



## New Chalk Talk

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Teaching News

The Center for Learning and Teaching  
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### **Critical Thinking (1)**

If there is one feature that distinguishes an AUC education from that of all other institutions in the region, it is that ours is a Liberal Arts education. As faculty, we recognize that critical thinking figures prominently at the core of a liberal arts education, and that our goal is **to change our students from being passive receptors of information to being “critical thinkers”**.

It is therefore useful to define for ourselves what critical thinking is, and to explore the reasoning skills that are associated with it. It is also important to examine practical classroom strategies that have been found to promote those skills.

While many definitions of critical thinking abound in the literature, the two simplest ones are:

- “*Critical thinking is thinking that assesses itself*” (Center for Critical Thinking, 1996)
- Critical thinking is “*the ability to think about one’s thinking ...to... recognize its strength and weaknesses, and... to recast the thinking in improved form.*” (Center for Critical Thinking, 1996)

What **specific reasoning abilities** should we cultivate in our students?

Physicist Arnold Arons suggests ten of them, summarized as follows. The ability

1. To consciously raise the questions: What do we know...? How do we know...? What is the evidence for...? when studying some body of material or approaching a problem.
2. To recognize when a conclusion is reached (or a decision made) in the absence of complete information, and to be able to tolerate the ambiguity and uncertainty.
3. To discriminate between observation and inference, between established fact and subsequent conjecture.
4. To recognize the necessity of using only words of prior definition, rooted in shared experience, in forming a new definition, and to avoid being misled by technical jargon.

5. To probe for assumptions behind a line of reasoning.
6. To draw inferences from data, observations, or other evidence and to recognize when firm inferences cannot be drawn.
7. To perform hypothetico-deductive reasoning; i.e. given a particular situation, to apply relevant knowledge of principles and constraints and to visualize, in the abstract, the plausible outcomes that might result from changes imposed on the system.
8. To discriminate between inductive and deductive reasoning
9. To test one's own line of reasoning and conclusions for internal consistency
10. To develop self-consciousness concerning one's own thinking and reasoning processes.

Having said that, what **classrooms strategies** can be used to develop such skills in our students? Our **next "New Chalk Talk" issue** will address this question.

Sources:

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K. Bain, *Defining Critical Thinking*. The Class Act (January 1998). The Searle Center for Teaching Excellence Newsletter

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