Motivating your students to prepare for your flipped class
Excuse me, you’re shoulding all over your students.

- They should remember without being told.
- They should look at the syllabus.
- They should put in the time.
- They should know how to read.
- They should be more on top of things.
- They should not need quizzes or points.
- They should know what I mean.
The shoulding is ALL TRUE!!!
My outrageous claim

It IS our job to help our students prepare for our classes.

And if we do, our lives will be much better and less frustrating.
Before class

- Exposure to content
- Limited practice

Class

- Working with content
- Clarification
- Some new info

After class

- Reflection
- Complex practice
Before class:
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Flow:
- Exposure to content → Limited practice → Class → Reflection → Complex practice
Why students don’t prepare

Unfavorable cost-benefit analysis

• Other (legitimate) priorities
• Weak link between prepping and doing well
• No justification for why the prep activities are chosen
• Believe important course content will be covered in class anyway
• Boring prep activities
• Prep is too hard or is unreasonably long or complex
• Don’t like the professor in general
The last time I didn’t prepare for a meeting it was because…

Someone else was in charge
It wasn’t on my calendar
The directions weren’t clear
The materials weren’t easy to access
There were 500 pages across 50 folders to read
I didn’t care about the meeting
I had no use for the committee chair
I had other things to do
It didn’t matter anyway
Why students DO prepare
Favorable cost-benefit analysis

• Overall respect for professor and enjoyment of class
• Clearly articulated benefits and goals of each prep assignment
• Obvious incorporation of prep work into class activities and/or graded work
• No compensation for unpreparedness
• Prep work is reasonable, do-able, engaging, productive, and failure-tolerant
• Support is available
• Enough lead time
Motivation

- Value of outcome
- Connection of task to outcome
- Expectance of success at task

Supportive Environment
For us, learning is usually the valued outcome.

For students, the grade is usually the valued outcome.
Value of the outcome

Learning

Grades

Clear, relevant learning outcomes for the prep work, communicated to students

Moderate points for preparation – not tied strongly to correctness
Learning outcomes for prep work

**Week 1 -- Getting Started**

**Checklist for Week 1**

Here's a quick checklist -- see the items below the checklist for more specific directions.

1. Get your textbook.
2. Read the syllabus. If you have a question about something, write it down and bring it to class (10-15 minutes).
3. Do the knowledge survey (30-45 minutes).**
4. Introduce yourself and your favorite soil (15-30 minutes).**
5. Watch the two lecture videos (~20 minutes each, 40 minutes total).
6. While you watch, physically write down on paper at least 2 questions for each video that you want answered in lecture. Bring this paper to class.**

**Participation points!

Learning outcomes, in other words what I want you to get out of this prep work:

- Your questions answered about how the course will run and how you'll be graded
- A high-altitude overview of the topics we'll cover
- Some fun getting to know your classmates and introducing yourself to them
- See how beautiful soil can be, in an artistic kind of way
- Introductory vocabulary about soil structure and function
Connection of task to outcome
What do you mean when you say “Prepare for class”? Don’t say “They did the reading.”

• What demonstrable outcome are you looking for from people who have “done the reading”?
• What directions can you give that will provide evidence of that outcome?
Expectance of success

• Clear instructions
• Easy to find instructions
• Chunkable, engaging, variable activities
• Reasonable effort
• Failure-tolerant
• Support
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Easy to find instructions

LAB Content

Week 1 -- NO LAB! Cesar Chavez Day

Week 2 -- Physical Properties I
Please note -- this lab will be on APRIL 7! We don't have lab on March 31 due to Cesar Chavez Day.
- Lab Safety & Check-In
- Soil Physical Properties Part I
  - Texture by Feel
  - Structure
  - Strength and Consistence
  - Color

Week 3 -- Soil Morphology in the Field
Open the folder to see what to do/bring!

Week 4 -- Physical Properties II
- Texture by Hydrometer
- Bulk Density, Particle Density, and Porosity
- Aggregate Stability
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**Participation points!
Reasonable effort

The “Carnegie credit”: One hour of lecture time plus two hours of homework per week, three hours total per credit.

- 3 unit class = 9 hours of work per week, 3 in class and 6 outside class

Students will take much longer than you for a task.
3 hours in class = 6 hours outside
Suggestion: prep work should be no more than ~1/3 of outside time, or about 1-2 hr per week.

- Exposure to content
- Limited practice

Before class

- Working with content
- Clarification
- Some new info

Class

- Reflection
- Complex practice

After class
Failure-tolerant

• Pass/fail grade on basis of completeness, effort, and timeliness.
  – Calculus class: “Students must pass 12 out of 13 Guided Practices to be eligible for an A in the course, 10 out of 13 for a B, and 8 out of 13 for a C. Each individual assignment is simple to pass; repeated failures to do so will have severe effects on the course grade.”
Support for completion

- Reminders of due dates
- Study and reading guides
- Available for help in office hours
- Help students manage their workload