

Flipping the Class

Fostering Deep and Flexible Learning



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Today's Mantra: Fostering Deep & Flexible Learning

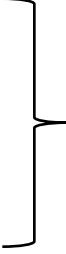


Anticipation Guide

Directions: Please read each statement and decide if you **Agree** or **Disagree** with the statement, or how might you want to **Edit** the statement.

1. Anyone can teach.
2. Active learning in students is fostered by note taking and discussions with fellow students.
3. Technology allows teachers to teach more powerfully, more efficiently, and with less effort.

Overview

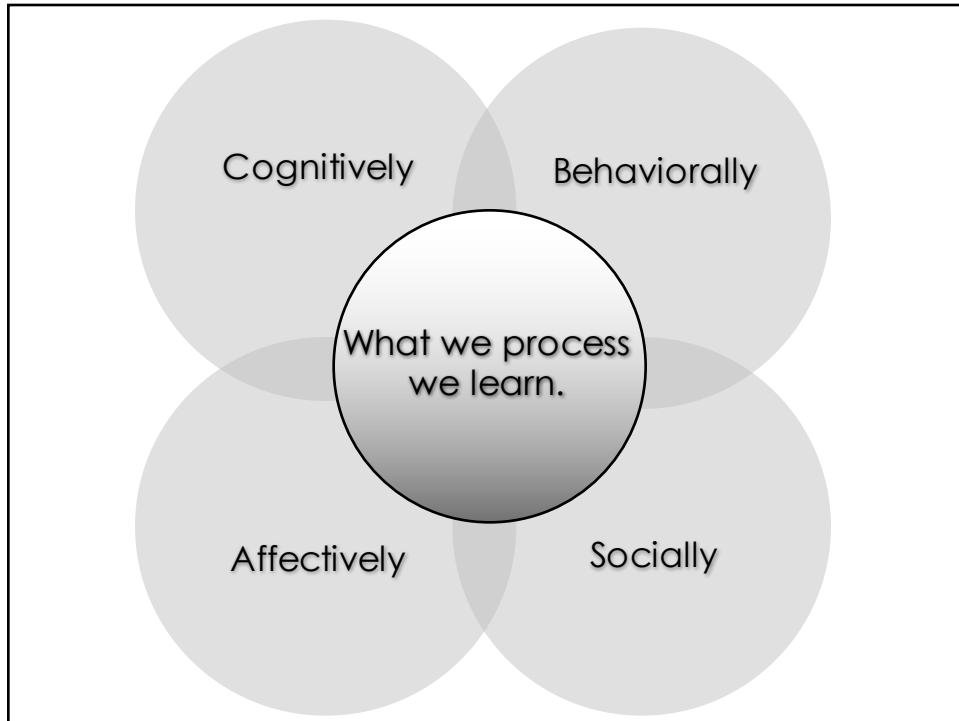
1. Introduction
 2. Learning First
 3. Flipping Essentials
 4. Flipping Design
 5. Flipping Strategies
 6. Conclusion
- 
- Fostering
Deep & Flexible
Learning

Learning First

The processing of knowledge, experience, and self.



What does the activity tell us?



7 Principles for Developing Deep & Flexible Learning

1. Learning through practice at retrieval
2. Learning through varied tasks
3. Learning for varied purposes
4. Learning at the principle level
5. Learning awareness and control (metacognition)
6. Learning embedded in prior knowledge & experience
7. Learning in response to developmental feedback

(Engle, 2006; Halpern & Hakel, 2003; Mariano, Doolittle, & Hicks, 2009; Wagner, 2006)

Active Learning Strategy



processing

Strategy Oral Explanations

- Opportunity for students to (a) communicate their understanding of various ideas, concepts, and procedures, and (b) apply this understanding to a problem or situation of choice.
- Explain key ideas, concepts, and procedures from class in a 10-min video (no notes, no post-processing)
- The preparation and explaining (processing) is more important than the video (product).



Oral Explanations Fostering Deep & Flexible Learning

- Clarify and communicate their understanding
 - Explain key ideas and concepts in a 10-min video
1. Learning through practice at retrieval
 2. Learning through varied tasks
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 4. Learning at the principle level
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Flipping Essentials

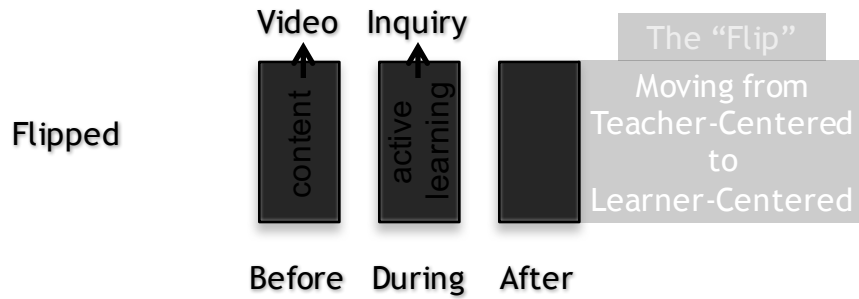
What flipping is and is not.



Top 5 Reasons to Flip Your Class

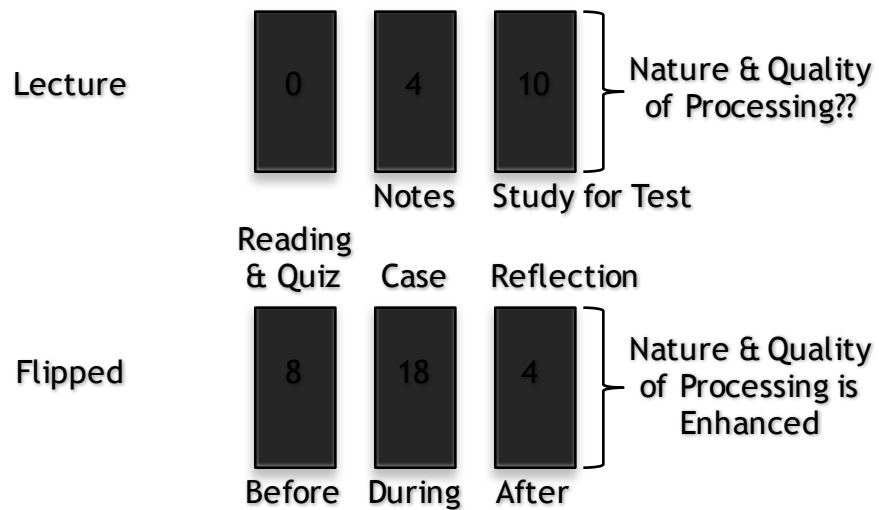
1. Increase student learning.
2. Increase student learning.
3. Increase student learning.
4. Increase student learning.
5. Increase student learning.

Flipping Basics

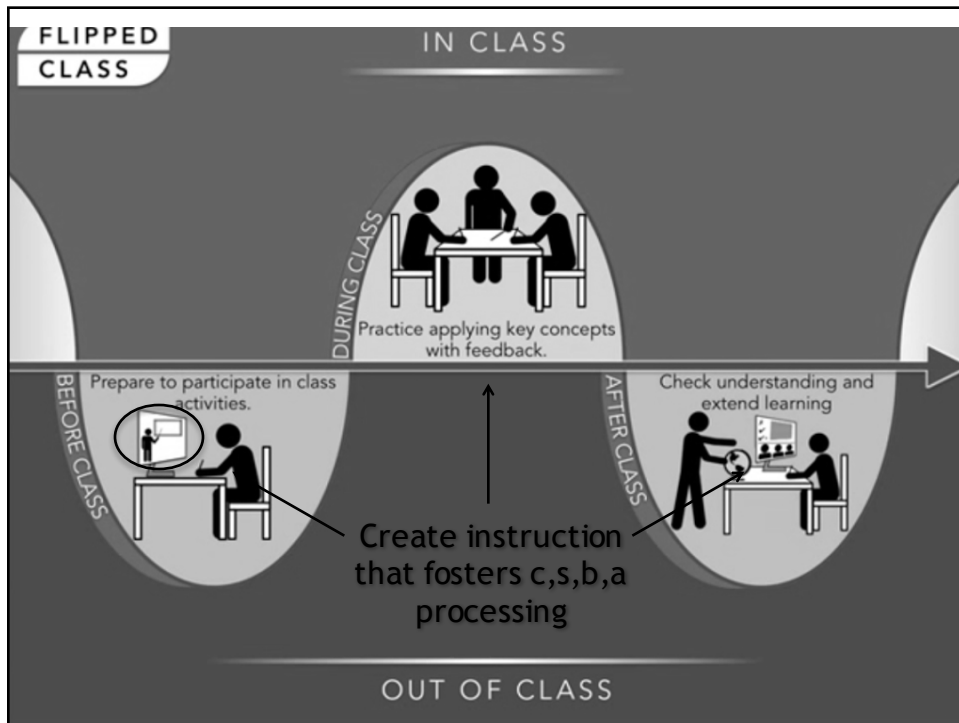
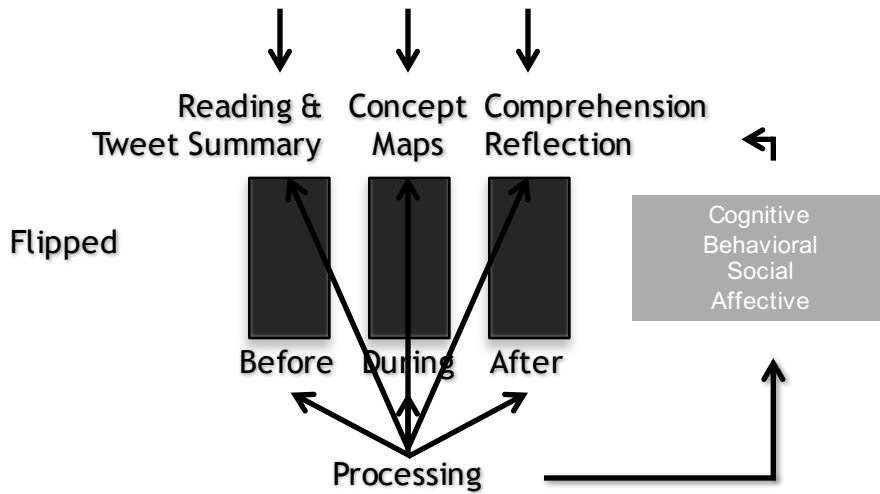


Learning is not magic, it's by design.

Lecturing versus Flipping



Basic Flipped Classroom Design



Example 1

Will Hossack, Developmental Biology
Salford University, Manchester, England

Reading Chapter
Quiz



Before

Group Discussion



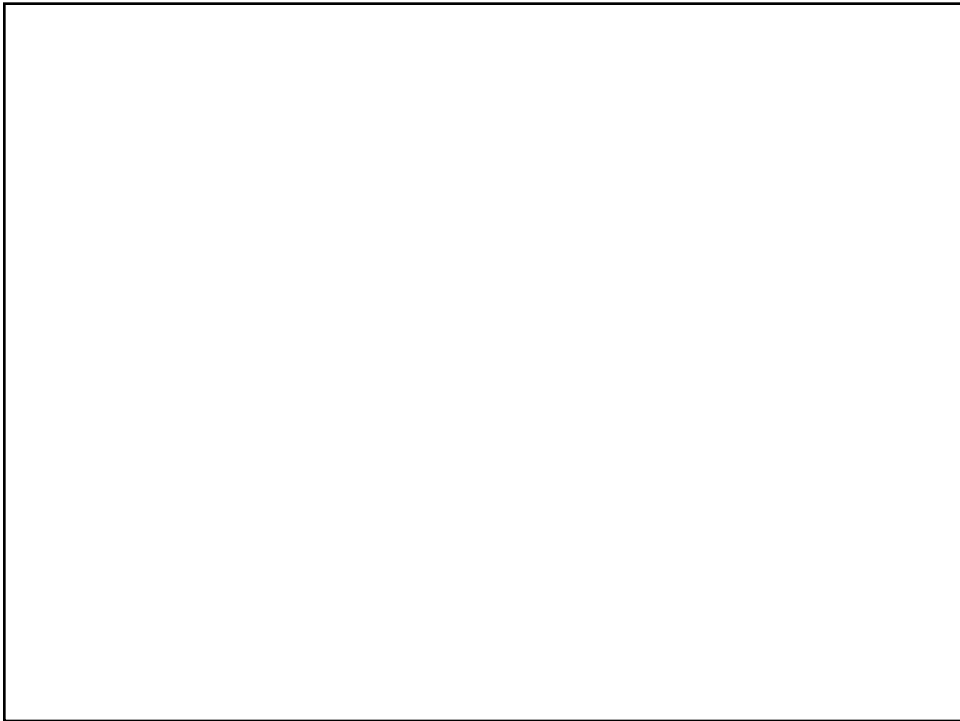
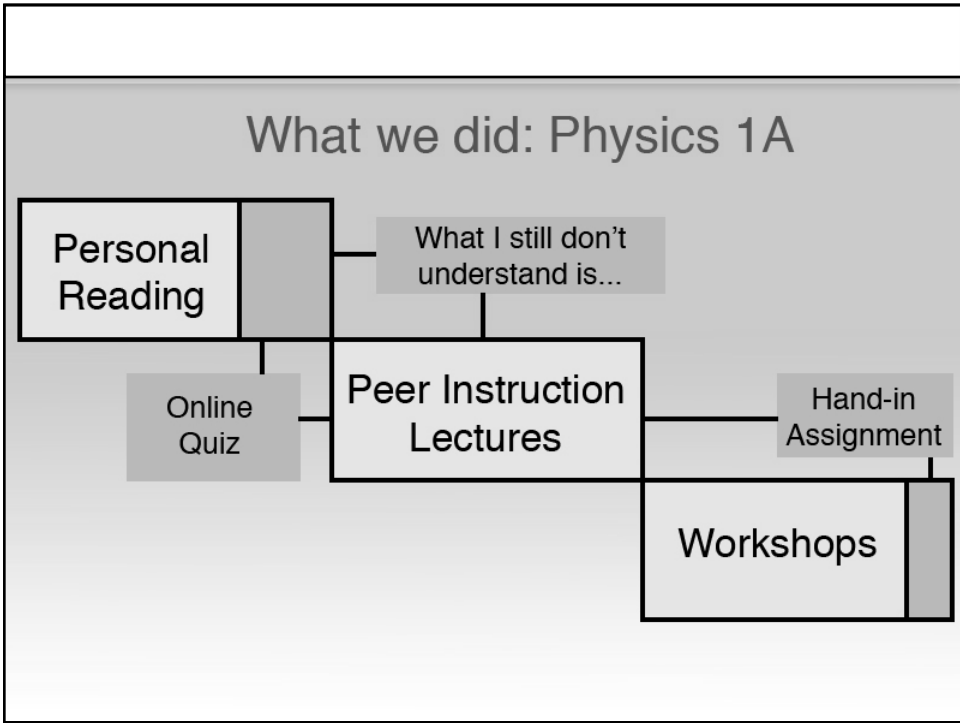
During

Small Group
Recitation



After





Example 2

Steven Toaddy, Psychology
North Carolina State University

Content Video

Open-Note Quiz
2 Group Activities

na



Before



During



After

Steven Toaddy – North Carolina State University



How are student's processing?

Example 3

Peter Doolittle, Educational Psychology
Virginia Tech

Read Article
25-Word Summary



Before

Group Activities



During

Comprehension
Reflection

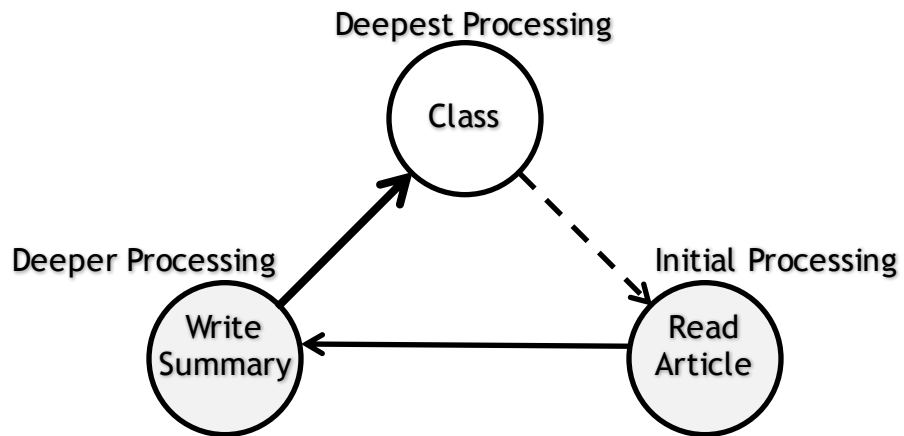


After

25-Word Summaries Fostering Deep & Flexible Learning

- Opportunity to engage in critical thinking and extract the essential meaning from a reading, lecture, video, movie, activity, or experience
- Summarize the meaning clearly and concisely, based on student's understanding, in 25 words or less.
- The summarizing (processing) is more important than the summary (product).

25-Word Summaries & Flipping



Barr, R., & Tagg, J. (1995, Nov/Dec). *From teaching to learning: A new paradigm for undergraduate education*. *Change*, 13-25.

Colleges provide instruction, but should produce learning. Students and teachers should co-produce knowledge. Coherent education creates flexible, adaptable, interesting people. This shift will change everything. [25 words]

The first two sentences of the summary do a nice job of addressing essential elements of the article; the second two sentences seem to lose the focus. The first sentence is an explicit central theme, while the second sentence is more implicit. Given that you have identified two themes in the two sentences, how could you combine the two sentences? Often combining such sentences will result in the use of fewer words and allow you to increase the interrelationship between the various ideas (thus increasing their meaning).

The third sentence isn't really a central focus. The authors focus on student learning more than creating interesting people. The final sentence is more descriptive; that said, if you have the words to spare, the idea seems important to the authors.

25-Word Summaries

* Students' guidelines for constructing a summary

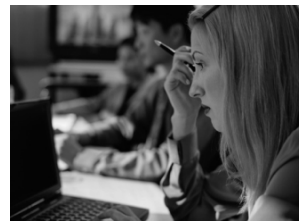
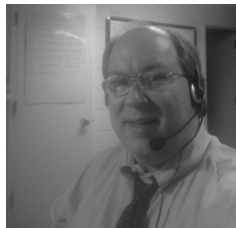
1. Provide time to read, annotate, write, and rewrite
2. Provide time between reading/annotating and writing
3. Develop a strategy for annotating (notetaking)
4. Look for important details while reading
5. Read the entire article before committing to main ideas
6. Every word counts - write and rewrite
7. Writing summaries develops over time

25-Word Summaries

▪ Rubric for Evaluation

- | | |
|--------------------------------------|--------|
| 1. Structural Format | 5 pts |
| 2. Clarity of Thought and Expression | 5 pts |
| 3. Delineation of Core Message | 15 pts |

▪ Feedback



5 In-Class Activities (all in groups)

- Jigsaw the Article
 - Divide the article into 5 sections, have each group analyze their section, each group teaches their section
- Share, Synthesize, Share
 - Share summaries in group, write a group summary, share synthesized summary with class
- Quote Connect
 - Extract 20 quotes from the article, have each student read their quote and connect it to the previous quotes
- Graffiti
 - Create a question for each group. Each group gets 3 minutes to answer the question, then the questions are passed to the next group and the answering continues

25-Word Summaries

- Think critically and extract the essential meaning
 - Summarize the meaning clearly and concisely
1. Learning through practice at retrieval
 2. Learning through varied tasks
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 7. Learning in response to developmental feedback

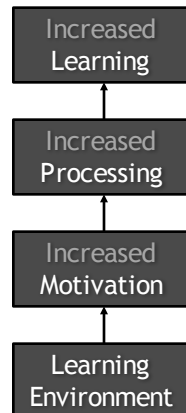
Flipping Design

Effective learning environments are not random events.



7 C's of ^{intrinsic} Motivation

1. Choice
2. Caring (Interest/Value)
3. Control
4. Challenge
5. Collaboration/Connectedness
6. Competence
7. Curiosity



(Deci & Ryan, 2000; Gagne & Deci, 2014; Jones et al., 2013; Schunk, Pintrich, & Meece, 2008)

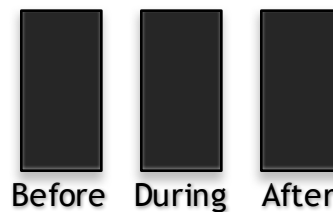
Lesson Sequencing & Design

Day	Topic	Objective	Before Class	During Class	After Class
1	Intro Syllabus				
2	Behaviorism CC	1.1 1.2	Article + Quiz	Jigsaw Article Teach Out	Personal Example
3	Behaviorism CC	1.1 1.2	Article + Summary	Summary Creation	
4	Behaviorism OC	1.1 1.3	Article + Quiz	Jigsaw Article Teach Out	Dog Training Vid + Explain
5	Behaviorism OC	1.1 1.3	Article + Summary	Summary Creation	

Processing

Lesson Design Basics

- Learning Outcomes
- Instructional Introduction
- Instructional Content
- Instructional Activity
- Instructional Assessment
- Instructional Closure
- Instructional Support



Before / Pre-Class

Processing	Assessment
1. Movie Videos	1. Blog/Vlog
2. Content Videos	2. MC Quizzes
3. Group Mini-Projects	3. Article Response
4. Web-based Reading	4. Artifact Creation
5. Web-based Research	5. Tweet Perspective
6. Self-Reflection Response	6. Written Summaries
7. Case Reading & Response	7. Mini-Case Response
8. Simulation Problem Solving	8. Image Interpretation
9. Immersive Envrnmt Exploration	9. 6-second Vine Video
10. Read an Article/Story/Chapter	10. Short Video Responses

During / In-Class

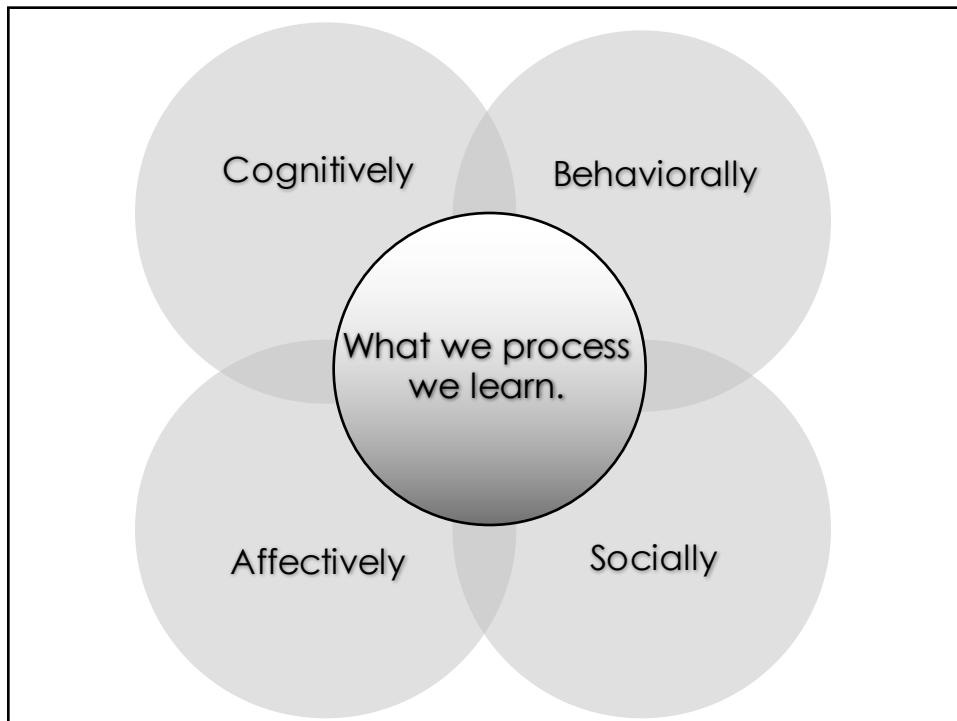
Processing
1. Simulations
2. Problem Sets
3. Case-Studies
4. Data Analysis
5. Serious Games
6. Artifact Critique
7. Skyped Speakers
8. Class Presentations
9. Explanatory Video Creation
10. Small/Large Group Discussions

After / Post-Class

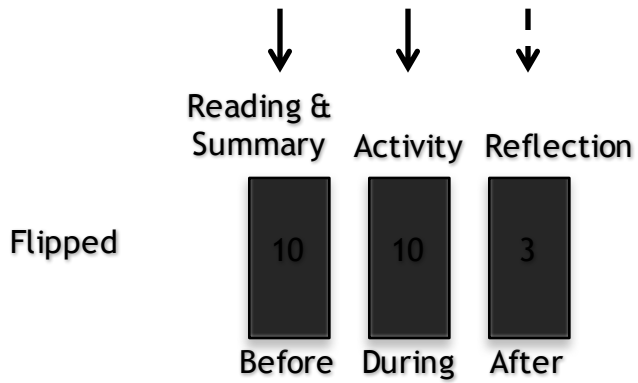
Processing

1. Blog/Vlog
2. Reflection
3. Problem Sets
4. Peer Critiques
5. Writing Revision
6. Class Feedback
7. Mini-Case Studies
8. Team-based Revisions
9. Improvement Inventory
10. Personal Application Case

Closure



Lesson Design Basics



Learning's not magic, it's by design.

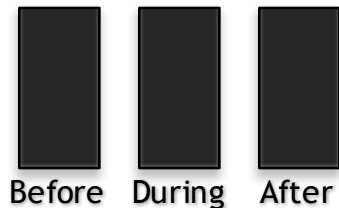
Lesson Sequencing & Design

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

Processing

Lesson Design Basics

- Learning Outcomes
- Instructional Introduction
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- Instructional Support



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