

# Teaching Large Classes

Strategies and Course Design



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## Overview

1. Introduction
2. Learning First
3. Surveys, Interviews, Research
4. Large Class Logistics, Engagement, & Assessment
5. Large Class Flipping, Clickers, & Peers
6. asd
7. Conclusion

## Anticipation Guide

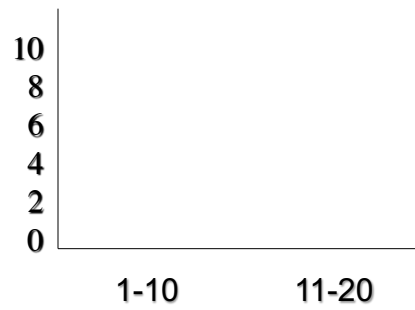
1. Large classes require a special “teacher personality” to do well.
2. Advanced pedagogies - problem-based learning, case-based learning, inquiry learning - are not possible in large classes.
3. Teaching large classes with technology is more efficient and results in more learning than teaching without technology.

## Learning First

The processing of knowledge, experience, and self.

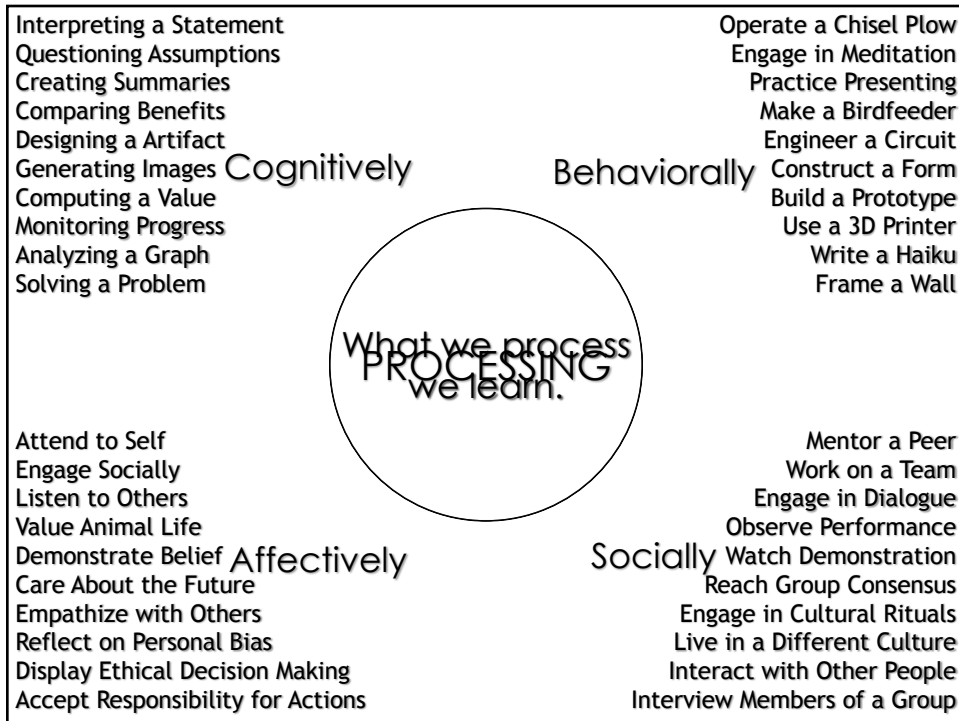


## Activity #1



## Activity #2

- Meaningful Learning
  - Elaborative Learning
  - Imagery
  - Self-Generation
  - Self-Reference Effect
  - Encoding Specificity
    - State-dependent
    - Context-dependent
    - Transfer-Appropriate Processing
  - *Practice with Feedback*
- Processing



## Surveys, Interviews, Research

What do teachers say?



## Surveys, Interviews, Research

- 132 Large Class (100+) Instructional Faculty
- Rank
  - Instructor 35
  - Assistant 24
  - Associate 42
  - Full 31
- Class Size
  - 100-299 students 96
  - 300-599 students 32
  - 600+ students 4
- Experience Teaching Large Classes
  - < 5 years 30
  - 5-10 years 48
  - 10+ years 54

## Large Class Instruction: A Survey

What strategies do you use in your large class?

<b>Top 5</b>	
Lecture with PowerPoint/Keynote/Prezi	82%
Video Clips/Films	52%
Solving Problems/Worked Examples	48%
In-Class Discussions/Q&As	43%
Chalkboard/Whiteboard	40%

## Large Class Instruction: A Survey

What strategies would you like to learn?

<b>Top 5</b>	
Flipped Classroom Activities	45%
In-Class Active Learning Strategies	39%
Social Media	26%
Discovery/Inquiry Learning	24%
Peer Learning	23%

## Large Class Instruction: A Survey

What types of *assessments* do you use?

<b>Top 5</b>	
In-Class Tests/Exams	76%
Homework	58%
In-Class Quizzes	46%
Clickers/Personal Response Systems	34%
Out-of-Class Quizzes	34%

## Large Class Instruction: A Survey

What *assessments* would you like to use?

<b>Top 5</b>	
Flipped Classroom Activities	41%
Experiential Learning Projects	22%
Service Learning Projects	21%
In-Class Activities	19%
Group/Team Projects	19%

## Large Class Instruction: A Survey

What are your *concerns/challenges* in your large class?

<b>Top 5</b>	
Classroom Distractions (laptops, phones)	71%
Classroom Space/Design	60%
Cheating	53%
Student Engagement/Enthusiasm	51%
Attendance	47%

# Large Class Strategies

Ideas from teachers of large classes



# Social Presence & Rapport

Fighting Anonymity





# Social Presence

- Social Presence: the awareness of and interaction with “others” that establishes a sense of connectedness and belonging.
- Top 3 Attributes of Social Presence
  - Responsiveness                      Immediacy
  - Connectedness                      Intimacy/Empathy/Affect
  - Interactivity                          Social Exchange

(Gunawardena, 1995; Short, Chrisie, & Williams, 1976; Tu, 2002)

# Social Presence

- Social presence increases
  - Attendance
  - Participation
  - Critical thinking



## Social Presence

- Strategies for increasing social presence
  - Pre-course communication
  - Chat with students before class/during set up
  - In-class discussion
  - In-class circulation
  - In-class teacher affect
    - Emotions
    - Actions (smile, laugh, eye contact, frown, show concern)
  - Collaborative/cooperative/group projects
  - Extra-class communication
    - Email, office hours (f2f, online), social media
    - Online office hours

## Learning Students' Names

How do you learn students' names?

- Study students' names and photos
- Have students use a name tag/card during class
- Call students by name at times in class
- Do an "About Me"-type assignment
- Ask students their names when they ask questions

# Logistics

Attendance and Email



## Perspectives on Attendance

Do you take attendance? If so, how? Or, why not?

- Don't take attendance
  - because students are adults
- Don't take attendance
  - but give in-class activity points
  - no make up for missed points
  - provide point to those with an excused absence (via Dean of Students)

## Perspectives on Attendance

- Take attendance
  - Sign-in on clipboard
  - Exit slips at end of class
  - Clicker questions
  - Assigned seats
  - ID card swipe
  - Activity participation
  - Randomly take attendance on 10+/- times during semester

## Handling Email – Part 1

- Return all emails in XX hours
  - Explain email return policy, 24 or 48 hours
- Be honest; explain you are often behind on emails
  - Tell students to resend if no response is received
- Discuss the importance of effective emailing
  - Only answer “effective emails”; questions where the answer is not on the syllabus, CMS, assignment guides
  - Respond “syllabus”

## Handling Email – Part 2

- Post responses to common questions on FAQs page
  - Refer students to FAQ page frequently
- Allow students to answer each other's questions
  - Use discussion boards to allow students to do this
- Provide clear policies on syllabus
  - Provide a full list of email policies on syllabus
  - Title format or question format of emails
  - Policy for seeking information (syllabus, FAQ, TA, Prof)
  - Use a syllabus quiz to emphasize information

## Engagement

Fostering processing in students



## Peer Instruction (Mazur)

1. Pose a question from lecture or pre-class reading
2. Time to think is provided to students
3. Poll students via clickers or hand raising
4. Students discuss with neighbors
5. Poll students again via clickers or hand raising
6. Professor explains answer

## Strategies for Engagement

- Use think-pair-share to initiate discussion/engagement
- Engage students in collaborative/group activities
- Incorporate response technologies to make choices
- Incorporate response technologies to begin discussion
- Incorporate response technologies to form. assess

## Strategies for Engagement

- Make examples/illustrations interesting/relevant
- Incorporate “fun facts” into the class
- Ask questions, both divergent and convergent
- Tell stories addressing relevant lived experience

## Strategies for Engagement

- Invite guest speakers, hold students accountable
- Have students present/perform to class
- Divide and conquer field trips
- Play music before class

## Tips for Using Groups

- Explain the importance/purpose of group work
- Explain group work clearly before forming groups
- Group randomly, by neighbors, by interest, etc.
- Walk around during group work time
- Process individually → small group → large group
- Debrief after group work
- Use the classroom spaces

## Engagement: Flipping Essentials

What flipping is and is not.

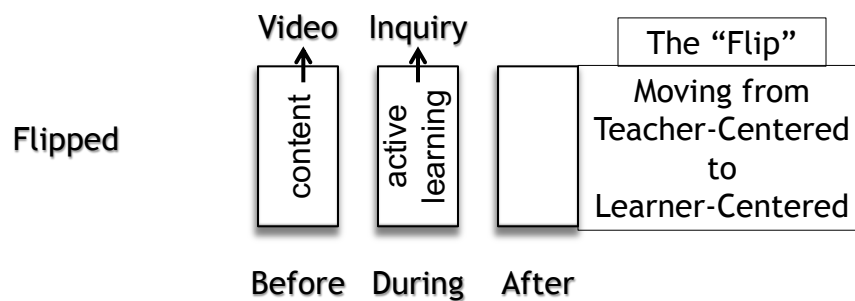




## Top 5 Reasons to Flip Your Class

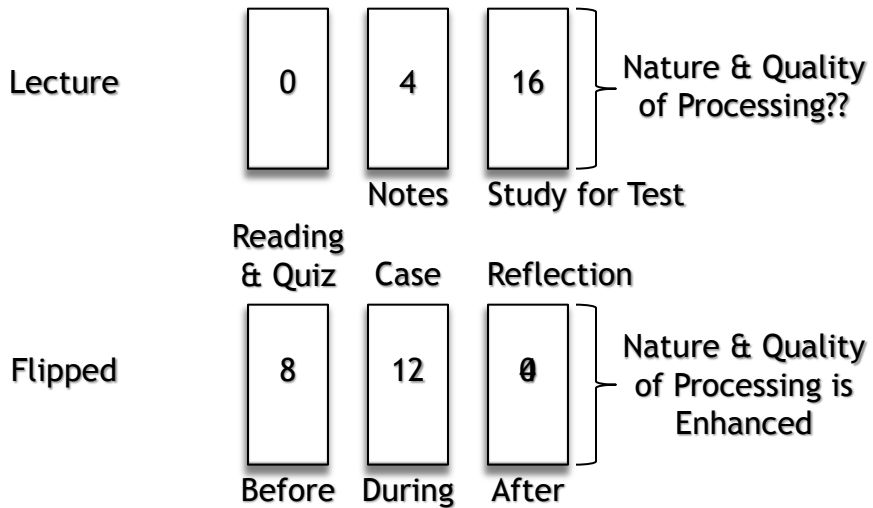
1. Increase student learning.
2. Increase student learning.
3. Increase student learning.
4. Increase student learning.
5. Increase student learning.

## Flipping Basics

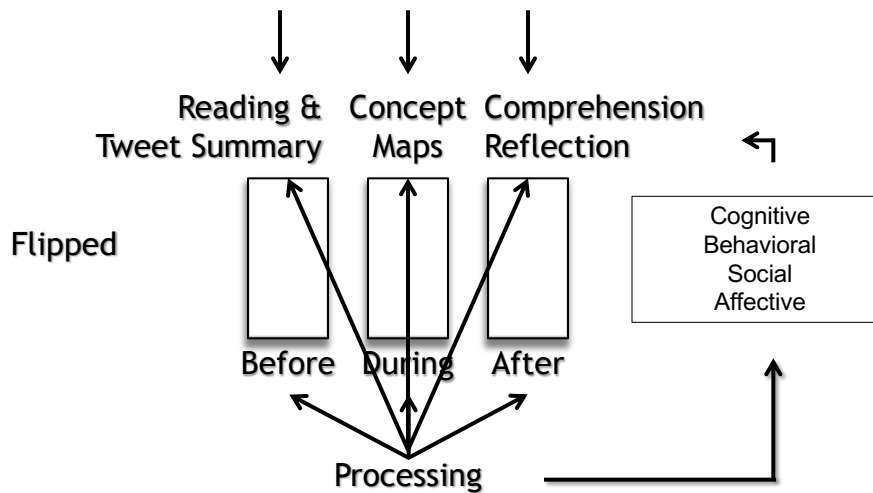


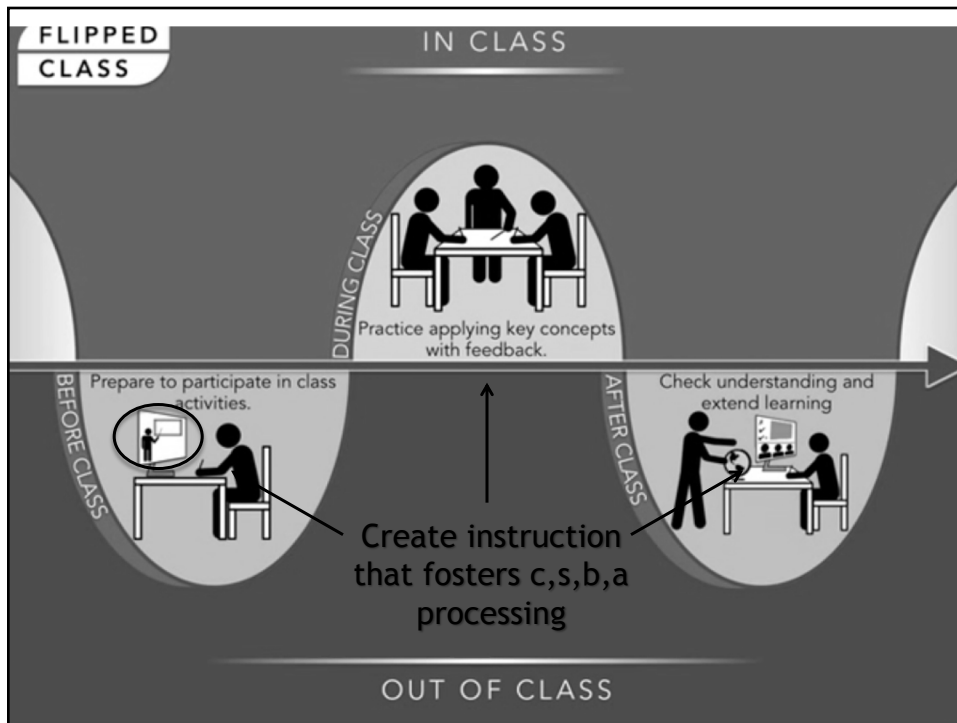
Learning is not magic, it's by design.

# Lecturing versus Flipping



# Basic Flipped Classroom Design





## Does Flipping Work?

Flipping “works” to the extent that the design of the course motivates students to engage in the cognitive, behavioral, social, & affective processing (before, during, and after class)

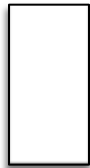
that is necessary to foster the learning and development that aligns with one’s outcomes.

Learning’s not magic, it’s by design.

# Example 1

Will Hossack, Developmental Biology  
Salford University, Manchester, England

Reading Chapter  
Quiz



Before

Group Discussion



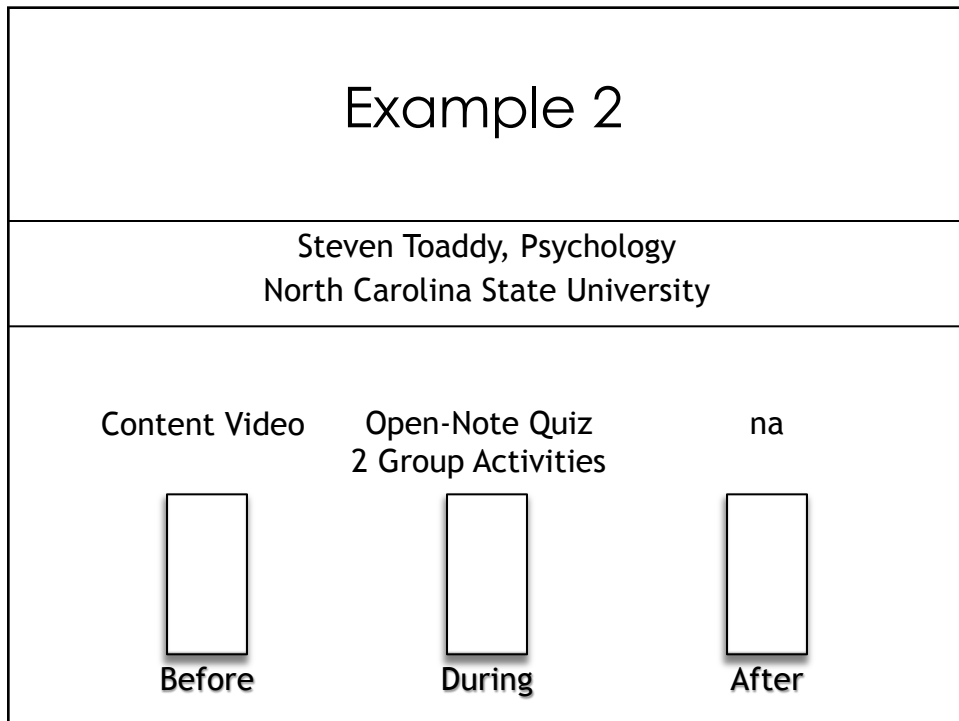
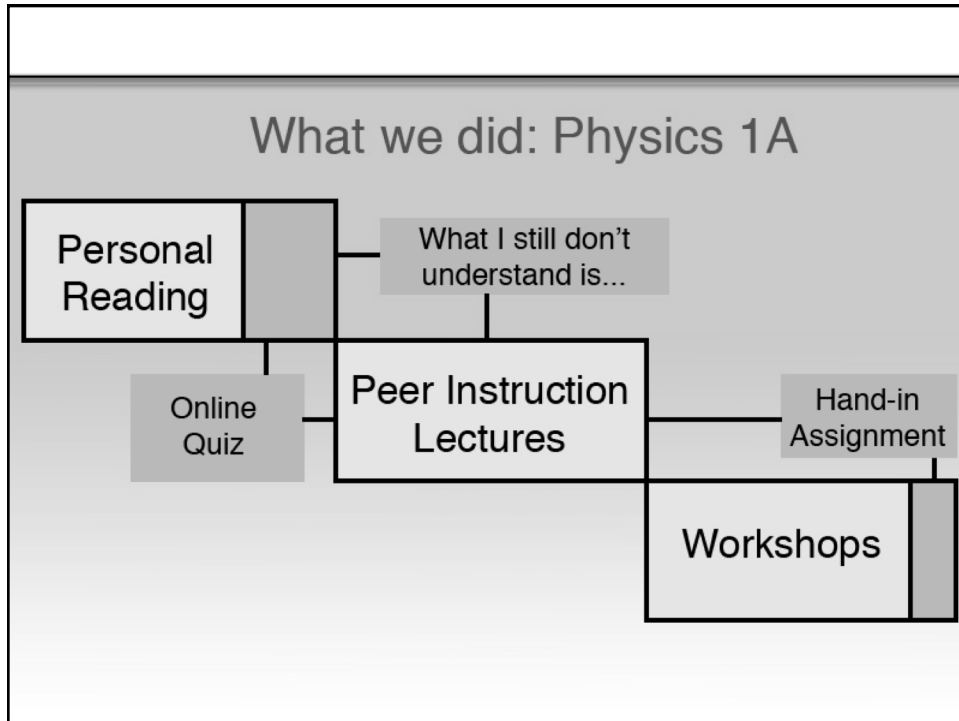
During

Small Group  
Recitation



After





Steven Toaddy – North Carolina State University



How are student's processing?

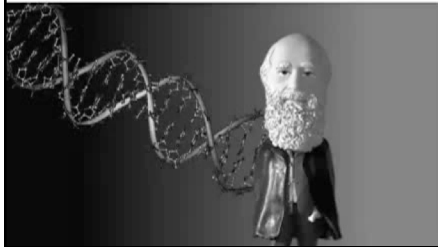
## Lesson Sequencing & Design

Week /Day	Topic	Outcome	Processing	Pre-Class	In-Class	Post-Class

Processing

# Bio202 Introduction to Genetics and Evolution

Mohamed Noor



## Disctractions

Minimizing off-task behavior



## Minimizing Distractions

- Break class into small segments (15 minute chunks)
  - Use meaningful and interesting breaks between segments
  - Focus breaks on short processing activities
  - Consider image/video clip analysis, problems, examples
- Use active learning activities during class
  - Use case studies, minute papers, think-pair-share
- Have a clear policy on in-class distractions
  - Include it on the syllabus and discuss it on the first day
  - Have students create a contract for classroom behavior

## Addressing Distractions

- Walk around the classroom – even the very back
  - Establish eye contact with students and ask questions
  - Teach from the back of the class
- Address students who are off task during class
  - Say something out loud to distracting students
  - Stare at them until they notice
  - Stand beside them until they notice
  - Ask them to stay after class if the problem persists
  - Ask them a question or to provide an example



## Addressing Distractions

- Limit use of laptop/phones in class
  - Provide a laptop zone in class – back 2 rows/front left
  - Have no technology days or closed laptop times
  - Decide if you care about students' use of technology
- Make laptops/phones a part of the lesson
  - Have students use laptops/phones to provide feedback
  - Have groups locate and use information from the web
  - Use information races in class

## Grades/Grading

Maintaining sanity while assessing students



## Grades/Grading

- Provide more opportunities for points than needed
  - Provide assessment choices for students to earn points
  - Align assessment choices with instructional outcomes
- Ramp up multiple choice questions
  - MC items
  - Interpretive response MC items
  - Extended interpretive response MC items
- Be creative with non-MC options
  - Flash quizzes
  - Shared/community movies (50% alone; 50% with others)
    - Introduction, movie, timed quiz

## Grades/Grading

- Have a team of graduate teaching assistants (GTAs)
  - Make sure the GTAs are trained to ensure grading consistency!
  - Check university policy on what GTAs are allowed to grade
- Provide more points than the total for hmwk/quizzes
  - This cuts back on dealing with excused/unexcused absences.
  - Serves the same purpose as allowing students to drop a grade
- Have a clear policy about make up work
  - Explain what is an "excused" absence
  - Determine who makes the "excused" decision
  - Provide a time when a student must notify the professor of a coming absence

## Grades/Grading

- Limit length for written responses
  - 2-3 sentences for short answer
  - 1 word for cloze questions
- Create a system for handling questions about grades
  - Grade question report explaining issue, rationale, and solution
  - Visit during office hours
  - Statute of limitations



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The image shows a black and white photograph of a large lecture hall with many students seated at desks, looking towards the front. The text is overlaid on the image.

## Faculty Voices: Advice

- Prepare
- Be specific – on syllabus, on assignments, on rubrics
- Be transparent about your expectations
- Be fair and consistent
- Hold students accountable
- Keep them engaged however you can
- Try new things to keep them awake – even at 8am!
- Show excitement – even for classes you've taught a lot
- Enjoy it – students will know if you don't really like it
- Be true to yourself

## Keeping It In Perspective

