


Thinking it Through: Critical Thinking for Character

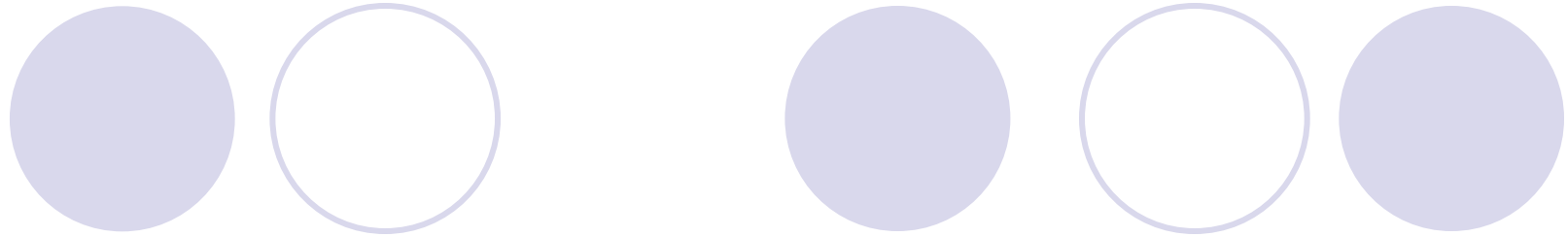
The background features several decorative circles. There are two solid light purple circles and two hollow light purple circles. The solid circles are positioned behind the text, while the hollow circles are positioned in front of the text.

**Archdiocesan Educators'
Conference K-12
February 9th, 2007**



“Becoming educated and practicing good judgment does not absolutely guarantee a life of happiness, virtue, or economic success, but it surely offers a better chance at those things.”

- Peter Facione (2007) “Critical Thinking: What it is and Why it Counts”.

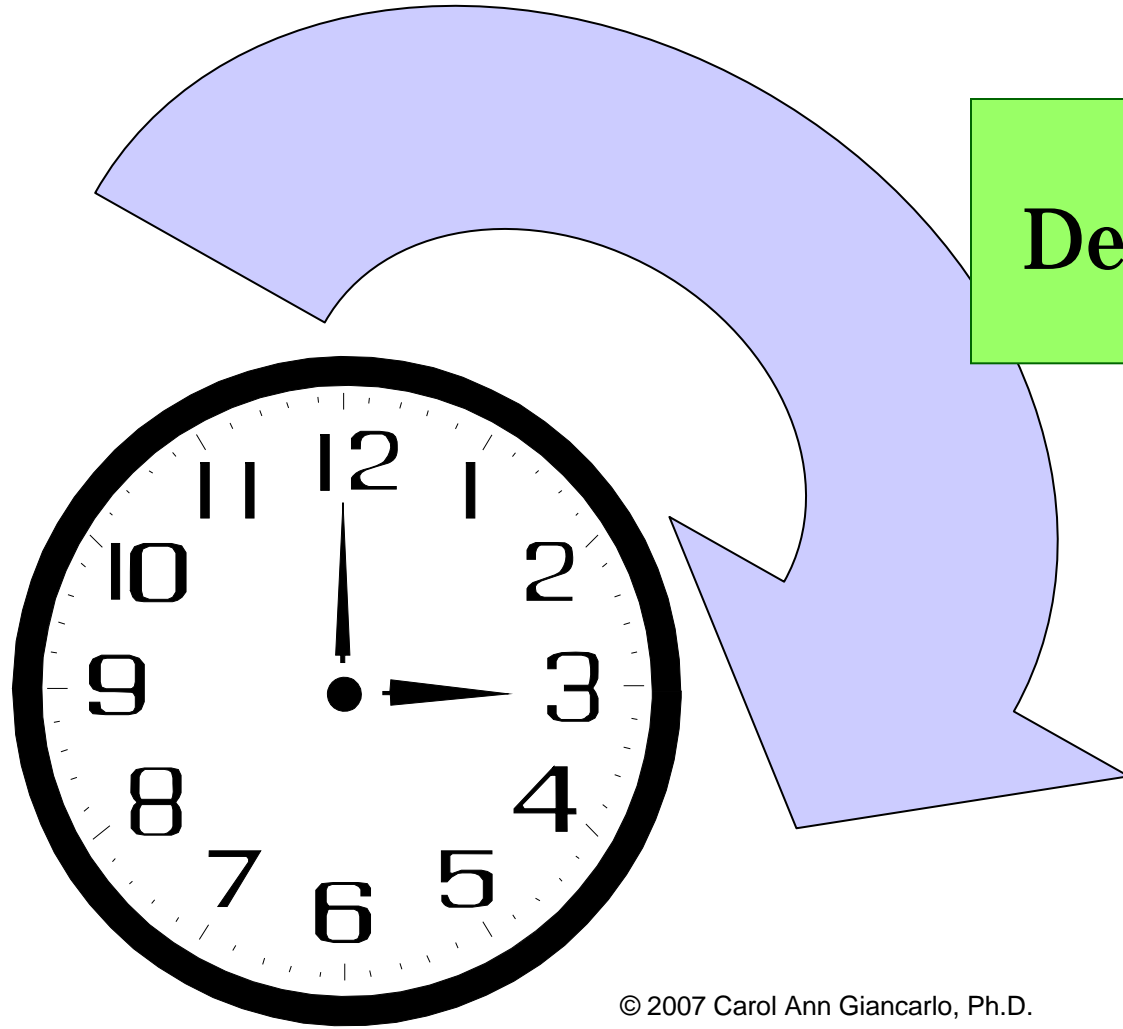


*Let's begin with an important fact:
It takes time to think well.*

Newell: “It takes on average 11-16 seconds to interpret a novel question and to begin to formulate a well reasoned response”

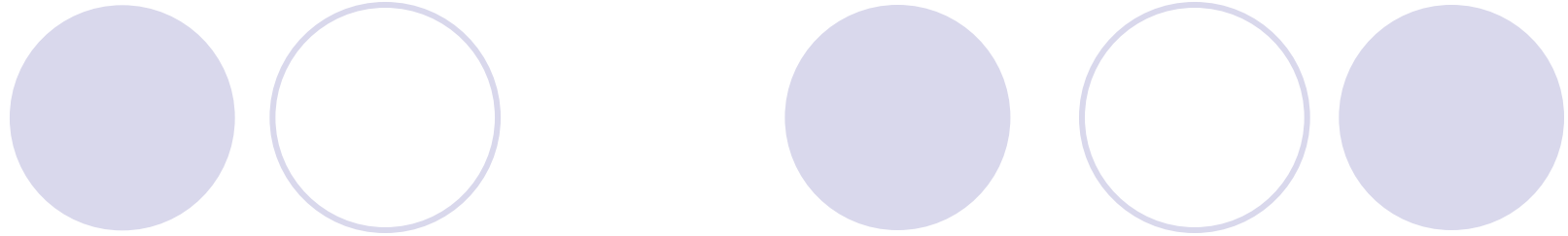
Newell A. 1990. *Toward Unified Theories of Cognition*. Harvard University Press: Cambridge, MA.

Ask a Question then Wait!



Decision Making

11 -16 seconds



**What thoughtful observations
you can make about this picture?**



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Critical Thinking – A Definition...

**Purposeful, self-regulatory judgment
which manifests itself in
reasoned consideration
of evidence, context, methods,
standards, and conceptualizations in
deciding what to believe or what to do.**

The Delphi Report: Executive Summary: (1990), The California Academic Press, or ERIC Doc ED315 423

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Language for Thinking

- *Interpreting* the question
- *Analyzing* the concepts
 - Problem Framing
 - Critical Thinking
- Drawing *inferences* from the data
- Crafting *explanations* for judgments
- *Evaluating* arguments presented
- *Self-monitoring* for possible errors

What CT prompts might we use with this image?

Analysis

Explanation

Interpretation

Inference

Evaluation



Francis Miller/LIFE

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Step back and reflect. So far...

- o **Use silence to provide think-time before talk-time.**
- o **Find visual and verbal devises which engage thinking.**
- o **Invite and encourage active participation.**
- o **Pose unexpected problems to evoke key ideas.**
- o **Reprise what people say by using active CT verbs.**
- o **Introduce the example before the abstraction.**

Core Critical Thinking Skills Interact





Definition of Interpretation

- **To categorize; Formulate categories, distinctions, or frameworks for understanding**
- **To decode the significance; Content, motives, purposes, social significance, values, views, criteria, or inferential relationships expressed in language, drawings, graphs, social behaviors, etc...**
- **To clarify the meaning; Paraphrase the contextual or intended meanings of ideas, or make ideas more explicit. To remove vagueness and ambiguity.**

What sort of person..?

- Makes purposeful self-regulatory judgments by giving
- reasoned consideration to
 - evidence
 - context
 - theory / conceptualizations
 - methods
 - standards

One driven by the consistent internal motivation to engage one's cognitive skills in problem framing and solving

WILLING and *ABLE* to Think

Skills

**Two aspects of
critical thinking**

Dispositions

Characteristics of a Critical Thinker

- **Truth-seeking**
- **Open-minded**
- **Analytical**
- **Systematic**
- **CT- Confident**
- **Inquisitive**
- **Cognitively Mature**
- **Oriented toward Learning**
- **Creative Problem Solver**
- **Focused (Mentally)**
- **Challenge Seeking**
- **Risk Taking**



Cognitive Integrity

Motivated to think in a fair-minded fashion.

Positively disposed toward seeking the truth and being open-minded.

Comfortable with complexity and interacting with varying viewpoints in the search for truth or the best decision.

The California Measure of Mental Motivation (Giancarlo & Facione, 200-).

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Some Expressions of Weakness in Cognitive Integrity as a CT disposition

“When someone says an idea I do not agree with I stop listening to them when they talk.” (IA)

“When I disagree with someone I want to talk and try to work it out.” (IA)

“Listening to everyone’s ideas before making a decision is the fair thing to do.” (IB)

“Thinking about other points of view is a waste of time.” (II)

“Others have a right to their ideas, but I do not need to hear them.” (II)

“I know what I think, so why should I pretend to consider choices.” (II)

The California Measure of Mental Motivation (Levels I & II) (CM3)©

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Reliability and Validity of the CM3 (Level II) Correlations Among the CM3 Scales and Psychological Measures of Academic Motivation and Social Desirability

Correlations Among Motivation and CT Disposition Variables				
Dependent Variables	Learning	Creative Problem Solving	Mental Focus	Cognitive Integrity
Task / Mastery Goals	.625**	.364**	.313**	.193**
Performance-Approach Goals	.230**	.179**	.062 (NS)	-.145**
Performance-Avoidance Goals	.156**	.099*	-.008 (NS)	-.332**
Value	.442**	.248**	.152**	.170**
Self-Efficacy	.396**	.397**	.351**	.275**
Self-Handicapping	-.109**	-.170**	-.278**	-.394**
Fear of Failure	-.206**	-.303**	-.294**	-.464**

Adapted from Urdañ & Giancarlo (2001). *A Comparison of Motivational and Critical Thinking Orientations Across Ethnic Groups*. In McInerney (Ed.)

*“But I teach _____ grade!”
Creating a Thinking Classroom...*

- ❖ Expect and reward strong thinking
- ❖ Evaluate processes, not results only
- ❖ Present information from the bottom up, explaining why, not just what (upper elementary)
- ❖ Build a culture of reasoned, fair-minded, evidence-based thinking
- ❖ Infuse opportunities for thinking and enhancing meta-cognition & reflection
- ❖ Model critical thinking

Nurturing Critical Thinking for Character

- Model CT skills and dispositions.
- Use the vocabulary of thinking: Assumption, evidence, explanation, inference, conclusion, open-mindedness, inquisitiveness...
- Diversify contexts of problems and judgments.
- Provide multiple perspectives on an issues.
- Expose students to unscripted problems.
- Guide reflection on the thinking process.
- Engage students in thinking well.
- Ask “Why?” and “Why not?”

