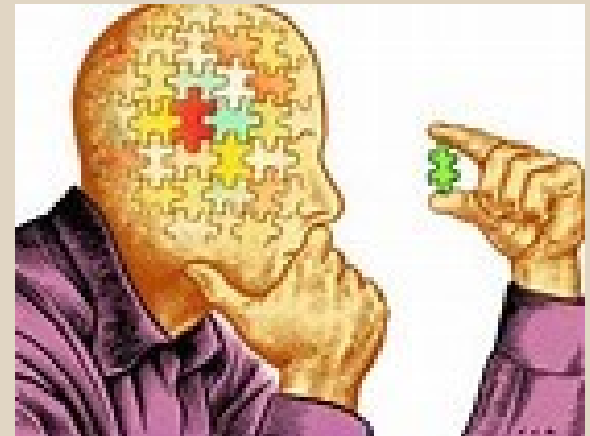*Creating a Cadre of Critical Thinking Scholar*

Kim Dooley
Jenna Kurten
Barry Boyd
Texas A&M University

Critical Thinking Defined
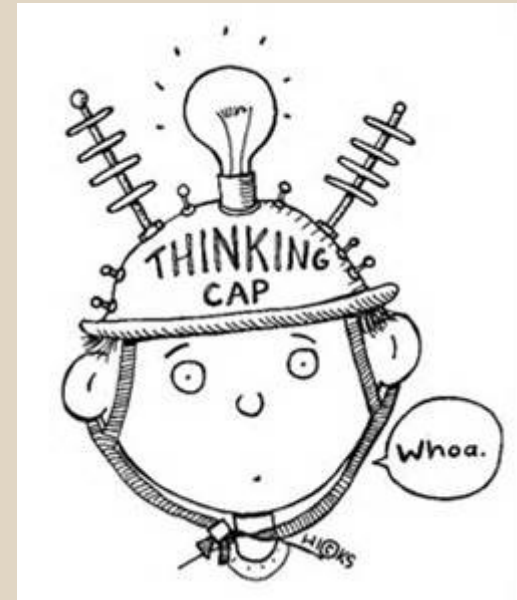
The art of analyzing and evaluating thinking with a view to improving it (Paul, 1995, p. 2).

- Systematic way to shape one's thinking

- Discipline, purposeful
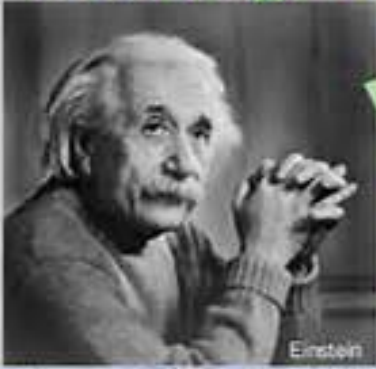
- Based on intellectual standards

Eight Elements of Thought

- Purpose
- Question
- Information
- Inference
- Essential concepts
- Assumptions
- Consequences

Paul & Elder, 2010

How many of you have critical thinking as a learning outcome?

<u>Learning outcome</u>: *demonstrate critical thinking, including the ability to evaluate, analyze, and integrate information from a variety of sources; use appropriate strategies and tools to represent, analyze, and integrate information; and develop critical, reasoned positions.*

FACULTY!

Instructors who are well-trained in educational methodology can positively influence students' critical thinking disposition, even within the time limits of a college semester (Burbach, Matkin, Quinn & Searle, 2012).

Critical Thinking Academy

- Launch in 2015 through a college-wide application process

- Faculty described their motivation and plans for implementing into courses for selection

- 3 workshops on intentional teaching strategies

- Plan for implementations

- Development grant ($1,000)

- Assessment tool created

- 11 in cohort 1; 10 in cohort 2

I am keenly aware of the gap between what we desire and critical thinking skills in our graduates and the critical thinking abilities of most students in my classes…As faculty, <u>we are not trained</u> to be effective teachers of critical thinking and many of the course assessment methods faculty use do not foster critical thinking.

Before the workshops

I greatly desire to hone my pedagogical skills to better train students to be critical thinkers and to be able to have them apply these skills in my classes. I strongly believe that critical thinking is <u>crucial for our students to learn in order to thrive in their future work environment(s)</u>, yet realize that many struggle to be able to achieve these abilities.

After the workshops

What was useful

- Conceptual understanding of critical thinking

- Interacting with other faculty

- Seeing what others were doing

What would change

- More time to learn from one another

- More formal conversations about changing courses

- More about assessment in different subjects

Change in abilities

Before

- Integrate at the beginning of a course

- Never told students what CT was

- Did not make the process explicit

After

- Integrate into every class and assignment

- Teach the elements of reasoning

- More salient; more problem-solving; elevating quality

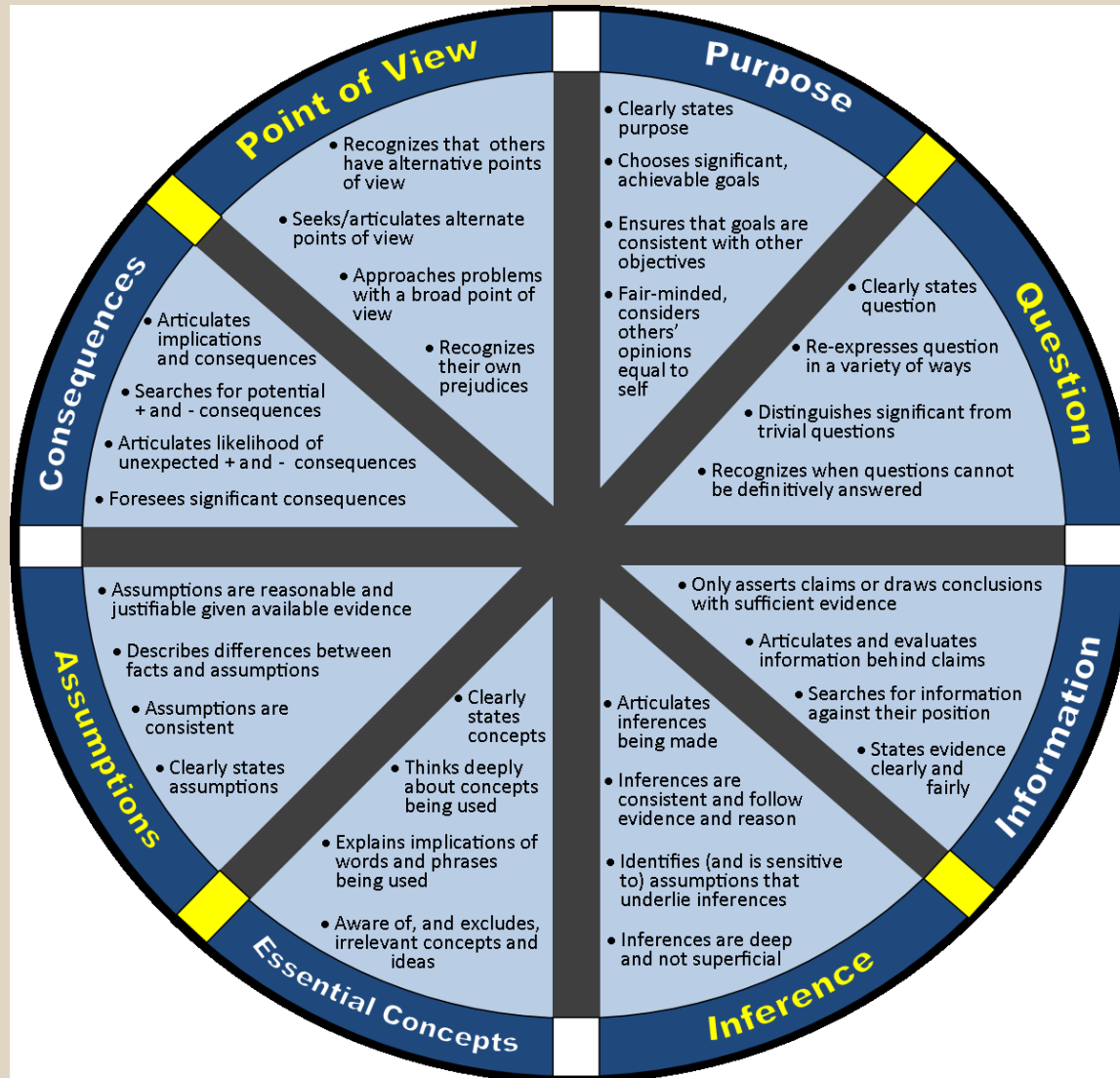# Cohort and use of time

Cohort

- Critical thinking network

- Hearing others' ideas and experiences

- Invaluable, enlightening, congenial, thoughtful

Use of time

- Well spent

- Significant, but likely would not have made the changes

- Need more time on assessment

Assessment Model

Point of View
- Recognizes that others have alternative points of view
- Seeks/articulates alternate points of view
- Approaches problems with a broad point of view
- Recognizes their own prejudices

Purpose
- Clearly states purpose
- Chooses significant, achievable goals
- Ensures that goals are consistent with other objectives
- Fair-minded, considers others' opinions equal to self

Question
- Clearly states question
- Re-expresses question in a variety of ways
- Distinguishes significant from trivial questions
- Recognizes when questions cannot be definitively answered

Consequences
- Articulates implications and consequences
- Searches for potential + and - consequences
- Articulates likelihood of unexpected + and - consequences
- Foresees significant consequences

Assumptions
- Assumptions are reasonable and justifiable given available evidence
- Describes differences between facts and assumptions
- Assumptions are consistent
- Clearly states assumptions

Essential Concepts
- Clearly states concepts
- Thinks deeply about concepts being used
- Explains implications of words and phrases being used
- Aware of, and excludes, irrelevant concepts and ideas

Inference
- Articulates inferences being made
- Inferences are consistent and follow evidence and reason
- Identifies (and is sensitive to) assumptions that underlie inferences
- Inferences are deep and not superficial

Information
- Only asserts claims or draws conclusions with sufficient evidence
- Articulates and evaluates information behind claims
- Searches for information against their position
- States evidence clearly and fairly

Critical thinking visual tool adapted from *Thinker's Guide to Analytic Thinking* by L. Elder and R. Paul, 2010.

Feedback on implementation

We did some discussions at the end of the class and students were very positive about the experience and wished that we had done it at the beginning of the semester, so they can <u>use the framework throughout the semester</u> in our learning activities. Some of the upper level students commented that they had been talking about critical thinking in other classes but never had a structured exploration about what it was.

Student viewpoint

There are a few topics on the tool that I would have thought of independently when thinking about the literature, but I found that the tool offered a much broader focus and as a result a more thorough understanding of the case study…The tool served as a <u>phenomenal facilitator and in my mind bridged the gap</u> between the idea of critical thinking and actually performing critical thinking.

Conclusions and recommendations

- CTA deepened commitment to inclusion of problem-solving experiences, reflective writing, case studies and projects to elevate the quality of classes

- Currently pilot testing the visual tool and hope to broaden participation

- Created an online community of practice with CT resources

- Intentionality of thought and practice impact CT

Questions?