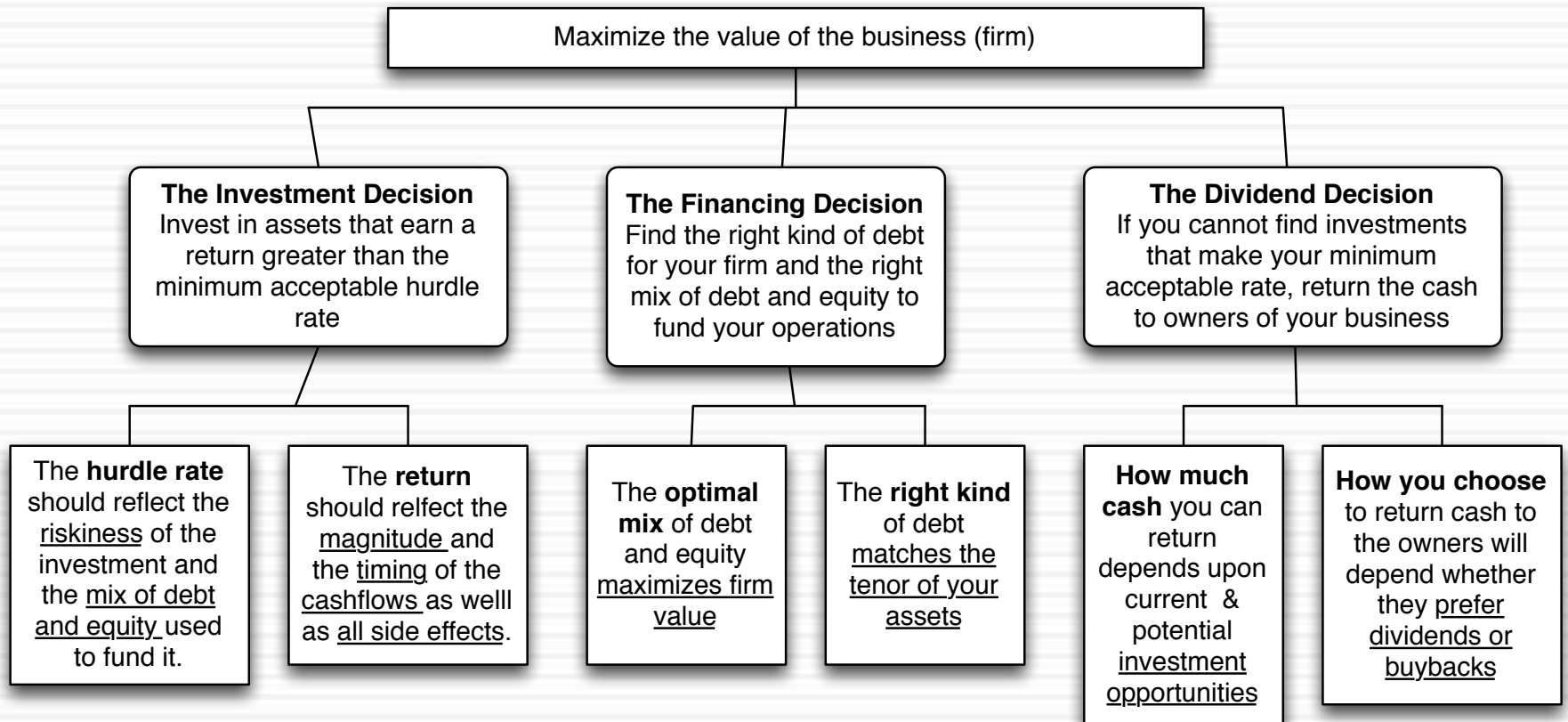
# The Inspiration

# The Classroom: Real or Virtual

- ① Put it in context - provide the big picture and have a narrative.
- ② Be clear about where you are going before you take off.
- ③ Explain why your subject matter is relevant.
- ④ Frame topics to appeal to the widest audience
- ⑤ Make it real
  - ① Use real companies in real time
  - ② Connect to everyday life.
- ⑥ Keep people involved
  - ① Active versus Passive participation
  - ② Look for Aha! Moments
- ⑦ Manage your time, don't let the system beat you and trust your students.

# 1. Show them the big picture..

## Corporate Finance: First Principles



# Task 1: The Big Picture for the class you teach...

## Establishing a narrative

- Think about the big picture/ first principles that govern the class that you are teaching now. While doing this,
  - ▣ Avoid the jargon that is endemic to every discipline
  - ▣ Think in terms of the principles that govern how you think through problems in your discipline rather than on tactics or strategy.
  - ▣ Put first principles in common sense terms
  - ▣ Keep it compact (should fit on a page)
- Test it out by explaining what you are trying to do in your class to someone who does not know anything about your discipline and, better still, does not care.

## 2. Have a central question/theme for each class

### Session 16: The Financing Mix Question

- Background: This is session 16 of a 26-session corporate finance class. It follows sessions where we have analyzed the investment principle. This session is built around one question.
- In deciding to raise financing for a business, is there an optimal mix of debt and equity?
  - ▣ If yes, what is the trade off that lets us determine this optimal mix?
  - ▣ If not, why not?

## Task 2: The question of the day is....

- Take your conventional syllabus, which usually lists the topics for each session.
- For each session in your class, outline the key question or questions that you hope to answer. In doing so, keep in mind that
  - ▣ Most good lectures revolve around one question or perhaps two...
  - ▣ Framing the question correctly will make it easier for your students to follow the class.
  - ▣ Your lecture should revolve around answering the question.

### 3. Motivate the discussion

- Every business, small or large, private or public, has to choose a mix of debt and equity to fund its operations.
- It is possible that there exists a mix of debt and equity that is best for each business, and that the mix could be different for different businesses.
- If such a mix exists, we should try to find it even though we may be constrained by internal and external factors from moving to that mix.

## Task 3: Make it relevant

- For each lecture in your class, explain why answering the question you will be addressing in that session matters. In coming up with the motivation, remember that the following don't work:
  - ▣ You need to know it because it will be on the exam
  - ▣ Everyone in my discipline (finance, marketing ..;) believes that it is important to know this...
- If you cannot find a good reason why students should know the answer to a question, perhaps you should not ask it in the first place...



# 4. Draw everyone in: The Choices in Financing

- There are only two ways in which a business can make money.
  - ▣ The first is debt. The essence of debt is that you promise to make fixed payments in the future (interest payments and repaying principal). If you fail to make those payments, you lose control of your business.
  - ▣ The other is equity. With equity, you do get whatever cash flows are left over after you have made debt payments.
- The equity can take different forms:
  - ▣ For very small businesses: it can be owners investing their savings
  - ▣ For slightly larger businesses: it can be venture capital
  - ▣ For publicly traded firms: it is common stock
- The debt can also take different forms
  - ▣ For private businesses: it is usually bank loans
  - ▣ For publicly traded firms: it can take the form of bonds

# Task 4: Generalize your discussion

- Take a typical lecture and go through it looking for ways to say things that appeal to those from
  - ▣ From other countries
  - ▣ From other backgrounds (not finance, in my case)
  - ▣ With other interests

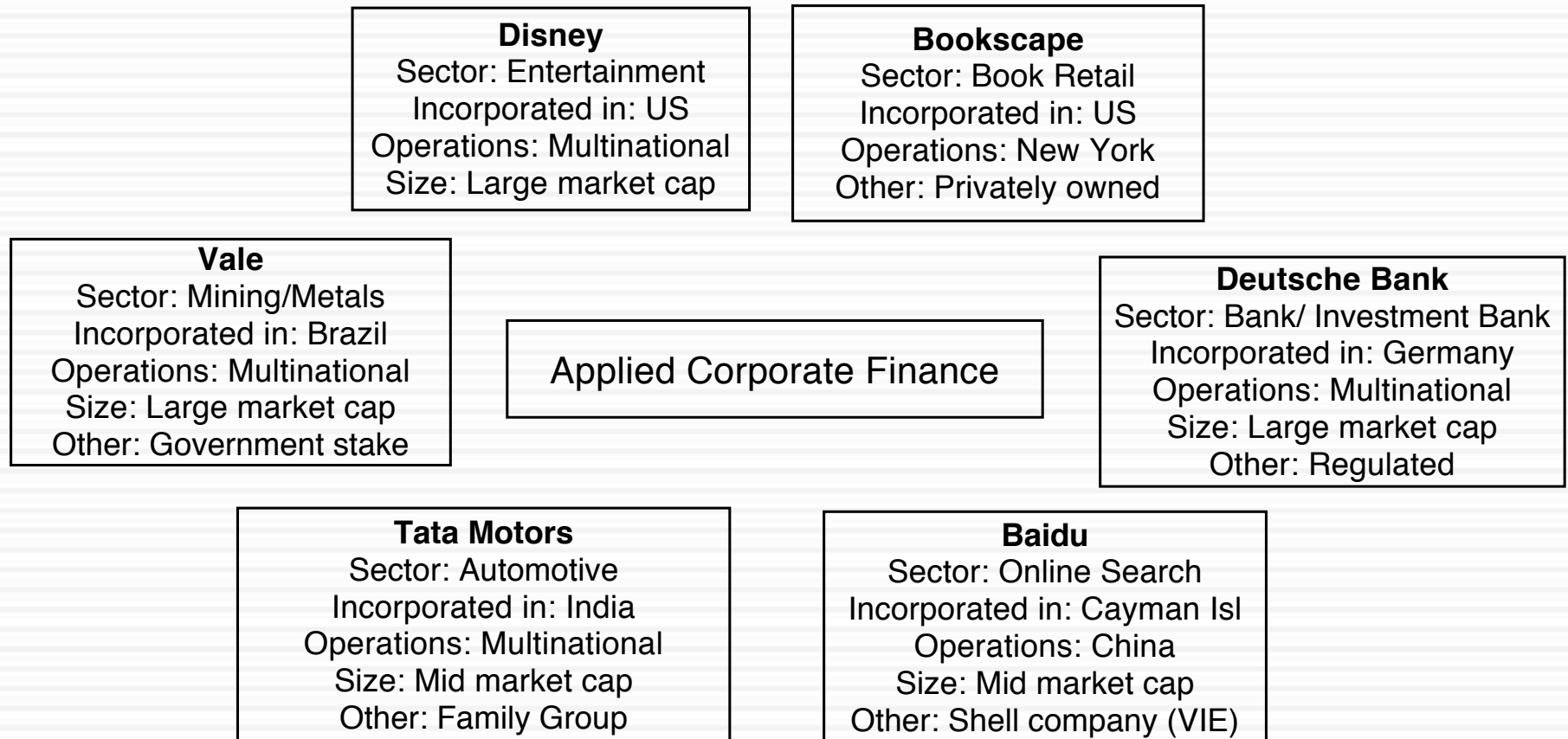
## 5. Make it real

### Measuring a firm's financing mix

- The simplest measure of how much debt and equity a firm is using currently is to look at the proportion of debt in the total financing. This ratio is called the debt to capital ratio:
- $$\text{Debt to Capital Ratio} = \text{Debt} / (\text{Debt} + \text{Equity})$$
- Debt includes all interest bearing liabilities, short term as well as long term.
- Equity can be defined either in accounting terms (as book value of equity) or in market value terms (based upon the current price)

# And it will be applied...

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# Bring in real companies

## Disney (US, entertainment)

Debt = \$13,028  
Equity = \$121,878  
D/E ratio = 13.1%

## Tata Motors (India, automobile)

Debt = Rs 477,268 m  
Equity = Rs 1,152,664 m  
D/E ratio = 41.4%

## Baidu (China, technology)

Debt = 15,403 m Yuan  
Equity = 334,345 m Yuan  
D/E ratio = 5.5%

Corporate Finance  
First principles

## Deutsche Bank (Germany, bank)

Debt = 143,800 m Euros  
Equity = 35,150 m Euros  
D/E ratio = 409.1%

## Vale (Brazil, mining)

Debt = \$R 99,132  
Equity = Rs 180,257 m  
D/E ratio = 55.0%

## Bookscape (US, bookstore)

Debt = \$12,156  
Equity = \$31,500  
D/E ratio = 38.5%

## ▼ Application Test: What is your firm's debt ratio?

- Looking at the balance sheet of your firm, estimate the following:
  - ▣ Total interest bearing debt at your firm
  - ▣ The book value of equity
  - ▣ Book value debt to capital ratio
- Using the market value of equity in the firm, estimate the market value debt to capital ratio

# Task 5: Make it real..

- When introducing a measure, a model or a proposition, follow it up by having students look at a real company. If possible,
  - ▣ Let them pick their own companies
  - ▣ Make it real time
  - ▣ Work with the companies in class
- If not, use a case... If you do, watch out for the following:
  - ▣ Don't make the case discussion too contrived or stage managed
  - ▣ Leave open the possibility that the “case solution” (offered by the case writer) may be wrong or incomplete
  - ▣ Watch out for hindsight bias

## 6. Set up roadmaps for discussions

### The Trade Off: Debt versus Equity

- Benefits of Debt
  - *Tax Benefits*: The tax code is tilted in favor of debt, with interest payments being tax deductible in most parts of the world, while cash flows to equity are not.
  - *Adds discipline to management*: When managers are sloppy in their project choices, borrowing money may make them less so.
- Costs of Debt
  - *Bankruptcy Costs*: Borrowing money will increase your expected probability and cost of bankruptcy.
  - *Agency Costs*: What's good for stockholders is not always what's good for lenders and that creates friction and costs.
  - *Loss of Future Flexibility*: Using up debt capacity today will mean that you will not be able to draw on it in the future.



## 6a. And use anecdotes to bring home your point

### Debt adds discipline to management

- If you are managers of a firm with no debt, and you generate high income and cash flows each year, you tend to become complacent. The complacency can lead to inefficiency and investing in poor projects. There is little or no cost borne by the managers
- Forcing such a firm to borrow money can be an antidote to the complacency. The managers now have to ensure that the investments they make will earn at least enough return to cover the interest expenses. The cost of not doing so is bankruptcy and the loss of such a job.
- Here is my Volvo explanation for this argument...

## Task 6: Explain with everyday occurrences...

- When explaining a concept, see if you can come up with something from everyday life that brings it home. If you can,
  - ▣ Make it personal
  - ▣ And keep it connected to what you are trying to explain
- Try it out on an audience. If it does not work, try modifying it. If it does, remember it and keep fine tuning it.



## 7. Allow for different types of participation Added Discipline...

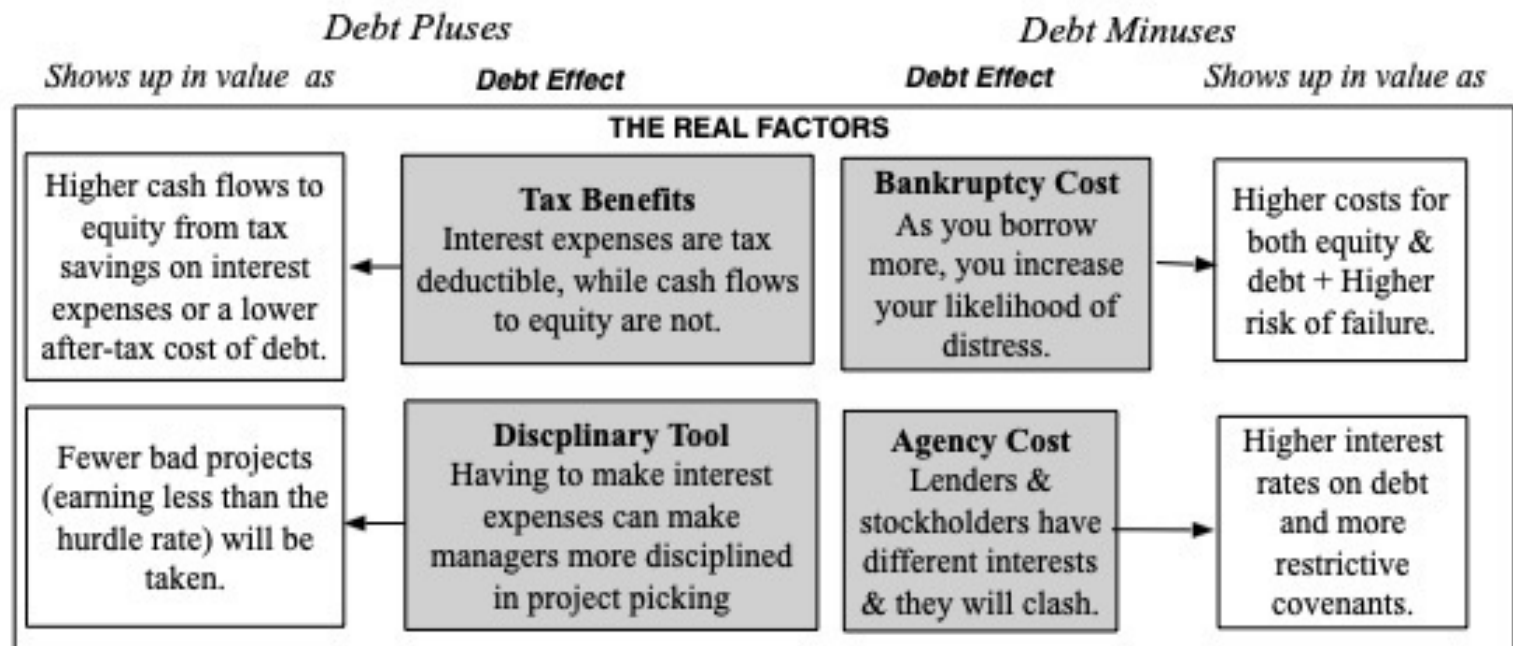
- Assume that you buy into this argument that debt adds discipline to management. Which of the following types of companies will most benefit from debt adding this discipline?
  - a. Conservatively financed (very little debt), privately owned businesses
  - b. Conservatively financed, publicly traded companies, with stocks held by millions of investors, none of whom hold a large percent of the stock.
  - c. Conservatively financed, publicly traded companies, with an activist and primarily institutional holding.

## Task 7: Create active participation...

- Take a few open ended questions that you currently ask in class and see if you can convert them into a multiple choice questions, with each answer representing a feasible answer (albeit with a different assumption needed to get there).

# 8. Repeat, rinse, repeat

## Debt: Summarizing the Trade Off



## 8a. Let them figure it out

### A Hypothetical Scenario

- Assume you operate in an environment, where
  - (a) there are no taxes
  - (b) there is no separation between stockholders and managers.
  - (c) there is no default risk
  - (d) there is no separation between stockholders and bondholders
  - (e) firms know their future financing needs
- What are the costs and benefits of borrowing in this scenario? What are the implications for an optimal debt ratio?

## 8b. Look for Aha! moments

### The Miller-Modigliani Theorem

- In an environment, where there are no taxes, default risk or agency costs, capital structure is irrelevant.
- The value of a firm is independent of its debt ratio.

# Task 8: Create aha moments!

- If you could do it, what part of your class would you want your students to have the aha moment on?  
How would you go about making it easier for them to get there?
  - ▣ A simple framework for thinking through problems
  - ▣ No extraneous issues and questions
  - ▣ No buzz words...
  - ▣ A non-threatening atmosphere
- The more important the proposition, the greater the payoff to letting them get there on their own...

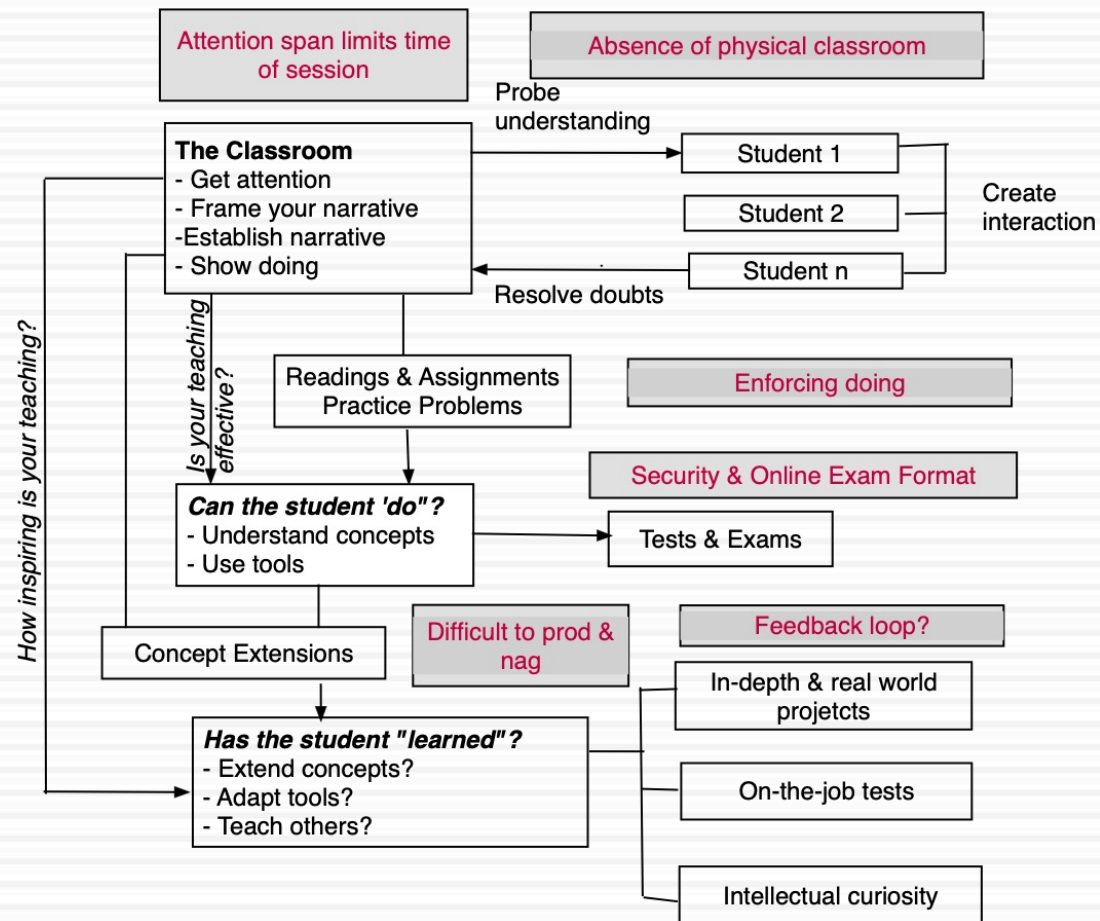


## Task 9: Incorporate changing media into your class

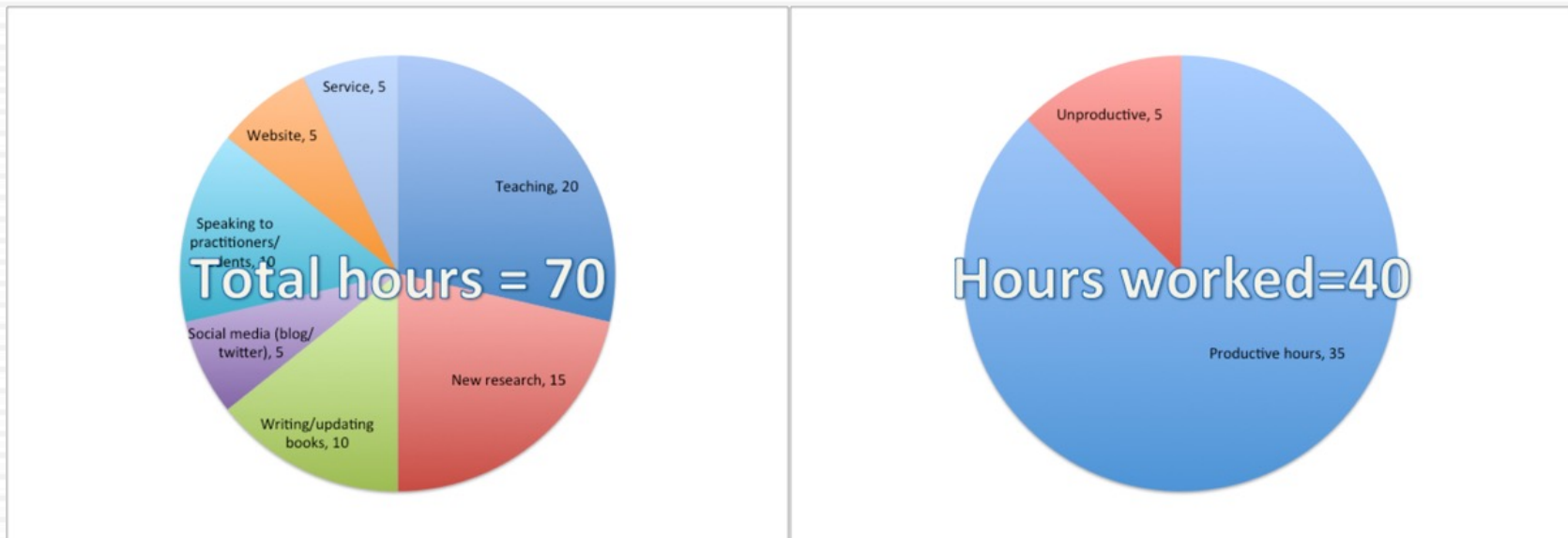
- Do you find yourself frustrated that your students don't learn the way you learned or communicate the way you did?
- Have you adapted the way you communicate to the way your students do?
- Are there parts of your class that will lend themselves to any of the social media vehicles?
- Do you incorporate social media into your class? If so, how do you do it? If not, why do you choose not to?

# Teaching Online Classes

## The Online Teaching Challenge



# 10. Use your time well. Don't compartmentalize!



## Task 10: Take a time audit and follow up...

- Take a typical workweek and keep track of the time you spend on activities, breaking down teaching into preparation, office hours, classroom hours, email hours etc. and the rest of the week into administrative and research time.
- Think about ways in which you can make one activity serve more than one purpose. For instance, when you are doing research, can you think of ways of incorporating into a classroom session. Alternatively, can you make your administrative time actually serve useful purposes?

# 11. The system is rigged but you can beat it..

## Be subversive...

### **If you teach at a research university**

- They tell you that teaching matters but make judgments about who to hire, who to tenure and who to reward based upon “quality” research.
- You should
  - a. Research what interests you and do not be driven by the “publish or perish” culture.
  - b. Stare into the abyss (of not getting tenure)
  - c. Preserve the option to abandon.

### **If you teach at a teaching college**

- They tell you that you should be a good teacher but don’t give you the resources to back it up and give you a teaching load that causes burn out.
- You should view teaching well as your ultimate revenge. If you can pull this off, your power and affirmation will flow from below (the students) and not from above (the administration).

# It will be beaten...And here is my small contribution...

Symynd: Youtube versions of webcasts with online tutors and exams: 25,000-50,000

Lore/Coursekit: An external site with webcasts, class material and social media: 5000 students

Webcasts & class material on my website:  
2000 students

My NYU classroom  
400 MBA students

Apple iTunes U: Site for those with Apple devices to take class:  
5000 students

Unauthorized sites: Webcasts of classes: Unknown number