

WE ARE TEACHING FOR CRITICAL THINKING....AREN'T WE?

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Session Outcomes

1. You will be more explicit about your definition of CT so that you are able to identify:
 - intellectual habits and skills that, when developed, will enable your students to think critically
 - criteria for students' critical thinking that will assist assessment
 - relevant expectations for students' critical thinking



REALLY?? In
90 minutes??



The story behind the workshop

- The Learning and Teaching Centre at UVic, 2000
- Advisory Board Survey of Instructors
- Critical Thinking (UVic Strategic Plan, Department Plans, Ministry Competencies, feedback from faculty)



Teaching for Critical Thinking

- A central focus for educational development at the LTC
- **Green Guide** for the Society of Teaching and Learning in Higher Education, Canada



Directions from STLHE

- Base it on ‘what excellent teachers do’
- Keep it simple—no long philosophical arguments
- Include examples

Paul, Elder, and Bartell (1997)


- 140 faculty members in 38 public and 28 private universities in California
- Written responses to open ended questions and individual interviews regarding teaching for CT


Paul, Elder, & Bartell (1997)

- 89% reported that CT was a primary outcome in their courses
- 19% were able to give a clear and coherent description of CT
- 9% provided evidence that indicated that they specifically taught for CT

Paul, Elder, & Bartell (1997)

- 78% reported that their students were unable to demonstrate most intellectual standards
- 8% could identify the intellectual criteria and standards that they required and could give a clear explanation of those criteria and standards

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- ❖ We interviewed 16 UVic professors, noted for their teaching excellence, to solicit examples of the ways in which they taught for CT.
 - ❖ All 16, when asked if they taught for CT, were very clear that this was an important part of all their courses

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- ❖ Despite their assurances that they taught for CT, few of these professors could articulate a comprehensive definition or provide clear examples of assignments to support development of CT.
 - ❖ As well, the explanations of their assessment of CT were vague.

What did this mean?

- It certainly didn't mean that these professors could not or did not think critically, nor did it mean they didn't understand CT.

SO WHAT DID WE MAKE OF THIS?

- Professors, most likely, have developed and refined their CT to a very advanced level.
- It is difficult for them (us) to explicate a process so deeply imbedded in their academic repertoire and, indeed, a similar phenomenon occurs with artists and writers when they are asked to explain *how* they produce a painting or poem.

SO WHAT DID WE MAKE OF THIS?

If instructors are unable to articulate their approach to the support and development of CT to interviewers, it is probable that that they are unable to be explicit about CT with students, and consequently to provide the effective and purposeful guidance necessary for the development of students' CT.

GETTING PAST:

- *I'LL KNOW IT WHEN I SEE IT*
- *ARM WAVING AND BIG WORDS*

Jerome Bruner*

I would be content if we began, all of us, by recognizing that discovering how to make something comprehensible (to our students) is only a continuation of making something comprehensible to ourselves in the first place

*As quoted in Ramsden, 1992, p. 150



Teaching for Critical Thinking

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London, Canada



2006




Society for Teaching and Learning in Higher Education
La société pour l'avancement de la pédagogie dans
l'enseignement supérieur



... and here is the paradox
that plagues us in teaching for
critical thinking

- Everyone thinks; it is our nature to do so. But much of our thinking, left to itself, is biased, distorted, partial, uninformed or down-right prejudiced. Yet the quality of our life and that of what we produce, make, or build depends precisely on the quality of our thought. ...
- Excellence in thought, however, must be systematically cultivated.



“ ...critical thinking strategies are more likely to be internalised by students if those strategies are taught explicitly and systematically.” (p.355)*

*Rush Cosgrove (2011) Critical thinking in the Oxford tutorial: a call for an explicit and systematic approach, Higher Education Research & Development, 30:3, 343-356, DOI: 10.1080/07294360.2010.487259

Stephen Brookfield (1995) made the following observations:

Pinning down exactly what is meant by CT, describing the process for advancing it, and then setting criteria, seems reductionist and may appear to trivialize this important concept.

Stephen Brookfield (1995) made the following observations:

None-the-less, if a definition of CT is not made clear and criteria and standards for assessment are not evident, then how can you expect students to learn and value CT?


WHAT IS YOUR WORKING DEFINITION OF CRITICAL THINKING?



Go 'META'

Think about your thinking as you write your working definition

- 7 minutes to complete
- Please wave your hand when you are done



Now, join one or two other people
and discuss the similarities and
differences in your WORKING
DEFINITIONS OF CT

Similarities?

Differences?

Sternberg (1985a)

- The mental processes, strategies, and representations that people use to solve problems, make decisions and learn new concepts

SCRIVENS AND PAUL (1987)

- Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action

- In its exemplary form, it is based on universal intellectual values that transcend subject matter divisions

- clarity
- accuracy
- precision
- consistency
- relevance
- sound evidence
- good reasons
- depth
- breadth
 - fairness

Another definition

- Critical thinking is self-guided, self-disciplined thinking which attempts to reason at the highest level of quality in a fair-minded way.

Van Gyn & Ford, (2010)

A quality of thinking that is characterized by a reflective disposition and self regulation that guides the application of intellectual habits and intellectual deliberations towards an evaluative judgment on a challenge, situation or task.



Reflective Disposition

- Reflecting for action
- Reflecting in action (metacognition)
- Reflection after action

▪ Donald Schon, 1983

Intellectual Habits: Characteristics of mind necessary for developing critical thinkers

- intellectual curiosity
- respect for truth and reason
- fairmindedness
- intellectual courage
- tolerance for uncertainty and ambiguity
- intellectual work ethic
- willingness to work collaboratively

Such traits guard against the development of fallacious, capricious, or self-deceptive thinking.

Intellectual Deliberations

- Evidence gathering/information seeking
- Problem/Issue recognition
- Identification of assumptions
- Applying standards
- Logical reasoning
- Discriminating
- Synthesis
- Analysis
- Prediction
- Knowledge Transformation/Transfer
- Evaluation



The assessment of students is
a serious and often tragic
enterprise.

Paul Ramsden, 1992. p. 181

Definition

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graph TD; A[Definition] --- B[Parts/Qualities or Criteria]; A --- C[Standards];
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Parts/Qualities
or Criteria

Standards

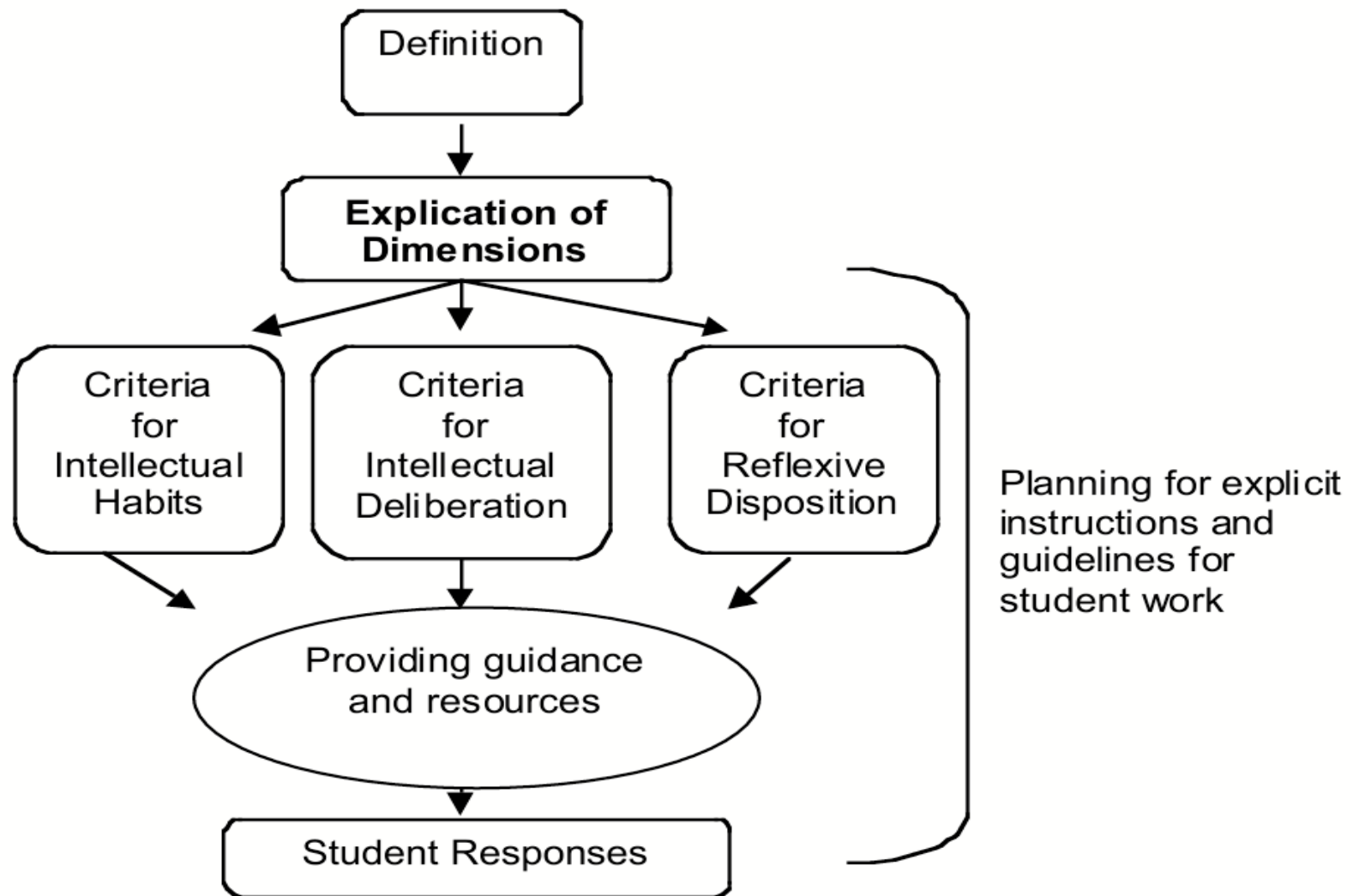
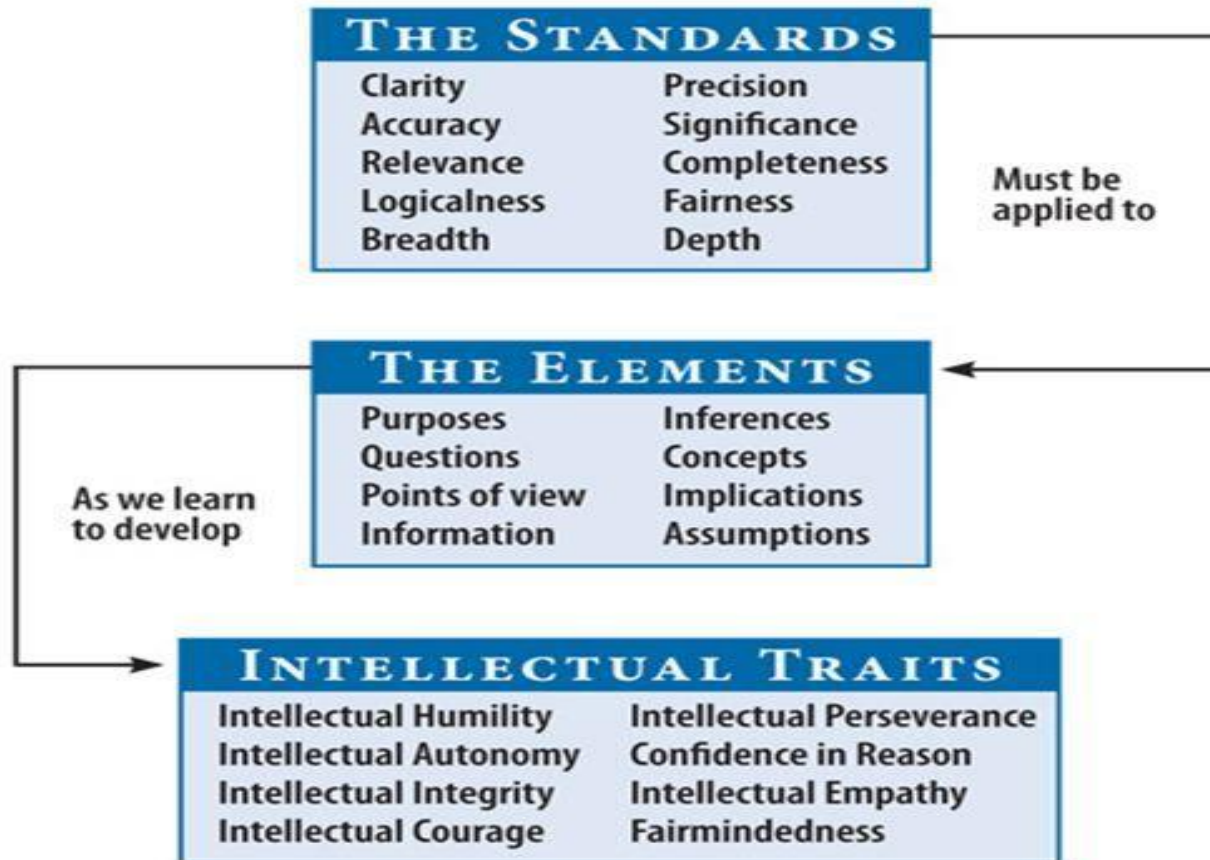


Figure 3. Relationship of CT definition, dimensions, and criteria to instructional planning and guidance for students.

Critical Thinkers Routinely Apply Intellectual Standards To The Elements Of Reasoning In Order To Develop Intellectual Traits



Criteria, Standards, Rubrics

- The criteria for CT that the instructor sets as part of being explicit about the dimension of CT describe the best result that the student can produce.

Criteria, Standards, Rubrics

- The standards chosen are the various levels of attainment of those criteria.
- E.g. A, B, C....etc
- Excellent, Very Good, Good, Fair, Poor
- Consistently, Often, Seldom

Criteria, Standards, Rubrics

- The description of the level of the standard is called a rubric . The resulting rubrics represent “criterion-referenced” evaluation

CRITERIA FOR CT

- Informs students as to what they should be attending in their discussions, writing, projects, design, etc. and to monitor the strength of their CT
- Used by instructor to guide instruction and as a basis for assessment and evaluation of CT

Example: Criteria for intellectual deliberations – the parts

1. Identify and reflect on/analyze the situation that requires an evaluative judgement to be reached
2. Gather and interpret background information
3. Select and apply cognitive (thinking) strategies appropriate to the task
4. Generate or select option

Example: Criteria for intellectual deliberations – the parts

5. Select criteria to guide a judgement among alternatives
6. Make an evaluative judgement among options based on criteria
7. Provide justification for judgement/conclusion

Example: Criteria for intellectual deliberations – qualities of one of the intellectual deliberations

- *Gather in interpret background information*
 - Relevancy of information/knowledge to the task
 - Sufficient
 - a range of valid sources
 - a variety of points of view
 - Clearly represented
 - Plausible/accurate interpretation




Examples of Generic CT Qualities

- Clear
- Precise
- Accurate
- Plausible
- Relevant
- Comprehensiveness
- Sufficient
- Coherent
- Sustainable
- Just
- Acceptable
- Effective
- Valid
- Sound


From Criteria to Standards



STRONG LEVEL OF CT	DEVELOPING LEVEL OF CT	WEAK LEVEL OF CT
<p>Consistently demonstrates:</p> <ol style="list-style-type: none">1. Choice of relevant information for the task2. Uses sufficient information<ol style="list-style-type: none">a. Range of valid sourcesb. Variety of points of view3. Clearly represents the relevant information4. Plausible/accurate interpretation of the relevant information	<p>Sometimes demonstrates</p>	<p>Seldom or does not demonstrate</p>



With your partner(s) choose one part/element from your working definitions of CT and describe the qualities associated with that part that would be good evidence that students are demonstrating that part of CT successfully



Would any one like to share
their work?

- A well cultivated critical thinker

raises vital questions and problems, formulating them clearly and precisely;

gathers and assesses relevant information, using abstract ideas to interpret it effectively, comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards;

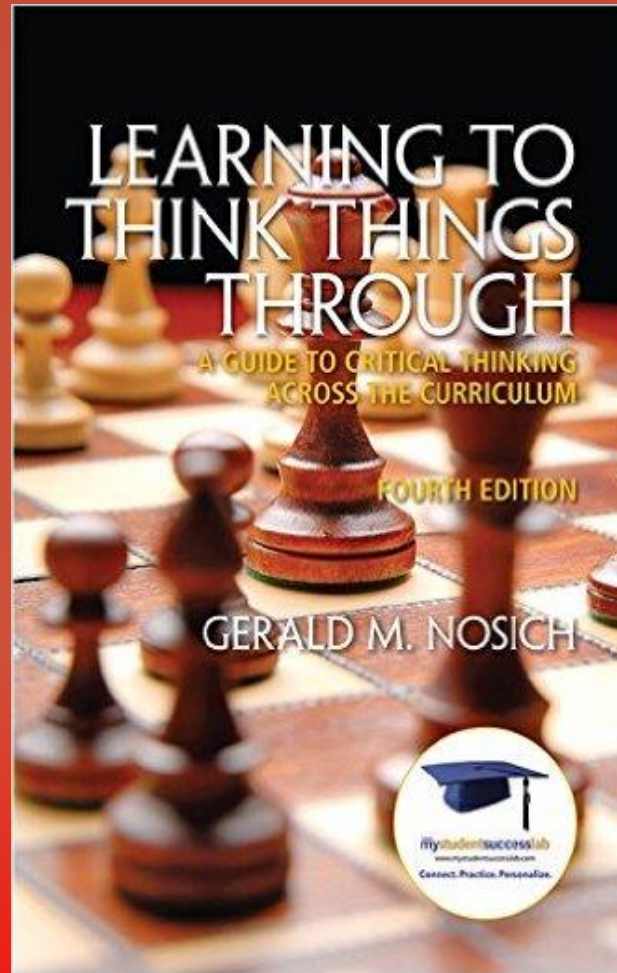
thinks open-mindedly within alternative systems of thought, recognizing and assessing, as need be, their assumptions, implications, and practical consequences; and

communicates effectively with others in figuring out solutions to complex problems.

Foundation for Critical Thinking



Dr. Gerald Nosich





Dr. Stephen Brookfield (2012)

Teaching for critical thinking: Tools and techniques to help students question their assumptions. San Francisco: Jossey-Bass

How to Think Like Shakespeare



<http://www.chronicle.com/article/How-to-Think-Like-Shakespeare/237593/>