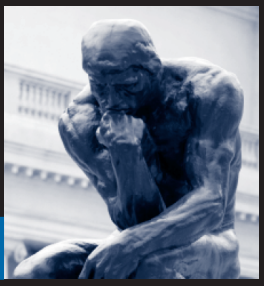
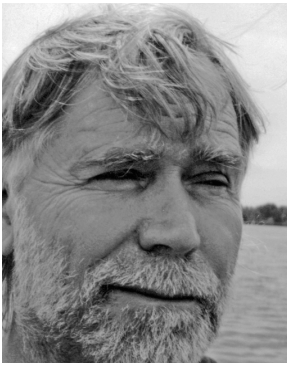
CRITICAL THINKING

2012



The 32nd Annual
International Conference
On Critical Thinking
And Educational Reform

Foundation for Critical Thinking



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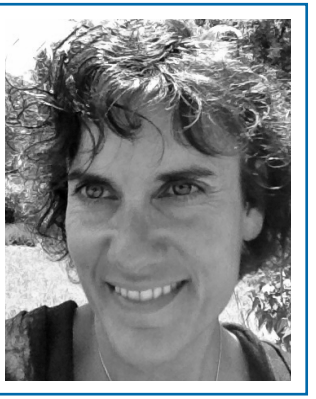

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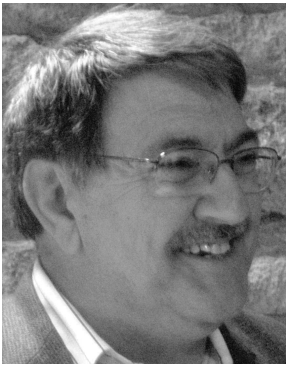

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Proceedings of the 32nd Annual International Conference on Critical Thinking and Educational Reform

July 21 - 26, 2012

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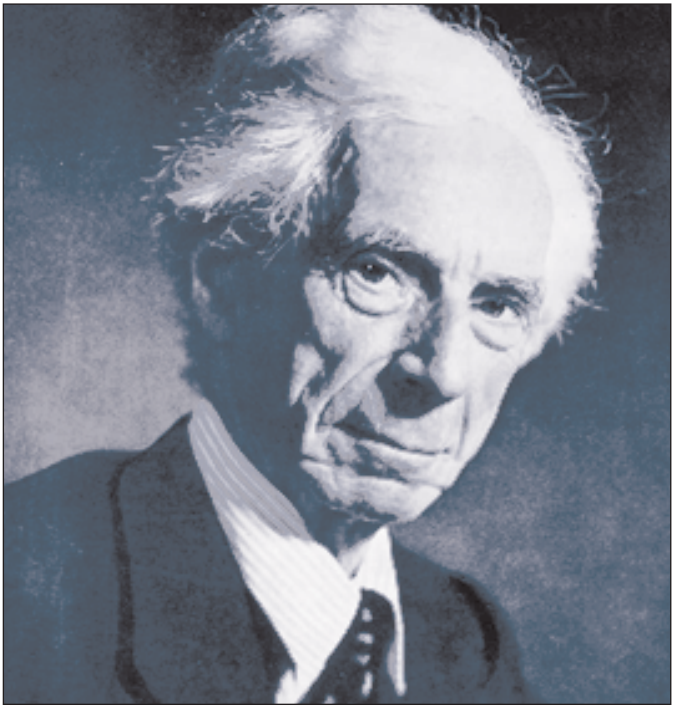

Bertrand Russell

The proceedings of the 32nd International Conference on Critical Thinking are dedicated to the memory of Bertrand Russell, whose commitment to the advancement of critical societies was lifelong and enduring.

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Table of Contents

Introduction to the Conference

Critical Thinking: What it is and Why it is Essential to Teaching and Learning

Conference Overview

Focal Session Presenters 36
Bertrand Russell Distinguished Scholars Series..... 39
Bertrand Russell Distinguished Scholars for the 32nd International Conference..... 42

Conference Program

Conference at a Glance 44
Preconference Schedule 48
Conference Schedule 49
Conference Focal Sessions Program (The Fellows Lead the Way) 51
Bertrand Russell Scholars Series Format and Schedule 55
Conference Focal Sessions Descriptions..... 56
Concurrent Sessions Program 68
Concurrent Sessions Presenters' Contact Information 80

History and Outreach

Theoretical Development, Scholarship and Research 82
Conferences, Academies and Workshops 83
Onsite Professional Development Programs 83
Testing and Assessment Tools in Critical Thinking 83
Publication and Dissemination of Books and Instructional Materials ... 85
Dynamic Website - Free Resources For Educators At All Levels 85
Translations of our Work – 25 Languages 85
Institutions Using Our Approach – A Sampling 85

General Conference Information

Important Announcements 94
Conference Academic Credit 98
Foundation for Critical Thinking Books and Guides 99
Conference Announcement 101
Restaurant List 102
What Previous Attendees Say 104

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From Past Conferences

Henry Steele Commanger
at the 1st International

Neil Postman
at the 2nd International

Edward Glaser
at the 4th International

Carol Tavris
at the 7th International

David Perkins
at the 7th International

Matthew Lipman
at the 10th International

George Hanford
at the 10th International

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Introduction to the Conference

The Center and Foundation for Critical Thinking have together hosted critical thinking academies and conferences for more than three decades. During that time, we have played a key role in defining, structuring, assessing, improving and advancing the principles and best practices of fairminded critical thought in education and society. Our annual conference provides delegates from around the world a unique opportunity to improve their understanding of critical thinking, as well as their ability to foster it more substantively in the classroom and in all aspects of their work and life.

Throughout our work we emphasize the importance of fostering a substantive conception of critical thinking. Such a conception not only highlights the qualities of the educated person, but also implies the proper design of the educational process. There are essential minimal conditions for educating minds. These entail modes of instruction that facilitate development of the standards, abilities, and traits of the educated person. For example, when history is substantively taught, it is taught as historical thinking; the major goal: to give students practice in thinking historically (analyzing, evaluating, and reconstructing historical interpretations and problems). As a result, students learn not only how to read historical texts with insight and understanding, but also how to gather important facts and write well-developed historical essays of their own. Through this mode of instruction, students come to see the significance of historical thinking both in their own lives and in the life of culture and society. History becomes — in such a transformed mind — not random facts from the past, but a way to reason about the past in order to make intelligent decisions in the present, and reasonable plans for the future.

When students are taught using a substantive concept of education as the guide to the design of instruction, they learn to initiate, analyze, and evaluate their own thinking and the thinking of others (within all the content areas they study). Doing so, they come to act more reasonably and effectively in every part of life. They are able to do this because they have acquired intellectual tools and intellectual standards essential to sound reasoning and personal and professional judgment. Self-assessment becomes an integral part of their lives. They are able to master content in diverse disciplines. They become proficient readers, writers, speakers, and listeners. They become reasonable and fairminded persons capable of empathizing with views with which they disagree. They are able to use their reasoning skills to contribute to their own emotional life and transform their desires and motivations accordingly. They come to think, feel, and act effectively and with integrity.

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All of our work and thus all of our conference sessions are based on this substantive conception of critical thinking. We are committed to a concept that interfaces well within the disciplines, that integrates critical with creative thinking, that applies directly to the needs of everyday and professional life.

All conference sessions are designed to converge on basic critical thinking principles and to enrich a core concept of critical thinking with practical teaching and learning strategies.

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Critical Thinking: What it is and Why it is Essential to Teaching and Learning*

By Richard Paul

Introduction to the Logic of the Conference

The principal goal of the conference is to foster a learning atmosphere that enables participants to grasp three dimensions of critical thinking: theory of critical thinking (in general), pedagogy of critical thinking, and theory of application of critical thinking to every domain of human life. The conference theory that follows illuminates these three dimensions and some of the challenges generated by their interrelationships.

Critical Thinking (in general)

Critical thinking entails a body of concepts and principles which, when internalized and practiced, enable people to raise their thinking to a higher level. Critical thinking, in one form or another, has been implicit in the thinking of some people from the earliest days of homo sapiens (the species that thinks). Once thinking was raised to the level of consciousness, it followed that at least some people would begin to think consciously about thinking (noticing its sometimes "flawed" nature, for example). Yet we are still a considerable distance from the emergence of homo "criticus" sapiens (the species that thinks critically). Critical thinking has not yet become a dominant cultural value, nor have high levels of critical-mindedness (criticality) become a common personal attribute.

Why Critical Thinking?

Humans live in a world of thoughts. We accept some thoughts as true. We reject others as false. But the thoughts we perceive as true are sometimes false, unsound, or misleading. And the thoughts we perceive as false and trivial are sometimes true and significant.

The mind doesn't naturally grasp the truth. We don't naturally see things as they are. We don't automatically sense what is reasonable and what is unreasonable. Our thought is often biased by our agendas, interests, and values. We typically see things as we want to. We twist reality to fit our preconceived ideas. Distorting reality is common in human life. It is a phenomenon to which we all, at times, unfortunately fall prey.

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* Much of this article was modified from a paper to be published in an upcoming edition of *Inquiry: Critical Thinking Across the Disciplines.*

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Each of us views the world through multiple lenses, often shifting them to fit our changing feelings. In addition, much of our perspective is unconscious and uncritical and has been influenced by many forces – including social, political, economic, biological, psychological, and religious influences. Social rules and taboos, religious and political ideologies, biological and psychological impulses, all play a role, often unconscious, in human thinking. Selfishness, vested interest, and parochialism are deeply influential in the intellectual and emotional lives of most people.

What is Critical Thinking?

To live successfully in this world of power, propaganda, manipulation, and exploitation, we need an orientation that enables us to exercise oversight on thinking (on our thinking and that of others). We need a systematic way to further sound thinking and limit unsound thinking. We need to take command of our cognitive processes in order to determine in a reasonable way what thinking to accept and what to reject. Critical thinking is that process, that orientation, and in the finest cases, that way of living. As William Graham Sumner put it, more than a hundred years ago:

> [Critical thinking] is "the examination and test of propositions of any kind which are offered for acceptance, in order to find out whether they correspond to reality or not. The critical faculty is a product of education and training. It is a mental habit and power. It is a prime condition of human welfare that men and women should be trained in it. It is our only guarantee against delusion, deception, superstition and misapprehension of ourselves and our earthy circumstances."

Regarding Definitions of Critical Thinking

There is no categorical way to express (in one definitive definition) the ideal of critical thinking. Nevertheless, one can find a number of helpful ways to comment on what that ideal is. Here is one from Webster's Dictionary of Synonyms:

> "Critical, when applied to persons who judge and to their judgments, not only may, but in very precise use does, imply an effort to see a thing clearly and truly so that not only the good in it may be distinguished from the bad and the perfect from the imperfect, but also that it as a whole may be fairly judged or valued."

Of course, this core "definition" though a fair statement of the ideal of critical thinking, does not capture an important subset of critical thinkers, and that is those we term "weak sense or sophistic critical thinkers"; those who develop skills

of argumentation and persuasion to a high level, but not with the view to seeing things as they are, fairly and truly, but rather with the view to gaining an advantage over others, of advancing their own interests or the interests of the social, political, religious, or national groups of which they are members. Institutions that are centers of force and power routinely recruit persons of high intelligence and intellectual skill to maintain their advantage in the struggle for power in the world. Intellectual skills for "hire" is the mundane reality that dominates the everyday use of reason. Intellectually skilled managers of "the herd" (the large mass of uncritical thinkers) are common. Fairminded thinkers are rare at every level and in every context. This is more apparent if one examines the history of thinking (noting especially how commonly skilled thought is egocentrically or sociocentrically motivated). Many accounts of critical thinking ignore (and therefore confuse) the ideal form of critical thinking (skilled fairminded thinking) with its most common uses for hire (skilled one-sided sophistic thinking). Consider, for example, those lawyers, advertisers, bankers, financiers, and corporate CEOs at the service of "big money" in society. For them, truth in the public interest is not a goal of thought. The "truth" that serves their private (vested) interest is.

What are the Forms and Manifestations of Critical Thinking?

Critical thinking concepts encompass a large network of interrelated ideas. To understand one such idea often entails understanding other ideas. As such, critical thinking concepts are best understood in relationship to each other and in contrast to their opposites. At the Foundation for Critical Thinking, we have focused on concepts that are non-technical (and are thus available in any well-researched dictionary of the English language). Furthermore, we have focused on concepts of use to those interested in an explicit, multi-dimensional, Socratic, and systematic approach to critical thinking, rather than on approaches that are implicit, sophistic, one-dimensional, or episodic.

The concept of critical thinking, comprehensively viewed, is, then, a rich, variegated, and to some extent, open-ended concept. At its base is a foundational set of meanings presupposed in all its varied uses. Its multiplicity is given by the fact that one can pursue the improvement of thinking through somewhat different studies, with somewhat different scopes, and focused somewhat on different things.

Thus, critical thinking may be implicit in human thought, or explicit. It may be fostered systematically, or engaged in only episodically. It may foster selfishness or fairmindedness. It may be global (multi-dimensional, broad, generalizable) or specialized (one-dimensional, narrow, intradisciplinary).

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Though we recognize all these forms and manifestations of critical thinking, we still believe the approach most essential to the non-specialist is that which is most functional across all disciplines and domains. What is more, even specialists are well-advised to master the foundations of global Socratic critical thinking, since specialists need to learn to think effectively across disciplines and other domains of thought (for example, to correct for the biases and limitations of their discipline).

Throughout the conference we shall distinguish between the concept of critical thinking (in general) and its forms, frameworks, and manifestations (which account for its diversity).

The history of critical thinking illuminates a variety of important distinctions that can help us create a map of the field. For instance, as previously mentioned, the core concept of critical thinking is explicitly or implicitly accepted among critical thinking scholars. This concept provides the ultimate basis upon which any framework for critical thinking should be built.

Beyond the most basic conception, there are a considerable number of forms of critical thinking. A form of critical thinking is any system of thought that reflects or entails critical thinking. Forms of critical thinking would include subjects, professional fields, disciplines, indeed any domain of thought, insofar as they are expressly built upon critical thinking. Forms of critical thinking may be narrow (as in highly specialized fields) or broad (as in general subjects such as science, literature, history, and so forth).

As scholars have proposed organized ways to analyze, assess, and reconstruct forms of thinking they have devised a variety of frameworks for doing so. The result is a wide variety of ways, with multiple emphases and insights, of approaching critical thinking. We shall view forms of thought in a variety of ways, the most important of which we approach through "polarities" of critical thought.

When people think within any given framework for critical thinking, their thinking falls somewhere within each of these polarities (think of each as a continuum):

a. global versus specialized critical thinking
b. systematic versus episodic critical thinking
c. fairminded versus sophistic critical thinking
d. explicit versus implicit critical thinking
e. emancipatory versus constrained critical thinking
f. ordinary language versus technical language

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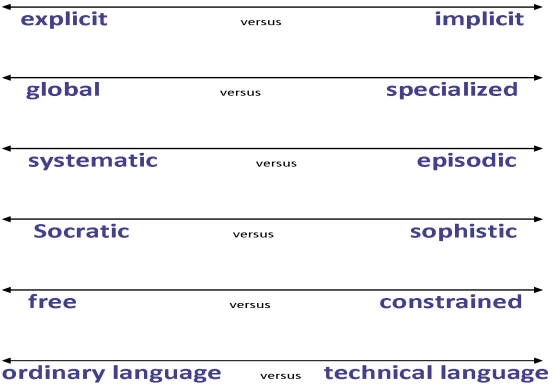
Assessing Frameworks for Critical Thinking Using Six Polarities



These polarities of critical thinking can be briefly elaborated as follows:[1]

global critical thinking (multidimensional, interdisciplinary, transdisciplinary, generalizable): the development of intellectual concepts and principles that can be used across disciplines, subjects, or domains. Global critical thinking is comprehensive and multilogical. Examining assumptions for justifiability is a global critical thinking skill relevant to thinking well within all subjects and disciplines.

specialized critical thinking (nonglobal, intra-disciplinary, one-dimensional): the development of intellectual concepts and principles that enable one to evaluate and improve thinking within a given discipline, domain or specialization. Specialized critical thinking concepts and tools are often found in methodological treatises within a discipline. They often entail technical terminology. Highly skilled anesthesiologists or airplane pilots exemplify specialized critical thinking.

Socratic fairminded critical thinking (fair, ethical, openminded, strong-sense critical thinking[2]): thinking critically while taking into account the rights and needs of relevant others (including any sentient creature). Fairminded

[1] These descriptions are adapted from the *Glossary of Critical Thinking Terms and Concepts* by Linda Elder and Richard Paul, Dillon Beach: Foundation for Critical Thinking Press, 2009. They have been modified for this introduction. These polarities are also found in Critical Thinking: On the Need for a Minimalist, Comprehensive, Integrated Framework by L. Elder (2012), in *Critical Thinking and Higher Order Thinking: A Current Perspective.* Nova Publishers.

[2] See the term *strong-sense critical thinking* in the glossary referenced in footnote #1 above.

critical thinking entails intellectual traits of mind that enable the thinker to exercise intellectual humility, intellectual empathy, and intellectual integrity.

sophistic critical thinking (selfish, unethical, narrowminded, weak-sense critical thinking)[3]: skilled thinking which ignores or violates the rights and needs of relevant others. Sophistic critical thinking entails manipulating or "tricking" people into accepting poor reasoning as good. It enables people so inclined to win debates, irrationally persuade and otherwise to misuse or selectively use critical thinking tools. The politician who successfully manipulates the public to act against their interests exemplifies sophistic critical thinking.

explicit critical thinking: entails conscious awareness of the need to improve one's thinking, and the deliberate designing of strategies for that purpose (by the thinker). The thinker who knowingly uses understanding of the elements of thought and intellectual standards to improve thought engages in explicit critical thinking.

implicit critical thinking: skilled thinking that functions without conscious awareness on the part of the thinker as to how it does what it is doing when thinking critically. The thinker who uses the elements of reasoning well, but is not aware of their existence, engages in implicit critical thinking (for example, the thinker who sticks to her purpose, pursues reasonable purposes, and formulates questions well, albeit implicitly).

systematic critical thinking (integrated): an organized, thorough, interconnected approach to knowledge using a wide range of critical thinking concepts and principles. People who regularly and routinely work to apply intellectual standards to their thought across the domains of their life and who routinely analyze their thinking by focusing on its parts, all in attempting to develop intellectual traits or character, exhibit systematic critical thinking.

episodic critical thinking (occasional, partial): reasoning at a high level of skill, but only sporadically or occasionally, not consistently or systematically; unintegrated critical thought. People who occasionally notice their assumptions and correct them are using critical thinking episodically.

emancipatory critical thinking (free): reasoning which utilizes the concepts and principles of critical thought to free the mind; reasoning that is open to considering alternative perspectives and world views; thinking that does not lock itself into a rigid set of assumptions. People who are willing to examine any and all of their beliefs, without regard to how deeply ingrained those beliefs are, who openmindedly seek the truth and a reasonable way of living one's life, exemplify emancipatory critical thinking.

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[3] Also see the entry for *weak-sense critical thinking* in our glossary of critical thinking terms.

constrained critical thinking (trapped): reasoning which begins with a certain set of assumptions and operates at a high level of skill given these assumptions, but which does not openmindedly entertain other possible assumptions or viewpoints. The person who can give the most reasonable interpretation of and justification for religious beliefs, but who is unwilling to examine the assumptions upon which those beliefs are based, exemplifies constrained critical thinking.

Manifestations of critical thinking are simply any and all actual examples of critical thinking. Consider these manifestations of critical thinking: When a person notices problems in her assumptions and reworks them to better fit reality; When an accountant finds and rectifies a bookkeeping errort; when a chef improves a recipe; when someone invents a nuclear weapon. An unlimited number of examples of critical thinking occur in everyday human life. And the overwhelming majority of such manifestations are implicit rather than explicit.

Again, our framework for critical thinking is global, fairminded, explicit, systematic and emancipatory. It fosters comprehensive intellectual skills and principles which, when internalized and used, enable the thinker to:

- reason well within any subject, discipline or domain of thought (because it is global in nature).
- reason fairmindedly rather than selfishly.
- identify problems in his or her reasoning (because the reasoning is explicit).
- approach complex problems and issues in a systematic and integrated, rather than a fragmented or episodic way.
- emancipate the mind through the rational pursuit of ideas.

Thinking within a discipline

To think within a discipline is to think within the system of meanings that constitute the discipline. What we call knowledge are systems of interconnected ideas, ideas that create a logic: the logic of biology, the logic of chemistry, the logic of mathematics, the logic of sociology, the logic of anthropology, the logic of legal studies, the logic of medicine, and so forth. Yet most students think of what they are learning as disconnected sentences from a textbook or lecture. By the time they reach the college level they have successfully mislearned what it means to learn. They have successfully constructed misconceptions of knowledge. They don't see the need for thinking their way through the content, or for finding connections within and across disciplines. They see subjects and disciplines as complexes of atomic facts, bits and pieces of meaning to store in their minds for a test and then forget to make room for more bits and pieces for

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another test and another test and another test. It is our job to disabuse our students of their caricatures of knowledge and learning. It is our job to teach them how to think: clearly, accurately, precisely, relevantly, deeply, broadly, logically, significantly, fairly. Enter critical thinking.

Critical thinking is maximally robust to the extent that its categories and out-reach are global, Socratic, explicit, systematic, integrated, uncensored, and based in natural language. This seven-fold combination makes for robustness in that it enables thinkers to export their critical-mindedness to every domain of thought, and to do this explicitly and (presumably) without indulging in self-deception. Of course, we should keep in mind that virtually every frame of reference or mode of thinking can be embraced critically or uncritically. Any intellectual framework can be misapplied or abused.

All of the above examples suggest the fact that, broadly viewed, there is almost an unlimited number of forms of criticality (actual or potential) in human scholarly or intellectual discourse. Some are intra-disciplinary, some interdisciplinary, some trans-disciplinary.

Four Intellectual Constructs Essential to Critical Thinking

The human intellect is the seat of human meaning-making. All meaning arises out of the creation and use, in someone's mind, of intellectual constructs[3]. All intellectual constructs, in turn, are, to a reasonable person, subject to critique. There are four forms of intellectual construction essential to critical thinking: elements of thought (structures integral to thinking), standards of thought (qualities that perfect thinking), intellectual traits of mind (motivators that drive thinking), and intellectual skills and abilities. A robust conception of critical thinking must account for the role of all four in human thought.

Each of these sets of essential understandings in critical thinking form the foundations of critical thinking and hence of all conference sessions.

Critical Thinking and the Educated Person

No one lacking the skills and traits of the critical mind should be considered a fully educated person. Educated persons, in a strong sense of the word 'educated,'

[3] Intellectual constructs include much more than the analysis and assessment of arguments. All of the following are intellectual constructs of potential importance in critical thought: essays, theories, knowledge claims, assumptions, math problems, cases, world views, concepts, information, inferences, novels, poems, plays, schools of thought, critical analyses, critical evaluations, editorials, news articles, news stories, budgets, financial plans, axiomatic systems, accounting documents, architectural designs, engineering designs, number systems, classificatory systems, intellectual distinctions, histories, experiments, critiques of art of whatever sort, background logic, understandings, interpretations, and so forth.

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are able to enter viewpoints alien to them and think within those viewpoints clearly and accurately in good faith. They change their position when faced with reasoning superior to their own. They are able to give serious consideration to alternate possible conclusions when reasoning through a complex issue. They are able to think logically, to think with breadth and depth, when the question at issue requires them to do so. Educated persons, in this strong sense, are able to formulate their purposes clearly and accurately, to check multiple purposes for consistency, to determine how their purposes relate with the question at issue. They are able to persevere through the difficulties in issues. They apply the same standards to their own thinking and behavior that they expect of others. They have the courage to examine their beliefs and stand alone, using disciplined reasoning, when opposed by others. Implicit in all of these skills, abilities and dispositions are the elements of reasoning, intellectual standards and intellectual virtues.

Critical thinking in a strong sense of the word 'educated,' is not now a cultural or educational value, as is evidenced by its rarity in our schools, colleges and universities at all levels and in all subjects. Only when institutions begin to take critical thinking seriously and thus foster it systematically within and across departments and divisions, in keeping with basic intellectual standards and traits, will we begin to educate the mind in the strong sense of the word.

For more than 30 years we have worked to foster critical thinking across the curriculum. Throughout this time we have focused on the problem of didactic instruction as a prevailing deep-seated barrier to critical thinking across the curriculum. This, of course, is an old problem that goes back perhaps hundreds, if not thousands, of years. But most important, it is a problem still prevalent today, despite agreement among educators and administrators that we need to go beyond it. The table on the next few pages delineates important differences between didactic instruction and critical thinking, this table being only slightly modified from the original published more than two decades ago in *Critical Thinking: What Every Person Needs to Survive in a Rapidly Changing World*. It provides a comprehensive and integrated theoretical framework for understanding or fostering critical thinking across the curriculum.

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Theory of Knowledge, Learning, and Literacy	
Didactic Theory	**Critical Thinking**
1. The fundamental needs of students	
That the fundamental need of students is to be taught more or less ***what*** to think, not ***how*** to think (that is, that students will learn how to think if they can only get into their heads what to think).	That the fundamental need of students is to be taught ***how,*** not ***what*** to think; that it is important to focus on significant content, but this should be accomplished by raising live issues that stimulate students to gather, analyze, and assess that content.
2. The nature of knowledge	
That knowledge is independent of the thinking that generates, organizes, and applies it.	That all knowledge of "content" is generated, organized, applied, analyzed, synthesized, and assessed by thinking; that gaining knowledge is unintelligible without engagement in such thinking. (It is ***not*** assumed that one can think without some content to think about, nor that all content is equally significant and useful.)
3. Model of the educated person	
That educated, literate people are fundamentally repositories of content analogous to an encyclopedia or a data bank, directly comparing situations in the world with facts that they carry about fully formed as a result of an absorptive process. That an educated, literate person is fundamentally a true believer, that is, a possessor of truth, and therefore claims much knowledge.	That an educated, literate person is fundamentally a repository of strategies, principles, concepts, and insights embedded in processes of thought rather than in atomic acts. Experiences analyzed and organized by critical thought, rather than facts picked up one-by-one, characterize the educated person. Much of what is known is constructed by the thinker as ***needed*** from context to context, not ***prefabricated*** in sets of true statements about the world. That an educated, literate person is fundamentally a seeker and questioner rather than a true believer, and is therefore cautious in claiming knowledge.

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Theory of Knowledge, Learning, and Literacy	
Didactic Theory	**Critical Thinking**
4. The nature of learning	
That knowledge, truth, and understanding can be transmitted from one person to another by verbal statements in the form of lectures or didactic teaching.	That knowledge and truth can rarely, and insight never, be transmitted from one person to another by the transmitter's verbal statements alone; that one cannot directly give another what one has learned—one can only facilitate the conditions under which people learn for themselves by figuring out or thinking things through.
5. The nature of listening	
That students do not need to be taught skills of listening to learn to pay attention and this is fundamentally a matter of self-discipline achieved through willpower. Students should therefore be able to listen on command by the teacher.	That students need to be taught how to listen critically—an active and skilled process that can be learned by degrees with various levels of proficiency. Learning what others mean by what they say requires questioning, trying on, testing, and hence, engaging in public or private dialogue with them, and this involves critical thinking.
6. The relationship of the basic skills to thinking skills	
That the basic skills of reading and writing can be taught without emphasis on higher order critical thinking.	That the basic skills of reading and writing are inferential skills that require critical thinking; that students who do not learn to read and write critically are ineffective readers and writers; and that critical reading and writing involves dialogical processes in which probing critical questions are raised and answered. (For example, What is the fundamental issue? What reasons, what evidence, is relevant to this issue? Is this source or authority credible? Are these reasons adequate? Is this evidence accurate and sufficient? Does this contradict that? Does this conclusion follow? Is another point of view relevant to consider?)

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Theory of Knowledge, Learning, and Literacy	
Didactic Theory	**Critical Thinking**
7. The status of questioning	
That students who have no questions typically are learning well, while students with a lot of questions are experiencing difficulty in learning; that doubt and questioning weaken belief.	That students who have no questions typically are not learning, while having pointed and specific questions, on the other hand, is a significant sign of learning. Doubt and questioning, by deepening understanding, strengthen belief by putting it on more solid ground.
8. The desirable classroom environment	
That quiet classes with little student talk are typically reflective of students learning while classes with a lot of student talk are typically disadvantaged in learning.	That quiet classes with little student talk are typically classes with little learning while classes with much student talk focused on live issues is a sign of learning (provided students learn dialogical and dialectical skills).
9. The view of knowledge (atomistic vs. holistic)	
That knowledge and truth can typically be learned best by being broken down into elements, and the elements into sub-elements, each taught sequentially and atomically. Knowledge is additive.	That knowledge and truth is heavily systemic and holistic and can be learned only by many ongoing acts of synthesis, many cycles from wholes to parts, tentative graspings of a whole guiding us in understanding its parts, periodic focusing on the parts (in relation to each other) shedding light upon the whole, and that the wholes that we learn have important relations to other wholes as well as their own parts and hence need to be frequently canvassed in learning any given whole. (This assumption has the implication that we cannot achieve in-depth learning in any given domain of knowledge unless the process of grasping that domain involves active consideration of its relation to other domains of knowledge.) That each learner creates knowledge.

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Theory of Knowledge, Learning, and Literacy	
Didactic Theory	**Critical Thinking**
10. The place of values	
That people can gain significant knowledge without seeking or valuing it, and hence that education can take place without significant transformation of values for the learner.	That people gain only the knowledge they seek and value. All other learning is superficial and transitory. All genuine education transforms the basic values of the person educated, resulting in persons becoming life-long learners and rational persons.
11. The importance of being aware of one's own learning process	
That understanding the mind and how it functions, its epistemological health and pathology are not important or necessary parts of learning. To learn the basic subject matter of the schools, one need not focus on such matters, except perhaps with certain disadvantaged learners.	That understanding the mind and how it functions, its health and pathology, are important and necessary parts of learning. To learn subject matter in-depth, we must gain some insight into how we as thinkers and learners process that subject matter.
12. The place of misconceptions	
That ignorance is a vacuum or simple lack, and that student prejudices, biases, misconceptions, and ignorance are automatically replaced by their being given knowledge.	That prejudices, biases, and misconceptions are built up through actively constructed inferences embedded in experience and must be broken down through a similar process; hence, that students must reason their way dialogically and dialectically out of their prejudices, biases, and misconceptions.
13. The level of understanding desired	
That students need not understand the rational ground or deeper logic of what they learn to absorb knowledge. Extensive but superficial learning can later be deepened.	That rational assent is an essential facet of all genuine learning and that an in-depth understanding of basic concept and principles is an essential foundation for rational concepts and facts. That in-depth understanding of root concepts and principles should be used as organizers for learning within and across subject matter domains.

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Theory of Knowledge, Learning, and Literacy	
Didactic Theory	**Critical Thinking**
14. Depth versus breadth	
That it is more important to cover a great deal of knowledge or information superficially than a small amount in depth. That only after the facts are understood, can students discuss their meaning; that higher order thinking can and should only be practiced by students who have mastered the material. That thought-provoking discussions are for the gifted and advanced only.	That it is more important to cover a small amount of knowledge or information in depth (deeply probing its foundation) than to cover a great deal of knowledge superficially. That all students can and must probe the significance of and justification for what they learn.
15. Role definition for teacher and student	
That the roles of teacher and learner are distinct and should not be blurred.	That we learn best by teaching or explaining to others what we know.
16. The correction of ignorance	
That the teacher should correct the learners' ignorance by telling them what they do not know.	That students need to learn to distinguish for themselves what they know from what they do not know. Students should recognize that they do not genuinely know or comprehend what they have merely memorized. Self-directed recognition of ignorance is necessary to learning.
17. The responsibility for learning	
That the teacher has the fundamental responsibility for student learning. Teachers and texts provide information, questions, and drill.	That progressively the student should be given increasing responsibility for his or her own learning. Students need to come to see that only they can learn for themselves and that they will not do so unless they actively and willingly engage themselves in the process.

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Theory of Knowledge, Learning, and Literacy	
Didactic Theory	**Critical Thinking**
18. The transfer of learning to everyday situations	
That students will automatically transfer the knowledge that they learn in didactically taught courses to relevant real-life situations.	That most knowledge that students memorize in didactically taught courses is either forgotten or rendered "inert" by their mode of learning it, and that the most significant transfer is achieved by in-depth learning, which focuses on experiences meaningful to the student and aims directly at transfer.
19. Status of personal experiences	
That the personal experiences of the student has no essential role to play in education.	That the personal experiences of the student is essential to all schooling at all levels and in all subjects; that it is a crucial part of the content to be processed (applied, analyzed, synthesized, and assessed) by the student.
20. The assessment of knowledge acquisition	
That a student who can correctly answer questions, provide definitions, and apply formulae while taking tests has proven his or her knowledge or understanding of those details. Since the didactic approach tends to assume, for example, that knowing a word is knowing its definition (and an example), didactic instruction tends to overemphasize definitions. Students practice skills by doing exercises, specifically designed as drill. Successfully finishing the exercise is taken to be equivalent to having learned the skill.	That students can often provide correct answers, repeat definitions, and apply formulae while yet not understanding those questions, definitions, or formulae. That proof of knowledge or understanding is found in the students' ability to explain in their own words, with examples, the meaning and significance of the knowledge, why it is so, and to ***spontaneously*** recall and use it when relevant.
21. The authority validating knowledge	
That learning is essentially a private, monological process in which learners can proceed more or less directly to established truth, under the guidance of an expert in such truth. The authoritative answers that the teacher has are the fundamental standards for assessing students' learning.	That learning is essentially a public, communal, dialogical, and dialectical process in which learners can only proceed indirectly to truth with much "zigging and zagging" along the way, much back-tracking, misconception, self-contradiction, and frustration in the process. In this process, authoritative answers are replaced by authoritative standards for engagement in the communal, dialogical process of enquiry.

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One of the significant problems we face in bringing critical thinking across the curriculum is that few scholars within the various disciplines are taking critical thinking seriously. They may reason well within their disciplines implicitly. But making critical thinking accessible to all students requires explicit contextualization within the disciplines. Thus, in our work at the Foundation for Critical Thinking, we have developed many publications that contextualize critical thinking across the disciplines and which offer tools for engaging students in deep learning, both in and across disciplines. See our *Thinker's Guide Library* for some of our areas of emphasis.

Using Graphic Illustrations to Foster Global Insights into Critical Thinking and its Application Across the Disciplines

It is important for instructiors to provide learners with graphic images that facilitate their picturing in their mind's eye the over-arching concepts and principles underlying and synthesizing the constituent "parts" being learned. The images on the following several pages exemplify this point. We recommend that you study the various images provided and determine the extent to which you are able to "translate" each into an accompanying explanatory text. In doing so, it is important that you recognize that the images themselves are presented for their heuristic value alone. They have no "metaphysical" or "absolutistic" status. They are useful if they aid the learner using them. The same field of concepts and principles can be represented in different graphics. When a graphic is effective, the learner studying them can explain core concepts and principles in a more "intuitive" way. However, if you find that any of these graphics seem misleading, set the graphic aside and create your own.

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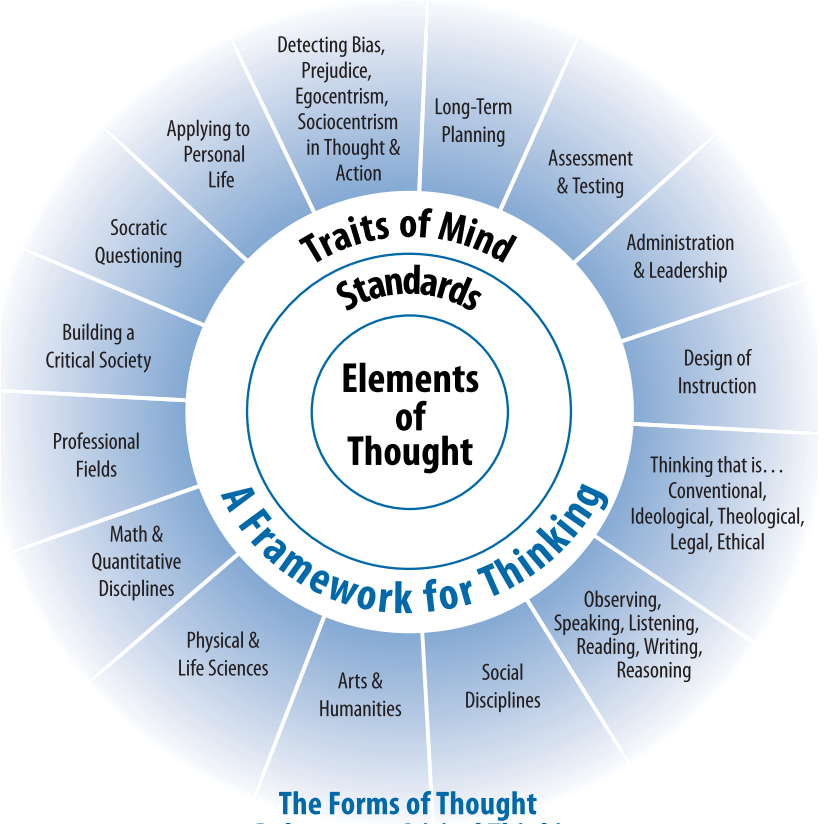
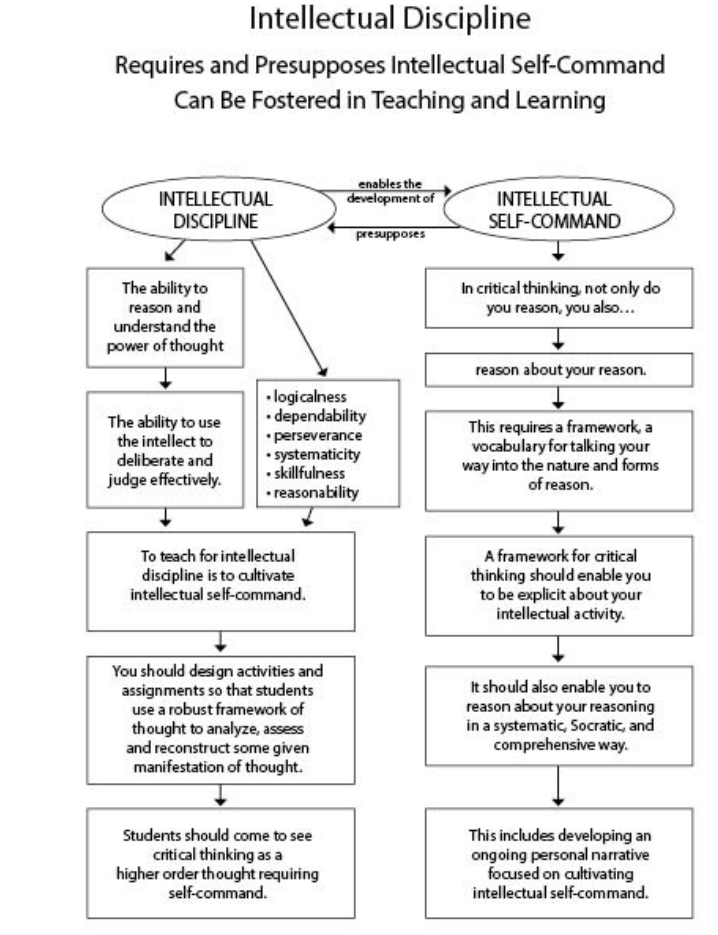
Critical Thinking is Manifested in ALL Forms of Thought



The Forms of Thought as Relevant to Critical Thinking Across the Disciplines



This diagram suggests the importance of the relationship between intellectual discipline and intellectual self-command. What is more, a number of core concepts are interwoven here, while others are suggested by implication.

Contrast your sense of the conceptual points made as a result of their display in the graphic with an unintegrated list of individual concepts: Intellectual discipline, self-command, ability to reason, understanding the power of thought, ability to use the intellect, ability to deliberate, ability to judge, to reason about your reason, logicalness of thought, dependability of thought, perseverance in thought, systematicity of thought, skillfulness in thought, teaching for intellectual discipline, cultivating intellectual self-command.

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Thinking Within Every Subject and Domain of Human Thought

Anthropological thinking
Mathematical thinking
Sociological thinking
Historical thinking
Archeological thinking
Biological thinking
Botanical thinking
Zoological thinking
Chemical thinking
Biochemical thinking
Geological thinking
Political thinking
Geographical thinking
Ecological thinking
Physiological thinking
Astronomical thinking
Financial thinking
Medical thinking
Pharmacological thinking
Psychological thinking
Arithmetic thinking
Algebraic thinking
Geometrical thinking
Musical thinking
Artistic thinking
Biotechnological thinking
Criminological thinking
Epidemiological thinking
Statistical thinking
Technological thinking
Nano-technological thinking
Global thinking
Philosophical thinking
Metaphysical thinking
_____ thinking

Thinking like a doctor
Thinking homeopathically
Thinking allopathically
Thinking like a surgeon
Thinking like a psychologist
Thinking like an economist
Thinking like a librarian
Thinking like a lawyer
Thinking like an educator
Thinking like a teacher
Thinking like a principal
Thinking like a dean
Thinking like a classroom teacher
Thinking like a novelist
Thinking like a dramatist
Thinking like a poet
Thinking like a writer
Thinking like a civil engineer
Thinking like a nurse
Thinking like an accountant
Thinking like an architect
Thinking like a sculptor
Thinking like a painter
Thinking like a dancer
Thinking like a physicist
Thinking like a parasitologist
Thinking like a linguist
Thinking like a computer scientist
Thinking like a judge
Thinking like a defense attorney
Thinking like a prosecutor
Thinking like a police officer
Thinking like a social worker
Thinking like a physical therapist
Thinking like a _____

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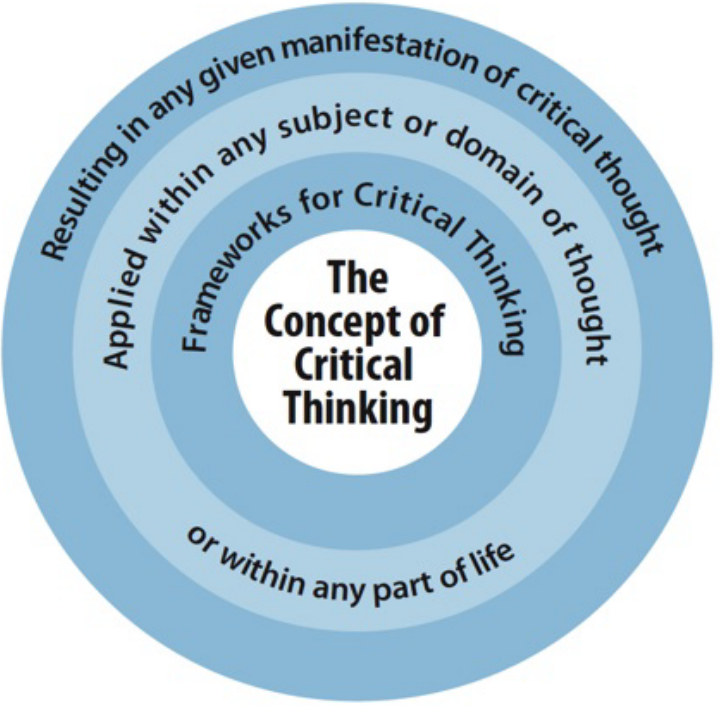

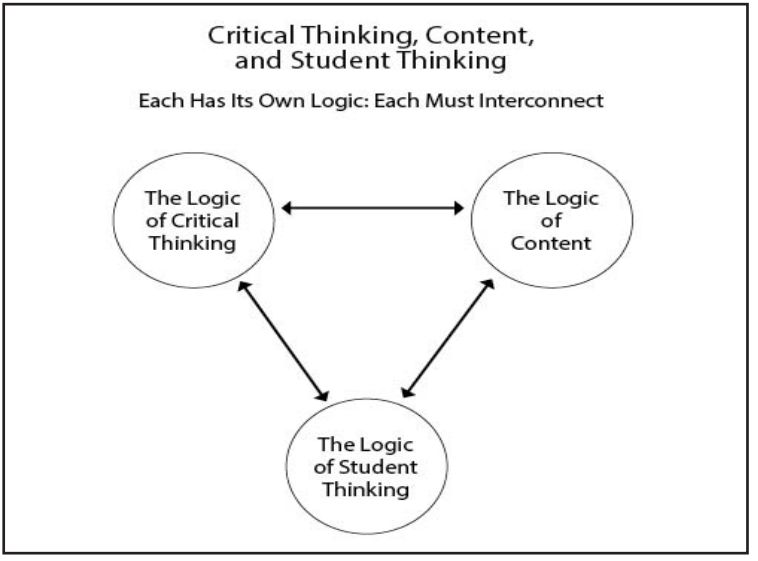

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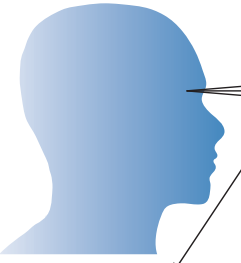
The Figuring Mind



Object

The thing must have a logic. . .
something to figure out. . .

There is a logic to figuring something out, to constructing a system of meanings which makes sense of something

There are **intellectual standards** critical thinkers use to assess whether the logic in our mind mirrors the logic of the thing to be understood

The Elements of Thought reveal the logic:			
1	An object to be figured out	→	some data or information, some experience of it (the **Empirical Dimension**)
2	Some reason for wanting to figure it out	→	our **Purpose** or **Goal**
3	Some question or problem we want solved	→	our **Question at Issue**
4	Some initial sense of the object (whatever we take for granted)	→	our **Assumptions**
5	Some ideas by which we are making sense of the object	→	the **Conceptual Dimension**
6	Some drawing of conclusions about the object	→	our **Inferences** or interpretations
7	What follows from our interpretation of the object	→	the **Implications** and **Consequences**
8	Some viewpoint from which we conceptualize the object	→	our **Point of View** or **Frame of Reference**

Intellectual Standards include:

- **Clarity**
- **Precision**
- **Relevance**
- **Accuracy**
- **Depth**
- **Breadth**
- **Logic**
- **Fairness**

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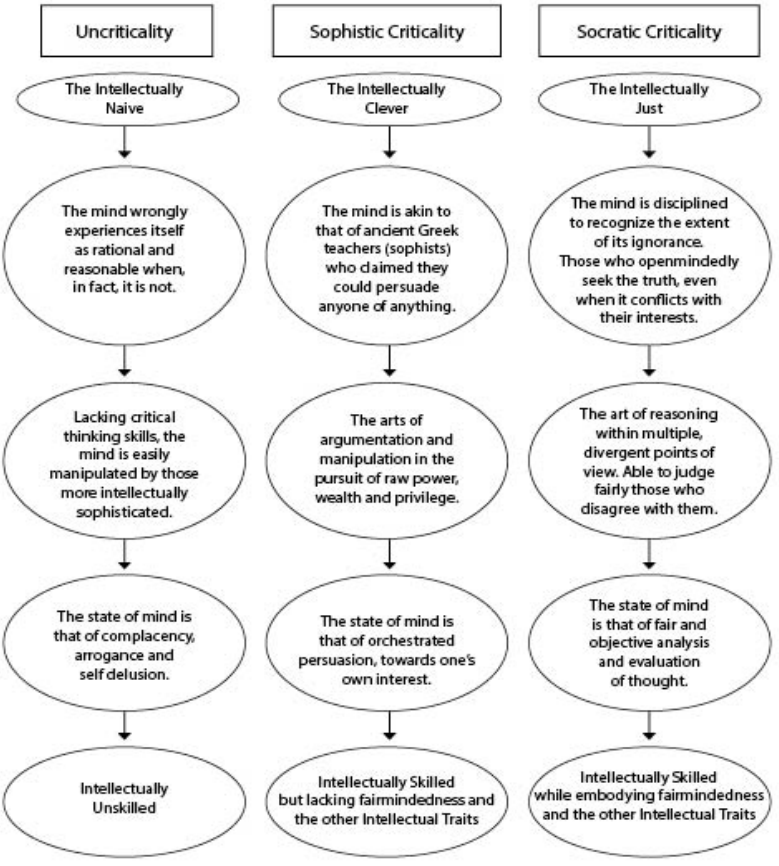
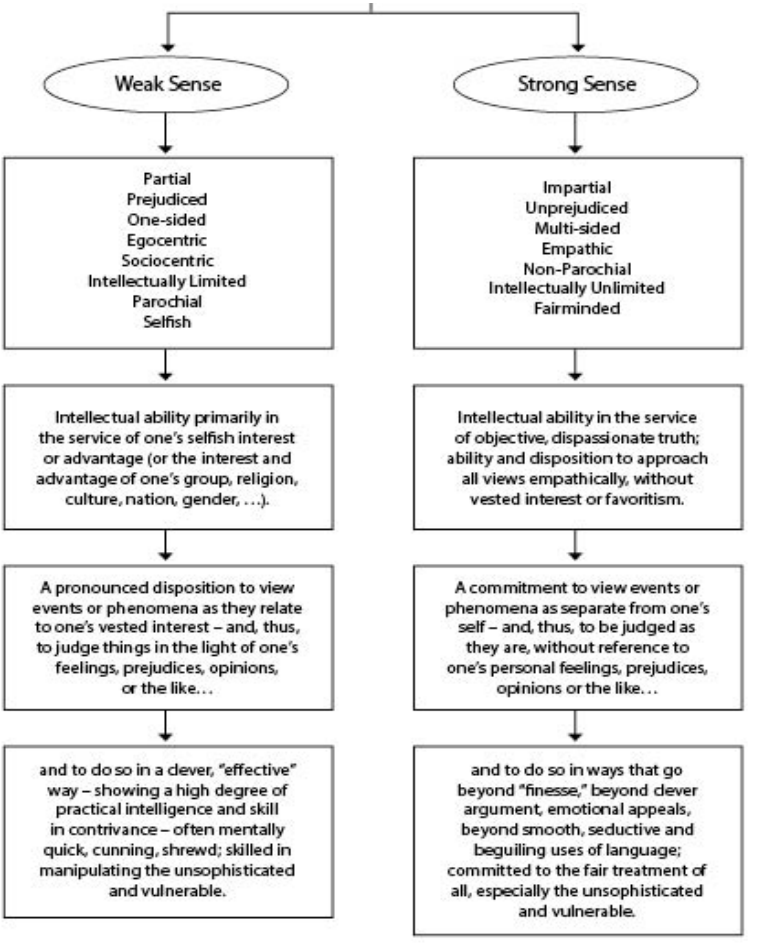
Three Forms of Criticality



Strong Versus Weak



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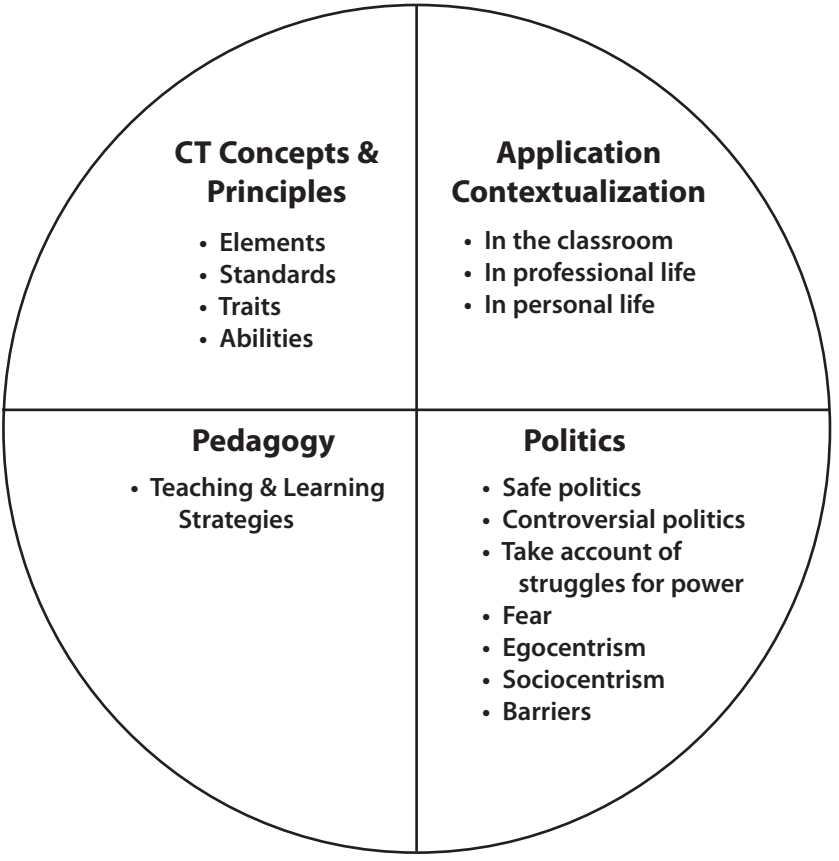
Integrating Four Dimensions of Critical Thinking Development



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Bringing Critical Thinking Across the Curriculum Must Be Given Priority in Schools, Colleges and Universities

During the past three decades, those of us at the Center and Foundation for Critical Thinking have articulated central concepts of critical thinking (in as simplified a form as we believe possible) within an integrated theoretical framework. We have distinguished the difference between thinking critically in a weak-sense (selfish critical thought) and thinking critically in a strong-sense (fairminded critical thought). We have articulated the issues that emerge when we focused critical thinking skills on the subject of teaching critical thinking in every subject and at every grade level. All of our work has been based on these premises:

- that the fundamental need of students is to be taught how, not what, to think
- that all knowledge of "content" is generated, analyzed, organized, applied, and synthesized by thinking
- that gaining knowledge is unintelligible without such thinking
- that an educated, literate person is fundamentally a seeker and questioner rather than a "true believer"
- that classroom activities are question-, issue-, or problem-centered rather than memory-centered; that knowledge and truth can rarely be transmitted by verbal statements alone
- that students need to be taught how to listen critically – an active and skilled process
- that critical reading and writing cannot be effectively taught without critical dialogue
- that those who teach must actively model the intellectual behavior they want
- that teachers must routinely require students to explain what they have learned
- that students who have no questions typically are not learning
- that students must read, write, and talk their way to knowledge
- that knowledge and truth is heavily systematic and holistic, not atomistic and piecemeal
- that people gain only the knowledge they seek and value
- that without motivation, learning is superficial and transitory
- that all genuine education transforms the values of the learner
- that students must reason their way dialogically and dialectically out of ignorance and prejudice
- that students learn best if they have to teach others what they are learning

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- that self-directed recognition of ignorance is necessary to learning
- that when possible, teachers should allow students to express their own ideas
- that the personal experience of the students is essential to all learning

In our work with teachers and administrators, we have tried to help them see that it is important to be clear about the goal of critical thinking on three levels:

1. the ideal level (what is our vision of ideal success?)
2. the realistic level (what stands in the way of achieving that vision?), and
3. the pragmatic or practical level (what strategies have we devised for moving from where we are to a closer approximation of our goal?)

Many people are not clear as to what they are trying to achieve (in integrating critical thinking across the disciplines). Most people are not clear as to what stands in the way of achieving this goal. An even larger number are confused as to what strategies, if pursued, would enable them to maximize their success. Finally, an even larger number of people are resistant, irrespective of which analysis one favors, to doing the intellectual work – the sheer intellectual drudgery – essential to success.

If critical thinking is to play a leading role in the reform of education, the problem of bringing critical thinking across the disciplines must become transparent and intuitive to faculty and students. If critical thinking is to become transparent and intuitive to faculty and students across the disciplines, teaching and learning must be re-thought within an integrated theoretical framework. The result of such "rethinking" must demonstrate what it would look like for faculty and students to work together toward the cultivation of intellectual skills, abilities and traits. It must show them what it would be like to apply critical thinking concepts and principles in practical ways to everyday teaching and learning. Faculty must be able to picture the reality in their minds' eyes. And they must believe in the reality they are picturing. Then they must work together toward that reality in the spirit of fairminded criticality.

This may be put another way. If students are to gain insight into how the basic concepts of critical thinking apply in the disciplines they study, they need to be taught by faculty who themselves grasp that application. This presupposes faculty going through a process of learning in which they come to increasingly grasp this insight for themselves. But such a transformation of teacher-learning, such transfer across the disciplines, requires deep-seated motivation and intellectual perseverance. How can we win the hearts and minds of educators so

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they become committed to living an examined life? It is only through this commitment that they will develop the requisite skills and dispositions to effectively foster critical thinking across the disciplines and across the curriculum? These are the questions we faced 50 years ago when Glaser conducted the first "official" study on critical thinking and these are the questions we still face today.

Conference Overview

The conference consists in the following three types of sessions:

1. *Focal Sessions* that focus fundamentally on the core concepts and principles explicit in critical thinking following. These sessions are led primarily by Fellows of the Foundation for Critical Thinking.

2. *Concurrent Sessions,* which are led by guest faculty and administrators attempting to bring critical thinking into instruction and in various domains of life.

3. *Bertrand Russell Distinguished Scholars Series,* which highlights the contributions of important scholars to the conception of critical societies.

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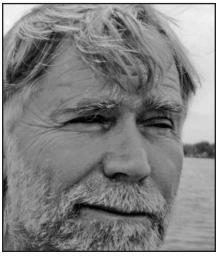
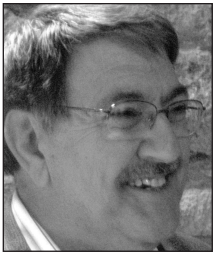
Focal Session Presenters



Dr. Richard Paul is a distinguished leader in the international critical thinking movement. He is Director of Research at the Center for Critical Thinking, the Chair of the National Council for Excellence in Critical Thinking, and author of over 200 articles and seven books on critical thinking. Dr. Paul has given hundreds of workshops on critical thinking and made a series of eight critical thinking video programs for PBS. His views on critical thinking have been canvassed in *New York Times, Education Week*, *The Chronicle of Higher Education, American Teacher*, *Educational Leadership*, *Newsweek, U.S. News and World Report*, and *Reader's Digest*.

Dr. Linda Elder is an educational psychologist and a prominent authority on critical thinking. She is President of the Foundation for Critical Thinking and Executive Director of the Center for Critical Thinking. Dr. Elder has taught psychology and critical thinking at the college level and has given presentations to more than 20,000 educators at all levels. She has coauthored four books and 20 thinker's guides on critical thinking. Her views have been canvassed in the *Times Higher Education*, the *Christian Science Monitor*, and on *National Public Radio*.



Dr. Gerald Nosich is an authority on critical thinking. He has given more than 150 national and international workshops on critical thinking. He has worked with the U.S. Department of Education on a project for the National Assessment of Higher Order Thinking skills, has served as the Assistant Director of the Center for Critical Thinking, and been featured as a Noted Scholar at the University of British Columbia. He is Professor of Philosophy at Buffalo State College in New York. He is the author of two books including *Learning to Thinking Things Through*.

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Dr. Enoch Hale is a Fellow of the Foundation for Critical Thinking. He has more than 15 years instructional experience in secondary, post-secondary and graduate education. For close to a decade, Dr. Hale has designed and presented critical thinking workshops for faculty and administrators at all levels. The writings of Dr. Hale have been published in the *Journal of College Teaching and Learning* as well as other education journals. His PhD dissertation, entitled "A Critical Analysis of Richard Paul's Substantive Trans-disciplinary Conception of Critical Thinking" is, to date, the most comprehensive analysis of Paul's conception of critical thinking.

Mr. Rush Cosgrove is Historian for the Foundation for Critical Thinking and is engaged in research for a PhD at the University of Cambridge. He holds Masters degrees from both the University of Oxford, New College and University of Cambridge, Darwin College. He has conducted research on critical thinking and the Oxford Tutorial and is current conducting research on the Paulian Framework for critical thinking as contextualized at the University of Louisville. He conducts workshops in critical thinking for both faculty and students, in both English and Spanish.

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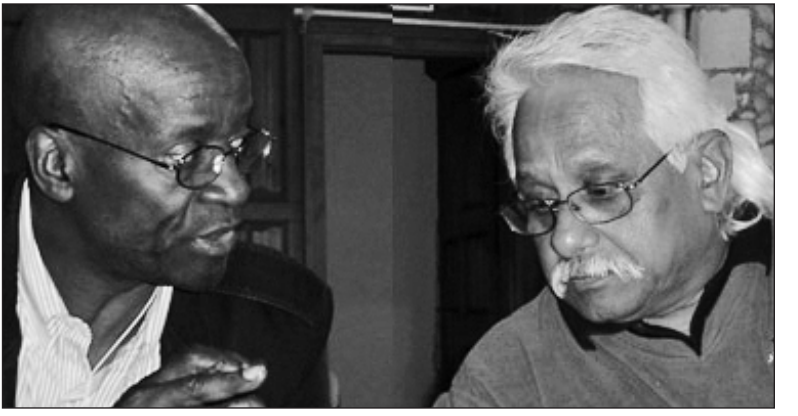
Additional Focal Session Presenter

Dr. Patty Payette is the executive director of "Ideas to Action," the Quality Enhancement Plan at the University of Louisville, and is associate director of UofL's Delphi Center for Teaching and Learning. Dr. Payette has more than ten years experience in higher education faculty development, instructional/curriculum design, and training and development for instructors and administrators. Dr. Payette has designed and delivered dozens of workshops on teaching and learning topics, including sessions on critical thinking across the curriculum. She consults with schools and colleges nationally on the design and implementation of critical thinking initiatives. She has designed and taught undergraduate courses at Michigan State University—where she earned her PhD in 2001—and the University of Michigan-Flint. Her publications include numerous essays, articles, and book reviews on a variety of higher education topics, including articles appearing in the *National Teaching and Learning Forum*; *Academic Leader*; and *The Chronicle of Higher Education.*



The Bertrand Russell Distinguished Scholars Critical Thinking Series

At this year's conference we introduce the Bertrand Russell Distinguished Scholars Critical Thinking Series. This new feature of the conference will highlight the work and thinking of distinguished thinkers within subjects, fields, disciplines, or about specific topics or issues. We honor the thinking, the philosophy and the contributions of Bertrand Russell through this series.

Bertrand Russell was one of the most influential 20th century philosophers. In the following passages he emphasizes the importance of open and free inquiry. He stresses the critical need to create education systems that foster fairminded pursuit of knowledge, and warns of the dangers inherent in dogmatic ideologies.

> The conviction that it is important to believe this or that, even if a free inquiry would not support the belief, is one which is common to almost all religions and which inspires all systems of state education...A habit of basing convictions upon evidence, and of giving to them only that degree of certainty which the evidence warrants, would, if it became general, cure most of the ills from which the world is suffering. But at present, in most countries, education aims at preventing the growth of such a habit, and men who refuse to profess belief in some system of unfounded dogmas are not considered suitable as teachers of the young...
>
> The world that I should wish to see would be one freed from the virulence of group hostilities and capable of realizing that happiness for all is to be derived rather from cooperation than from strife. I should wish to see a world in which education aimed at mental freedom rather than at imprisoning the minds of the young in a rigid armor of dogma calculated to protect them through life against the shafts of impartial evidence. The world needs open hearts and open minds, and it is not through rigid systems, whether old or new, that these can be derived (Russell, 1957, pp. vi-vii).

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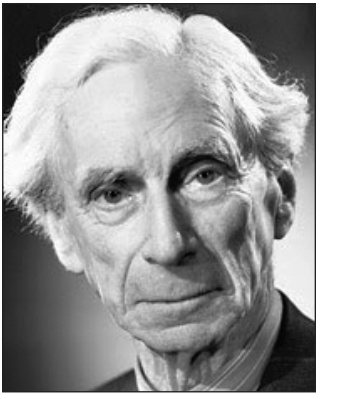
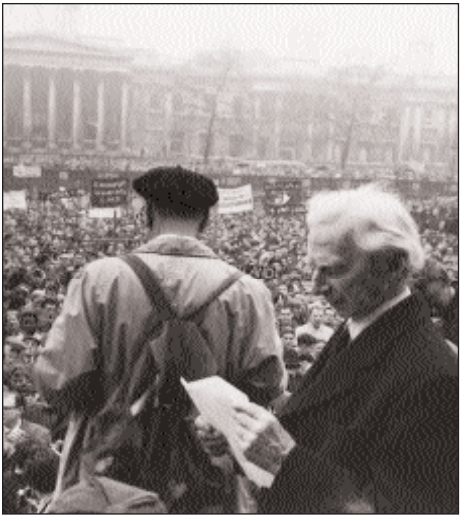
In his book, *Portraits from Memory*, "Reflections on My Eightieth Birthday," Russell (1956) comments on the long-term nature of change and the importance of moving ever closer toward the creation of critical societies:

> ...beneath all this load of failure I am still conscious of something that I feel to be victory. I may have conceived theoretical truth wrongly, but I was not wrong in thinking that there is such a thing, and that it deserves our allegiance. I may have thought the road to a world of free and happy human beings shorter than it is proving to be, but I was not wrong in thinking that such a world is possible, and that it is worth while to live with a view to bringing it nearer. I have lived in the pursuit of a vision, both personal and social. Personal: to care for what is noble, for what is beautiful, for what is gentle; to allow moments of insight to give wisdom at more mundane times. Social: to see in imagination the society that is to be created, where individuals grow freely, and where hate and greed and envy die because there is nothing to nourish them. These things I believe, and the world, for all its horrors, has left me unshaken.

Russell (1919) also illuminates the fact that the vast majority of people today do not think critically, or indeed ethically, and that those who do will seek a "new system of society." He says:

> The great majority of men and women, in ordinary times, pass through life without ever contemplating or criticising, as a whole, either their own conditions or those of the world at large. They find themselves born into a certain place in society, and they accept what each day brings forth, without any effort of thought beyond what the immediate present requires...they seek the satisfaction of the needs of the moment, without much forethought, and without considering that by sufficient effort the whole condition of their lives could be changed...It is only a few rare and exceptional men who have that kind of love toward mankind at large that makes them unable to endure patiently the general mass of evil and suffering, regardless of any relation it may have to their own lives. These few, driven by sympathetic pain, will seek, first in thought and then in action, for some way of escape, some new system of





society by which life may become richer, more full of joy and less full of preventable evils than it is at present (p. viii).

Bertrand Russell's thoughts and writings on social issues are intimately linked with the ideals of critical thinking and the concept of fairminded critical societies.

References:

Russell, B. (1919). *Proposed Roads to Freedom* . NY: Henry Holt and Co. Russell, B. (1956). *Portraits From Memory and Other Essays* . New York: Simon and Schuster.

Russell, B. (1957). *Why I am Not a Christian* . New York: Simon and Schuster.

Bertrand Russell Distinguished Scholars for the 32nd International Conference

This new feature of the conference will highlight the work and thinking of distinguished thinkers within subjects, fields, disciplines or about specific topics or issues. This year's scholars include Michael Shermer, Ethan Watters, and William Robinson. All conference participants are invited to these presentations.

Dr. Michael Shermer

Dr. Michael Shermer is the Publisher of *Skeptic* magazine, a monthly columnist for *Scientific American*, and author of many books, including *Why People Believe Weird Things.* He was a college professor for 20 years, and has appeared on such shows as The Colbert Report, 20/20, Dateline, Charlie Rose, and Larry King Live. Dr. Shermer was the co-host and co-producer of the 13-hour Family Channel television series, Exploring the Unknown.

Ethan Watters

Ethan Watters is the author of *Crazy Like Us: The Globalization of the American Psyche* and coauthor of *Making Monsters*, an indictment of the recovered memory movement. A frequent contributor to The New York Times Magazine, Discover, Men's Journal, Details, Wired, and PRI's This American Life, he has appeared on such national media as Good Morning America, Talk of the Nation, and CNN. His work has been featured in the Best American Science and Nature Writing series.

William I. Robinson

William I. Robinson is professor of sociology, global studies, and Latin American studies at the University of California at Santa Barbara. He is a scholar-activist who participates in social justice movements in Latin America and the United States. Among his seven books are *A Theory of Global Capitalism* (2004) and *Latin America and Global Capitalism* (2008). His web page is www.socucsb.edu/faculty/robinson.

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Schedule for the Bertrand Russell Series:

Tuesday, July 24 7:00 p.m. – 8:30 p.m. Michael Shermer
Why People Believe Weird Things

Wednesday, July 25 10:55 am – 12:25 pm Ethan Watters
Crazy Like Us: The Globalization of the American Psyche

Wednesday, July 25 7:00 p.m. – 8:30 p.m. William Robinson
A Theory of Global Capitalism

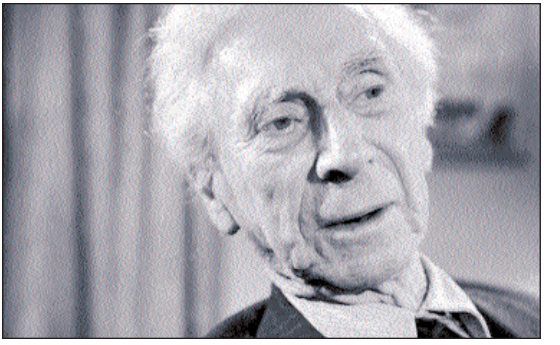
Empire Ballroom

Bertrand Russell Series Format

To draw out the critical thinking implicit in the thinking of the Russell Scholars, the following unique design for the presentations will be used:

A fellow of the Foundation for Critical Thinking will lead a Socratic dialogue with the Scholar (45 minutes). This will be followed by 20 minutes of questions to the Scholar by conference delegates and attendees. There will then be another 20-30 minutes of Socratic dialogue between moderator and Scholar.

Each presentation will be followed by a book signing. Books by the scholar will be available for sale at that time. These books will also be available for sale throughout the conference. The number of books is limited.



Conference at a Glance

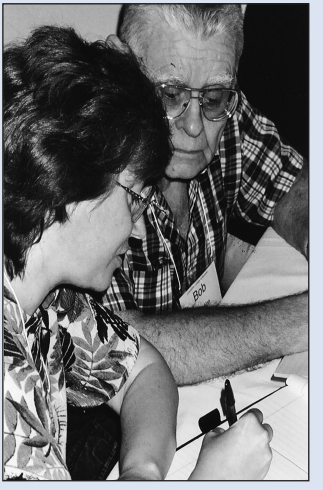
Preconference

Saturday, July 21 and Sunday, July 22

(9:00 am - 4:00 pm)

(Preconference registrants have chosen one of the following sessions)

- On Teaching Within the Spirit of the Oxford Tutorial–Richard Paul
- Fostering Multilogical Thinking within the Disciplines–Gerald Nosich
- Practical Ideas for Improving Student Learning– Enoch Hale
- Discovering the Layers Underneath the Layers of Critical Thinking– Linda Elder and Rush Cosgrove *(advanced session)*



DAY ONE - Monday, July 23
Opening Ceremony

(8:45 - 10:00 am)

Keynote address:
Dr. Richard Paul
Empire Ballroom

Focal Sessions Day One

(10:30 am - 4:00 pm)

(Conference registrants have chosen one of the following sessions)

- Some Ways to Design Instruction Using Critical Thinking as the Driving Force–Richard Paul
- For Administrators: the Foundations of Critical Thinking and How They Can Be Infused Across the Curriculum– Linda Elder
- Practical Methods for Fostering Critical Thinking in Secondary Instruction–Enoch Hale
- Understanding the Relationship Between Critical Thinking and Socratic Questioning– Gerald Nosich
- The Art of Analyzing Transcripts of Interviews of Higher Education Faculty– Rush Cosgrove *(advanced session)*

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Conference at a Glance

DAY TWO - Tuesday, July 24
FOCAL SESSIONS

Morning Focal Sessions
(9:00 am - 11:45 am)

(Conference registrants have chosen one of the following sessions for the morning)

- What Can Research Really Tell Us About the Human Mind?– Linda Elder
- Overcoming Bad Habits of Teaching and Learning– Gerald Nosich
- Advanced Session: Analyzing Readings Using the Element of Thought–Enoch Hale
- Two Conflicting Theories of Knowledge, Learning, and Literacy: the Didactic and the Critical– Richard Paul

Afternoon Focal Sessions (Tues.)
(1:15 pm - 4:00 pm)

(Conference registrants have chosen one of the following sessions for the afternoon)

- Why We Are All Pathological Thinkers and What Can Be Done About It– Linda Elder
- Cultivating the Intellect Through Close Reading and Substantive Writing–Enoch Hale
- Teaching Students to Think Within the Logic of a Discipline– Gerald Nosich
- The Higher and Lower Politics of Critical Thinking–Richard Paul

Russell Scholar Presentation: Michael Shermer

Why People Believe Weird Things

(7:00 – 8:30 pm
Empire Ballroom
Tuesday)

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Conference at a Glance

DAY THREE - Wednesday, July 25

Concurrent Sessions

(see concurrent session program)

Concurrent Session I: 8:30 am- 9:30 am

- Using Critical Thinking "Elements Wheel" as a Professional Development Tool–Rhonda Ormann
- Application of the SEEI Model in the Classroom– Joseph D'Silva
- The Incomplete Image: Using Critical Thinking as the Tool for Exposing Students to their Limited Understanding of Aesthetics– Miguel Del Castillo
- A Dialectical Approach to Critical Thinking Through Writing – Nancy Burkhalter
- Teaching Young Children to Think Critically– Carmen Polka

Concurrent Session II (Wed.): 9:40 am - 10:40 am

- Developing Intellectual Virtues– Brian Barnes
- It's Not All About Me?: Strategies to Uncover Egocentrism and Sociocentrism– Laura Ramey
- Improving Student Critical Thinking Through Direct Instruction in Rhetorical Analysis– Lauren McGuire
- Using the Elements of Thought in a Digital Media Assignment to foster the development of the Intellectual Traits– Edna Ross

Russell Scholar Presentation: Ethan Watters

Crazy Like Us: The Globalization of the American Psyche

(10:55 am – 12:25 pm
Empire Ballroom
Wednesday)

Concurrent Session III (Wed.): 1:45 pm - 2:45 pm

- Strategies for Promoting Critical Thinking in Courses across the Curriculum– Scott Weeden, Kate Thedwall, Nancy Evans
- Questioning and Writing Strategies for the Critical Mind– Gary Meegan
- PRISM: Rays of Light from a Campus-wide CT Infusion– Ann Gleason, Tim Hendrix, Mark O'Dekirk, Dianne Raubenheimer
- Enhancing Critical Thinking Ability in ESP: A Case Study of English for Science and Technology Class– Arthitaya Narathakoon
- Critical Thinking and Intelligence Analysis: Experiences with Professional Development– Daniel R. Durham, Debora Pfaff

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Conference at a Glance

Concurrent Session IV (Wed.): 3:00 pm - 4:00 pm

- The Logic Wheel: Strategies for the Classroom– Gary Meegan
- Enhancing Faculty Critical Thinking Skills Through the Design of an Assessment Rubric to Measure Student Critical Thinking and Inter-professional Collaboration– Laura MacDonald
- Helping Students Grow in Their Understanding and Appreciation of Critical Thinking– Melvin Manson
- Modeling Critical Thinking in a Masters Level Health Policy and Nursing Course–Juanita Holliman, RN
- Applications of Critical and Creative Thinking in Homeland Security– Fred May
- Critical Thinking and Ethical and Social Issues: Critical Thinking - Is a True Democracy Possible?– Robert Schlim, facilitator

Russell Scholar Presentation: William Robinson

A Theory of Global Capitalism

(7:00 – 8:30 pm
Empire Ballroom
Wednesday)

DAY FOUR - Thursday, July 26

(9:00 am - 11:30 am)

Focal Sessions

(Conference registrants have chosen one of the following sessions for the morning)

- Helping Students Learn to Think Within the Key Concepts in Subjects and Disciplines– Gerald Nosich
- Teach so that Students Think Through the Content Using Intellectual Traits–Richard Paul
- Four Forms of Sociocentric Thought and the Harm They Cause– Linda Elder
- Bringing it Home: Critical Thinking at the Institutional Level –Patty Payette and Rush Cosgrove
- Identifying Resources that Foster Critical Thinking– Enoch Hale

Closing Session (Thurs.)

Where Do We Go From Here?

(11:50 am – 12:30 pm
Empire Ballroom)

led by Dr. Richard Paul and the Fellows of the Foundation for Critical Thinking

All conference attendees are invited.

Preconference Schedule
Daily Schedule July 21-22, 2012

Saturday - July 21

7:30 a.m. - 9:00 a.m.	Registration & Check In – Horizon Room
9:00 a.m. - 10:30 a.m.	Preconference Workshops begin
10:30 a.m. - 10:45 a.m.	Break – Horizon Room
10:45 a.m. - 11:45 a.m.	Preconference Workshops continue
11:45 a.m. - 1:15 p.m.	Lunch — on your own
1:15 p.m. - 2:45 p.m.	Preconference Workshops continue
2:45 p.m. - 3:00 p.m.	Break – Horizon Room
3:00 p.m. - 4:00 p.m.	Preconference Workshop sessions end

Sunday - July 22

9:00 a.m. - 10:30 a.m.	Preconference Workshops begin
10:30 a.m. - 10:45 a.m.	Break – Horizon Room
10:45 a.m. - 11:45 a.m.	Preconference Workshops continue
11:45 a.m. - 1:15 p.m.	Lunch — on your own
1:15 p.m. - 2:45 p.m.	Preconference Workshops continue
2:45 p.m. - 3:00 p.m.	Break – Horizon Room
3:00 p.m. - 4:00 p.m.	Preconference Workshop sessions end

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Conference Begins
Daily Schedule July 23-24, 2012
Days One and Two

Monday - July 23

7:30 a.m. - 8:40 a.m.	Registration & Check In – Horizon Room
8:45 a.m. - 10:00 a.m.	Opening Ceremony – Empire Ballroom
10:00 a.m. - 10:30 a.m.	Break – Horizon Room
10:30 a.m. - 12:00 p.m.	Day One Focal Sessions Begin
12:00 p.m. - 1:30 p.m.	Lunch — on your own
1:30 p.m. - 2:45 p.m.	Day One Focal Sessions Continue
2:45 p.m. - 3:00 p.m.	Break – Horizon Room
3:00 p.m. - 4:00 p.m.	Day One Focal Sessions Continue

Tuesday - July 24

9:00 a.m. - 10:30 a.m.	Morning Focal Sessions Begin
10:30 a.m. - 10:45 a.m.	Break – Horizon Room
10:45 a.m. - 11:45 a.m.	Morning Focal Sessions Continue
11:45 a.m. - 1:15 p.m.	Lunch — on your own
1:15 p.m. - 2:45 p.m.	Afternoon Focal Sessions Begin
2:45 p.m. - 3:00 p.m.	Break – Horizon Room
3:00 p.m. - 4:00 p.m.	Afternoon Focal Sessions Continue
7:00 p.m. - 8:30 p.m.	Bertrand Russell Scholar Michael Shermer*

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Conference Continues
Daily Schedule July 25-26, 2012
Days Three and Four

Wednesday- July 25…concurrent sessions.

Choose sessions from the concurrent session program.

8:30 a.m. - 9:30 am	Concurrent Sessions I
9:40 a.m. - 10:40 am	Concurrent Sessions II
10:40 am - 10:55 am	Break – Horizon Room
10:55 am - 12:25 pm	Bertrand Russell Scholar Ethan Watters*
12:25 pm - 1:45 pm	Lunch — on your own
1:45 pm - 2:45 pm	Concurrent Sessions III
2:45 pm - 3:00 pm	Break – Horizon Room
3:00 pm - 4:00 pm	Concurrent Sessions IV
7:00 p.m. - 8:30 p.m.	Bertrand Russell Scholar William Robinson*

Thursday - July 26

9:00 a.m. - 10:15 a.m.	Morning Sessions Begin
10:15 a.m. - 10:30 a.m.	Break – Horizon Room
10:30 a.m. - 11:30 a.m.	Morning Sessions Continue
11:50 a.m. - 12:30 p.m.	Closing Session – Empire Ballroom

* *See Bertrand Russell Distinguished Scholars Critical Thinking Series*

Conference Focal Sessions Program

All conference delegates and attendees have registered for their choices of the following sessions. See your confirmation sheet (in your packet) if you are unclear which focal sessions you have selected. Please attend the sessions you chose, as room assignments have been determined based on enrollment totals for each session. If any problems arise, visit the registration desk.

Preconference Session Descriptions

Saturday and Sunday (9:00 am - 4:00 pm)

On Teaching Within the Spirit of the Oxford Tutorial…Richard Paul

The goal of this workshop is practical and intuitive. It is about the classic approach to teaching at Oxford (and therefore about how to build in critical reading, critical writing, critical speaking, and critical listening to a repeating pattern of instruction). It is also about the way a serious student of CT works and lives with the challenges of life. The participants will apply CT to a full range of everyday realities: from personal economics and politics to love and romantic relationships, from respectful friendships to deeply intimate and erotic excitement in the inner life of the mind. (Note that this description has been modified and replaces all previous descriptions of this session).

Fostering Multilogical Thinking Within the Disciplines…Gerald Nosich

When we foster multilogical thinking in the classroom, we foster students' abilities to sympathetically enter into, consider, and reason within multiple points of view. Most significant human issues require multilogical thinking. They are non-atomic issues inextricably joined to other issues, with some conceptual messiness to them, often with important values lurking in the background. When the issues have an empirical dimension, they tend to be controversial. In dealing with multilogical problems, people often disagree about how some of the facts relevant to it should be interpreted and how their significance should be determined. When these problems have a conceptual dimension, the concepts usually can be pinned down in different ways. Thus, the ability to reason multilogically is essential to critical thinking. A student who is comfortable thinking through multilogical problems is comfortable thinking within multiple perspectives, engaging in dialogical and dialectical thinking, practicing intellectual empathy, and thinking across disciplines and domains. This session will focus on teaching students to reason through multilogical issues in any subject, discipline, or domain of human thought.

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Preconference Session Descriptions Continued

Practical Ideas for Improving Student Learning…Enoch Hale

To study well and learn any subject is to learn how to think with discipline within that subject. It is to learn to think within its logic, to:

- raise vital questions and problems within it, formulating them clearly and precisely.
- gather and assess information, using ideas to interpret that information insightfully.
- come to well-reasoned conclusions and solutions, testing them against relevant criteria and standards.
- adopt the point of view of the discipline, recognizing and assessing, as need be, its assumptions, implications, and practical consequences.
- communicate effectively with others using the language of the discipline and that of educated public discourse.
- relate what one is learning in the subject to other subjects and to what is significant in human life.

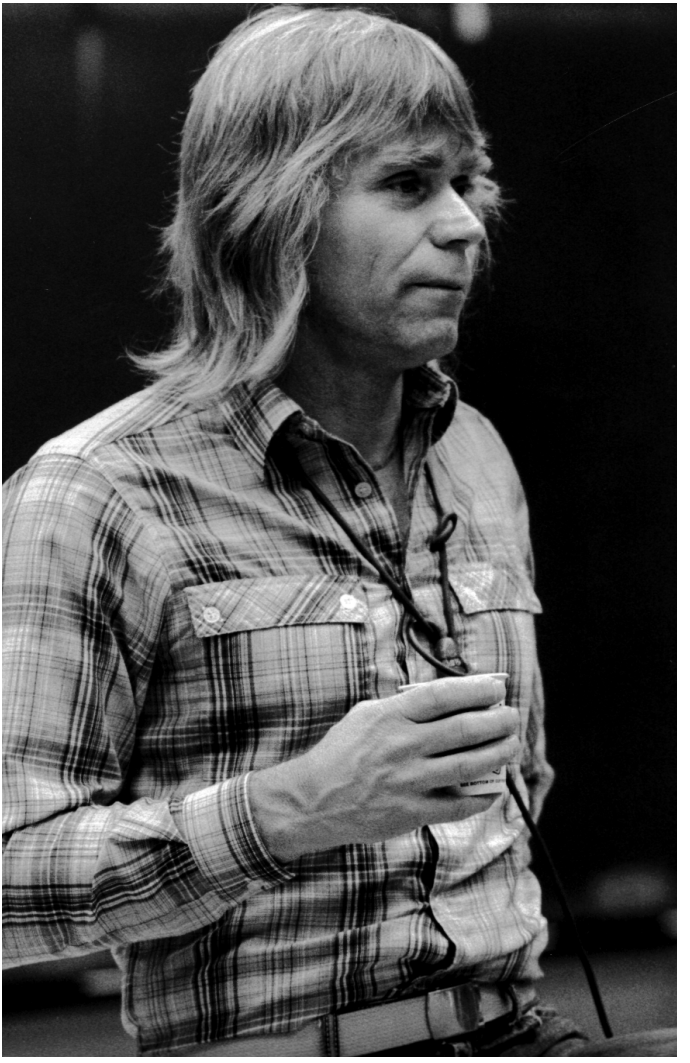
To become a skilled learner is to become a self-directed, self-disciplined, self-monitored, and self-corrective thinker who has given assent to rigorous standards of thought and gained mindful command of their use. Skilled learning of a discipline requires that one respect the power of it, as well as its, and one's own, historical and human limitations. This session will offer strategies for helping students begin to take their learning seriously. This session focuses on a number of instructional ideas that are based in the idea that substantive teaching and learning can occur only when students take ownership of the most basic principles and concepts of the subject. These strategies are rooted in a vision of instruction implied by critical thinking and an analysis of the weaknesses typically found in most traditional didactic lecture/quiz/test formats of instruction. This session, then, focuses on some basic instructional strategies that foster the development of student thinking, and strategies that require students to think actively within the concepts and principles of the subject.

Discovering the Layers Underneath the Layers of Critical Thinking…Linda Elder and Rush Cosgrove *(advanced session)*

Critical thinking is sometimes conceptualized as a list of skills that students need to learn, or as a one-two-three step approach to problem solving, or as formal logic, or as a list of fallacies, or as argumentation, or as any number of other things. But for critical thinking to do the job we need it to do in human life, we need to begin with a substantive conception of it – one that takes into account

Preconference Session Descriptions Continued

the intrinsic problems in human thought – and we need to articulate this conception in everyday common language. But then we need to go further. We need to understand that critical thinking is like an onion; there are many layers to it. We can understand each new layer only when we have taken command of the layers they presuppose. If we are to advance through the stages of critical thinking, we need to take the layers of critical thinking seriously and teach students to do the same. We must help students learn the layers implicit in the foundations of critical thinking – the tools for analysis, assessment and improvement of thought. Thus in this session we will think of critical thinking as layers to be worked through. Participants will identify some parts of the theory they have less command of and we will work to gain greater understanding of those concepts and principles. We will focus on the interrelationships between the concepts implicit in critical thinking (between the elements of reasoning, intellectual standards and intellectual traits). We will delve into the background logic of thought (for example, how our assumptions are connected to our concepts and how they inform our point of view). We will explore how our worldviews have been formed and how they influence our thought in a given situation. We will consider the intellectual conflict that occurs when we are faced with competing lines of thought. We will focus on how the barriers to critical thinking impede our ability to analyze and assess reasoning. This session is designed for returning participants and presupposes internalization of the foundations of critical thinking (the elements of reasoning, intellectual standards and intellectual traits).



Richard, in the beginning...

Bertrand Russell Scholars Series Format and Schedule

The Russell Scholars presentations are an important part of the conference experience. Please join us for these lively discussions, which will follow a question/answer format.

Schedule of Presentations:

Tuesday, July 24 7:00 p.m. – 8:30 p.m. Michael Shermer
Why People Believe Weird Things

Wednesday, July 25 10:55 am – 12:25 pm Ethan Watters
Crazy Like Us: The Globalization of the American Psyche

Wednesday, July 25 7:00 p.m. – 8:30 p.m. William Robinson
A Theory of Global Capitalism

Empire Ballroom

Bertrand Russell Series Format

To draw out the critical thinking implicit in the thinking of the Russell Scholars, the following unique design for the presentations will be used:

A fellow of the Foundation for Critical Thinking will lead a Socratic dialogue with the Scholar (45 minutes). This will be followed by 20 minutes of questions to the Scholar by conference attendees and delegates. Then there will be another 20-30 minutes of Socratic dialogue between moderator and Scholar.

Each presentation will be followed by a book signing. Books by the scholar will be available for sale at that time. These books will also be available for sale throughout the conference. The number of books is limited.

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Conference Focal Sessions Descriptions

Day One: Monday (10:45 am - 4:00 pm)

Some Ways to Design Instruction Using Critical Thinking as the Driving Force…Richard Paul

In this session Richard Paul will guide participants through a process in which they select a body of content and a set of CT instructional strategies relevant to teaching the content. Participants will work with a partner reflecting upon and talking their way through the process. Beginning with reading and reflection, participants will explain to their working partner what choices they have made and why. Richard Paul will model the process to facilitate the decision-making of the participants. Upon completion of the session, participants will better understand how CT can be used as the driving force of teaching and learning. Critical reading, critical writing, critical speaking, and critical listening will be important modalities in the design process. Reciprocal teaching will also be important in the process.

For Administrators: the Foundations of Critical Thinking and How They Can Be Infused Across the Curriculum…Linda Elder

Critical thinking, deeply understood, provides a rich set of concepts that enable us to think our way through any subject or discipline, through any problem or issue. With a substantive concept of critical thinking clearly in mind, we begin to see the pressing need for a staff development program that fosters critical thinking within and across the curriculum. As we come to understand a substantive concept of critical thinking, we are able to follow-out its implications in designing a professional development program. By means of it, we begin to see important implications for every part of the institution – redesigning policies, providing administrative support for critical thinking, rethinking the mission, coordinating and providing faculty workshops in critical thinking, redefining faculty as learners as well as teachers, assessing students, faculty, and the institution as a whole in terms of critical thinking abilities and traits. We realize that robust critical thinking should be the guiding force for all of our educational efforts. This session introduces the foundations of critical thinking, relates those foundations to instruction, and presents a professional development model that can provide the vehicle for deep change across the institution. It will utilize Dr. Elder's article on professional development that has been published in TIMES HIGHER EDUCATION.

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Conference Focal Sessions Continue

Practical Methods for Fostering Critical Thinking in Secondary Instruction…Enoch Hale

Bringing critical thinking into the high school classroom entails understanding the concepts and principles embedded in critical thinking and then applying those concepts throughout the curriculum. It means developing powerful strategies that emerge when we begin to understand critical thinking. In this session we will focus on strategies for engaging the intellect at the high school level. These strategies are powerful and useful because each is a way to get students actively engaged in thinking about what they are trying to learn. Each represents a shift of responsibility for learning from the teacher to the student. These strategies suggest ways to get your students to do the hard (but necessary) work of learning.

Understanding the Relationship Between Critical Thinking and Socratic Questioning…Gerald Nosich

Socratic questioning is disciplined questioning that can be used to pursue thought in many directions and for many purposes, including: to explore complex ideas, to get to the truth of things, to open up issues and problems, to uncover assumptions, to analyze concepts, to distinguish what we know from what we don't know, and to follow out logical implications of thought. The key to distinguishing Socratic questioning from questioning per se is that Socratic questioning is systematic, disciplined, and deep, and usually focuses on foundational concepts, principles, theories, issues, or problems.

Teachers, students, or indeed anyone interested in probing thinking at a deep level can and should construct Socratic questions and engage in Socratic dialogue. When we use Socratic questioning in teaching, our purpose may be to probe student thinking, to determine the extent of their knowledge on a given topic, issue or subject, to model Socratic questioning for them, or to help them analyze a concept or line of reasoning. In the final analysis, we want students to learn the discipline of Socratic questioning, so that they begin to use it in reasoning through complex issues, in understanding and assessing the thinking of others, and in following-out the implications of what they, and others think.

The art of Socratic questioning is intimately connected with critical thinking because the art of questioning is important to excellence of thought. Both critical thinking and Socratic questioning share a common end. Critical thinking provides the conceptual tools for understanding how the mind functions (in its pursuit of meaning and truth); and Socratic questioning employs those tools in framing questions essential to the pursuit of meaning and

Conference Focal Sessions Continue

truth.

This session will focus on the mechanics of Socratic dialogue, on the conceptual tools critical thinking brings to Socratic dialogue, and on the importance of questioning in cultivating the disciplined mind. The session will be highly interactive as participants practice Socratic question using the foundations of critical thinking.

The Art of Analyzing Transcripts of Interviews of Higher Education Faculty (at a Research University) Regarding their Conception of Critical Thinking (and How they Attempt to Teach for It) ...Rush Cosgrove *(advanced session)*

Just as there is no such thing as THE history of critical thinking, but only of A history of critical thinking; so too is there no such thing as THE assessment of programs for critical thinking across the disciplines at the college and University level. All evaluations of programs for the improvement of instruction are driven by an agenda, an orientation, a point of view. How the agenda is defined will impact our point of view. Our point of view, in turn, will impact the concepts we use as well as the assumptions we make, not to mention how we interpret any information we select and examine. In this session we will work with transcripts of interviews of university faculty regarding their conception of critical thinking (and how they teach for it). Participants in this session will work in teams to analyze and assess faculty interview transcripts. The presenter will then share his analysis of the same interview transcripts, and similarities and differences between the session participants and the researcher will be critically analyzed and commented on. This experience will then be used as a foundation for a discussion of the problem of analyzing and assessing faculty accounts of their own teaching and their assessment of their effectiveness in teaching for critical thinking across the curriculum. The data to be analyzed will be taken primarily from research conducted at the University of Oxford and Lampton School in England (by Rush Cosgrove, PhD candidate at the University of Cambridge). Both oral records and printed transcripts will be used. This session presupposes understanding of the foundations of critical thinking – the elements of reasoning, intellectual standards and intellectual traits. If you are new to the conference, please choose one of the other three sessions for day one.

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Conference Focal Sessions Continue

Day Two: Tuesday Morning (9:00 am - 11:45 am)

What Can Research Really Tell Us About the Human Mind?...Linda Elder

In current times, science is given exalted status. And so it should be when we are dealing with scientific questions. But when we want to better understand the complexities in the human mind, the translation from brain to mind may not be as simple or as apparent as is often implied or assumed. The human mind has a biological (and thus scientific) component certainly. We are, after all, biological creatures. But we are much more. Many forces influence human thought and action, including sociological forces, psychological forces, economic, religious, and political forces, to name a few. Further, because of the fundamental role that language plays in human thought and action, it is far more difficult to study people (from a chemical or biological perspective) than to study most other living creatures (that do not use the complex language we use). Yet this is precisely what we are facing – an explosive number of "scientific" studies, focused primarily on brain chemistry, that purport to explain, obviously, some part of human behavior. On the other hand, many studies are conducted in the social disciplines that shed important light on human behavior. Think, for example, of the Milgram studies that illuminate the fact that humans will often obey authority figures even when it means harming innocent people. Think also of the Stanford prison experiment which shows how people will readily dominate other people, humiliate and torture them, when placed in positions of authority. A host of studies have been conducted in cognitive psychology in recent years that illuminate the fact that people don't learn concepts very well through lecture. Consider a study conducted recently by the University of Maryland which found that after undergraduates heard a physics lecture by a well-regarded professor, almost none could specifically answer the question: "What was the lecture you just heard about?"

This session will explore a number of scientific studies being illuminated in popular literature, as well as some studies in the social disciplines, that purport to make sense of some important part of human behavior. These studies will be examined using the tools of critical thinking. At the heart of this process will be these questions: To what extent does a given study illuminate the human thoughts, feelings, motivations or behavior it purports to illuminate? Might there be other reasonable explanations for this phenomenon? Are there any potential conceptual problems with the methodology of the experiment or the conclusions of the experimenter(s)?

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Conference Focal Sessions Continue

Overcoming Bad Habits of Teaching and Learning…Gerald Nosich

Humans are creatures of habit. Good habits lead to success. Bad habits lead to failure. Institutional bad habits lead to institutional failure. The teaching profession at every level is plagued by bad habits:

- The habit of covering too much content.
- The habit of talking too much.
- The habit of giving students answers to questions they have never asked.
- The habit of covering many more concepts than students can digest.
- The habit of thinking that knowledge can be acquired by "parroting" what teachers say.
- The habit of teaching concepts unconnected with other concepts.
- The habit of teaching as if understanding came from memorizing bits and pieces of fragmented information.
- The habit of teaching concepts isolated from real life contexts.

This session will target these, and other, bad habits, and focus on the good habits that should replace them.

Analyzing Readings Using the Elements of Thought…Enoch Hale

(advanced session)

Skilled reading is rare among students. Highly skilled reading is even more rare. Yet reading at an advanced level is essential to educating the mind. Many faculty and students use an analytic approach to reading focused on taking apart the thinking of the author (the elements of thought). But it takes skilled practice to use this approach effectively. In this session, participants will analyze several readings, focusing on the elements of reasoning embedded in the work, and compare their analysis with that of others in the session. Basic intellectual standards will be applied to the analysis. In other words, first, participants will read a short written piece. They will then analyze the written piece (write out the logic of it). Finally, they will share their analysis and assess one another's work using intellectual standards such as clarity, accuracy and logicalness. This session is designed for returning participants who have basic command of the elements of reasoning and intellectual standards.

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Conference Focal Sessions Continue

Two Conflicting Theories of Knowledge, Learning, and Literacy: The Didactic and the Critical…Richard Paul

Most instructional practice in most academic institutions around the world still presupposes a didactic theory of knowledge, learning, and literacy, one that is ill suited to the development of critical minds and literate persons. In this session participants will be exposed to 21 contrasting assumptions that delineate the differences between those who teach from a didactic point of view and those who teach from a critical thinking point of view. Participants will increase the depth of their insight into the significance of those two incompatible ways to teach. Reciprocal teaching will be used throughout the sessions, that is, working in shifting pairs, participants will increase their knowledge by teaching each other what they are learning as they are learning it.

Day Two: Tuesday Afternoon (1:15 pm - 4:00pm)

Why We are All Pathological Thinkers and What Can Be Done About It… Linda Elder

The human mind is at once rational and irrational, reasonable and unreasonable. We naturally see the world from a narrow egocentric perspective. We are also highly vulnerable to influence from group traditions, mores, taboos and customs. We are naturally selfish, self-deceiving, prejudiced, biased. We naturally distort reality to fit our vision of it. We naturally distort information to keep from seeing what we would rather avoid. We naturally seek more for ourselves and our group than is rightfully ours. We naturally act without due regard to the rights and needs of others.

In short, humans are naturally egocentric and sociocentric. At the same time, we are capable of developing as reasonable persons. But to do so requires commitment and some fundamental understandings about the pathological side of the human mind. It this session we will focus on some of these painful truths about the mind. We will explore egocentric and sociocentric thought (with primary emphasis on egocentricity) as intrinsic mental phenomena that gets in the way of the cultivation of critical societies, and creates barriers to critical thought. We will also explore strategies for overcoming these tendencies.

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Conference Focal Sessions Continue

Cultivating the Intellect Through Close Reading and Substantive Writing…Enoch Hale

Educated persons are skilled at and routinely engage in close reading and substantive writing. When reading, they seek to learn from texts; they generate questions as they read and seek answers to those questions by reading widely and skillfully. In short, they seek to become better educated through reading. They do this through the process of intellectually interacting with the texts they read, as they read. They come to understand what they read by paraphrasing, elaborating, exemplifying, and illustrating what they read. They make connections as they read. They evaluate as they read. They bring important ideas into their thinking as they read.

Substantive writing, in turn, consists in focusing on a subject worth writing about and then saying something worth saying about it. It enhances our reading. Whenever we read to acquire knowledge, we should write to take ownership of the texts we read. Furthermore, just as we must write to gain an initial understanding of the primary ideas of a subject, so also must we write to begin to think within the subject as a whole and to make connections between ideas within and beyond the subject. Quite remarkably, many of our students have never read a text closely, nor written in a substantive way. Instead, they have developed the habit of skirting by with superficial and impressionistic reading, writing, and listening. This session will explore ways and means for developing student skills in close reading and substantive writing as major strategies for learning content.

Teaching Students to Think Within the Logic of a Discipline…Gerald Nosich

One of the main goals of instruction is to help the student internalize the most basic concepts in the subject and to learn to think through questions in everyday life using those concepts. Critical thinking in biology is biological thinking. Critical thinking in anatomy is anatomical thinking. Critical thinking in literature is thinking the way a knowledgeable, sensitive, reasonable reader thinks about literature. A discipline is more than a body of information. It is a distinctive way (or set of ways) of looking at the world and thinking through a set of questions about it. It is systematic and has a logic of its own. In this session, participants will think through the logic of a discipline of their choosing. They will also focus on teaching the logic of their discipline so students internalize the way of thinking inherent in the subject as a life-long acquisition.

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Conference Focal Sessions Continue

The Higher and Lower Politics of Critical Thinking…Richard Paul

> "There appear to be some powerful mythologies circulating that academics are free of partisanship, untouched by conflicts of interest and personal grievance. There may be some noble souls who are faultless in these areas, but in my experience that is not universally the case."
>
> Judy Swindells, Professor of English

Politics and power are an intrinsic part of academic life. However, educators can respond in a "higher" or "lower" way to the (usually vexing) realities of politics. Responding in a higher way, or in other words, taking the high ground, enables educators to make a good faith commitment to the ideal of critical thinking without ignoring the frustrating realities of politics. Those who take the high ground recognize the gap between the ideal and the real. They recognize that some people will more readily see the importance of critical thinking. They understand that some will resist. They therefore design a long-term staff development process that:

1. (For those who resist change) offers an escape hatch strategy that leaves resisters to themselves (as long as their mode of resisting does not actively undermine those motivated to work for substantive change),
2. (For slow movers) provides a gradualist set of strategies that enables those motivated to move at a slow pace to do so. (Often slow movers face significant obstacles that render accelerated change In their context exceedingly difficult),
3. (For those ready for sweeping substantive change) provides a fast track that enables fast movers to work under favorable conditions at an accelerated pace (politically and academically),

In this session participants will be given (and will themselves generate) examples of the higher and lower ways of dealing with political realities when critical thinking programs are implemented on campus. Participants will also exemplify escape hatch, gradualist, and crash course orientations. Accordingly, participants will gain some practical insights into the art of cultivating substantive change essential to transforming higher-order institutions (from didactically- to critically-centered communities). Participants will see how the ideals of education can be served by knowledge of practical strategies grounded in a realistic conception of the obstacles that typically prevent or de-rail significant change. Through this knowledge you will be primed to take the high ground – to your benefit and to the benefit of those who work with you.

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Conference Focal Sessions Continue

Day Four: Thursday Morning (9:00 am - 11:30 am)

Helping Students Learn to Think Within the Key Concepts in Subjects and Disciplines…Gerald Nosich

Concepts are ideas we use in thinking. They enable us to group things in our experience in different categories, classes, or divisions. They are the basis of the labels we give things in our minds. They represent the mental map (and meanings) we construct of the world, the map that tells us the way the world is. Through our concepts we define situations, events, relationships, and all other objects of our experience. All our decisions depend on how we conceptualize things. All subjects or disciplines are defined by their foundational concepts. Cell versus mitochondria is an example. Cell is a much more fundamental and powerful concept in biology than is mitochondria. Students who achieve a deep understanding of the concept of a cell will be able to think though and gain insight into a very large number of topics in biology. It will give them a powerful entrance into thinking biologically. Not only that, but a good grasp of the concept cell will enable students to think critically about a range of topics they will encounter outside the course. By contrast, a student who achieves a good grasp of the concept mitochondria will not, thereby, gain insight into nearly as large a range of other biology topics.

When students master foundational concepts at a deep level, they are able to use them to understand and function better within the world. Can you identify the fundamental concepts in your discipline? Can you explain their role in thinking within your discipline? How can you help students take command of these concepts? These are some of the questions that will be explored in this session.

Teach So That Students Think Through the Content Using Intellectual Traits…Richard Paul

We want students to think through the content so that not only is the thinking of the system laid bare, but also so that the mind of the student is simultaneously transformed from uncriticality to criticality, and from weak-sense criticality to strong-sense criticality. This session will focus on some guiding principles, including:

1. I know better what I know about X when I can empathize with those who do not know or believe X, when I can give voice to those who think differently and acquire their insights.

Conference Focal Sessions Continue

2. I know better what I know when I can think through, for myself, the logic of what I believe.
3. I know better what I know when I know the extent to which I apply what I am learning in my life.
4. I know better what I know when I recognize the extent to which I hold contradictory beliefs, and when I work to remove those contradictions (in a fair-minded way).
5. I gain more, and deeper, knowledge when I work my way through difficulties, obstacles, and frustrations in the process of learning.

These and other principles will be used in this session to exemplify how to teach so as to encourage student development of critical thinking traits.

Bringing it Home: Critical Thinking at the Institutional Level…Patty Payette and Rush Cosgrove

This session will focus on helping administrators, teachers and other leaders begin to design a long-term critical thinking professional development program at their home institution, department or school. During this session, the facilitators will share insights (both experiential and research-based) from one institution (the University of Louisville) currently in the 5th year of a 10-year plan to improve teaching for critical thinking across the disciplines.

The session will focus on the guiding principles useful in designing effective professional development programs around critical thinking at any institution and at any level. Participants will have the opportunity to discuss and apply these principles to their own unique contexts and draft a plan of action to take significant steps toward a critical thinking program at their home institution. The session will be jointly led by Rush Cosgrove (PhD candidate in educational research, University of Cambridge) and Patty Payette, Ph.D. (executive director of the critical thinking faculty development initiative at the University of Louisville).

Four Forms of Sociocentric Thought and the Harm They Cause…Linda Elder

If we want to cultivate critical thinking, in ourselves or in others, we need to understand the barriers to critical thinking. Some of the most powerful barriers come from intrinsic habits of the human mind. One of these, sociocentric thought, is the focus of this session.

Almost everything we think or do, we have been taught to think or do by the social groups that have shaped us. Living a human life entails membership in

Conference Focal Sessions Continue

a variety of human groups. This typically includes groups such as nation, culture, profession, religion, family, and peer group. We find ourselves participating in groups before we are aware of ourselves as living beings. We find ourselves in groups in virtually every setting in which we function as persons. What is more, every group to which we belong has some social definition of itself and some usually unspoken "rules" that guide the behavior of all members. Each group to which we belong imposes some level of conformity on us as a condition of acceptance. This includes a set of beliefs, behaviors, and taboos.

This session will focus on the following primary forms of sociocentric thought as found in Linda Elder's book, The Emancipated Mind: Overcoming Sociocentric Thought (in press): 1) groupishness or group selfishness, 2) group validation, 3) group control, and 4) group conformity.

The problem of sociocentric thinking in human life will be discussed, along with its implications for living a rational life, and for teaching and learning.

Identifying Resources that Foster Critical Thinking….Enoch Hale

There are a plethora of resources that focus on instructional redesign, many of which tout an emphasis on critical thinking. But we need critical thinking abilities to be able to determine which instructional resources are actually based in critical thinking concepts and principles. In other words, we need to think critically to identify whether and to what extent critical thinking is implicit in instructional materials. We need critical thinking abilities to determine which teaching strategies will work best with our students, which need to be modified for use with our students, and which probably won't work. We can find these strategies in intellectual resources– those people, books, articles, etc. that stimulate our thinking and take us to higher levels of thought. Our ability to appropriately assess and utilize these resources reflects the extent to which we think critically about them. In this session, participants will be introduced to a variety of resources and will determine which would be most useful in their work with students. But our main goal will be to deepen our understanding of critical thinking by applying it in the context of assessing and considering how we might use intellectual resources.

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Concurrent Sessions Program

Wednesday, July 25, 2012

The concurrent sessions are presented by faculty who are attempting to foster critical thinking in teaching and learning. Choose one concurrent session to attend for each time slot.

Note that we have included in the schedule below the Bertrand Russell Lectures, to which all are invited.

Schedule Overview:

8:30 am	–	9:30 am	Concurrent Sessions I
9:40 am	–	10:40 am	Concurrent Sessions II
10:40 am	–	10:55 am	Break – Horizon Room
10:55 am	–	12:25 pm	Ethan Watters, Russell Scholar
12:25 pm	–	1:45 pm	Lunch
1:45 pm	–	2:45 pm	Concurrent Sessions III
2:45 pm	–	3:00 pm	Break – Horizon Room
3:00 pm	–	4:00 pm	Concurrent Sessions IV
7:00 pm	–	8:30 pm	William Robinson, Russell Scholar

Concurrent Sessions I
(8:30 am – 9:30 am, Wednesday)

Using Critical Thinking "Elements Wheel" as a Professional Development Tool

Rhonda Orman
University of Louisville
Room: Sonoma

Session explores process by which presenter utilized critical thinking knowledge gained as UofL undergraduate student to subsequently develop year-long departmental training initiative at place of employment, Jefferson Community & Technical College. Initiative focused on developing critical thinking skills using tools from Paul/Elder framework modified by presenter specifically for this purpose. Session will cover goals, challenges, strengths, and weaknesses of using the Paul/Elder framework as a strategy to address departmental training needs.

Application of the SEEI Model in the Classroom

Joseph D'Silva
Norfolk State University
Room: Napa

The SEEI model is a powerful tool to engage students in learning Critical

Thinking skills. It was applied in teaching three courses, two of which were Anatomy & Physiology and Pathophysiology, the latter being an upper level. The model was embedded in the syllabus and explained to the students so that they could apply it to study concepts. Furthermore, the students were divided into groups of five for the purposes of collaboration and cooperation. Concepts from the textbook were given to them to study. They used the SEEI model to critically analyze these concepts as written in the book and then to frame four questions, first individually and then as a group. The group questions (with answers) were posted on a Blog site on Blackboard for all to view. When asked if whether the SEEI model enabled them to engage more fully with the concepts under study and to become more critical in their thinking, their reply was in the affirmative. Students were able to relate to study material more than before. In addition to prompting them to think critically, the exercise developed a study habit in the students. The dynamics of the classroom intervention in the application of the SEEI model are discussed. Critical Thinking skills are a part of the Quality Enhancement Plan at NSU and are promoted actively.

The Incomplete Image: Using Critical Thinking as the Tool for Exposing Students to Their Limited Understanding of Aesthetics

Miguel Del Castillo
Gulliver Preparatory School
Room: Lanai 2

Students tend to believe that the role of aesthetics is intertwined with their own perceptions and insights, thus negating an objective attempt to clarify any inaccuracies in their own conclusions. Within the classroom setting, the role of critical thinking and clarifying aesthetics is often linked to the task of the teacher 'thinking' for the students. If students are to begin to think critically about how they interpret and detect bias within what they are learning, they must be exposed to their own limitations, especially in relation to how the world appears around them. This session seeks to model how the simple task of looking at a historical photograph can start the complex mission of having students evaluate their own socio-centrism and egocentrism in relation to what they are 'seeing', and question to what extent they are thinking critically about aesthetics. By going through a series of steps in this session, participants will be asked to reflect upon their own values and beliefs as they will encounter how bias informs most, if not all, of what we observe. A primary tool that will serve as a guide for this session will be *How to Detect Media Bias & Propaganda* (Paul and Elder) and its applicability to the process of understanding the implications, both positive and negative, of what we 'see' in the media, whether it is in a photograph, television, film, and/or on the internet. This session will close with participants discussing

how they can utilize, at their own institutions, different texts and images to facilitate the simple step of seeing as a tool for critical thinking.

A Dialectical Approach to Critical Thinking Through Writing

Nancy Burkhalter
University of Washington
Room: Claremont Ballroom

In this one-hour workshop, participants will gain a clearer understanding of how to guide students' formulation of thesis statements and other rhetorical devices to encourage critical thinking and, in turn, how critical thinking improves their writing. After a brief explanation of how writing and thinking are complementary activities, I will present my method for creating a thesis statement. Since one cannot (usually) write a fully fleshed-out thesis at the outset, I then show how the thesis statement (i.e., their thinking) can be gradually honed by means of other rhetorical elements, such as topic sentences and the use of transitions between sentences and paragraphs. This method gives writers a tool to create balanced, well developed, focused, organized essays that lead the reader smoothly through their arguments, regardless of the subject.

This dialectical interplay between the refining of the thesis and the development of the essay helps address the Paul/Elder intellectual standards of clarity and precision (through development of ideas), logic (use of transitions), relevance (creating a controlling idea), to name a few.

Most methods of teaching academic essays cover thesis statements; however, my method differs from others in that it is much more explicit in how to arrive at a complete, focused, fleshed-out thesis.

Some of the benefits of this method are the following:

1. It helps writers focus, refine, clarify, and develop their thinking.
2. It helps writers produce a credible, arguable, well organized essay that meets readers' rhetorical expectations, i.e., no wandering around, no fuzzy ideas, no diatribes – just measured, well supported ideas that make one point and make it well.
3. It helps students extract/outline the thesis and arguments in others' writing, thereby helping them better evaluate the content.

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Teaching Young Children to Think Critically

Carmen Polka
Ponderosa Elementary School
Room: Monterey

A common misconception the general public has is that if we just teach young children the basic skills and leave the 21st century skills to the older grades, we will be just fine. This is a fallacy. Basic skills include critical thinking as a necessary, fundamental tool. So what does that look like? What does it sound like? How does one foster critical thinking in a classroom for early learners?

In my classroom, building a foundation for children as young as the age of four is more than possible; it is reality. An environment for optimal learning is centered on a core set of best practices. These practices include balanced literacy, developmentally appropriate, multiple intelligences, and gradual release of responsibility, inquiry and constructivism. However, the most essential to quality instruction and optimal learning is developing quality thinkers. The development of critical thinking skills, abilities and traits is a basic goal in my classroom. As children start taking apart their thinking by analyzing their inferences, questions, assumptions, purpose and so forth they begin the journey. But it doesn't stop there. Assessing their thinking is where the fun really begins. It is common in my classroom to hear students assessing their thinking using the intellectual standards of logicalness, accuracy, relevance and significance. My students are actively learning and using the language of critical thinking.

Teaching children at the primary level to think critically is an incredible challenge, yet with the challenge comes great reward.

Concurrent Sessions II
(9:40 am – 10:40 am, Wednesday)

Developing Intellectual Virtues

Brian Barnes
University of Louisville
Room: Sonoma

How do Intellectual Traits cross over from the classroom into our daily routine? Can educators find ways to cultivate these Traits in the classroom that will cause them to become significant for students' and teachers' broader lives? This workshop will provide classroom activities and assignments that emphasize the connections between a scholarly pursuit of positive habits of mind and their location in the world at large. Importance is placed on connecting the Traits to Intellectual Standards and Elements of Thought to demonstrate the claim that

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study of one aspect of the Framework reinforces other aspects. Participants will learn to develop activities that work for their own disciplines.

It's Not All About Me?: Strategies to Uncover Egocentrism and Sociocentrism

Laura Ramey
Serra High School
Room: Napa

Human beings have a tendency to consider their own rights and needs, without considering those of others. We also may not fully appreciate the points of view of others and we may not recognize the limits of our own point of view. Thus, our thinking is focused on ourselves – egocentric thinking. In addition, we may not fully grasp the degree to which our thinking is influenced by the society we live in and the norms embodied in that society – sociocentric thinking. This is an interactive, working session aimed at designing questions and activities that might help our students, employees, and colleagues to identify the extent to which egocentric and sociocentric thinking impacts their thinking, beliefs, and actions.

Improving Student Critical Thinking Through Direct Instruction in Rhetorical Analysis

Lauren McGuire
Apple Valley High School
Room: Lanai 2

Cultivating critical thinking, intellectual growth, and lifelong learning opportunities that afford students the knowledge and skills necessary for success in life is a fundamental goal of all educational institutions. Educators are beginning to explore those pedagogical practices that could effectively develop higher order thinking skills. Instructional strategies that advance critical thinking pedagogy on a consistent basis could positively impact the range and quality of student critical thinking skills' performance. Further, purposeful implementation of the Thinkers Guides, based on Dr. Richard Paul and Dr. Linda Elder's model of critical thinking and Socratic questioning, could strengthen students' perceptions of critical thinking and of their own critical thinking abilities. Using Paul and Elder's Thinkers Guides, the Elements of Reasoning, and Socratic questioning, this session will focus primarily designing instruction that integrates direct instruction in rhetorical analysis. Participants will work in small groups and will be offered instructional methodologies which encourage analysis and evaluation of expository and argumentative discourse and which develop students' critical thinking, reading, and writing skills.

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Using the Elements of Thought in a Digital Media Assignment to Foster the Development of the Intellectual Traits

Edna Ross and Rhonda Orman
University of Louisville
Room: Claremont Ballroom

The emphasis on digital media proficiency and critical thinking competencies are increasingly important components of higher education. U ofL honors seminar students were required to utilize the Paul-Elder framework of critical thinking to develop a video presentation of their final project. The instructor of the course will explain how the assignment maps to specific critical thinking proficiencies and one of the students from the class will present her perspective on how the assignment impacted her critical thinking skills.

Break - Coffee/ Tea 10:40-10:55 am (Horizon room)

Bertrand Russell Presentation: Ethan Watters (10:55 am – 12:25 pm)
Empire Ballroom

Break For Lunch, on your own... (12:25 pm – 1:45 pm)

Concurrent Sessions III
(1:45 pm – 2:45 pm, Wednesday)

Strategies for Promoting Critical Thinking in Courses Across the Curriculum

Scott Weeden
Kate Thedwall
Nancy Evans
Indiana University Purdue University Indianapolis
Room: Claremont Ballroom

In 2009, a faculty Critical Thinking Community of Practice (CoP) was formed on the Indiana University Purdue University Indianapolis (IUPUI) campus among faculty teaching Gateway (freshmen and sophomore level) courses. The purpose of the CoP is to work on strategies for promoting students' critical thinking abilities that can be adopted in other courses across the campus. The members of this interdisciplinary CoP will present results from their ongoing investigations in courses ranging from chemistry, psychology, computer information technology, speech communication, and English. These

investigations have included how student peer mentors use The Elements of Thought (Paul & Elder, 2009) in an introductory chemistry course; how students work with fundamental and powerful concepts and levels of concepts (Nosich, 2012) in an introductory psychology course; how students use the SEEI process (Nosich, 2012) for a project in a computer technology course; how students use The Elements of Thought (Paul & Elder, 2009) to summarize and analyze an academic article in an introductory speech communication course; and how students work with a course focusing question in an English writing course.

Questioning and Writing Strategies for the Critical Mind

Gary Meegan
Junipero Serra High School
Room: Sonoma

Students all too often look at a book as being a repository of facts that either need to be searched for the right answer or memorized for a test. The critical mind does neither of these: instead, it digs deep to explore and understand. This session will look closely at how questions and SEEI contribute to the education of the thinker. It will become evident that critical thinking also allows for differentiation among students and fosters motivation at all levels. The strategies and activities discussed will be practiced and materials will be provided that can be used immediately in the classroom, including a PowerPoint and handouts.

PRISM: Rays of Light from a Campus-wide CT Infusion

Dr. Timothy M. Hendrix, Associate Professor/Director of the PRISM Experience
Ann Gleason, Dean of Students/Co-chair, PRISM Advisory Committee
Dr. Steven A. Benko, Assistant Professor
Dr. Mark O'Dekirk, Associate Professor
Dr. Kelly Morris Roberts, Associate Professor
Meredith College
Room: Napa

How does a smaller liberal arts college infuse critical thinking (CT) into the fabric of the academic climate across the entire campus? PRISM (Purposeful Reasoning, Inquiry & Scholarship at Meredith) is a multi-year campus-wide effort to develop a sustained emphasis on critical thinking through both curricular and co-curricular initiatives. Initiatives include: (1) PRISM Seminars—freshmen-level, discipline-based seminars that introduce critical thinking skills in the context of significant content problems; (2) The PRISM Collaborative, a vibrant professional learning community among co-curricular staff; (3) Efforts to infuse CT in the middle and upper levels of major programs; and (4) Stone Soup

Conference, an annual professional development conference for both faculty and staff that is the catalyst for continuing PD during the academic year. This session will share the framework as well as the strategies, successes and challenges of these initiatives with a primary focus on the early lessons learned from data. In the context of articulating the challenges we face and how this campus is addressing those challenges, this session will invite participants to discuss the common challenges campuses face as well as to generate possible solution paths that are beneficial for campus-wide initiatives.

Enhancing Critical Thinking Ability in ESP: A Case Study of English for Science and Technology Class

Arthitaya Narathakoon
Language Institute, Thammasat University
Thailand
Room: Lanai 2

Integrating critical thinking with language teaching poses one of the most challenging tasks to second language teachers. The main purpose of the study was to increase students' critical thinking skills in English for Science and Technology and to investigate their opinion toward critical thinking enhancing activities. The 14-week lesson plans were specifically designed to engage students in various activities. Posing questions applied from Bloom's Taxonomy was also implemented to promote their critical thinking skills. The participants were 30 students from Thammasat University, Thailand who have low English proficiency and limited exposure to critical thinking skills development. The research instruments consisted of lesson plans, students' writing assignments, a teacher's journal and a questionnaire. The findings show students' improvements in terms of critical thinking ability, English proficiency, and level of participation in classroom activities. The findings also show changes in relationships between students and students and students and teachers. The recommendations for improving teacher's practices in developing students' critical thinking ability and for future research are also provided.

Critical Thinking and Intelligence Analysis: Experiences with Professional Development

Daniel R. Durham
Debora Pfaff
Joint Military Intelligence Training Center;
Defense Intelligence Agency
Room: Empire Ballroom

Critical thinking is of paramount importance at all levels of an intelligence

analyst's professional development. The Defense Intelligence Agency (DIA), Joint Military Intelligence Training Center (JMITC) is responsible for educating new and experienced employees in intelligence analysis for the Department of Defense, Intelligence Community (IC) agencies, and international partners. A critical component of this education is an initial introduction to and mid-level reinforcement of the concepts and principles of critical thinking based on the Paul and Elder Model. Socratic questioning is integrated into the training model early on, as we encourage students to explore the mindsets and biases of themselves and others. To capitalize on the principles of critical thinking, students are taught structured analytical techniques that require them to develop the issue, question their assumptions, and use models to guide their thinking. As the students progress in their careers, advanced courses build upon their skills and encourage them to regard critical thinking as not just a "box to be checked," but an imbedded systemic process that is necessary to develop intellectual virtues. This session will cover incorporating critical thinking into intelligence analysis training as structured over several layers within the DIA/JMITC curriculum.

Break- coffee/ soft drinks- 2:45-3:00 pm

Session IV
(3:00 pm – 4:00 pm)

The Logic Wheel: Strategies for the Classroom

Gary Meegan
Junipero Serra High School
Room: Sonoma

Research has shown the power of the Paul/Elder model of critical thinking in the classroom. Now that you've been grounded in the theory, let's take it to the classroom. This session will focus on using the Elements of thought to help students analyze how they, and others, reason. We will walk through the elements and practice strategies for using them in reading and writing. The strategies and activities discussed will be practiced and materials will be provided that can be used right away in the classroom, including a PowerPoint and handouts.

Enhancing Faculty Critical Thinking Skills Through the Design of an Assessment Rubric to Measure Student Critical Thinking and Inter-professional Collaboration

Laura MacDonald
School of Dental Hygiene, Faculty of Dentistry
University of Manitoba
Canada
Room: Lanai 2

The University of Manitoba (UM) health professional programs are building an interprofessional education (IPE) curriculum for collaborative patient-centered practice. Critical thinking (CT) is a must in collaborative practice. "Be a critical thinker" and "collaborate with others" are both 'must' accreditation requirements of the health profession programs, as well as standards of practice for licensure. If the professional is a good critical thinker, she/he would be an effective interprofessional collaborative patient-centered practitioner (ICPCP). Collaboration skills such as autonomy, trust and respect inherently require the professional to possess CT traits, be mindful of their thinking, and pursue quality of their thinking. Use of the Paulian Critical Thinking Framework ensures CT is embedded in the UM IPE curriculum. This session describes the experience of seven UM IPE faculty who integrated the CT elements, standards and traits with the collaboration skill set to develop a rubric to assess student critical thinking and collaboration as a result of an IPE learning event. This community of education scholars conceptualized and constructed the rubric based on three tenets: 1) critical thinking can be taught and assessed, 2) IPE learning is measurable, and 3) transformative learning results in observable behavioral change. The faculty enhanced their own critical thinking and interprofessional collaboration, thus building capacity of the IPE curriculum to deliver the musts of 'be a critical thinker' and 'collaborate with others'.

Helping Students Grow in Their Understanding and Appreciation of Critical Thinking

Melvin Manson
Endicott College
Room: Lanai 3

Students learn best in an environment where classroom instructional pedagogy guides these students to better ways of thinking and reasoning. The ideal is for students to learn and internalize strategies that will help them become

self directed, critical learners. Continuous application of the intellectual standards and the elements of thought in all course assignments allows students to develop and use these critical thinking abilities so that close reading, substantive writing and a questioning mind become routine behaviors both in and out of the classroom. Practical examples of such teaching strategies and assignments will be introduced in this session. Participants will evaluate how effective these assignment examples might be for their own classroom setting and make suggestions on how to incorporate some of these ideas or other ideas from participant discussion in new class assignments that will help guide their students in the ways of critical thinking.

Modeling Critical Thinking in a Masters Level Health Policy and Nursing Course

Juanita Holliman, RN
Chicago State University
Room: Napa

Socrates (469-399BC) the model teacher of reasoning, who encouraged his students to be free to question anything, and to be constrained by nothing except reason itself, was tried, convicted, and put to death for teaching "Critical Thinking." The challenge continues as faculty and students, search for meaning and the application of critical thinking in classes across colleges and universities across America.

Participants will gain knowledge and understanding of how to incorporated critical thinking concepts across curriculum as the presenter shares insight into how she was able to integrate the concept of critical reasoning, into a "Health Policy and Nursing Masters Level Course". "Elements of Reasoning and Universal Intellectual Standards," as proposed by the Center for Critical Thinking and Moral Reasoning at Sonoma State University in California, was the conceptual framework utilized to assess and determine the logical underpinnings or critical elements for the course.

Applications of Critical and Creative Thinking in Homeland Security

Fred May
Eastern Kentucky University
Room: Claremont

This presentation explores classroom applications of two Socratic Questioning Models (SQMs) which teach students to ask essential questions to analyze homeland security content relating to natural and man-caused disasters. The first model enables students to analyze disasters to determine creative

approaches for change. The second model enables students to individually analyze disaster case studies, followed by analyzing the same case studies in teams. This teaches students the creative advantage of team problem solving. Both questioning models lead students from critical thinking to the development of creative products useful in disaster management. These types of questioning models are broadly applicable in education.

Critical Thinking and Ethical and Social Issues:

Is America Abandoning its Traditional Role as Global Champion of Human Rights?
Robert Schlim, facilitator
Room: Empire

Critical thinking is not just for the classroom. It is crucial to the ethical conduct of life itself. To stimulate, even to provoke, some of that thinking, we have included in this year's conference this session that emphasizes the importance of thinking critically about ethical, social and political issues. The issue that is the focus of the session is presented in such a way as to stimulate the critical thinking of the participants. In presenting the issue we strove to be "objective." However, we have no pretense to being "neutral."

This session will focus on the views of the participants and will be led by a facilitator. Debate is invited as long as it demonstrates fair-minded and empathic critical thinking. Participants will be divided into small groups. Each group will briefly report its conclusions to the group as a whole toward the end of the session. Caveat: though participants are free to question or argue against any of the premises or assumptions in the formulation of the issue, such discussion should not be so drawn out as to prevent discussion of the issue itself, as presented. We hasten to add---to those who believe that "neutrality" is essential in such discussions ---that any issue put in such a way as to challenge the dominant view in a society will appear to those who hold that dominant view to be biased and unfair. We therefore recognize that others might put the issues differently, to stimulate our thinking in different directions.

Bertrand Russell Presentation: William Robinson (7:00 pm – 8:30pm)
Empire Ballroom

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History and Outreach

The Center for Critical Thinking was established in 1980 to advance the idea of fairminded critical societies in education and every dimension of life; the Foundation for Critical Thinking was established in 1991.

From the beginning, our work has emphasized the need for three things: 1) a substantive conception of critical thinking based in ordinary language, accessible to all, 2) an approach that fosters and encourages critical thinking (in a strong-sense) across all disciplines, subjects, domains of human thought and life, and 3) barriers and challenges to critical thinking and ways of dealing with them. Our work can be broadly categorized into these areas:

1. theoretical development, scholarship and research
2. outreach through conferences, academies and workshops
3. outreach through onsite training for schools, colleges and universities
4. development of testing and assessment tools in critical thinking
5. development, publication and dissemination of books, instructional materials, videos and thinker's guides on critical thinking
6. outreach through a dynamic website which offers many complementary resources for educators at all levels, including a large online library
7. outreach through multi-language translations of our work

Theoretical Development, scholarship and research

Theoretical development in critical thinking has been a primary focus of our work at the Foundation for Critical Thinking. All of this theory has been pursued in an attempt (ultimately) to answer the question: What is critical thinking (viewed globally), and how can it be contextualized to help people live more rationally, productively, fairmindedly? The theory in our approach is detailed in our many publications. We also conduct and support ongoing research in critical thinking (see our website for examples). We believe that a rich conception of critical thinking is one that is alive and in constant development; hence the need for continual development of the theory of critical thinking. Further, we believe that any field of study can potentially contribute to such a conception. Therefore, we invite scholars to contribute to this robust conception. We invite scholarly critique. All of our work should stand the test of scholarly assessment. It should grow and develop as a result thereof.

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Conferences, academies and workshops

The First Conference on Critical Thinking, sponsored by the Center for Critical Thinking, marked the year of our birth (1980). Since that time, we have continued to host this conference every year. In addition, we sponsor and coordinate critical thinking academies (national and international), as well as regional workshops. More than 60,000 educators and administrators have attended these events, many from countries beyond the U.S. For instance, in the past four years alone, educators from the following countries have attended our events: Singapore, China, Canada, England, Australia, Germany, Hong Kong, Israel, Malaysia, Mexico, Nigeria, Philippines, Saudi Arabia, Denmark, Korea, Nepal, South Africa, Thailand, American Samoa, Czech Republic, Kazakhstan, Kuwait, Japan, Venezuela, Taiwan, Turkey, United Kingdom, Netherlands, Jamaica, Kuwait, Oman, Russian Federation, Spain, Sweden, and United Arab Emirates. At any given conference, more than 100 departments are represented from every major field of study, and from every grade level from elementary through graduate school, making our conference the most diverse conference on critical thinking in the world. We have provided national and international scholarships to our conferences and events for hundreds of educators.

Onsite professional development programs

We develop and conduct onsite professional development programs for educators at all levels, both in the U.S. and abroad. In the past three decades, we have presented professional development workshops to more than 70,000 educators. All of our professional development programs are designed and developed with participating institutions in mind, as there is no formulaic way to develop substantive professional development in critical thinking. The actual context must always be taken into account.

Testing and assessment tools in critical thinking

The Foundation for Critical Thinking offers assessment instruments that share in the same general goal: to enable educators to gather evidence relevant to determining the extent to which instruction is fostering critically thinking (in the process of learning content). To this end, the fellows of the Foundation recommend:

- that academic institutions and departments establish an oversight committee for critical thinking, and
- that this oversight committee utilize a combination of assessment instruments to generate incentives for faculty (by providing faculty with evidence of the actual state of instruction in critical thinking at the Institution).

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The following instruments are available through the Foundation for Critical Thinking to generate evidence relevant to critical thinking teaching and learning:

1. Course Evaluation Form: provides evidence of whether, and to what extent, students perceive faculty as fostering critical thinking in instruction (course by course).
2. Critical Thinking: Concepts and Understandings: provides evidence of whether, and to what extent, students understand the fundamental concepts embedded in critical thinking (and hence tests student readiness to think critically). Online test.
3. Critical Thinking Reading and Writing Test: Provides evidence of whether, and to what extent, students can read closely and write substantively (and hence, tests student ability to read and write critically). Short answer.
4. International Critical Thinking Test: provides evidence of whether, and to what extent, students are able to analyze and assess excerpts from text books or professional writing. Short answer.
5. Commission Study Protocol for Interviewing Faculty Regarding Critical Thinking: provides evidence of whether, and to what extent, critical thinking is being taught at a college or university (can be adapted for high school). Based on the California Commission Study. Short Answer.
6. Foundation for Critical Thinking Protocol for Interviewing Faculty Regarding Critical Thinking: provides evidence of whether, and to what extent, critical thinking is being taught at a college or university (can be adapted for High School). Short Answer
7. Foundation for Critical Thinking Protocol for Interviewing Students Regarding Critical Thinking: provides evidence of whether, and to what extent, students are learning to think critical thinking at a college or university (can be adapted for high school). Short Answer. To view a sample student interview, please register to become a member of the critical thinking community.
8. Criteria for critical thinking assignments. Can be used by faculty in designing classroom assignments or by administrators in assessing the extent to which faculty are fostering critical thinking.
9. Rubrics for assessing student reasoning abilities. A useful tool in assessing the extent to which students are reasoning well through course content.

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Publication and dissemination of instructional materials

The Foundation for Critical Thinking develops and publishes instructional materials for faculty and curriculum materials for students that foster critical thinking across the curriculum. We also send complementary copies of our thinker's guides to educators to introduce them to critical thinking. In the past decade, we have sent (free of charge) more than a million thinker's guides to educators in the U.S. and abroad. (See our website bookstore for available resources.)

Dynamic Website - Free Resources For Educators At All Levels

For more than a decade, the Foundation for Critical Thinking has been building an increasingly dynamic website, offering more and more resources to educators, including the following:

1. More than one hundred articles under eight headings; all accessible freely; all aimed at making clearer the idea of critical thinking, its history, and its possible uses in classrooms of various subjects and grade levels;
2. research studies conducted by the FCT on the application of our work;
3. free translations of all our work for which we own the rights. Included languages: Spanish, German, Arabic, Chinese, Japanese, Korean, French, Greek, Polish, Thai, and Turkish. Spanish is the leading group with 12 works translated;
4. numerous interviews, editorials, news articles, and other visual and aural media; again, all aimed at explaining and applying critical thinking in various directions and in numerous contexts;
5. numerous critical thinking videos freely accessible;
6. an online college credit course for teachers that focuses on integrating critical thinking across the curriculum. This credit course is offered through Sonoma State University.

Our website is visited by more than a million people each year from more than 200 countries.

Translations of our Work – 25 Languages

The works of the Fellows of the Foundation for Critical Thinking have been translated into many languages. Many of these translations are available free of charge on our website. Additional translations are being added to our online library each year.

Institutions Using Our Approach – A Sampling

The following institutions are making considerable efforts to foster critical thinking using our approach to critical thinking. This conception is based on the

research of the Center and Foundation for Critical Thinking during the last 30 years and utilizes the work of Dr. Richard Paul, Dr. Linda Elder and Dr. Gerald Nosich. If your institution is not listed, but you think it should be added to this list, please let us know. Email Dr. Enoch Hale at hale@criticalthinking.org.

The University of Louisville Ideas to Action:
Using Critical Thinking to Foster Student Learning and Community Engagement

In 2007, the University of Louisville launched its quality enhancement plan (QEP) titled, Ideas to Acton: Using Critical Thinking to Foster Student Learning Community Engagement. This ten-year initiative is centered upon the development and assessment of students' critical thinking skills and the promotion of community engagement across the undergraduate curriculum. The Ideas to Action (i2a) program is part of UofL's commitment to ongoing improvement as part of the regional reaccreditation process. The Paul-Elder critical thinking model provides the framework for the teaching and learning innovations faculty and staff are creating as part of i2a at UofL. These innovations include the development of new or revised learning tools, assignments, assessments, programs and teaching and learning strategies. The i2a staff and campus partners are promoting critical thinking infusion and "Paul-Elder integration" by facilitating new learning communities, developing workshops and small group sessions, offering individual consultations, creating resource materials and fostering cross-disciplinary conversations about critical thinking. To learn more about the i2a critical thinking work at University of Louisville, go to: http://louisville.edu/ideastoaction

For more information, contact:
Edna Ross, Ph.D.
Ideas to Action Specialist for Critical Thinking
Ideas to Action Delphi Center for Teaching and Learning
University of Louisville (502) 852-5138
edna.ross@louisville.edu

Eastern Kentucky University:
Developing Informed, Critical and Creative Thinkers Who Communicate Effectively

Eastern Kentucky University is in its third full year of the implementation of its student learning Quality Enhancement Plan to "develop informed, critical and creative thinkers who communicate effectively" as a part of its accreditation. In that effort, EKU has embraced the work of The Foundation for Critical Thinking, promoting the work of Richard Paul, Linda Elder, and Gerald Nosich.

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"Coaches" (faculty & staff trainers) continue to work with individuals, departments, and colleges to develop specific teaching and assessment strategies to help improve student critical/creative thinking. Professional Learning Communities are being used to promote professional development to both faculty and professional staff to improve student critical/creative thinking and communication skills, in and out of the classroom. Workshops, consultations, resource libraries, and brown bag sessions help promote this initiative. The Foundation's booklets, posters, and bookmarks are widely distributed and displayed across campus. The new EKU five-year Strategic Plan is centered on student critical/creative thinking and communication and requires that each academic department develop student-learning outcomes to address these specific goals. You can find more information at this link: http://www.qep.eku.edu/

For information about the program, contact Kate Williams
Director / Quality Enhancement Programs
University Programs / Academic Affairs
Eastern Kentucky University
Kate.Williams@EKU.EDU

Surry Community College:
Becoming a Learning College Built on Critical Thinking

In the summer of 2003, Surry Community College in Dobson, North Carolina, began an initiative to improve and expand student learning with a focus on critical thinking. Our first decision was to adopt a shared model of critical thinking.

A common model allows students to make connections between subjects and skill sets. If multiple models (different language, different definitions and frameworks) are used across campus, it is difficult for students to see those connections. In order for an institution to impact students' thinking abilities college-wide, faculty must construct courses and design instruction around a common conceptualization of critical thinking, one that is precise and comprehensive, not vague, incomplete or narrowly defined.

After researching many conceptualizations of critical thinking, we chose the model originated by Richard Paul and developed by Paul, Linda Elder and Gerald Nosich. We believe that no other concept of critical thinking is as substantive or as accessible. At Surry Community College, we want to focus on education that moves people away from the past and facilitates new ways of learning that will prepare our students for the 21st century marketplace. We realize that critical thinking plays a vital role in facilitating that kind of authentic,

active learning. As a college focused on improving learning, we want to raise our academic standards to intellectually challenge our students on a daily basis through classroom activities and assessments that go beyond traditional lecture and rote memorization. Learning at Surry Community College should not only be rigorous but also transferable. Since our goal is for students to be successful critical thinkers for life, they must be able to transfer these skills to other venues — to future coursework, to their careers, and to their personal lives. To help achieve these goals, Surry Community College faculty continuously work to understand critical thinking and to rethink their teaching strategies, assessment methods, and even the nature of their discipline as a mode of thinking.

Using the approach developed by the Foundation for Critical Thinking, we recognize that all thinking consists of parts, or can be divided into elements: purpose, point of view, assumptions, implications and consequences, data and information, inferences and interpretations, concepts, question at issue. Paul and Elder explain in *Critical Thinking: Tools for Taking Charge of Your Learning and Your Life*, "Whenever you are reasoning you are trying to accomplish some purpose, within a point of view, using concepts or ideas. You are focused on some issue or question, issue or problem, using information to come to conclusions, based on assumptions, all of which has implications." Critical thinkers analyze their thinking, and that of others, by identifying these elements of reasoning. All thinking can be measured against intellectual standards such as clarity, accuracy, precision, relevance, depth, breadth, logic, significance, and fairness. Paul and Elder note, "These are not the only intellectual standards a person might use. They are simply among those that are the most fundamental-. . . . Thinking critically requires command of [these] fundamental intellectual standards." Critical thinkers assess their thinking--and that of others--by applying these standards of reasoning. Paul and Elder also note, "As we are learning the basic intellectual skills that critical thinking entails, we can begin to use those skills in a selfish or a fairminded way." All thinkers should cultivate positive intellectual traits such as intellectual humility, intellectual perseverance, intellectual integrity, intellectual courage, confidence in reason, intellectual empathy, etc.

To assist our faculty and staff in the work of critical thinking, we developed a website that explains the Surry Community College critical thinking initiative; both the thinking that shaped and continues to shape it, and the many ways in which faculty and staff have contextualized the model. You are invited to visit the site at: http://www.surry.edu/About/CriticalThinking.aspx

You may also contact Connie Wolfe at wolfec@surry.edu.

Wilkes Community College

Wilkes Community College (WCC) was reaffirmed by the Southern Association of Colleges and Schools (SACS) in June 2006. As part of the reaffirmation, WCC developed a Quality Enhancement Plan (QEP) with the overall goal of increasing students' disposition to use critical thinking in their academic, professional, and personal lives. WCC selected the Foundation for Critical Thinking (Paul and Elder) Model of Critical Thinking to create a common language among WCC students, faculty, and staff. WCC chose to emphasize four elements of the model: information, questions, assumptions, and point of view. Students are introduced to the critical thinking model in one of the first courses they take at WCC, Success and Study Skills. *The Miniature Guide to Critical Thinking Concepts and Tools* by Paul and Elder is one of the two texts in the course.

Wilkes Community College continues its critical thinking implementation efforts and the following are a few specific examples that may illustrate that the critical thinking focus is very much a part of the WCC culture.

ACA 115 is the student success course that students take within their first thirteen hours at WCC. In this course, students are introduced to the critical thinking model that they encounter in other courses and services. The language of the Paul and Elder model is used in this course and students focus on information, questions, assumptions, and point of view. Students purchase *The Miniature Guide to Critical Thinking Concepts and Tools* by Paul and Elder along with an in-house text. Martin Moore, ACA Lead Instructor, and Sheneele Wagoner, Lead Geography Instructor, teach the majority of the ACA 115 courses. This course was scheduled to be fully implemented during fall 2009, but we implemented it a year early due to instructor and staff expectations of students. Service learning and global education and cultural awareness are now part of the course.

WCC instructors submitted critical thinking assignments and student work during fall semester 2008. Assessment of these assignments and student work will begin this semester by faculty members from the different divisions and the QEP Director.

Learning Circles continue to be well attended at WCC. Three cycles of Learning Circles are offered each semester with approximately eight times from which to choose. Faculty and staff members participate in one hour dialogue using *The Thinker's Guide to the Art of Strategic Thinking*, published by the Foundation for Critical Thinking. Facilitators guide the Learning Circles and meet monthly to plan approaches. This is one comment that was made recently: "These sessions have kept me focused on the varying implications of the QEP

model."

Learning Conversations is a new effort involving our Vice President of Instruction and Student Services, Dr. Dean Sprinkle, and a seasoned faculty member from each of the four divisions as well as a relatively new faculty member from each division. Dr. Sprinkle serves as a facilitator and the conversations relate to higher education and our role in student learning.

Two new online workshops have been developed that provide faculty and staff opportunities to work with the language of critical thinking as well as the four outcomes dealing with information, questions, assumptions, and point of view. Blackboard is the platform that participants use to access workshop material. Video clips are also included and a discussion board is available through Blackboard. These workshops were developed for adjunct faculty, new faculty, and new staff members. They also may be helpful for seasoned faculty and staff who are interested in reviewing concepts. Scheduling professional development activities is often difficult so these workshops will allow faculty and staff to participate at a time convenient to them.

The QEP Open Line continues to be published monthly in electronic format and includes critical thinking news and strategies of interest to both faculty and staff.

WCC faculty members have been involved in the development of student learning outcomes in their academic programs. A critical thinking learning outcome is expected in each program.

WCC Advisory Board members assist WCC faculty in reviewing their academic programs. Advisory board members represent organizations and businesses connected to the programs and these members were asked in fall 2008: (a) Our QEP focus is critical thinking or the skills associated with looking at one's own thinking for the purpose of improving it. We sometimes use the phrase "reasoning through" a problem, issue, or topic. In your profession or field, what role does critical thinking play in effective performance? (b) What suggestions do you have for us as we create experiences for students to "reason through" topics, ideas, or situations? How might we better prepare students for the thinking they will be expected to do in the workplace?

The QEP Director recently spent two three-hour sessions introducing the Paul and Elder critical thinking model to intermediate Emergency Medical Technology students through our continuing education division.

You can learn more about the program at Wilkes Community College at this link: http://www.wilkescc.edu/. You may also contact Jan Huggins at jan.huggins@wilkescc.edu

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Angelina College:

Critical Thinking Skills: A Key for Successful Student Learning Outcomes in All Disciplines

Angelina College has identified three critical thinking learning outcomes consequent to the implementation of critical thinking skills in the curriculum:

1. Angelina College administration, faculty, and staff will have a common understanding of the tools and concepts of critical thinking
2. All divisions will execute tools for teaching critical thinking across the curricula
3. Graduates of Angelina College will have the ability to adapt and apply critical thinking skills and strategies in their academic, professional and personal lives.

To evaluate the implementation process and to assess student learning outcomes as they relate to critical thinking, six assessment tools will be utilized: the Community College Survey of Student Engagement (CCSSE), International Critical Thinking Basic Concepts and Understandings Test, Faculty Learning Community (FLC) Student Learning Survey, Student Perception of Critical Thinking in Instruction, Critical Thinking Rubrics, and the Student Learning Outcomes Assessment (SLOA).

Angelina College's plan included a Three Phase Implementation Cycle:

Phase I- (fall semester)- Professional Development Component

In the spring, representatives (division facilitators) from each division will begin consulting with the QEP Coordinator. In addition, these facilitators will attend the annual assessment conference that is held at Texas A&M University.

Beginning in the fall, the facilitators will attend a planning retreat to initiate the FLC process and schedule critical thinking training sessions.

The facilitators will be participating in several critical thinking training sessions. These training sessions involve compiling information and discussing content based on the Paul/Elder model of critical thinking. The curriculum followed is based on information from the text *Critical Thinking: Tools for Taking Charge of Your Learning and Your Life, 2nd Edition* (2006) by Richard Paul and Linda Elder.

Phase II-(spring semester)-Course Development Component

The facilitators will use the spring semester to plan for critical thinking implementation. Each facilitator will select a course to implement formal strategies for teaching and measuring critical thinking based on the Paul/Elder model. Course portfolios will be utilized for planning. These portfolios will serve as lesson plans for the course. Each will include information specific to the course, such as the syllabus, course materials, sample assignments, and how the

teaching method and course materials will enhance learning outcomes. Critical thinking instruction and assessment will be delineated in these portfolios. Upon completion of these course portfolios, the facilitator will have designed a critical thinking enhanced curriculum (CTEC) course.

Phase III-(fall semester)-Implementation and Assessment Component

At the beginning of the semester, students enrolled in CTEC courses will be administered the International Critical Thinking Basic Concepts and Understanding Test as a pre-test.

One week prior to final exams, the International Critical Thinking Basic Concepts and Understanding Test will be re-administered to assess the attainment of critical thinking skills. In addition, the assessment of teaching strategies and learning outcomes will be measured by utilizing the FLC Student Learning Survey for Faculty and the Student Perceptions of Critical Thinking in Instruction.

The pre and post-test scores from the International Critical Thinking Basic Concepts and Understanding Test will be compared to baseline scores on the California Critical Thinking Skills Test that was collected in April 2007.

The QEP Advisory Committee and the facilitators will review all collected data and determine the effectiveness of instruction. The group will then use the compiled data to recommend additional strategies and any changes for continuous improvement for the teaching and learning of critical thinking skills.

Angelina College plans to continue their implementation process beyond 2010.

You can read more about Angelina College's QEP Plan and Implementation of critical thinking in their curriculum on their website:
http://www.angelina.edu/QEP/institutional_effectiveness.html

For more information about the program, please contact:

Monica Y. Peters, Ph.D.
Coordinator of Institutional Effectiveness and QEP
Angelina College
Lufkin, TX
(936) 633-5250
mpeters@angelina.edu

Beacon College:

Enhancing Critical Thinking for Students with Learning Disabilities

The goal of the Beacon College Quality Enhancement Plan is to improve student learning through the development of critical thinking skills by using the standards and elements of the Paul/Elder Model. The initial phase of the QEP is directed to implementing a comprehensive faculty professional development

program. Professional development activities will focus on educating faculty in the use of the elements and standards of the Paul/Elder Model.

The mission of Beacon College is to provide educational opportunities for college-able students with learning disabilities and to assist them in achieving their academic potential. Engaging students in critical thinking and fostering concept development is vital in addressing the characteristics that many students with learning disabilities bring to the classroom environment.

The student learning outcomes for the Beacon College QEP are to:

1. Improve student disposition toward critical thinking
2. Employ the elements of critical thinking to academic disciplines
3. Employ the standards of critical thinking to academic disciplines
4. Develop an understanding of the fundamental and powerful concepts of an academicdiscipline

Several benefits of implementation of the Beacon College QEP have already been realized. The College has strengthened as a community with a common goal and a shared language for improving the quality of the educational experiences of our students. Not only has the faculty embraced changes in which the Institution approaches instruction, but the participation of all units and departments has helped the College emerge as a learning community. Beacon College has also established an Institute of Critical Thinking, acting as a critical thinking resource center not only for the campus community, but also as a professional development resource for other institutions.

It is anticipated that implementation of the QEP will result in increased student disposition for using critical thinking skills in every aspect of their lives. Outcomes of the QEP will not only increase the quality of education provided our students, but will also contribute to research in the field of learning disabilities. Opportunity exists for the College to conduct a longitudinal study investigating five-year outcomes, as measured by the California Critical Thinking Disposition Instrument (CCTDI), between students with learning disabilities and their non-learning disabled peers using the databank of colleges and universities that have completed the outcomes of their QEPs measuring disposition toward critical thinking.

For more information about the development or implementation of the plan, please contact: Dr. Johnny Good, Vice President of Institutional Effectiveness and Accreditation Liaison. jgood@beaconcollege.edu

Please see this link for additional information:
http://www.beaconcollege.edu/qualityenhancementplan.asp

General Conference Information

Important Announcements

1. Please turn all cell phone ringers off during all sessions.
2. Please review all of the information included in this program. You will find an area map, information about local restaurants, information about the workshop and room assignments, and general information about the Foundation for Critical Thinking.
3. Please bring all of your thinker's guides to every workshop session. This enables the presenter (and you) to use any or all of them throughout the workshop days.
4. Place your name or initials on each of your thinker's guides, in case you get separated from your guides.
5. We also suggest that you place your name on your bag – you may use the markers we have in the Horizon Room Sales Desk area.
6. Please wear your nametag at all times when you are in the workshop sessions, so that we know you are a paid registrant, and for group activities. You will need your nametag to receive the $5/day parking rate and 10% restaurant discount.
7. Please attend only the sessions you have registered for. The sessions are designed for deep learning. Activities within each session build upon one another. If you think the session you are registered for will not meet your needs, speak with one of the presenters to see if room is available for a change.
8. Our information desk is located in the Horizon Room. Please feel free to ask for assistance or information during breaks and at lunch.
9. Coffee and tea will be provided at the mid-morning break, coffee and soft drinks at the afternoon break, and water provided all day. If you would like anything in addition to this, including snacks, feel free to bring those as you wish. You may also purchase snack items in the lobby gift shop. All breaks are in the Horizon Room, see the schedule for break times.
10. We will have several of our materials and publications available for sale

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at the sales and information area, in the Horizon Room. The sales desk is open during breaks and lunch, and at the end of each day's sessions. Sales will close after the morning break on Thursday.

11. There are several food options in the hotel and a list of area restaurants in this program. Claremont restaurants will honor a 10% discount on food; please show your badge at point of purchase. Menus will be posted in the Horizon Room on the FCT Bulletin Board.

12. Coit Limousine is offering the following special rates to the airport for our group. Please sign up at the front desk when you check out. Or call 877-707-COIT.

Answers to frequently asked questions:

Can I purchase the PowerPoint presentations?

We have a PowerPoint CD available for purchase during the conference. It includes many, if not most, of the visual images used in focal sessions, as well as many more images. This CD is available for $20 and contains the following files:

- Introduction to Critical Thinking
- Three Types of Questions
- Fostering the Disciplined Mind
- Elementary Instruction
- Elements of Reasoning
- Intellectual Virtues
- Key Concepts
- Questioning Mind
- Quotes and Statistics
- Role of Administration
- Relationship between Content and Thinking
- Self-Handicapping Behaviors
- Socratic Questioning
- Standards Primary
- Theory of Mind

Please ask at Bookstore Sales table for information.

Why are the sessions being videotaped?

Many of the workshop sessions are videotaped for the following reasons: (1) to permanently document the sessions for the Foundation for Critical Thinking archives, (2) to provide video footage from the sessions for our website, (3) to provide DVD video clips for educational purposes.

Can I get a list of all conference participants?

We design workshop sessions so that participants frequently work with others in pairs and small groups. This enables those interested in establishing personal contacts at the workshop to exchange contact information. In addition, feel free to put a message on the bulletin board that invites those sharing an interest in _____ (whatever category you please), to take down your email address and leave their own for you. The message board will be located near our information and sales area, in the Horizon Room.

How do the concurrent sessions work?

All concurrent sessions will be held on Wednesday morning. Please read the Concurrent Session Program in this program in advance to decide which sessions seem most relevant to your work and life. You will not need to pre-register for concurrent sessions.

What is the closing session?

This is a time for all registrants to come together, to process what you have learned at the conference, to think about next steps for moving forward. This session will be led by Richard Paul, Linda Elder and Gerald Nosich.

How can I get academic credit for participation in the conference?

Academic Credit for the international conference is available through Sonoma State University. Registration forms for academic credit will be available at the conference desk, along with a copy of the course requirements and the assignment. Once you have registered for credit, you may download course requirements from our website.

Does the Foundation for Critical Thinking offer on-site professional development programs in critical thinking?

Yes. You can obtain a College/University or K-12 inservice packet at the workshop desk, which explains our professional development programs. That information is also available on our website at this link: http://www.criticalthinking.org/professionalDev/index.cfm

To discuss our professional development programs, email cct@criticalthinking.org

How can I establish an official affiliation with the Foundation for Critical Thinking?

By giving us your email we will make sure you are informed of the new membership possibilities we are presently considering. You can do this at the conference desk or email us at cct@criticalthinking.org .

How can I gain access to a library of articles on critical thinking?

There is a library of articles on our website, which includes numerous articles you can download - http://www.criticalthinking.org/resources/articles/

How can I get information on assessment regarding critical thinking?

Information is available on our website regarding tests and assessment. www.criticalthinking.org. Also, you received two thinkers guides on assessment during registration – Critical Thinking Competency Standards, and Critical Thinking Reading and Writing Test.

Where can I get the chimes the presenters use?

The chimes can be purchased through the following website: www.seagifts.com/inchimbyjwst.html

Academic Credit for the International Conference and Preconference is available through Sonoma State University

Registration forms for academic credit will be available at the conference, along with course requirements.

Participants who sign up for academic credit will submit a written assignment to the Foundation for Critical Thinking at the end of the semester following the conference that must be approved by a Foundation for Critical Thinking fellow. In the assignment, participants will demonstrate application of concepts/ideas learned at the conference in the classroom or in some other professional capacity. To register for credit, inquire at the conference desk in the Horizon Room.

ACADEMIC CREDITS				
Course	Units	Level	Instruction Hours	Fees
Phil 590	1 unit	Level 1 or Level 2	15	$45
Phil 590	2 units	Level 1 or Level 2	30	$90
Nurs 800	1.5 units	Level 1 or Level 2	30	$30

Foundation for Critical Thinking Books and Guides

The following publications have been written by Foundation for Critical Thinking Fellows and are available in our conference bookstore, or at www.criticalthinking.org:

- Critical Thinking: How to Prepare Students for a Rapidly Changing World
- Critical Thinking: Tools For Taking Charge of Your Learning and Your Life
- Critical Thinking: Tools for Taking Charge of Your Professional and Personal Life
- Critical Thinking: Learn the Tools the Best Thinkers use
- Learning to Think Things Through
- 25 Days to Better Thinking and Better Living
- Critical Thinking Handbook: K-3rd Grades
- Critical Thinking Handbook: 4th-6th Grades
- Critical Thinking Handbook: 7th-9th Grades
- Critical Thinking Handbook: High School
    - The Aspiring Thinker's Guide to Critical Thinking
- The Thinker's Guide: A Glossary of Critical Thinking Terms and Concepts
- The Thinker's Guide to Analytic Thinking
- The Thinker's Guide to Intellectual Standards
- The Thinker's Guide to Intellectual Standards
- The Miniature Guide to the Human Mind
- The Miniature Guide to Critical Thinking for Children
- The Miniature Guide to the Art of Asking Essential Questions
- The Teacher's Manual for the Miniature Guide to Critical Thinking for Children
- The Thinker's Guide to Clinical Reasoning
- The Thinker's Guide to Engineering Reasoning
- The Miniature Guide to Critical Thinking Concepts and Tools
- A Critical Thinker's Guide to Educational Fads
- The Thinker's Guide for Students on How to Study and Learn a Discipline
- The Thinker's Guide to How to Write a Paragraph
- The Thinker's Guide to How to Read a Paragraph
- The Thinkers Guide to Fallacies: The Art of Mental Trickery and Manipulation

- The Thinker's Guide for Conscientious Citizens on How to Detect Media Bias and Propaganda
- The Thinker's Guide to the Art of Socratic Questioning
- The Miniature Guide to Understanding the Foundations of Ethical Reasoning
- The International Critical Thinking Reading & Writing Test
- Critical Thinking: Tools for Taking Charge of Your Learning and Your Life
- A Miniature Guide to For Those Who Teach on How to Improve Student Learning
- A Miniature Guide for Students and Faculty to Scientific Thinking
- A Guide for Educators to Critical Thinking Competency Standards
- The Thinker's Guide to the Nature and Functions of Critical and Creative Thinking

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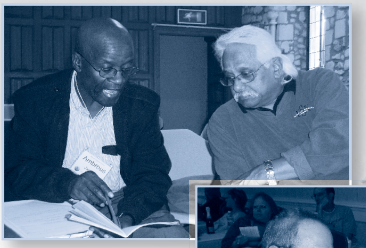
the world's longest running conference on critical thinking…

HELD EVERY SUMMER



The Foundation for Critical Thinking

Visit www.criticalthinking.org for details.

Restaurant List

American			
Barney's Gourmet Hamburgers	5819 College Ave.	510-601-0444	Gourmet Hamburgers
Rockridge Café	5492 College Ave.	510-653-1567	Diner
Rick & Ann's	6317 College Ave	510-654-6607	Contemp. American, Bar
Wood Tavern	2922 Domingo Ave.	510-649-8538	Great Breakfast, Dinner
American Comfort Food	6317 College Ave.	510-654-6607	Contemporary American
Asian			
Soi-Four	5421 College Ave.	510-655-0889	Thai, Closed Sundays
Tachibana	5812 College Ave,	510-654-3668	Sushi
Shen Hua	2914 College Ave.	510-883-1777	Chinese
Nan Yang	6048 College Ave.	510-763-8985	Burmese
Noodle Theory	6099 Claremont Ave.	510-595-6988	Great Noodle House
Continental/California			
Citron	5484 College Ave.	510-653-5484	Local ing., French style
Garibaldi's*	6356 College Ave.	510-595-4000	Local ing., Mediterranean
A'Cote*	5478 College Ave.	510-655-6469	Serving choice, Romantic
Italian/Pizza			
Trattoria La Sicilliana	2993 College Ave.	510-704-1474	Hmemade pasta, No c/c
Oliveto	5655 College Ave.	510-547-5356	Upscale Italian
Fillippos	5400 College Ave.	510-601-8646	Kid friendly Italian, casual
A.G. Ferrari	2935 College Ave.	510-849-2701	Italian Deli
Zachary's Pizza	5801 College Ave.	510-655-6385	Chicago deep dish pizza
Indian/Middle Eastern			
Khana Peena	5316 College Ave.	510-658-2300	N. Indian cusine, upscale,
La Mediterranean	2936 College Ave.	510-540-7773	Middle Eastern Cuisine
Seafood			
Marica	5301 College Ave.	510-985-8388	Great fishMeat/Poultry too
Pubs			
Barclays	5940 College Ave.	510-654-1560	Eng. Pub, 30 beers on tap
Delivery			
West Coast pizza	delivery till 10:00pm	510-841-9378	Trad. or Thin Crust Pizza
North Beach Pizza	delivery till midnight	510-849-9800	Pasta and Pizza
King Dong Chinese	delivery till 9:00pm	510-841-6196	Cantonese
Berkeley Thai House	delivery till 10:00pm	510-841-8424	Thai
India Palace	delivery till 10:00pm	510-848-7252	Northern Indian
Dorsey's Locker Soulfood	delivery till 9:00pm	510-428-1935	Authentic Soulfood

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What previous attendees say about the conference…

- This conference stimulated "instructional" creativity. It also showed how to help students develop their understanding of and appreciation for asking questions.
- Your "stepping-out" on the proverbial "limb" in designing this conference was worthwhile. The info was clearly presented; usable, concrete and even FUN!
- Excellent identification of intellectual traits and introspection to identify barriers.
- Recognizing/affirming the importance of significant ideas, which generate significant "live" questions.
- Taking time to evaluate the intellectual traits as they apply to ourselves and developing a deeper understanding of those traits.
- This session challenged my assumption about the actual reading abilities of my students, I feel equipped to take my teaching of reading up several notches. Thank You!
- Every reading teacher/reading program director needs this booklet [How to Read a Paragraph]. Why have we been making the teaching of reading such a ridiculously difficult endeavor? Shameful!
- Thanks for all the sharing. Its been a catalyst for self reflection and the integration of all the ideas I've ever heard but never really thought seriously about.
- The most valuable thing was rebuilding a relationship with critical thinking methodology—which has reignited the flame!
- Great suggestions on how to focus on students' strengths, not weaknesses, and how to apply the tools to empower them as critical thinkers.
- The conference is invigorating, both intellectually and emotionally and it provides a wealth of practical strategies/methods.
- I have gained many good ideas from my colleagues. The conference has raised as many questions as it has given answers.
- It provides a depth of understanding that isn't possible from reading.
- Among the most stimulating days I've ever spent intellectually.
- My teaching is being transformed to inspire students' development of critical thinking skills through practice and effective facilitation.
- No one can possibly participate without changing (or learning) some aspect of how to improve their own thinking.

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The Foundation for Critical Thinking seeks to promote essential change in education and society through the cultivation of fairminded critical thinking, thinking committed to intellectual empathy, intellectual humility, intellectual perseverance, intellectual integrity, and intellectual responsibility. A rich intellectual environment is possible only with critical thinking at the foundation of education. Why? Because only when students learn to think through the content they are learning in a deep and substantive way can they apply what they are learning in their lives. Moreover, in a world of accelerating change, intensifying complexity, and increasing interdependence, critical thinking is now a requirement for economic and social survival.

Contact us onine at criticalthinking.org
to learn about our publications, videos, workshops, conferences, and professional development programs.

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