Critical Thinking Workshop

Carol Caraway

A Baseline Concept of Critical Thinking

Since one dimension of our assessment of the state of present knowledge of critical thinking and current teaching practices involves an assessment of the extent to which the views expressed demonstrated an internalization of "minimalist" elements of critical thinking, it is appropriate that we lay out the basis for such a minimalist notion. This section provides a brief summary of the following aspects of critical thinking: its etymology and dictionary definition, major definitions and explanations in the literature, a brief history of the idea, major tests, and values.

However, before we look into the concept of critical thinking in a formal way, it may be helpful to provide an informal characterization of the underlying core meaning of critical thinking, a concept which we believe can be generalized across subject matter disciplines and a wide range of human activities.
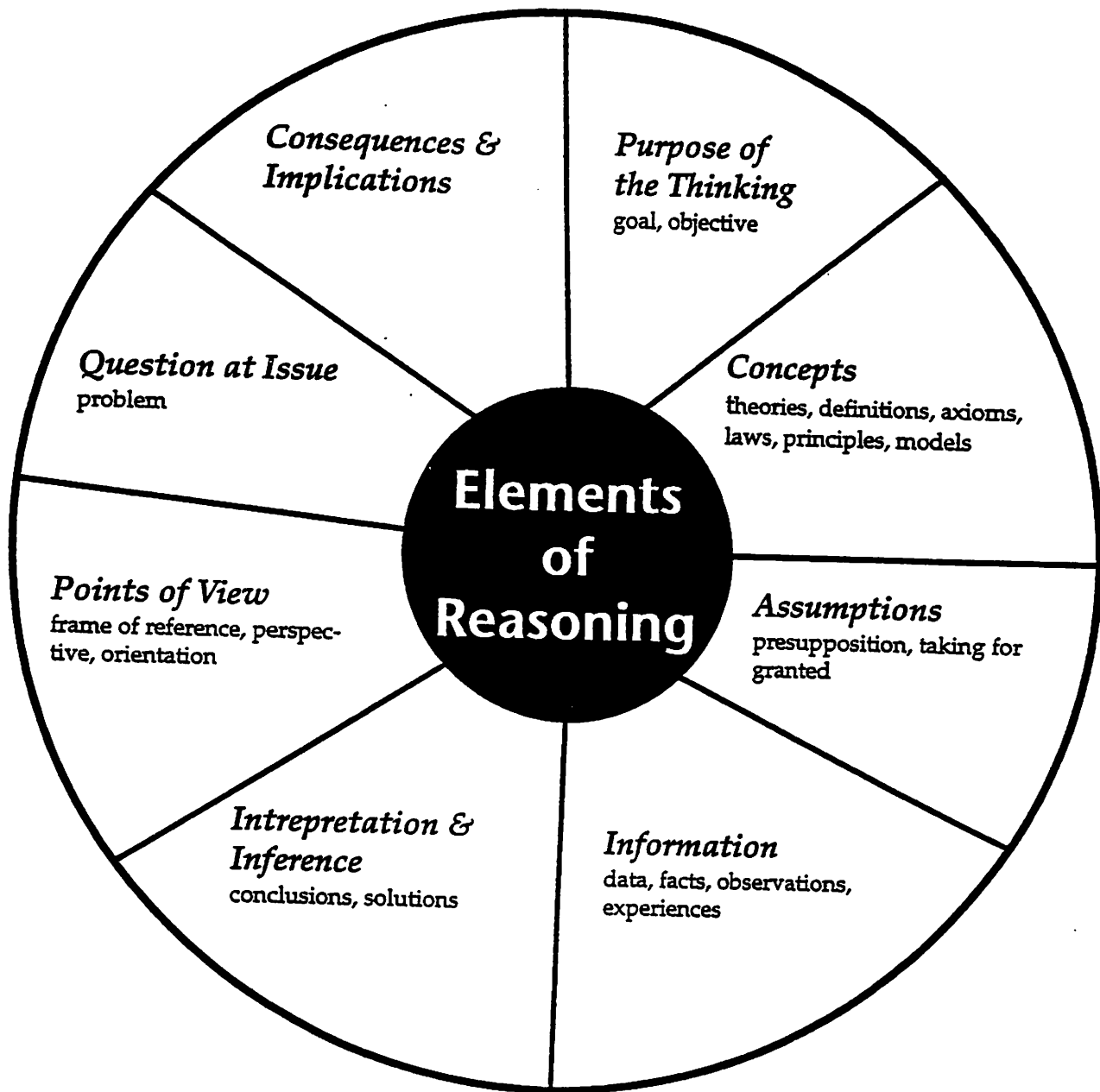
One way to explicate this core meaning is to view it as constituted by four interrelated components:

(1) ability to engage in reasoned discourse (the faith in this ability is the underlying assumption of a democratic society);

(2) reasoning operating in the context of intellectual standards (clarity, accuracy, precision, relevance, depth, breadth, logic);

(3) involving analytic inferential skills (the ability to formulate and assess goals and purposes, questions and problems, information and data, concepts and theoretical constructs, assumptions and presuppositions, implications and consequences, point of view and frames of reference); and

(4) committed to a fundamental value orientation that includes certain traits and dispositions (intellectual humility, intellectual courage, intellectual empathy, intellectual integrity, intellectual perseverance, faith in reason and fair-mindedness).

It is important to note that these components are interrelated and inter-dependent, functioning as a complex of skills, practices, disposition, attitudes and values. Further, this concept of critical thinking is multi-dimensional, including the intellectual (logic, reason), the psychological (self-awareness, empathy), the sociological (the socio-historical context), the ethical (involving moral norms and evaluation), and the philosophical (the meaning of human nature and life). As the multi-faceted, multi-dimensional nature of the core concept of critical thinking has been delineated, it should be increasingly apparent that it can be approached both as a universal ideal and as an intensely personal undertaking. It is the ideal that guides the individual as he/she is engaged in the process of becoming a critical thinker. However, the thinking person is in a dynamic relationship with the ideal, discovering its deeper meaning in the process of experimenting with and living it. This is part of what it means to be engaged in a unique educational process leading to a broadly disciplined human mind and character.

A CRITICAL THINKER
CONSIDERS THE ELEMENTS OF REASONING

**Consequences &
Implications**

**Purpose of
the Thinking**
goal, objective

Question at Issue
problem

Concepts
theories, definitions, axioms,
laws, principles, models

**Elements
of
Reasoning**

Points of View
frame of reference, perspec-
tive, orientation

Assumptions
presupposition, taking for
granted

**Intrepretation &
Inference**
conclusions, solutions

Information
data, facts, observations,
experiences

WITH SENSITIVITY TO UNIVERSAL INTELLECTUAL STANDARDS

Clear	Deep	Logical
Precise	Significant	Realistic
Relevant	Consistent	Rational
Accurate	Broad	Fair

Universal Intellectual Standards
And questions that can be used to apply them

Universal intellectual standards are standards which must be applied to thinking whenever one is interested in checking the quality of reasoning about a problem, issue, or situation. To think critically entails having command of these standards. To help students learn them, teachers should pose questions which probe student thinking, questions which hold students accountable for their thinking, questions which, through consistent use by the teacher in the classroom, become internalized by students as questions they need to ask themselves. The ultimate goal, then, is for these questions to become infused in the thinking of students, forming part of their inner voice, which then guides them to better and better reasoning. While there are a number of universal standards, the following are the most significant:

CLARITY: Could you elaborate further on that point? Could you express that point in another way? Could you give me an illustration? Could you give me an example? Clarity is a gateway standard. If a statement is unclear, we cannot determine whether it is accurate or relevant. in fact, we cannot tell anything about it because we don't yet know what it is saying. For example, the question "What can be done about the education system in America?" is unclear. In order to adequately address the question, we would need to have a clearer understanding of what the person asking the question is considering the "problem" to be. A clearer question might be "What can educators do to ensure that students learn the skills and abilities which help them function successfully on the job and in their daily decision-making?"

ACCURACY: Is that really true? How could we check that? How could we find out if that is true? A statement can be clear but not accurate, as in "Most dogs are over 300 pounds in weight."

PRECISION: Could you give me more details? Could you be more specific? A statement can be both clear and accurate, but not precise, as in "Jack is overweight" (We don't know how overweight Jack is, one pound or 500 pounds.).

RELEVANCE: How is that connected to the question? How does that bear on the issue? A statement can be clear, accurate, and precise, but not relevant to the question at issue. For example, students often think that the amount of effort they put into a course should be used in raising their grade in a course. Often, however, "effort" does not measure the quality of student learning, and when that is so, effort is irrelevant to their appropriate grade.

DEPTH: How does your answer address the complexities in the question? How are you taking into account the problems in the question? Is that dealing with the most significant factors? A statement can be clear, accurate, precise, and relevant, but superficial (that is, lack depth). For example, the statement "Just Say No" which is often used to discourage children and teens from using drugs, is clear, accurate, precise, and relevant. Nevertheless, it lacks depth because it treats an extremely complex issue, the pervasive problem of drug use among young people, superficially. It fails to deal with the complexities of the issue.

BREADTH: Do we need to consider another point of view? Is there another way to look at this question? What would this look like from a conservative standpoint? What would this look like from the point of view of...? A line of reasoning may be clear, accurate, precise, relevant, and deep, but lack breadth (as in an argument from either the conservative or liberal standpoints which gets deeply into an issue, but only recognizes the insights of one side of the question.)

LOGIC: Does this really make sense? Does that follow from what you said? How does that follow? But before you implied this and now you are saying that, I don't see how both can be true. When we think, we bring a variety of thoughts together into some order. When the combination of thoughts are mutually supporting and make sense in combination, the thinking is "logical." When the combination is not mutually supporting, is contradictory in some sense, or does not "make sense," the combination is "not logical."

Valuable Intellectual Traits

INTELLECTUAL HUMILITY: Having a consciousness of the limits of one's knowledge, including a sensitivity to circumstances in which one's native egocentrism is likely to function self-deceptively; sensitivity to bias, prejudice and limitations of one's viewpoint. Intellectual humility depends on recognizing that one should not claim more than one actually knows. It does not imply spinelessness or submissiveness. It implies the lack of intellectual pretentiousness, boastfulness, or conceit, combined with insight into the logical foundations, or lack of such foundations, of one's beliefs.

INTELLECTUAL COURAGE: Having a consciousness of the need to face and fairly address ideas, beliefs or viewpoints toward which we have strong negative emotions and to which we have not given a serious hearing. This courage is connected with the recognition that ideas considered dangerous or absurd are sometimes rationally justified (in whole or in part) and that conclusions and beliefs inculated in us are sometimes false or misleading. To determine for ourselves which is which, we must not passively and uncritically "accept" what we have "learned." Intellectual courage comes into play here, because inevitably we will come to see some truth in some ideas considered dangerous and absurd, and distortion or falsity in some ideas strongly held in our social group. We need courage to be true to our own thinking in such circumstances. The penalties for non-conformity can be severe. ·

INTELLECTUAL EMPATHY: Having a consciousness of the need to imaginatively put oneself in the place of others in order to genuinely understand them, which requires the consciousness of our egocentric tendency to identify truth with our immediate perceptions of long-standing thought or belief. This trait correlates with the ability to reconstruct accurately the viewpoints and reasoning of others and to reason from premises, assumptions, and ideas other than our own. This trait also correlates with the willingness to remember occasions when we were wrong in the past despite an intense conviction that we were right, and with the ability to imagine our being similarly deceived in a case-at-hand.

INTELLECTUAL INTEGRITY: Recognition of the need to be true to one's own thinking; to be consistent in the intellectual standards one applies; to hold one's self to the same rigorous standards of evidence and proof to which one holds one's antagonists; to practice what one advocates for others; and to honestly admit discrepancies and inconsistencies in one's own thought and action.

INTELLECTUAL PERSEVERANCE: Having a consciousness of the need to use intellectual insights and truths in spite of difficulties, obstacles, and frustrations; firm adherence to rational principles despite the irrational opposition of others; a sense of the need to struggle with confusion and unsettled questions over an extended period of time to achieve deeper understanding or insight.

FAITH IN REASON: Confidence that, in the long run, one's own higher interests and those of humankind at large will be best served by giving the freest play to reason, by encouraging people to come to their own conclusions by developing their own rational faculties; faith that, with proper encouragement and cultivation, people can learn to think for themselves, to form rational viewpoints, draw reasonable conclusions, think coherently and logically, persuade each other by reason and become reasonable persons, despite the deep-seated obstacles in the native character of the human mind and in society as we know it.

FAIRMINDEDNESS: Having a consciousness of the need to treat all viewpoints alike, without reference to one's own feelings or vested interests, or the feelings or vested interests of one's friends, community or nation; implies adherence to intellectual standards without reference to one's own advantage or the advantage of one's group.

Critical Thinking in The Classroom:
Ideal vs Reality

Bursting the Bubble: Recent Study Indicates Most Instruction Does Not Emphasize Critical Thinking

A Recent Ground-Breaking Study of College and University Professors Revealed:

1) Though the overwhelming majority (89%) claimed critical thinking to be a primary objective of their instruction, only a small minority (19%) could give a clear explanation of what critical thinking is; and only 9% of the respondents were clearly teaching for critical thinking on a typical day in class.

2) Though the overwhelming majority (78%) claimed that their students lacked appropriate intellectual standards (to use in assessing their thinking), and 73% considered that students learning to assess their own work was of primary importance, only a very small minority (8%) could enumerate any intellectual criteria or standards they required of students or could give an intelligible explanation of what those criteria and standards were.

3) When asked how they conceptualized truth, a surprising 41% of those who responded to the question said that knowledge, truth and sound judgment are fundamentally a matter of personal preference or subjective taste.

4) Although the vast majority (89%) stated that critical thinking was of primary importance to their instruction, 77% of the respondents had little, limited or no conception of how to reconcile content coverage with the fostering of critical thinking.

5) Although the overwhelming majority (81%) felt that their department's graduates develop a good or high level of critical thinking ability while in their program, only 20% said that their departments had a shared approach to critical thinking, and only 9% were able to clearly articulate how they would assess the extent to which a faculty member was or was not fostering critical thinking. The remaining respondents had a limited conception or no conception at all of how to do this.

6) Although the vast majority (89%) stated that critical thinking was of primary importance to their instruction, only a very small minority could clearly explain the meanings of basic terms in critical thinking.

7) From either the quantitative data directly, or from minimal inference from those data, it is clear that most faculty:

• do not understand the connection of critical thinking to intellectual standards.

• are not able to clarify major intellectual criteria and standards.

• Inadvertently confuse the active involvement of students in classroom activities with critical thinking in those activities.

• are unable to give an elaborated articulation of their concept of critical thinking.

• cannot provide plausible examples of how they foster critical thinking in the classroom.

• are not able to name specific critical thinking skills they think are important for students to learn.

• are not able to plausibly explain how to reconcile content with fostering critical thinking.

• do not consider reasoning to be a significant focus of critical thinking.

• do not think of reasoning within disciplines as a major focus of instruction.

• cannot specify basic structures essential to the analysis of reasoning.

• cannot give an intelligible explanation of basic abilities either in critical thinking or in reasoning.

• do not distinguish the psychological dimension of thought from the intellectual dimension.

• have had no involvement in research into critical thinking and have not attended any conferences on the subject.

• are unable to name a particular theory or theorist that has shaped their concept of critical thinking.

These results are based on a study of professors at 48 public and 38 private colleges and universities.

Yet Critical Thinking is More & More Essential

Unfortunately, though most teachers and professors are failing to teach their students to think critically, their students need critical thinking more and more each year. In a world of accelerating change, a world of intensifying complexity, a world of increasing interdependence, we need to focus instruction on what does not change. When content is transformed faster than anyone can record that transformation, we must shift the focus from mere memorization of that which fluctuates to command of that which is eternally the same: the nature, structure, and standards of sound thinking. To the extent that we help students to discipline their minds, we free them from dependence on any particular piece or mass of content. To the extent that we aid students to learn how to assess their own learning, we help them acquire the tools to learn new content, analyze new problems, interpret new situations, and think within new domains and subjects. For though the content of historical thinking may change, the essence of it does not. The same is true for mathematical thinking, for scientific thinking, for anthropological thinking—indeed for every established mode of thinking. Critical thinking is an indispensible tool for all who would discipline their minds, learn content, communicate effectively, and perform successfully in a complex changing world.

INTRODUCING CRITICAL THINKING IN LAYERS

There are four layers in which critical thinking can be introduced into instruction:

1) as a tool for the overall design of a course
2) as a tool for the design of a unit or given day of instruction
3) as a tool for transferring learning from subject to subject
4) as a tool for the conduct of everyday life

The 17th International Conference on Critical Thinking will focus on these practical realities.

5

Appendix E

Critical Thinking:
Using Intellectual Standards to
Assess Student Reasoning

By Richard Paul and Linda Elder

A crucial part of critical thinking involves the ability to accurately assess one's own reasoning ability. Therefore, as teachers, one of our primary objectives is to teach students to assess their own thinking. Before teachers can do this, however, they must first learn to assess student reasoning. Then teachers can and should focus on teaching students to assess their own reasoning. To assess student reasoning requires that we focus our attention as teachers on two interrelated dimensions of reasoning. The first dimension consists of the *elements of reasoning*; the second dimension consists of the *universal intellectual standards* by which we measure student ability to use, in a skillful way, each of those elements of reasoning.

Elements of Reasoning
Once we progress from thought which is purely associational and undisciplined to thinking which is conceptual and inferential, thinking which attempts in some intelligible way to figure something out (in short, to reason) then it is helpful to concentrate on what can be called "the elements of reasoning". The elements of reasoning are those essential dimensions of reasoning which are present whenever and wherever reasoning occurs. Working together, they shape reasoning and provide a general logic to the use of reason. We can articulate these elements by paying close attention to what is implicit in the act of figuring anything out by the use of reason. These elements, then—purpose, question at issue, assumptions, inferences, implications, point of view, concepts, and evidence—constitute a central focus in the assessment of student thinking.

Standards of Reasoning
When we assess student reasoning, we want to evaluate, in a reasonable, defensible, objective way, not just that students are reasoning but how well they are reasoning. We will be assessing not just that they are using the elements of reasoning (because whenever a person reasons, he or she is implicitly processing through all the elements) but the degree to which they are reasoning well. This can be measured by continually applying the appropriate intellectual standards to each element as they think through a problem or issue.

To assess a student response, whether written or oral, in structured discussion of content or in critical response to reading assignments, by how clearly or completely it states a position, is to assess it on the basis of a standard of reasoning. Similarly, assessing student work by how logically and consistently it defends its position—by how flexible and fair the student is in articulating other points of view, by how significant and realistic the student's purpose is, by how precisely and deeply the student articulates the question at issue—is an evaluation based on universal standards of reasoning.

Distinct from such reasoning standards are other standards that teachers sometimes use to assess student work. To evaluate a student response on the basis of how concisely or elegantly it states a position is to use standards that are inappropriate to assessing student reasoning. Similarly unrelated to the assessment of reasoning is evaluating student work by how humorous, glib, personal, or sincere it is; by how much it agrees with the teacher's views; by how "well-written" it is; by how exactly it repeats the teacher's words; or by the mere quantity of information it contains. The danger is that such standards are confused with reasoning standards, often unconsciously, and students are assessed on grounds other than the degree to which they are reasoning well. The basic conditions implicit whenever we gather, conceptualize, apply, analyze, synthesize, or evaluate information— THE ELEMENTS OF REASONING—are as follows:

1. **Purpose, goal, or end in view.** Whenever we reason, we reason to some end, to achieve some objective, to satisfy some desire, or to fulfill some need. One source of problems in student reasoning is traceable to defects at the level of goal, purpose, or end. If the goal is unrealistic, for example, or contradictory to other goals the student has, if it is confused or muddled in some way, then the reasoning used to achieve it is problematic.

A teacher's assessment of student reasoning, then, necessarily involves an assessment of the student's ability to handle the dimension of purpose in accord with relevant intellectual standards. It also involves giving feedback to students about the degree to which their reasoning meets those standards.

2. **Questions at issue or problems to be solved.** Whenever we attempt to reason something out, there is at least one question at issue, at least one problem to be solved. One area of concern for assessing student reasoning, therefore, will be the formulation of the question to be answered or problem to be solved, whether with respect to the student's own reasoning or to that of others.

Assessing skills of mastery of this element of reasoning requires assessing—and giving feedback on—students' ability to formulate a problem in a clear and relevant way. It requires giving students direct commentary on whether the question they are addressing is an important one, whether it is answerable, or whether they understand the requirements for settling the question or for solving the problem.

3. **Point of view or frame of reference.** Whenever we reason, we must reason within some point of view or frame of reference. Any "defect" in that point of view or frame of reference is a possible source of problems in the reasoning process.

A point of view may be too narrow or too parochial, may be based on false or misleading analogies or metaphors, may contain contradictions, and so forth. It may be restricted or unfair. Alternatively, student reasoning involving articulation of their point of view may meet the relevant standards to a significant degree: their point of view may be broad, flexible, and fair; it may be clearly stated and consistently adhered to.

Feedback to students would involve commentary noting both when students meet the standards and when they fail to meet them. Evaluation of students' ability to handle the dimension of point of view would also appropriately direct students to lines of reasoning that would promote a richer facility in reasoning about and in terms of points of view. Teachers should help students understand the problem at issue from opposing points of view, enabling them to clearly see how their own point of view may be limited or flawed.

4. **The empirical dimension of reasoning (the evidence).** Whenever we reason, there is some "stuff," some phenomena about which we are reasoning. Any defect, then, in the experiences, data, information, evidence, or raw material upon which a person's reasoning is based is a possible source of problems.

Students would be assessed and receive feedback on their ability to give evidence that is gathered and reported clearly, fairly, and accurately. Does the student furnish data at all? Is the data relevant and valid? Is there sufficient information for the conclusion being drawn? Is the information adequate for achieving the student's purpose? Is it applied consistently, or does the student distort it to fit a personal point of view?

5. **The conceptual dimension of reasoning.** All reasoning uses some ides or concepts and not others. These concepts can include the theories, principles, axioms, and rules implicit in our reasoning. Any defect in the concepts or ideas of the reasoning is a possible source of problems in student reasoning.

Feedback to students would note whether their understanding of theories and rules was deep or merely superficial. Are the concepts they use in their reasoning clear ones? Are their ideas relevant to the issue at hand; are their principles slanted by their point of view?

6. **Assumptions.** All reasoning must begin somewhere, must take some things for granted. Any defect in the assumptions or presuppositions with which the reasoning begins is a possible source of problems for students.

Assessing skills of student reasoning involves assessing their ability to recognize and articulate their assumptions, again according to the relevant standards. The student's assumptions may be stated clearly or unclearly; the assumptions may be justifiable or unjustifiable, crucial or extraneous, and consistent or contradictory.

The feedback students receive from teachers on their ability to identify and articulate their assumptions and to meet the relevant standards in regard to their assumptions will be a large factor in the improvement of student reasoning.

7. **Implications and consequences.** No matter where we stop our reasoning, it will always have further implications and consequences. No matter how well we reason, the implications and consequences of any given situation will occur as a reality. Any defect in our ability to accurately determine implications or consequences in any circumstance is a possible source of problems.

The ability to reason well is measured in part by an ability to understand and enunciate the implications and consequences of the reasoning. Students therefore need help in coming to understand both the relevant standards of reasoning out implications and the degree to which their own reasoning meets those standards.

6

When they spell out the implications of their reasoning, have they succeeded in identifying significant and realistic implications, or have they confined themselves to unimportant and unrealistic ones? Have they enunciated the implications of their views clearly and precisely enough to permit their thinking to be evaluated by the validity of those implications ?

8. Inferences. Reasoning proceeds by steps in which we reason as follows: "Because this is so, that also is so or probably so," or "Since this, therefore that" Any defect in such inferences is a possible problem in our reasoning. The ideal is to match inferences with actual implications. Assessment would evaluate students' ability to make sound inferences in their reasoning. When is an inference sound? When it meets reasonable and relevant standards of inferring. Are the inferences the student draws clear? Are they justifiable ? Do they draw deep conclusions or do they stick to the trivial and superficial? Are the conclusions they draw consistent?

If an assignment requires reasoning (and most assignments should), then the elements of thought will be embedded in it. It is important for students to check their use of those elements. Here are some of the key points the students must understand:

1. All reasoning has a PURPOSE.
   • Take time to state your purpose clearly.
   • Distinguish your purpose from related purposes.
   • Check periodically to be sure you are still on target.
   • Choose significant and realistic purposes.

2. All reasoning is an attempt to FIGURE SOMETHING OUT, TO SETTLE SOME QUESTION, TO SOLVE SOME PROBLEM.
   • Take time to clearly and simply state the question at issue.
   • Express the question in several ways to clarify its meaning and scope.
   • Break the question into subquestions.
   • Identify if the question has one right answer, is a matter of mere opinion, or requires reasoning from more than one point of view.

3. All reasoning is based on ASSUMPTIONS.
   • Clearly identify your assumptions and check their validity.
   • Consider how your assumptions are shaping your viewpoint.

4. All reasoning is done from some POINT OF VIEW.
   • Identify your point of view.
   • Seek other points of view and identify their strengths as well as weaknesses.
   • Strive to be fair-minded in evaluating all points of view.

5. All reasoning is based on DATA, INFORMATION, AND EVIDENCE.
   • Restrict your claims to those supported by sufficient data.
   • Search for information that opposes your position as well as information that supports it.
   • Make sure that all information used is clear, valid, accurate, and relevant to the question at issue.

6. All reasoning is expressed through, and shaped by, CONCEPTS AND IDEAS.
   • Identify key concepts and explain them.
   • Consider alternative concepts or alternative definitions of concepts.

7. All reasoning contains INFERENCES by which we draw CONCLUSIONS and give meaning to data.
   • Infer only what the evidence implies.
   • Check inferences for their consistency with each other.

8. All reasoning leads somewhere or has IMPLICATIONS and CONSEQUENCES.
   • Trace your implications and consequences that follow from your reasoning.
   • Search for negative as well as positive consequences.
   • Consider all possible consequences.

Unfortunately many teachers are not familiar with the elements of reasoning and do not realize there are universal standards appropriate to their use. Only a well-designed professional development program can help teachers clearly understand the elements and the standards and how they interrelate.

pp. 1, 6, and 7 of this handout are from "California Teacher Preparation for Instruction in Critical Thinking: Research Findings and Policy Recommendations," March, 1997. This document was prepared by the California Commission on Teacher Credentialing and was made available to conference participants at the 17th International Conference on Critical Thinking and Educational Reform, August 3-6, 1997, sponsored by the Center for Critical Thinking and Moral Critique, Sonoma State University. The rest of the handout is from materials provided at the same conference.

7

Examples and Ideas

Critical Thinking and Active Learning Strategies: Whatever you use to promote critical thinking by the students--case studies, long or short-term group projects, journals or other writing assignments, oral reports, Socratic questioning, debates, simulations, etc.--it is important to design these so that they involve the elements of reasoning and and the intellectual standards and traits. Generally speaking, case studies, projects, simulations, or other assignments should be complex and rich enough so that there is no obvious correct answer or solution, and plausible alternatives exist requiring reasonable support. In most cases, it is probably a good idea to make available checklist assessment forms, lists of questions, or other course-specific guides so students know the critical thinking criteria and standards to be applied to their work. Here are some further general ideas that apply to a variety of courses:

1. **Critical Thinking and the Media:** Have your students find three old copies for the same week of *Newsweek*, *Time*, and *U.S. News and World Report*, and examine their coverage of a story for that week significant to your class. Get the students to compare and discuss the differences, what kind of slanting of the news is revealed, and what other assumptions are apparent. Or get the students to compare the coverage of a newspaper on some one national or international story for one week with the same story done by one of the three newsmagazines. Or have them compare a major network news show with the PBS *NewsHour*, or with NPR radio. Have them write a "letter to the editor." You may wish to prepare course-specific question sheets to guide them in identifying assumptions, points-of-view, differences in information, any inferences suggested, reliability of informed sources, etc.

2. **Critical Thinking and Culture:** Have your students tape their favorite sit-com and critically analyze it. Again, course specific lists of questions may guide them in exploring relevant themes and questions, such as assumptions made about the nature of human beings and personal relationships, what is presented as funny and laughable, what type of humor is used, how violence is portrayed, etc. How does that compare with reality? Or you may have them tape Saturday morning cartoons to see and discuss what messages are being given to children in the U.S. Or get them to tape and analyze critically a typical talk show. Or have them analyze the music and lyrics of a current popular song, film, play, etc. If you're teaching a fall course in an election year, you can address the importance of critical thinking in a democracy: make sure the students are all registered to vote, and have them follow some campaigns or referendum issues. Get the students involved in a campus/community issue.

3. **Critical consumerism:** Have students do some research and comparative shopping for something they have no intention of buying, and evaluate the appeals in store displays, brochures, ads, sales pitches received, etc. How much information relevant to making a sound purchase was obtained? How much difference does it make in the ability to form judgments if one is "shopping" with no desire to buy? Have the students write letters to companies critically assessing their advertising strategies.

4. **Select a classic argument** such as the Declaration of Independence. Focus primarily on its argumentative nature, getting the students to identify the reasoning elements, and evaluate the argument in terms of the intellectual standards and traits.

The Delphi Method is a powerful research tool which identifies a group of experts in a specialized discipline who interact with each other on some problem, pool their expertise, and try to arrive at consensus. Headed by Dr. Peter A. Facione, a group of 46 experts in the field of critical thinking were identified by this method and were able to achieve consensus on quite a few points concerning the nature of critical thinking. For example, here is the consensus statement on the general description of CT arrived at in the Delphi Study [OH change]:

> We understand critical thinking to be purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual consideration upon which that judgment is based. CT is essential as a tool of inquiry. As such, CT is a liberating force in education and a powerful resource in one's personal and civic life. While not synonymous with good thinking, CT is a pervasive and self-rectifying human phenomenon. The ideal critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit. Thus, educating good critical thinkers means working toward this ideal. It combines developing CT skills with nurturing those dispositions which consistently yield useful insights and which are the basis of a rational and democratic society.[1]

---

[1] Peter A. Facione, "Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction," American Philosophical Association report, 1990, Table 1, p. 3.