# Magna 20 Minute Mentor

## Note-taking Guide

# How Can I Design Critical Thinking into My Course?

Presented by:
**Linda B. Nilson, Ph.D.**

**MAGNA**

## Presenter

Linda B. Nilson, Ph.D.
Director, Office of Teaching
Effectiveness and Innovation
Clemson University
448 Brackett Hall
Clemson, SC 29634
864.656.4542
nilson@clemson.edu
www.clemson.edu/OTEI
www.linkedin.com/in/lindabnilson

1

## Outcomes

- Explain what critical thinking (CT) is
- Identify course content it can be applied to
- Write assessable CT learning outcomes for your discipline
- Integrate CT into a new or existing course

2

## CT does not apply

- Lower-level thinking/learning: knowledge, remembering, recognizing, reproducing, simple (non-interpretive) comprehension /understanding

- "Cookbook" or "plug-&-chug" procedures and solutions

3

## CT *does* apply

When a "claim" may or may not be valid, complete, or the best possible.

"Claim" = belief, value, assumption, interpretation, problem definition, theory, generalization, analysis, viewpoint, opinion, contention, hypothesis, solution, inference, decision, prediction, or conclusion – *not* a fact or term definition.

4

---

## Why a claim may be questionable

- Evidence is uncertain, ambiguous, or contradictory
- Problem/task is "fuzzy" and ill-defined.
- Multiple respectable claims exist (issues of disagreement, debate, controversy)
- Source is suspect
- Evaluation process is unclear

5

---

## Ask yourself

What content in your courses relies on "claims" that may or may not be valid, complete, or the best possible? (Look for areas of uncertainty.)

6

---

## Frameworks for Critical Thinking

- Brookfield (focus on assumptions)
- Higher-level cognitive operations in Bloom's Taxonomy
- Perry's Stages of UG Cognitive Development
- Halpern (cognitive psychology)
- Wolcott (& Lynch) Steps to More Complex/Critical Thinking
- Paul & Elder, Foundation for Critical Thinking
- Facione and Delphi Report (basis of CCTST)

7

## Critical Thinking

- Requires interpretation and analysis
- Is difficult and unnatural
- Involves character and integrity
- Requires self-regulated learning
- Needs emotional health

8

## Paul & Elder's "Intellectual Traits" of Character

- Intellectual humility
- Intellectual autonomy
- Intellectual integrity
- Intellectual courage
- Intellectual perseverance
- Confidence in reason
- Intellectual curiosity
- Fair mindedness

9

### Facione and Delphi Group's Dispositions toward CT

- Wide-ranging inquisitiveness
- Desire to be well-informed
- Desire to use critical thinking
- Trust in reasoned inquiry
- Confidence in one's reasoning abilities
- Open-mindedness

10

### Facione and Delphi Group's Dispositions toward CT (con't)

- Flexibility in considering alternatives
- Understanding of others' opinions
- Fair-mindedness
- Honesty with self about own biases, prejudices, stereotypes, egocentrism
- Prudence in suspending/altering views
- Willingness to revise views when warranted

11

### Halpern's Dispositions (Self-Regulated Learning)

- Willingness to work and persist at complex tasks
- Conscious planning and follow-through & suppression of impulsive activity
- Open-mindedness and flexibility
- Willingness to self-correct and replace ineffective with effective strategies

12

### Emotional Health to Counter "Psycho-logical Fallacies" (Nilson 1997)

- Assimilation
- Denial
- Displacement
- Externalization
- Projection
- Rationalization
- Regression

- Repression
- Resistance
- Selective Perception & Recall
- Sublimation
- Suppression
- Transference
- Withdrawal

13

### Critical Thinking Requires

- Background knowledge of subject matter

- Explicit and intentional integration into a course for students to learn it

- Self-regulated learning
  - metacognition
  - meta-emotional awareness and control

14

### Must-have CT learning outcomes

- Outcomes = statements of what students should *be able to do* by end of the day, week, unit, or course.

- "Performances" you can *observe* so you can assess and *set standards* for them – *not* internal states of mind like "know," "learn," "feel," "understand," "appreciate"
  (see supplementary material)

15

## General CT Skills According to Facione

- Interpretation
- Explanation
- Analysis
- Inference

- Evaluation
- Deduction
- Induction
- Numeracy

16

## General CT skills according to Halpern, D.F.,
Teaching critical thinking skills across the curriculum.
Starlink webinar broadcast live 12/1/04

- Verbal reasoning (to identify and defend against persuasive techniques)
- Argument analysis
- Scientific reasoning (hypothesis testing)
- Statistical reasoning (likelihood and probability)
- Decision making and problem solving

17

## Discipline-relevant CT skills and outcomes
(see supplementary material)

- Check those relevant to your course
- Add more if necessary
- Write some CT outcomes
- Start sequencing: In what order will students achieve them?

18

Thank you!

Tell us what you think:

https://www.surveymonkey.com/s/designCT

19

_____

_____

_____

_____

_____

_____

_____