

Critical Thinking, Research, and Communication of Knowledge in the Teaching and Learning Experiences at Drake University:

A report from the faculty study group established as part of a university self study

September, 2005

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Drake students will learn to engage in critical inquiry.

The tools of critical thinking take many forms. Among them are the use of formal reasoning (logic), and the careful examination of assumptions, beliefs and values. Both of these facilitate the construction and evaluation of reasoned arguments, which are necessary components of exploration and debate in all Areas of Inquiry.

Courses listed under this area should examine critical thinking as an intellectual practice. Examples include, but are not limited to, courses that examine logical reasoning, scientific and mathematical methods and textual interpretation.

(from the Drake Curriculum statement)

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In this age of new paradigms for college teaching (Campbell & Smith, 1997), professors *and students* are asked to pursue active, student-centered, learning. The model of the professor as sage and lecturer, as the purveyor of knowledge, and the student as receiver, note taker, and test taker is being replaced by various models of professor as facilitator and student as active collaborator or semi-independent pursuer of personally meaningful knowledge that is applied to the consideration of real world questions and problems. Students are now being asked to *think and apply*, not merely to remember and repeat.

In applying this new paradigm, professors and students must change teaching and learning practices. Two fundamental shifts in college teaching must take place: students must be taught/learn to think critically, to do some of their own research, and to communicate their new knowledge; professors and administrators must evaluate teaching effectiveness not by describing such “inputs” as professorial expertise or quality university resources but by measuring such “outputs” as student achievement and professional success of graduates.

The teaching of critical thinking requires that we respect, as well as instruct, our students. Harvey Siegel (Siegel, 1988) lists justifying considerations. Critical Thinking instruction:

1. “honors students’ demand for reasons and explanations,
2. deals with students honestly...,,
3. recognizes the need to confront students’ independent judgment... ,
4. [supports intellectual] self-sufficiency and preparation for adulthood...,
5. [offers] initiation into the rational traditions, and ...
6. [recognizes] the demands on education that result from the requirements for an educated citizenry living in a democracy.

Thus Drake University has established a “Study Group” to review relevant literature and to offer ideas about “Critical Thinking, Research, and Communication of Knowledge.” In a general meeting with other Drake University Study Groups (on “Collaborative and Responsible Learning,” “Responsible Global Citizenship,” and “Reflective Practitioners”), we agreed to approach our tasks by focusing on concept definitions, pedagogical models, and evaluation rubrics.

Definitions of Critical Thinking

“In the broadest sense, a critical thinker is a person who can independently assess the evidence and logic supporting a proposition or claim. A critical thinker does not accept events and decisions merely on the basis of authority or tradition. She demands that actions be supported by argument and that conclusions be justified by reasons. The critical thinker seeks explanations and judges their validity by her own lights.”
(Bybee, 2004, p 55.)

Perhaps the most comprehensive definition of critical thinking we found is offered by Michael Scriven and Richard Paul (2004).

Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or 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, and fairness.

It entails the examination of those structures or elements of thought implicit in all reasoning: purpose, problem, or question-at-issue; assumptions; concepts; empirical grounding; reasoning leading to conclusions; implications and consequences; objections from alternative viewpoints; and frame of reference. Critical thinking - in being responsive to variable subject matter, issues, and purposes - is incorporated in a family of interwoven modes of thinking, among them: scientific thinking, mathematical thinking, historical thinking, anthropological thinking, economic thinking, moral thinking, and philosophical thinking.

Critical thinking can be seen as having two components: 1) a set of information and belief generating and processing skills, and 2) the habit, based on intellectual commitment, of using those skills to guide behavior. It is thus to be contrasted with: 1) the mere acquisition and retention of information alone, because it involves a particular way in which information is sought and treated; 2) the mere possession of a set of skills, because it involves the continual use of them; and 3) the mere use of those skills ("as an exercise") without acceptance of their results. . .

Critical thinking is that mode of thinking - about any subject, content, or problem - in which the thinker improves the quality of his or her thinking by skillfully taking charge of the structures inherent in thinking and imposing intellectual standards upon them.

Diane F. Halpern (2003) in her book, *Thought & Knowledge: An Introduction to Critical Thinking*, defines critical thinking as:

“the use of those cognitive skills or strategies that increase the probability of a desirable outcome. [The term *critical thinking*] is used to describe thinking that is purposeful, reasoned, and goal directed—the kind of thinking involved in solving problems, formulating inferences, calculating likelihoods, and making decisions, when the thinker is using skills that are

thoughtful and effective for the particular context and type of thinking task.”

Halpern builds her discussions around four simple questions that provide a “framework for thinking.”

1. What is the goal? (Critical thinking is purposeful)
2. What is known? (Critical thinking is informed)
3. Which thinking skills will get you to your goal? (Critical thinking is planned and complex)
4. Have you reached your goal? (Critical thinking should be productive)

Ways of Knowing

Critical thinking can be compared and contrasted with other ways of knowing. Fraenkel and Wallen (2005), for example, suggest hierarchical sorts of knowing (renamed and expanded here):

1. Intuition
2. Personal Experience
3. Social Agreement (Common Knowledge)
4. Expert Opinion
5. Logic (Critical Thinking)
6. Scientific Method

Critical thinking can be seen as more accurate and reliable than intuition, which is not necessarily based upon evidence; personal experience, which is always limited and subjective; common knowledge, which is subject to historical and cultural influence; or expertise, which can be about power and influence. Critical thinking involves logical processing and data gathering and is closely related to formal scientific research that employs hypothesis testing.

Summary Aspects of Critical Thinking:

When one looks at various definitions and discussions of critical thinking, it seems that a synthesis description involves seven steps:

1. Clear definition of a question or problem
2. Gathering of relevant information
3. Conscious use of organizing concepts, principles or theories, and identified assumptions or hypotheses
4. Logical analysis using inductive and deductive processes
5. Creative consideration of alternative interpretations and conclusions
6. Explication and communication of both conclusions and methods
7. Realization that results are always tentative and subject to revision

Critical thinking should emphasize that belief systems, power structures, existing hierarchies and views of the dominant culture are open to challenge, critique and investigation. As Weinstein (1992) argues, "self-correction is at the heart of critical thinking . . . [and] requires that the inquirer use the inquiry process reflexively, reflecting back upon itself as an ongoing critique of the procedures employed." Thus, critical thinking demands that the inquirer and her sources be open to scrutiny. Weinstein asserts that this self-reflexivity will help "expose aspects that require alteration in the name of perfecting the inquiry itself."

Critical thinking is universal in that it can be used in all subject areas, is learnable in that it can be modeled as a process of using data in a logical manner, and is applicable in that its results can guide further thought and behavior. Critical thinking is contrasted with mere retention or skill building and with other modes of thought (such as intuition) that do not rely upon evidence and analysis.

Pedagogical Models for Teaching Critical Thinking

It is apparent that, despite increased awareness of the importance of critical thinking, including the (U. S.) National Educational Goals Panel (1991) goal that, "The proportion of college graduates who demonstrate an advanced ability to think critically, communicate effectively, and solve problems will increase substantially" and the adoption of critical thinking general education requirements at Drake University, many students do not possess or use critical thinking skills (Izawa and Hayden, 1993; Neubert and Binko, 1992; Asimov, 1989; etc.) Drake faculty can not assume that our students already possess critical thinking skills or that they will naturally or automatically gain them as they progress through general education and disciplinary coursework. Critical thinking must be explicitly taught and learned, either in specific courses or "across the curriculum." Such teaching and learning will require appropriate pedagogies and will need to be supported by appropriate feedback and evaluation techniques.

Critical thinking is not learned automatically; most college students need explicit CT instruction and guided practice in applying CT skills. Some college faculty may need explicit training in the teaching, evaluating, and supporting of student CT strategies.

CT skill learning and practice can be embedded into regular course work by providing direct instruction in CT and by encouraging students to purposefully select and apply specific CT strategies to evaluate information: to select appropriate data and ideas; to organize and synthesize information, to formulate inductions, deductions, and hypotheses; to test ideas and hypotheses, to remain open to alternative ideas and hypotheses; and to reflect on their CT processes.

The teaching and memorization of "right answers" does not develop CT skills.

The teaching and learning of critical thinking concepts and skills can be approached in many ways. The following ideas and pedagogical models may be useful.

Explicit Teaching of Critical Thinking Skills

Halpern (2003) sees the acquisition and use of critical thinking as a teachable set of skills and identifies a four part pedagogical model for teaching/learning critical thinking processes:

1. Explicitly learn the skills of critical thinking
2. Develop the disposition for effortful thinking and learning
3. Direct learning activities in ways that increase the probability of transcontextual transfer (structure training)
4. Making cognitive monitoring explicit and overt

Halpern has written a basic textbook (mentioned above) and an accompanying student exercise book (Halpern, 2003b) that are appropriate for personal use or for use in critical thinking courses. Her approach includes a general study of thinking skills and specific study of memory, the relationship between thought and language, inductive and deductive reasoning, argumentation, hypothesis testing, probability, decision making, problem solving, and creative thinking. This committee recommends *Thought & Knowledge, An Introduction to Critical Thinking* and its accompanying workbook as excellent resources (see excerpt in Appendix).

In work similar to Halpern's but written in much briefer and simpler terms, the Foundation for Critical Thinking offers the "Miniature Guide Series," with a set of "Critical Thinking Competency Standards" (Paul & Elder, 2005). They identify "four foundational sets of concepts" and twenty-five "Competencies of Critical Thinking" (see outline in Appendix). The short guides cover most topics and are recommended as good resources.

Both the Halpern text and the Miniature Guides Series are available on Library Reserve in Cowles Library.

Embedded Teaching of Critical Thinking Skills

The teaching and learning of critical thinking can be part of all coursework and can be embedded into traditional classroom methods.

Reading and CT

Richard Mayer and others (Mayer, 1984, 1999; Cook & Mayer, 1988) have suggested that there are three types of readers: those who pass over the words without gathering facts or remembering much information, those who remember many facts and details but are unable to apply what they have read, and those who identify and remember the main ideas and are able to apply what they have read to new situations. The differences between the three types of readers are in the way they mentally process what they read. Critical readers must (a) select the important information, (b) organize the information selected, and (c) integrate the new information with what

they already know. Selection improves short-term memory; organization improves understanding and long term memory; and integration and reflection improves the ability to apply the information.

Professors should help/ask students to identify key ideas and information, to see how data and ideas fit together, and to evaluate new information in light of what is already known. Reading is a “critical” activity that must be actively addressed. Classroom lectures, discussions, and assignments should require students to review, process, and integrate what they read.

Lectures and CT

While new paradigms of teaching and learning often suggest alternative, more active, student-centered approaches than traditional lectures, almost all professors will spend at least some class time talking and conveying knowledge as they understand it. Lectures, like reading assignments, are primary means of conveying information and ideas. There are many classroom techniques that foster critical thinking in students while listening to lectures, taking notes, and reflecting on lecture content (see standard textbooks in educational psychology: Woolfolk, 2004; Slavin, 2006).

Lecturing is often termed *direct instruction* and is most effective when combined with active critical thinking opportunities (either individual or small group):

1. Stop the lecture and ask students to identify key ideas just expressed.
2. Invite questions about content. Ask questions.
3. Explicitly describe your own thinking about key ideas and how they relate to each other and to course objectives, etc.
4. Invite students to reflect on whether the data and ideas are new, how they fit with old ideas, and how the new information might be applied.
5. Explicitly help students to organize key data and ideas and to see how new information can be applied to their world.
6. Follow up direct instruction with active learning assignments that require students to process the new information critically.
7. Explicitly teach and discuss critical thinking processes as means to process, evaluate, remember, and apply new information.

Classroom Discussion and Socratic Questioning

Christopher Phillips, in his *Socrates Café* (2001), describes “a number of keen minded professors” he admired who employed “...a version of the Socratic method to engage us in dialogue. Rather than try to drill in us ‘the right answer,’ they tried to help us learn for ourselves that there may be many possible ‘right answers,’ but that it was up to us to support our views with cogent, logical, well-supported reasons.”

Again, standard textbooks suggest that instructors model critical thinking processes and that discussion questions focus on identifying key information, examining critical thinking processes, aligning new information with existing ideas (or changing existing ideas), and consideration of applications.

Guided Cooperative Learning

It is often useful to divide students into small groups (teams of 3-5 students seem to work best). Groups can be directed to work toward content mastery of a particular reading, to share understandings of different readings, to investigate an area of interest, or to solve a particular problem. Groups share information within the group and often make a group presentation to other groups or the whole class. Group and/or individual papers are often assigned. Many experts recommend both group and individual assignments and testing to prevent some students from failing to contribute.

Groups can be encouraged to use critical thinking skills, and assignments can be structured to require active critical processing.

CT in an Age of Postmodernism

Mark Weinstein (1992) of the Institute for Critical thinking at Montclair State University has advocated for the importance and centrality of critical thinking and has addressed questions of teaching CT in a time of postmodern thought. He sees general education as supporting the “multi-logical issues” of postmodernism while disciplinary education, especially in the sciences and mathematics, often accepts Enlightenment (modern) positivism. “Modernism includes the thesis that a unified theoretic frame will become increasingly available as a support for inquiries of all sorts, and postmodernism is typified by the rejection of the claim to such an underlying unity and an emphasis on the divergence of foundational and methodological elements....”

Weinstein sees the teaching of critical thinking as “an attempt to construct a sense of rationality [general education] appropriate to conceptual universe of competing frameworks [disciplinary education].” He sees CT as maintaining the “centrality of reasonableness” and the “central role of dialogue” while employing theories of

argumentation and what he calls “informal logic.” “The diversity of frames need not rule out the possibility of rationality...[because] the variety of frames does not imply their equal validity.” Reason and comparative deliberation are CT tools for “the assessment of alternative frames.” Argumentation and informal logic involve examination of “foundational concepts, assumptions, values, purposes, experiences, implications, and consequences.” Critical thinking is the setting of criteria by which we evaluate alternative views, and the teaching/learning of CT is the essential general education task that both supports and critiques multiple frames (postmodernism).

The pedagogical model of CT, as suggested by Weinstein, involves four aspects:

1. Students must be brought to rational acceptance of the information they learn.
2. Students must see through the details of whatever they learn to principles that can be applied in new learning situations.
3. Education must help student to see the rational grounds of the disciplines they study.
4. Education must help students to make reasoned judgments about the complex, multi-logical issues that characterized the concerns of contemporary societies.”

Critical thinking in a postmodern world, then, involves transcending disciplinary frameworks to consider epistemological foundations and to make reasoned judgments in light of reasonable and contemporary standards. CT does not exclude multiple frames and views. It does, however, require the clarification of assumptions and the use of information and reason.

Evaluation Rubrics for Critical Thinking

We offer two useful rubrics that professors might use to create a consistent pattern of content, pedagogy, and evaluation. We expect that professors will understand the differences between “formative” evaluation (used to inform and redirect learning activities) and “summative” evaluation (used for final judgments in determining grades or evaluating program effectiveness). The CT Study Group has recommended two “rubrics”(below) offering evaluation/scoring strategies for providing student feedback on CT use. Our own synthesis of CT skills and expectations suggests faculty provide evaluative feedback to students based on how well student work meets the following expectations:

The Work Under Evaluation:

1. Identifies central problem, arguments or theses
2. Uses appropriate evidence and facts
3. Identifies assumptions
4. Organizes evidence and arguments clearly
5. Uses sound logic to develop inductions, deductions, hypotheses, conclusions
6. Specifically identifies thought processes and critical procedures used
7. Reflects on conclusions and alternative possibilities
8. Suggests applications and limitations

The Insight Assessment group offers online information and services regarding CT. “The Holistic Critical Thinking Scoring Rubric” (Facione & Facione, 1994) is reproduced below and offers a simplified approach to CT evaluation.

Holistic Critical Thinking Scoring Rubric	
Facione and Facione	
4	Consistently does all or almost all of the following: Accurately interprets evidence, statements, graphics, questions, etc. Identifies the salient arguments (reasons and claims) pro and con. Thoughtfully analyzes and evaluates major alternative points of view. Draws warranted, judicious, non-fallacious conclusions. Justifies key results and procedures, explains assumptions and reasons. Fair-mindedly follows where evidence and reasons lead.
3	Does most or many of the following: Accurately interprets evidence, statements, graphics, questions, etc. Identifies relevant arguments (reasons and claims) pro and con. Offers analyses and evaluations of obvious alternative points of view. Draws warranted, non-fallacious conclusions. Justifies some results or procedures, explains reasons. Fair-mindedly follows where evidence and reasons lead.
2	Does most or many of the following: Misinterprets evidence, statements, graphics, questions, etc. Fails to identify strong, relevant counter-arguments. Ignores or superficially evaluates obvious alternative points of view. Draws unwarranted or fallacious conclusions. Justifies few results or procedures, seldom explains reasons. Regardless of the evidence or reasons, maintains or defends views based on self-interest or preconceptions.
1	Consistently does all or almost all of the following: Offers biased interpretations of evidence, statements, graphics, questions, information, or the points of view of others. Fails to identify or hastily dismisses strong, relevant counter-arguments. Ignores or superficially evaluates obvious alternative points of view. Argues using fallacious or irrelevant reasons, and unwarranted claims. Does not justify results or procedures, nor explain reasons. Regardless of the evidence or reasons, maintains or defends views based on self-interest or preconceptions. Exhibits close-mindedness or hostility to reason.
<small>(c) 1994, Peter A. Facione, Noreen C. Facione, and The California Academic Press. (See cover page for conditional permission to duplicate.)</small>	

The Teaching for Thinking Project FIRE Rubric

The Minnesota State Colleges Teaching for Thinking Project, under the direction of Joel Peterson, has produced a "Checklist of Habits of Mind for Effective Thinking" organized under the acronym F. I. R. E.

**MINNESOTA COMMUNITY COLLEGES'
CHECKLIST OF HABITS OF MIND FOR EFFECTIVE THINKING**

As Described in The Minnesota Transfer Curriculum's
Four Critical Thinking Competencies and listed under the acronym F.I.R.E.

I. FACTUAL THINKING: *to gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.*

- 1 ___ A. Seeking factual clarity, accuracy, and fairness
- 2 ___ B. Observing reliably in detail and breadth
- 3 ___ C. Using effective record and recall strategies
- 4 ___ D. Maintaining alertness for patterns

II. INSIGHTFUL THINKING: *to imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which can give alternative meanings or solutions to given situations or problems.*

- 5 ___ A. Seeking the larger context
- 6 ___ B. Seeking alternative perspectives
- 7 ___ C. Relating the known to the unknown.
- 8 ___ D. Seeking alternative means of expression
- 9 ___ E. Using questions as probes
- 10 ___ F. Applying learning to self-understanding
- 11 ___ G. Drawing lessons from experiences

III. RATIONAL THINKING: *to analyze the logical connections among the facts, goals, and implicit assumptions relevant to a problem or claim and to generate and evaluate the implications that follow from them.*

- 12 ___ A. Identifying structure and order
- 13 ___ B. Formulating hierarchies and rules governing patterns
- 14 ___ C. Identifying and evaluating arguments
- 15 ___ D. Constructing arguments
- 16 ___ E. Working with rules in order to reach goals
- 17 ___ F. Judging strength of evidence
- 18 ___ G. Making awareness of thinking strategies explicit (metacognition)

IV. EVALUATIVE THINKING: *recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses and evaluations made by ourselves and others.*

- 19 ___ A. Maintaining sensitivity to values -- individual and collective
- 20 ___ B. Applying values to problems
- 21 ___ C. Respecting individual and collective differences
- 22 ___ D. Being willing to reflectively choose to take risks and make commitments
- 23 ___ E. Valuing your individual self and collective identity

Conclusions and Implications for the Drake Curriculum

The Critical Thinking Study Group offers the following recommendations. We do not assume that the university would (or should) adopt all (or any) of our suggestions, but we believe the university community would do well to explore the ideas below:

1. Faculty and students can learn more about CT by exploring Diane Halpern's book, *Thought & Knowledge: An Introduction to Critical Thinking* (available on Cowles Library Reserve) and the "Thinker's Guide Series" of booklets from The Critical Thinking Community (available on Cowles Library Reserve and online at <http://www.criticalthinking.org/resources/tgs/>). Other excellent resources are also available.
2. The university could sponsor a series of faculty CT workshops.
3. Expanded requirements could be developed for approval of courses satisfying CT outcomes in the Drake Curriculum. Faculty could be asked to report on how CT goals are facilitated and met.
4. CT instruction and application could become a required part of all First-Year Seminars. FYS faculty could be asked to attend CT workshops and to report on how CT goals are facilitated and met.
5. Specific CT courses could be developed and required as part of the Drake Curriculum.
6. The university could create a "Critical Thinking Examination" procedure (either written or oral) or require Student Portfolio of Critical Writings be submitted. Such procedures might best be used at the end of the sophomore or beginning of the junior year, thus providing formative information for needed additional work.
7. A new set of Junior Seminars could be established in discipline areas. The seminars would explore and reinforce general methods of critical thinking and begin in-depth study of critical procedures used within the particular discipline.
8. Each academic program could develop a critical thinking rubric that defines their majors' expected pattern of critical and ethical judgments and guides evaluative feedback to students. That rubric could be reviewed by the University Curriculum Committee.

We believe that the Critical Thinking AOI requirement as it is currently constituted does not fully provide for student mastery of CT skills. Some members of the committee believe that even more transformative change is necessary (for further exposition on this topic, see <http://www.lib.drake.edu/page.php?id=39> or Appendix 3).

The committee notes that it has focused on critical thinking though also charged with exploring ideas of research and the communication of knowledge. While we believe that critical thinking is the necessary foundation of scholarly research and effective communication, more university reflection must be directed toward these topics in the near future. Time did not allow us to go farther during our brief summer study time together.

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APPENDIX 1: Chapter One from *Thought & Knowledge* by Diane Halpern
(complete text available in Cowles Library)

APPENDIX 2: The summary appendix from *Critical Thinking Competency Standards* by Richard Paul and Linda Elder

(complete series available in Cowles Library).

Information can be found online at <http://www.criticalthinking.org/resources/tgs/>

APPENDIX 3: Critical Thinking and the Drake Curriculum: Implications

Some members of the committee offer a more transformative analysis and set of recommendations for the Drake Curriculum. Those ideas are presented here and online at <http://www.lib.drake.edu/page.php?id=39>

Critical Thinking and the Drake Curriculum: Implications

(a more transformative analysis and set of recommendations for the Drake Curriculum)

Given the research and discussions engaged in by the Study Group, as well as the definitions we offered earlier, the Study Group finds this statement to be both too limited (in its emphasis on the "tools" of critical thinking), as well as exclusive of some very important concepts (such as the ability to synthesize intellectual arguments and content from a wide array of disciplines) that are at the heart of what should constitute a critically-engaged, educated individual. Clearly, the implication is that a course touches on any one aspect (logical reasoning, textual interpretation, et al.) of CT, it can reach "approved status" for this AOI; this runs counter to our research, which suggests that a critically-engaged individual must be capable of using many "tools" to reason and function effectively.

Also, it should be noted that the way any given Drake student "satisfies" the AOI is by the tried-and-true method of "taking a class and getting it out of the way." Thus, a student could take a course from the AOI list in their first semester at Drake, and be "Drake certified" as a critical thinker; this approach has a number of limitations, but of primary interest is the implication that the remainder of a Drake student's academic career is unconnected to the development of one's critical faculties.

Let us not flinch at what is at stake here. Critical Thinking is the "liberal art" sine qua non. Possession of the ability to think and communicate critically is one undeniable hallmark of an educated individual. Re-energizing Drake's thinking and acting towards CT is, and should be viewed as, an indispensable step towards re-energizing the Drake curriculum.

Recall what CT really is: It is multi-disciplinary, it requires synthesis, and it is cumulative. It is multi-disciplinary in that, as individuals, it calls upon all of our intellectual faculties as well as our bases of knowledge (in the existing Drake Curriculum, for example, CT is closely related (in fact if not in practice) to areas such as Information Literacy, and Values & Ethics; but, it relates to all other areas, as well (for example, how can one argue about past practices without knowledge of History and historical practices?)

It requires synthesis: bringing together what one has learned, in

whatever context (academic or experiential or whatever) to examine or construct an argument. And it is cumulative: I am better able to engage the world critically today than I was yesterday, because I have read more, learned more, thought more.

Therefore, though this is somewhat beyond the purview of the Study Group, we feel we would be remiss if we did not encourage and endorse a more holistic approach.