Using Metacognition to Reframe Our Thinking about Learning Styles

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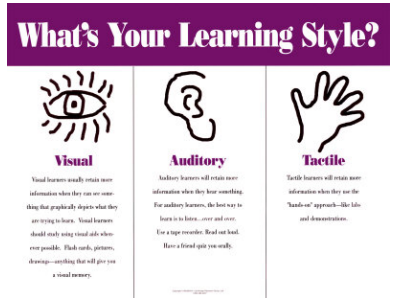
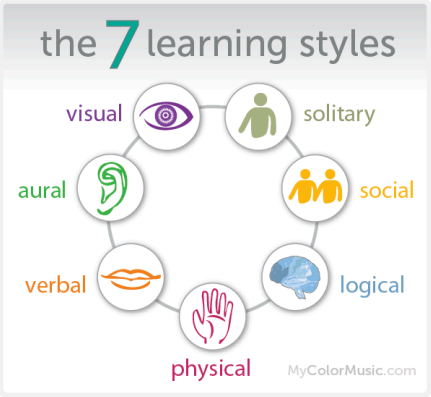
The Learning Styles Phenomenon

- Inspired by observable differences teachers saw in the way their students approached information
- Appeared to be an “easy fix” for differentiating instruction
- Moved (erroneously) from an instructional technique to a theory of learning
- Persisted as teachers-of-teachers continued to teach in the way they were taught



What’s “right”?

- People learn differently
- People have different learning interests and preferences
- People differ in their abilities and prior knowledge



What’s “wrong”?

- When people use their preferred style on a task they do not perform better than if they used a different style

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How is Metacognition Different?

- Metacognitive students are *aware of their own learning processes* and *adjust them* based on experience and reflection
- Involves planning, monitoring, and evaluation of strategies, and therefore is task-dependent
- Metacognitive students are constantly adapting and adding to their strategy repertoire, and they realize that they are not limited by a certain style

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Is Metacognition a Valuable Construct to Teach?

- We want our students to become self-regulated learners; modeling metacognition and having them consider *why* and *how* learning strategies work moves them farther down this path
- First-year seminar students say it's "definitely worth teaching" and "helped me understand how and why we think like we do." (Steiner, 2014)

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Sample Metacognitive Activities

Self-Assessment of Existing Learning Strategies

MSLQ

Metacognitive Awareness Inventory

These should be paired with reflective exercises as well as a "grain of salt"—they are a merely a jumping-off point for students to think about their own thinking.

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Sample Activity: Strategy Project

An opportunity to plan, monitor, and evaluate study strategies for a test in a current class

Involves:

- Pre-Project Reflection
- Professor Interaction
- Plan of Study
- Active Note-taking and Reading
- Additional Test Preparation
- Post-Project Reflection
- Dissemination of Results

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Sample Activity: Post-Exam Analysis

- Easy activity to implement in courses heavy on content
- Involves guiding students through an analysis of a graded exam. Students can:
  - predict their grade before they receive the test (large discrepancies indicate problems with metacognition)
  - look for patterns in their mistakes
  - evaluate study strategies that should be changed

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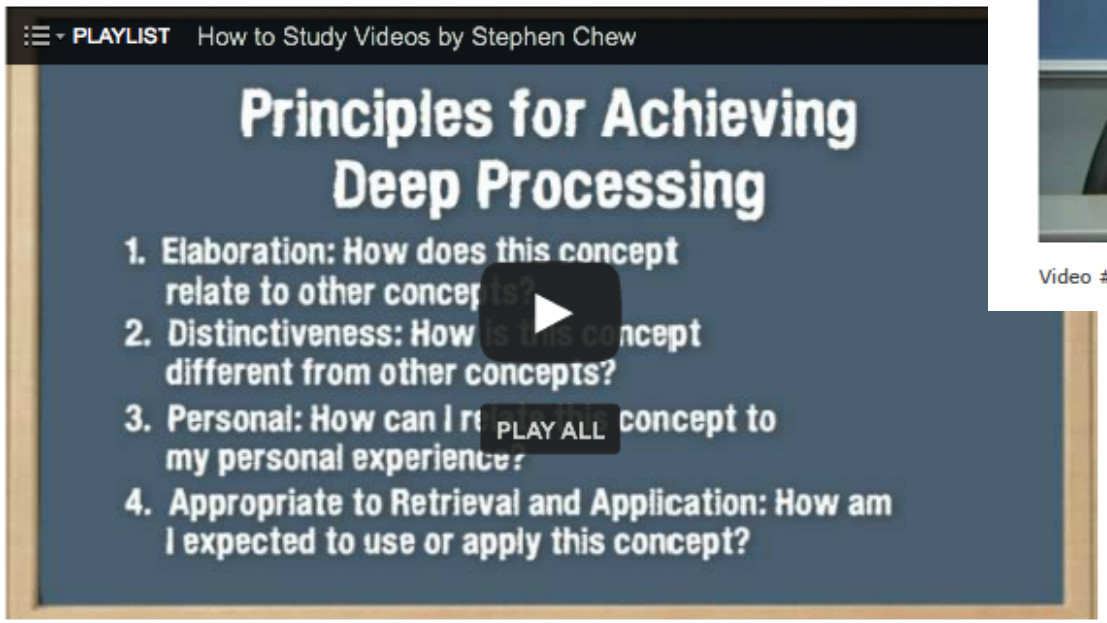
Sample Metacognitive Activities

Using metacognition to deconstruct the learning process and apply it to new subjects/topics



Watch the videos linked below and then respond to the questions and discussion prompts that follow.

Video #1: How to Get the Most Out of Studying

Video #2: Cognitive Principles for Optimizing Learning

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Metacognitive Prompting

Instructor-Led Modeling Metacognitive Self-Questioning

1. Comprehension (What is the task about?)
2. Connection (What are the similarities/differences between this task and those performed in the past?)
3. Strategic (What are the strategies, tactics, etc. needed to solve the task, and why?)
4. Reflection (What am I doing right now? Can I take a different approach?)

(Girash, 2014)

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Instructional Practices that Foster Metacognition

- Preassessments
- Muddiest Point/1-Minute Papers
- Reflective Journals (Self-Monitoring)
- Integrating Reflection into Existing Course Work/ Classes
- Instructional Interventions/Collaborative Student Learning Groups

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Implications

- Reframing the focus on *learning styles* to a focus on *metacognition*…
  - Helps students discover who they are as learners and how the learning process works
  - Creates opportunities for deeper and more integrative learning to occur
  - Enables students to leverage their strengths to develop dynamic approaches for learning
- Implications may also extend to individual interactions with students in academic coaching, tutoring, or advising sessions

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Think-Pair-Share

- How might you reframe existing activities or assignments in your first-year seminar to foster metacognitive functioning?
- What approaches can you take to model metacognitive self-questioning?
- What other "deep" learning approaches can you incorporate into your first-year seminar?

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