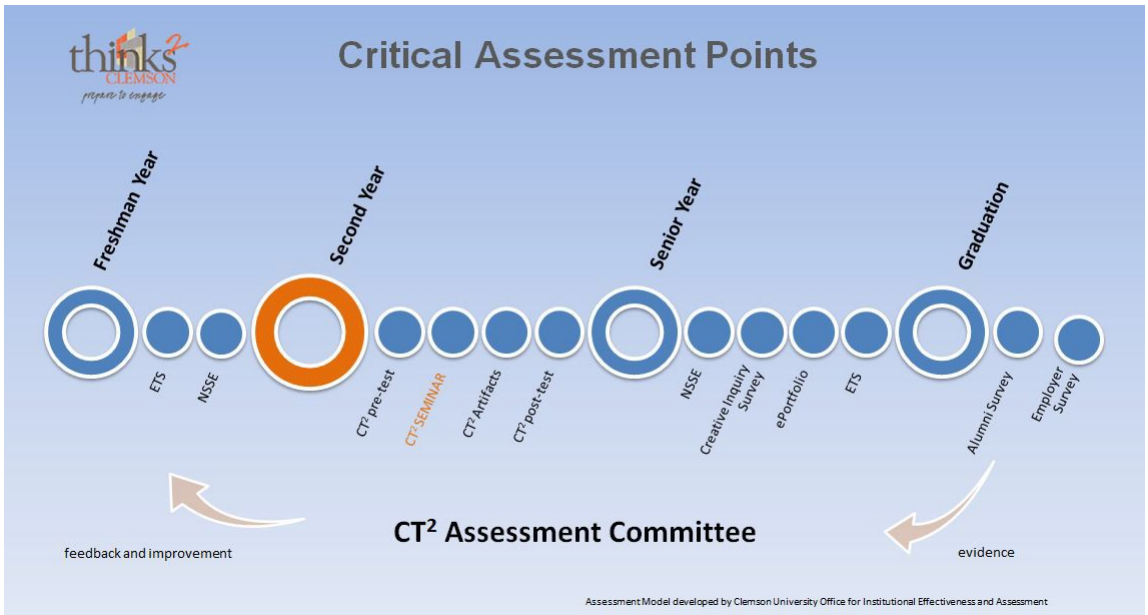
General Outline of Thursday June 20th 3:30-4:15 Presentation
Dr. David Knox

I. Overview of the *CT*^{2} assessment process:



Including the cycle of continuous quality improvement.

II. *CT*^{2} Assessments Within Your Class:

a. The Pre and Post CAT or CCTST and the *CT*^{2} Artifacts are required of all *CT*^{2} classes.

b. The Delphi Group report: *Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction*. (1990) upon which the ETS PP, CCTST, and CAT instrument are based (and, thus, the *CT*^{2} student learning outcomes).

- How can you design in-class assessments that align with the Delphi report, the *CT*^{2} SLOs, and the standardized tests?

- In each formative or evaluative exercise you design include at least one of the Delphi Core CT Skills are illustrated in the chart below:

Core Critical Thinking Skills		
SKILL	**Experts' Consensus Description**	**Subskill**
Interpretation	"To comprehend and express the meaning or significance of a wide variety of experiences, situations, data, events, judgments, conventions, beliefs, rules, procedures, or criteria"	Categorize Decode significance Clarify meaning
Analysis	"To identify the intended and actual inferential relationships among statements, questions, concepts, descriptions or other forms of representation intended to express beliefs, judgments, experiences, reasons, information, or opinions"	Examine ideas Identify arguments Identify reasons and claims
Inference	"To identify and secure elements needed to draw reasonable conclusions; to form Conjectures and hypotheses; to consider relevant information and to deduce the consequences flowing from data, statements, principles, evidence, judgments, beliefs, opinions, concepts, descriptions, questions, or other forms of representation"	Query evidence Conjecture alternatives Draw conclusions using inductive or deductive reasoning
Evaluation	"To assess the credibility of statements or other representations that are accounts or descriptions of a person's perception, experience, situation, judgment, belief, or opinion; and to assess the logical strength of the actual or intended inferential relationships among statements, descriptions, questions, or other forms of representation"	Assess credibility of claims Assess quality of arguments that were made using inductive or deductive reasoning
Explanation	"To state and to justify that reasoning in terms of the evidential, conceptual, methodological, criteriological, and contextual considerations upon which one's results were based; and to present one's reasoning in the form of cogent arguments"	State results Justify procedures Present arguments
Self-Regulation	"Self-consciously to monitor one's cognitive activities, the elements used in those activities, and the results educed, particularly by applying skills in analysis and evaluation to one's own inferential judgments with a view toward questioning, confirming, validating, or correcting either one's reasoning or one's results"	Self-monitor Self-correct

- Some of the ways to "fire-up" the development of these skills are illustrated in the chart below:

Questions to Fire Up Our Critical Thinking Skills	
Interpretation	• What does this mean? • What's happening? • How should we understand that (e.g., what he or she just said)? • What is the best way to characterize/categorize/classify this? • In this context, what was intended by saying/doing that? • How can we make sense out of this (experience, feeling, statement)?
Analysis	• Please tell us again your reasons for making that claim. • What is your conclusion/What is it that you are claiming? • Why do you think that? • What are the arguments pro and con? • What assumptions must we make to accept that conclusion? • What is your basis for saying that?
Inference	• Given what we know so far, what conclusions can we draw? • Given what we know so far, what can we rule out? • What does this evidence imply? • If we abandoned/accepted that assumption, how would things change? • What additional information do we need to resolve this question? • If we believed these things, what would they imply for us going forward? • What are the consequences of doing things that way? • What are some alternatives we haven't yet explored? • Let's consider each option and see where it takes us. • Are there any undesirable consequences that we can and should foresee?
Evaluation	• How credible is that claim? • Why do we think we can trust what this person claims? • How strong are those arguments? • Do we have our facts right? • How confident can we be in our conclusion, given what we now know?
Explanation	• What were the specific findings/results of the investigation? • Please tell us how you conducted that analysis. • How did you come to that interpretation? • Please take us through your reasoning one more time. • Why do you think that (was the right answer/was the solution)? • How would you explain why this particular decision was made?
Self-Regulation	• Our position on this issue is still too vague; can we be more precise? • How good was our methodology, and how well did we follow it? • Is there a way we reconcile these two apparently conflicting conclusions? • How good is our evidence? • OK, before we commit, what are we missing? • I'm finding some of our definitions a little confusing; can we revisit what we mean by certain things before making any final decisions?

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These in-class activities and evaluations will provide items for the *CT*[2] Artifacts data point. These are the skills that constitute CT ability. But what about CT ability as a whole? Just as the CCTST breaks down the score of the test-taker into the 5 CT skills in the table above, it also provides an integrated score of overall CT competence.
One of the ways of evaluating overall competence in your in-class activities is by the use of a rubric. One that I would recommend is the AAC&U Critical Thinking VALUE Rubric. This rubric grew from the same Delphi roots as the test mentioned above.