

“Everyone agrees that students learn in college , but whether they learn to think is more controversial.”

(McKeachie cited in Joscelyn, 1988)

# Critical Thinking

- How important are critical thinking skills for college students?
- How important is teaching critical thinking within your degree/program competencies?
- How important is the development of students' critical thinking within your courses?
- How well do your instructional strategies instill critical thinking strategies within your students?

The question. . .

*What is critical thinking?*



# *The facts...*

Results from a study on critical thinking that included faculty from 38 public and 28 private colleges and universities:

- Although the overwhelming majority (89%) claimed critical thinking to be a primary objective of their instruction:
  - only 19% could give a clear explanation of what critical thinking is.
  - 77% of the respondents had little, limited or no conception of how to reconcile content coverage with the fostering of critical thinking.
  - only a very small minority could clearly explain the meanings of basic terms in critical thinking: only 8% could clearly differentiate between an assumption and an inference, and only 4% could differentiate between an inference and an implication.
  - only 9% mentioned the special and/or growing need for critical thinking today in virtue of the pace of change and the complexities inherent in human life. Not a single respondent elaborated on the issue.

*"Are you thinking yet?":*  
Critical thinking in the curriculum

*a presentation of:*



Dr. Amber Dailey-Hebert

Dr. B. Jean Mandernach

Emily Donnelly-Sallee

# Why critical thinking?



- University mission
- Student perceptions
- Faculty perceptions

# Critical thinking is method, not content

- The mission of Park University is to provide access to academic excellence which will prepare learners to think critically, communicate effectively, and engage in lifelong learning while serving a global community.
- Critical thinking is not discipline-specific and does not represent another competency or content area you are expected to teach...

# Prevailing student attitudes?

- ❑ Success = Grades
- ❑ Remember and repeat
- ❑ “TELL ME WHAT YOU WANT ME TO KNOW!”
- ❑ Consumer-oriented approach to education

*Do our teaching practices promote these attitudes?*

[www.aces.uiuc.edu/Faculty/docs/CTSkillsIllinois.ppt](http://www.aces.uiuc.edu/Faculty/docs/CTSkillsIllinois.ppt)



# Prevailing faculty attitudes?

We tend to teach the way we were taught  
(Dunn & Dunn)...

- Reliance on didactic teaching
- Privilege content over comprehension
- Reliance on transmission model



*Are we preparing educated  
graduates or instructed  
graduates?*

# The dilemma

Content



Process

How do we balance the dual goals of covering content and encouraging critical thinking, a process of learning?

# Where do you fall on these teaching/learning continua?

Believer

Skeptic



Lecturer

Facilitator



Expert

Co-Learner

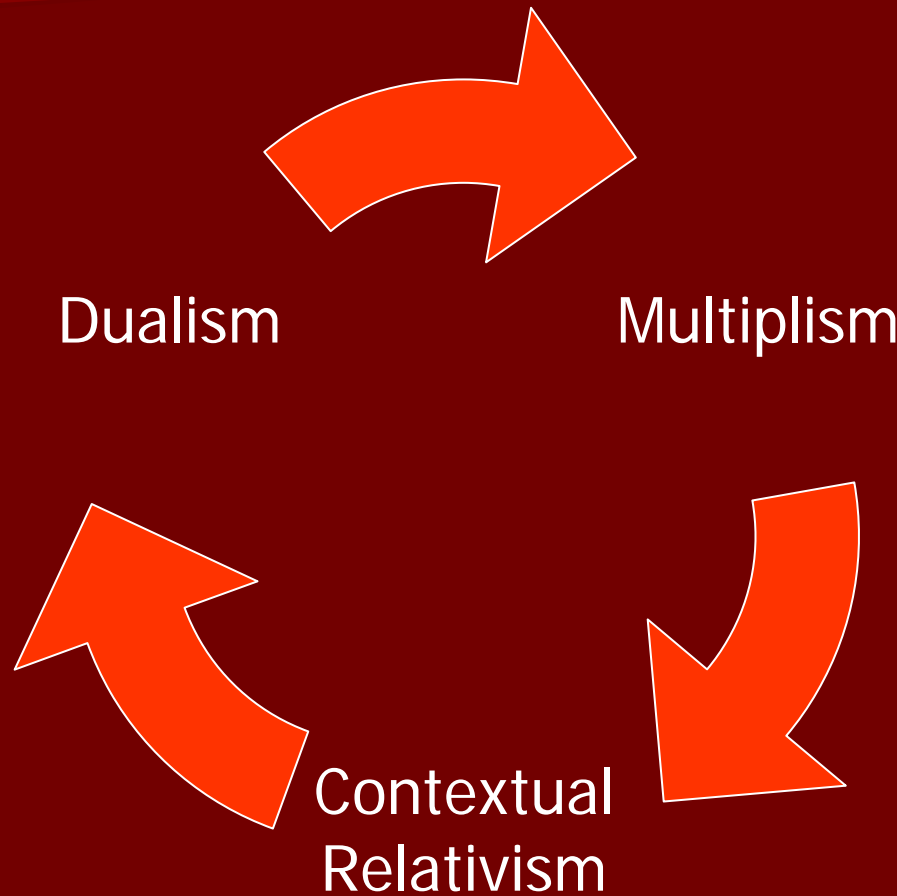


- Get in groups of four, compare where you fall on the continua of learning/teaching. What do your scores say about the extent to which you balance content with a critical thinking approach? What would the “ideal” classroom look like?
- We are starting to touch on/define/concretize critical thinking....with this in mind, work with your group to develop a definition of critical thinking.

# Some working definitions

- "Critical thinking is the disciplined mental activity of evaluating arguments or propositions and making judgments that can guide the development of beliefs and taking action" (Ennis 1992)
- "Critical thinking is that mode of thinking-about any subject, content, or problem-in which the thinker improves the quality of his or her thinking by skillfully analyzing, assessing, and reconstructing it. Critical thinking is self-directed, self-disciplined, self-monitored, and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem-solving abilities, as well as a commitment to overcome our native egocentrism and sociocentrism." (Our Concept of Critical Thinking, 2004)

# William Perry's Scheme for Intellectual Development



# Phases of Critical Thinking



1. *Trigger Event* - some unexpected happening prompts a sense of inner discomfort or perplexity (can be a negative or a positive experience).

2. *Appraisal* – a period of self scrutiny and appraisal of the situation follows the trigger event.

3. *Exploration* – we begin to search for new ways of explaining these discrepancies or of living with them – ways that reduce our sense of discomfort.

4. *Developing Alternative Perspectives for Integration* – we develop approaches that we feel ‘make sense’ for our situations and can be integrated into our life.



You and the members of your group are in the aftermath of a nuclear explosion. In the company of your team, you're in a radiation-free, protected room that has space and air enough for two other people. Three people who are stumbling around in the external environment discover the room and all ask to be admitted. These are: a doctor, a pregnant mother, and a teacher. Which of these three do you choose to admit? What is your rationale for the decision?



- Who did you choose to join you in the protected space?
- How did you arrive at the choice? What beliefs, values, and assumptions did you have to consider?
- How did you mediate the multiple alternatives for answering this question to resolve at an acceptable conclusion?
- How has your experience working in a group to solve this problem affected your original beliefs, values, and assumptions?

# Profile of a Critical Thinker

	Critical Thinking	Non-Critical Thinking
<b>Epistemological Standpoint:</b>	<ul style="list-style-type: none"> <li>• shades of gray - strives for depth</li> <li>• interdisciplinary</li> <li>• knowledge is open</li> <li>• knowledge is intertwined with thinking</li> </ul>	<ul style="list-style-type: none"> <li>• black and white - superficial level</li> <li>• uni- or adisciplinary</li> <li>• knowledge is closed</li> <li>• knowledge is independent of thinking</li> </ul>
<b>Modes of Inquiry:</b>	<ul style="list-style-type: none"> <li>• rational and consistent</li> <li>• strives to learn <b>how</b> to think</li> <li>• holistic/webbed</li> <li>• original/insightful</li> <li>• multiple frames of reference</li> </ul>	<ul style="list-style-type: none"> <li>• irrational and inconsistent</li> <li>• strives to learn <b>what</b> to think</li> <li>• uni-disciplinary/linear</li> <li>• relies on second-hand information</li> <li>• one or very limited frames of reference</li> </ul>
<b>Concrete Strategies for Thinking:</b>	<ul style="list-style-type: none"> <li>• suspends closure</li> <li>• explores/probes</li> <li>• questions</li> <li>• fair-minded</li> <li>• active</li> <li>• collaborative/communal</li> <li>• precise language</li> </ul>	<ul style="list-style-type: none"> <li>• strives for closure</li> <li>• dogmatic/avoiding</li> <li>• doubting</li> <li>• ego-/ethnocentric/emotional</li> <li>• passive</li> <li>• authoritative</li> <li>• vague language</li> </ul>

# The Two Defining Features of Critical Thinking

Curriculum that promotes critical thinking must include the following components:

Learners must:

- Identify and challenge assumptions
- Explore and imagine alternatives

# Classroom Activities & Assessments to Promote Critical Thinking

## *Learning Outcomes:*

- Assess information in order to identify assumptions, norms, and biases;
- Identify and negotiate multiple, sometimes conflicting, opinions;
- Apply theoretical concepts to practice, generate new ideas and alternatives;
- Demonstrate an awareness of one's own learning process (metacognition).



# Some activities to promote critical thinking

- Traditional Research Assignments
  - I-Search
  - Close Reading/Article Analysis



# Some activities to promote critical thinking

- Critical Information Literacy
  - Evaluating Sources Activity
  - Comparing Media Accounts
- Critical Thinking to Learn Activities
  - The “Polya” Method
  - The “Doubting” Game
  - Dialectical Journaling

# Modeling a critical thinking process in the classroom

## Open-ended teacher commentary:

- Questions that probe assumptions: Examples—You seem to be assuming \_\_\_\_
  - How would you justify taking this for granted?
  - Is this always the case?
- Questions that probe reasons and evidence: Examples—How could we go about finding out whether that is true?
  - Is there reason to doubt that evidence?
- Questions about viewpoints or perspectives: Examples—How would other groups or types of people respond? Why? What would influence them?
  - How would people who disagree with this viewpoint argue their case?
- Questions that probe implications and consequences: Examples—What effect would that have?
  - If this and this are the case, then what else must also be true?

# Sharing expertise

- In groups of four, we'd like to ask you to do the following:
  - Identify activities and assessments you currently use that would classify as promoting critical thinking (remember the two defining features...)

# Final thoughts...

- 1) Critical thinking can often become an unquestioned educational assumption. We can't take critical thinking for granted. Incorporating critical thinking starts with self-reflection on our part.
- 2) Critical thinking can and should be defined in relation to our disciplinary content, but with the understanding that critical thinking in and of itself is not content; it is a method, a process, and an ethic for teaching and learning.
- 3) Critical thinking is not just active learning or participatory learning; critical thinking is a process that must involve: 1) identifying and challenging norms, assumptions, and biases and 2) exploring and imagining alternatives.