

Flipping the Classroom

(with Videos and Economic Experiments)
(用事前錄影與課堂實驗來)顛覆教室

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How I Started Flipping at NTU?

- 2007: Principles of Economics: Micro
 - One Corresponding Classroom Experiment Per Week
- 2008: Graduate Micro Theory (in English)
 - "I commit not to understand Chinese both in class & when grading"
- 2009: Principles of Economics (in English)
 - Largest English Class @NTU: 169/163/125 (12F-14F)
- 2013: Flipped Graduate Micro (with Videos)
- 2014: Experimental Economics (as MOOC)
 - 2014 Coursera / 2015 OCW (forthcoming in English)

Teach in English @ NTU: Pros & Challenges

- Students **Self-Select** to Your Class
 - Lazy Taiwanese students won't come
 - Foreign students are forced to come
- Teaching is **Path Dependent**
 - Easier for new faculty or a new course
- **How to Foster Discussion/Interaction?**
 - Taiwanese students are shyer in English
 - Rural kids handicapped listening English

How to Foster Discussion & Interaction?

- Ask People to Vote
 - Then ask people who voted for X to explain why
 - Which Would You Choose (mutually exclusive)?
 1. Spend 4 Years Studying at the world's best university, but must keep attendance a secret.
 2. Get an Official Degree from the world's best university, but cannot actually study there.
- Clickers are Similar
 - Still challenging for Taiwanese students (English)




Old Chinese Wisdom:

Tell me and I'll forget;
show me and I may remember;
involve me and I'll understand.

Chinese Proverb

見之不若知之，知之不若行之，
學至於行之而止矣。行之，明
也。(荀子·儒效)

Not Enough Time?

- I get this question every time:
- How could I have time for experiments when I can't even finish my lectures?
- I used to say, 荀子說:「行之, 明也」
– "Involve me, and I'll understand."
- Now You Can Flip the Classroom with Videos, So There is No Excuse! 
– And it's even more beneficial if it's in English!

But...

- Each Instructor Faces Different Challenges
 - "You don't know how awful students @ XYU are."



- "NTU students can do this, but not ours!" (Really?!)

But...

- Every Divorce is different, but there is **Marriage Counseling** because there are:

1. General Principles
2. Case Studies
3. Inspiration
 - Learning from Analogy

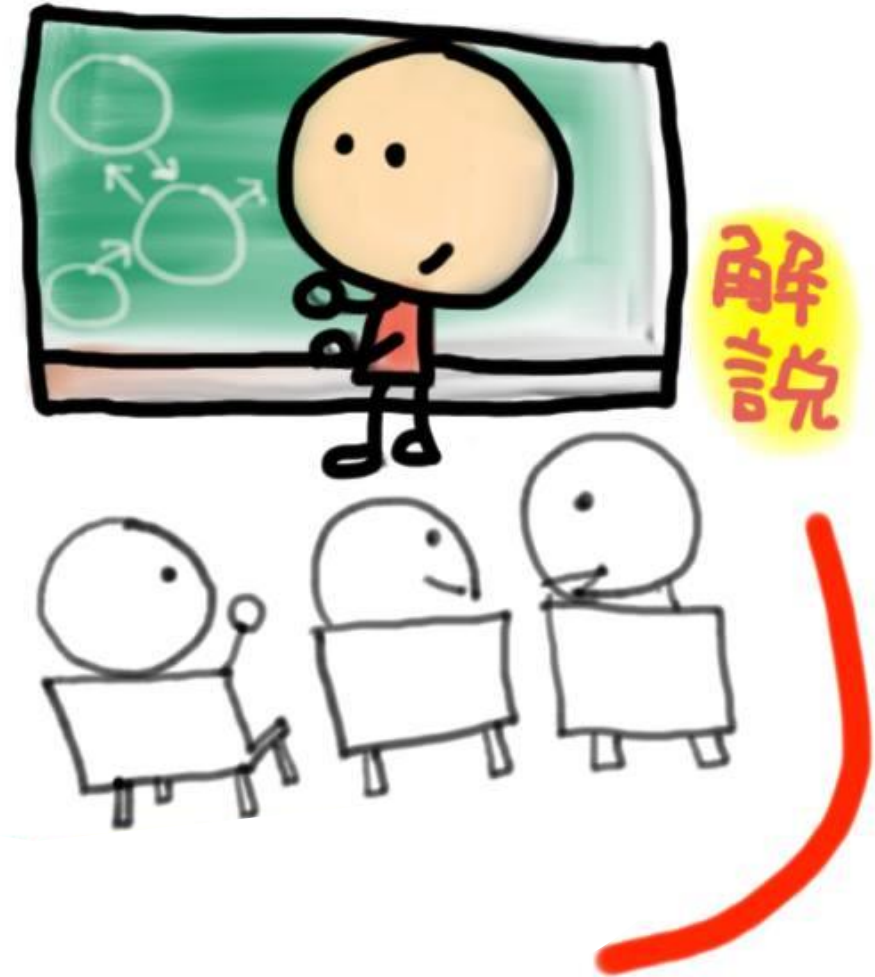


- Can **Teaching** be the same?

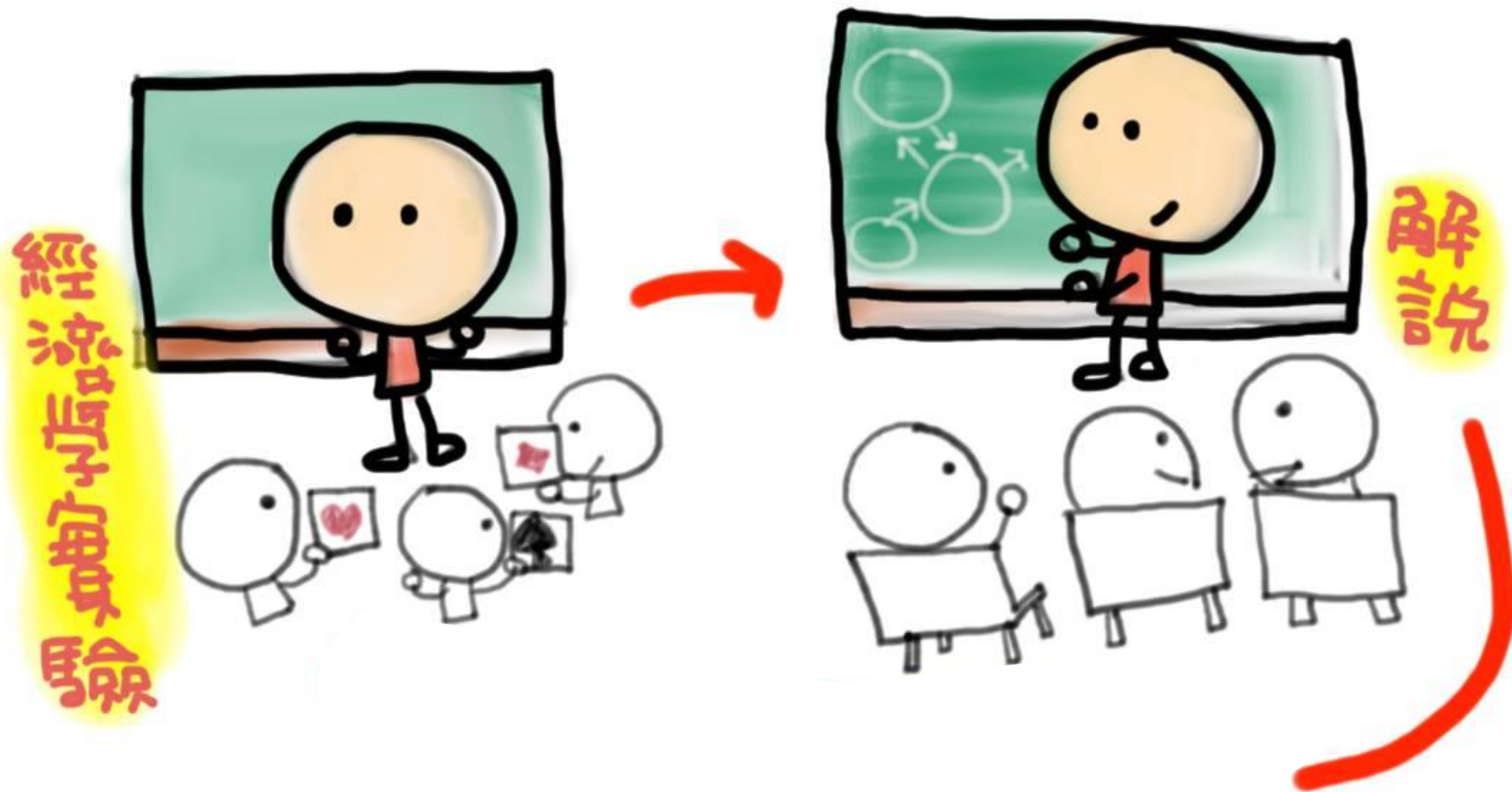
In a Flipped Classroom, You Can...

1. Force Students to **Preview** with Videos
 2. Encourage **Questions in Class**
 3. **Do Homework (=Quiz) in Groups**
 - See where they get stuck/teach each other
 4. **Run Experiments** to Foster Discussion
- **"Involve Me, and I'll Understand."**

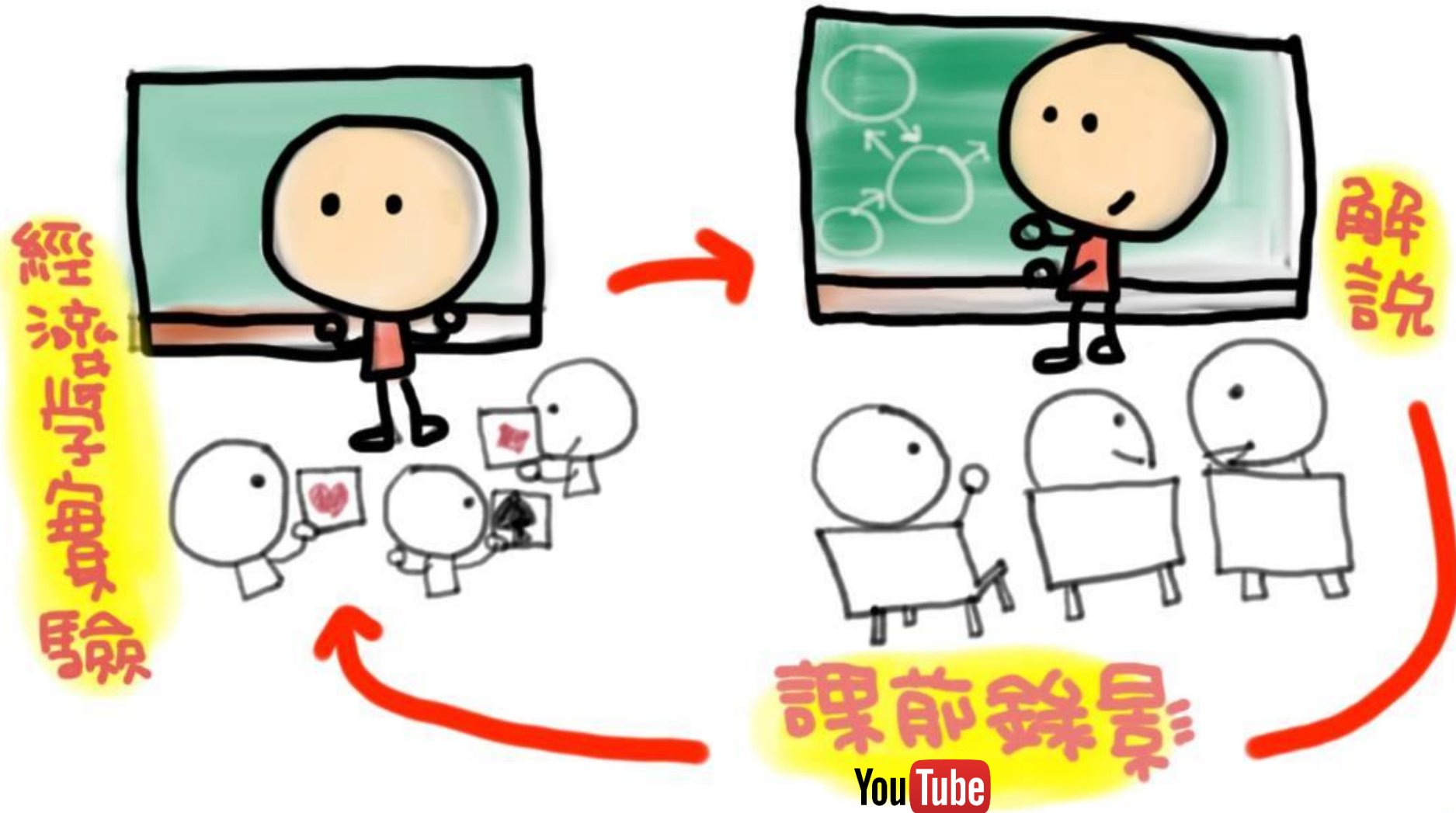
3MT – One Slide Summary



3MT – One Slide Summary



3MT – One Slide Summary



Panel Q & A

How Does (Online) Innovative Education Foster Off-line Interaction?

How to Overcome the Rooted Mindset of Grades/Score?

How Does Innovative Education (like Junyi) Make a Profit?

What is the Main Obstacle You Faced? How Did You Deal With It?

Your Question Here:_____.

(We Open to the Floor!)

The End

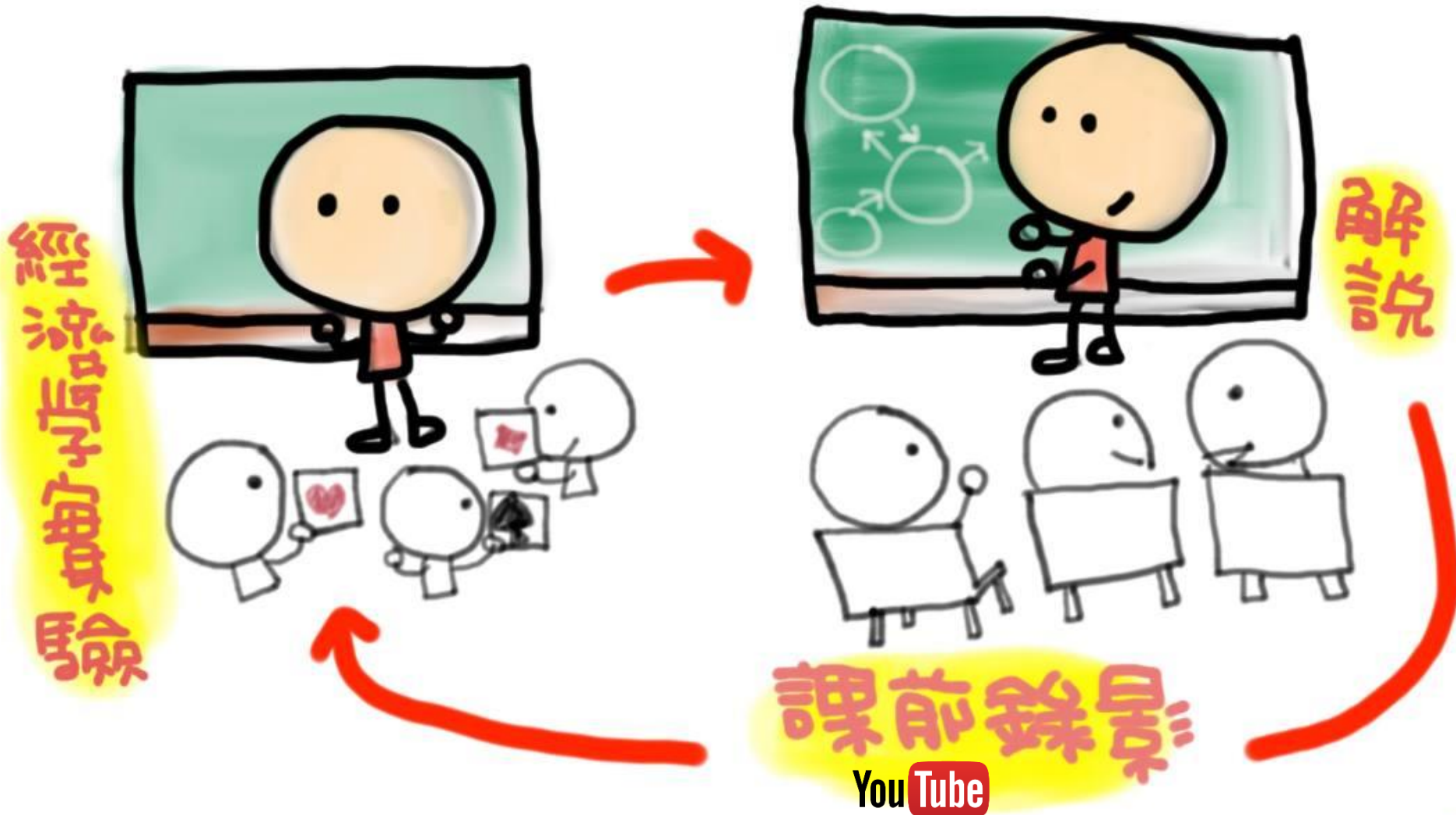
Challenges to Flipping: Signaling and Certification

顛覆教室的挑戰：認證機制

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Involve Me, and I'll Understand (for 3MT)



To Change, Requires...

1. The Logic Behind the Current System

- Why things are at the current state

2. Wisdom from God to Fine-tune It

- **Fine-tune** system to make everyone better off!

3. Convince the Key Person to Do It

- This is the easiest part, since
- Other two are mutually exclusive!



To Flipped Your Classroom, You Need To:

1. Know What Students **Expect**

- The logic behind the current system

2. **Design Unexpected Content**

- Wisdom from God to fine-tune It

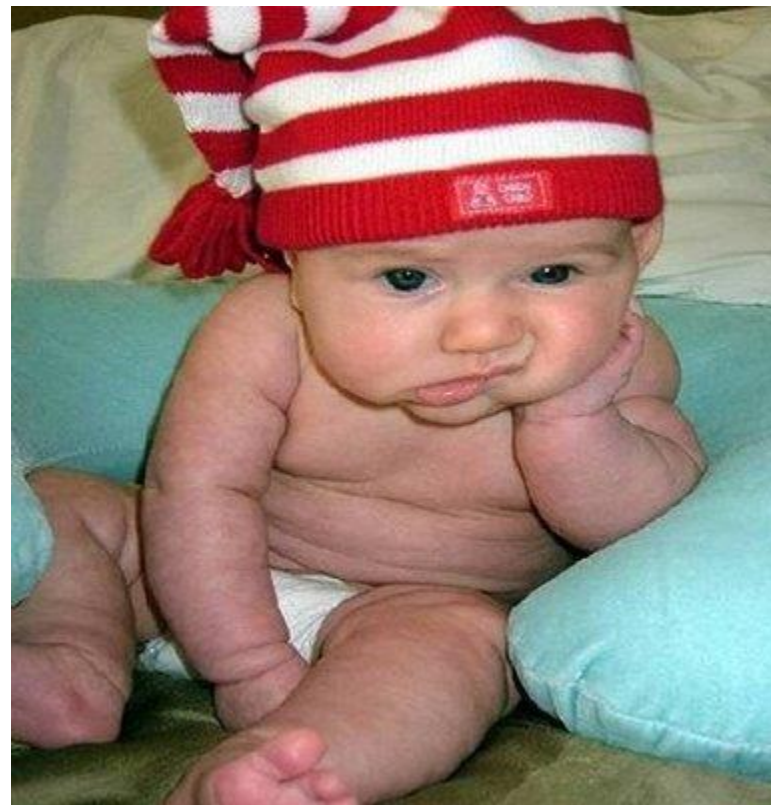
3. **Start from flipping 3 weeks**

- Convince the Key Person to do it
- If you flip 3 weeks each year, you would be flipping a quarter/half-semester in 3 years!



What Students Expect From Principles?

- Lectures (背多分)
 - Big classes
 - Unrealistic model
- They say that
 - 經濟：經常忘記
 - 會計：快快忘記
 - 統計：通通忘記



What Students Expect From Principles?



Classroom Experiment 1: Screening (篩選機制)

1. "稀ㄟ取踢" Inc. Offers 2 Cell Phone Plans:
 - Plan A: \$1 per minute
 - Plan B: \$168 monthly for 300min, then \$1.5/min

2. If Your Card is:

- ♠: Usage is 0-100min/mo
- ♥: Usage is 200-300min/mo
- ♦: Usage is 400-500min/mo
- ♣: Usage is 600-700min/mo



3. Which Plan Would You Choose? Why?

Screening (篩選機制)

1. A Set of Rules

- Different cell phone plans

2. Individuals Optimize

- Which saves me the most money?

3. You React to Others Optimizing

- Want a free iPhone 6S? Get a new line!

4. What Should Aggregate Data Look Like?

- Separating equilibrium says ♠♣ choose plan A, while ♥♦ choose plan B

Screening (篩選機制)

5. Does Empirical Data Match the Theory?
 - How many ♠♣(♥♦) really choose plan A(B)?
6. Can Individual Differences be Explained?
 - If you are different, what were you thinking?
7. How Can the Institution (Rules) Improve?
 - What would you do as a marketing manager?
8. Where Did this Institution Come From?
 - Copied from other countries? Only one approved?

Applications of Screening (篩選機制的應用)

- Screening Devices designed to **Differentiate**
 - Let some choose Plan A, others Plan B
- Examples:
- **Marketing Campaigns Target Specific Groups**
 - Student/NP plans of cell phone companies
 - BOGO, 2nd pair 50% off, 2nd bottle 41% off...
- **HR Screen CVs Based on Certain Criteria**
 - Ivy League, GPA, extra-curriculum activities, GIS
 - Students try their best to satisfy those criteria

Classroom Experiment 2: Signaling (認證標籤)

1. Expected Salary if you graduate from:

♥♦: National iDaiwan University: 35k/mo

♠♣: Private Salty Chicken University: 22k/mo

2. If you go to graduate school at NiDU:

– Expected salary 40k/mo, but need to repay student loans @ 5k/mo

3. Would you apply for NiDU graduate school? Why?



Signaling (認證標籤)

1. A Set of Rules

- Credentialism on the job market (and society)

2. Individuals Optimize

- Which choice is better for my job market?

3. You React to Others Optimizing

- Would salary be the same if everyone has a MA?

4. What Should Aggregate Data Look Like?

- Pooling equilibrium says all should get a MA, though NiDU undergrads (♥◇) are indifferent

Signaling (認證標籤)

5. Does Empirical Data Match the Theory?
 - How many ♠♣(♥♦) really applied grad school?
6. Can Individual Differences be Explained?
 - If you are ♥♦, what were you thinking?
7. How Can the Institution (Rules) Improve?
 - What would you do as employer? As Minister Wu?
8. Where Did this Institution Come From?
 - The Imperial Examination System (科舉制度)?

Applications of Signaling (認證標籤的應用)

- Signals Let You **Stand Out (鶴立雞群)**
 - Convince others you (your products) are better
- Examples:
- Consumers Demand **Certificate of Origin**
 - Credentials, Recommendation Letters, MIT, ISO
- Demonstrate Qualification in **Job Interviews**
 - Hire me, because...
 - Should I go for MBA immediately after college?

Still Cannot Get It? Try YouTube...

- eCornell – Game Theory: Signaling (7:26)
 - <https://www.youtube.com/watch?v=m5tKRMZWYD8>
- The Economics of Valentine's Day (3:16)
 - <http://www.learnliberty.org/videos/economics-valentines-day/>
- Spence on Valentine's Day Signaling (1:30)
 - <http://bigthink.com/think-tank/how-economics-can-help-your-love-life>



Applications of Signaling (認證標籤的應用)

- Which Would You Choose? (mutually exclusive)
 1. **Spend 4 Years Studying** at the world's best university, but must keep attendance a secret.
 2. **Get an Official Degree** from the world's best university, but cannot actually study there.
- Answer Reveals which do you think is the more important reason Education Increases Salary

Your **Human Capital** vs. Your **Signal**

What About MOOC?

- How Can You **Credibly Signal** You Did Learn Something in MOOC?
- Pay to Get a Certificate?
 - But few are doing so!
- In the Future, Do We
- Need a Certifying Agency/Institute?
- Do We Still Need MOE?

The End