



The 35th Annual International Conference on Critical Thinking and Educational Reform

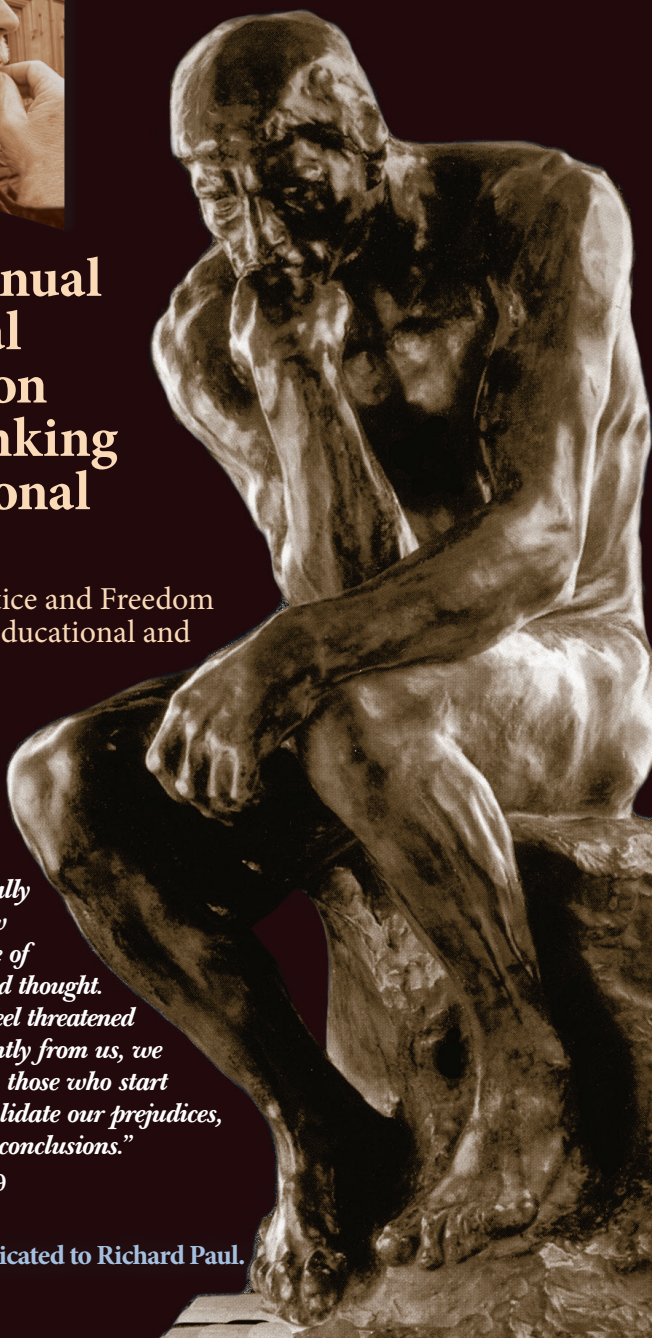
Cultivating World Justice and Freedom
of Thought Through Educational and
Social Reform

July 2015

*“...it is essential that we
foster a new conception of
self-identity, both individually
and collectively, and a new
practical sense of the value of
self-disciplined, openminded thought.
As long as we continue to feel threatened
by those who think differently from us, we
will listen seriously only to those who start
from our premises, who validate our prejudices,
and who end up with our conclusions.”*

— RICHARD PAUL, 1989

This year's program is dedicated to Richard Paul.





Proceedings of
the
35th Annual
International Conference
on
Critical Thinking and
Educational Reform



July 25 - 30, 2015



From Past Conferences



*Henry Steele
Commanger
at the 1st Conference*



*Neil Postman
at the 2nd Conference*



*Edward Glaser
at the 4th Conference*



*Carol Tavris
at the 7th Conference*



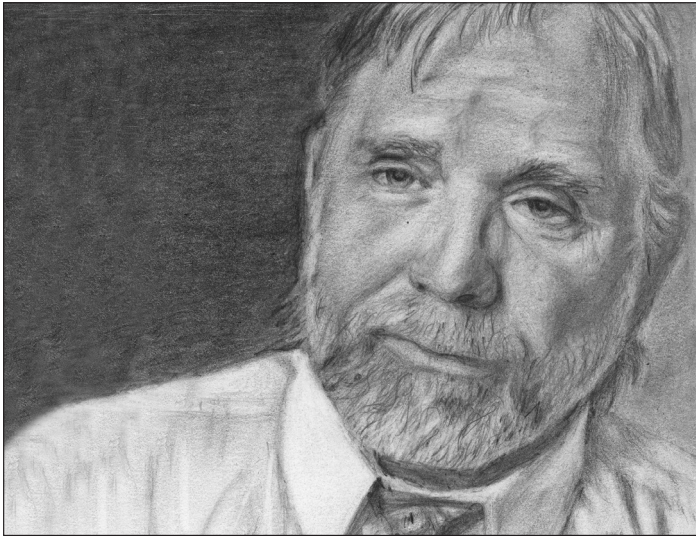
*David Perkins
at the 7th Conference*



*Matthew Lipman
at the 10th Conference*



*George Hanford
at the 10th Conference*



Dedication to Richard Paul

The proceedings of the 35th International Conference on Critical Thinking are dedicated to Richard William Paul, who has dedicated his life to the advancement of fairminded critical thinking across the world. For more than half a century, Paul has worked to develop, cultivate, and enrich a strong-sense conception of critical thinking and has argued for its central place throughout education and society. Paul places competent and committed ethical reasoning at the heart of a substantive conception of critical thinking, and of critical societies.

Richard Paul's work is intimately linked with the Socratic tradition, and – being based in natural languages – is accessible to all humans, thinking within any field of study and working through any problem in human life. Our hope is that some day all people across the globe will have access to the first principles in critical thinking illuminated in the Paulian Framework for Critical Thinking, and that through these principles, we (the people) can collectively create a far more fairminded world.

We honor Paul for the intellectual discipline through which he has lived his life, and from which his ideas have sprung. He has taken us to greater depths of knowledge in, and understanding of, the roots and foundations of critical thinking than perhaps any other previous thinker in history – and he has illuminated the paths to unlimited implications of these foundations. The task lies with us to further explore these paths.

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Ralph Nader and Linda Elder at the 34th International Conference

The quote on the front cover can be found in Richard Paul's anthology: *Critical Thinking: What Every Person Needs To Survive in a Rapidly Changing World*, Tomales, CA: FCT Press.

The portraits of Richard Paul in this program were drawn by Linda Elder. [Graphite on acid-free paper.]

Introduction to the Conference

The Center and Foundation for Critical Thinking have together hosted critical thinking academies and conferences for thirty-five years. 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 offers a unique venue for improving our understanding of critical thinking, as well as our ability to foster it more substantively in the classroom and in all aspects of our 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 is 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, as well as reasonable plans for the future.

When students are taught using a substantive concept of education as the guide to the design of instruction, they can 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, as well as to 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

**Conference Theme:
Cultivating World
Justice and Freedom
of Thought Through
Educational and
Social Reform**

reasonable and fairminded persons capable of empathizing with views with which they disagree. They are able to use their reasoning skills to take command of their own emotional lives, and to transform their desires and motivations. They come to embody, increasingly over time, the virtues of the fairminded critical thinker.

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 optimally within and among the disciplines, that integrates critical with creative thinking, and that applies directly to the needs of everyday and professional life.

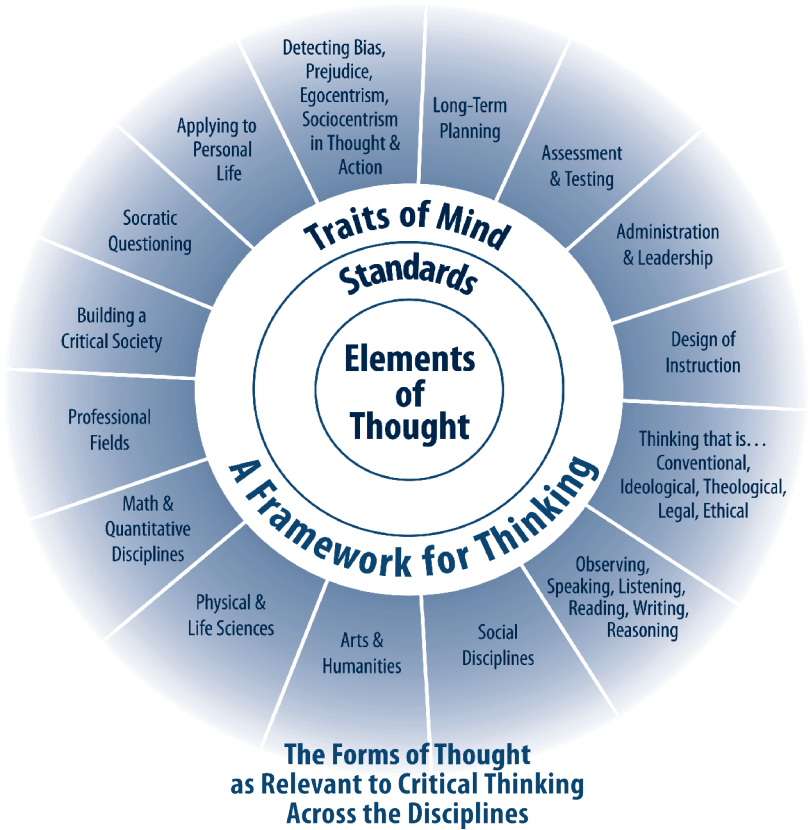
All conference sessions are designed to converge on basic critical thinking principles, and to enrich a core concept of critical thinking with practical teaching and learning strategies.



“We believe in the power of ideas and reasoned thought. We believe that what is ideal and what is imperative are converging. Well-grounded critical thinking has been a human ideal since Socrates. It is now fast becoming a global economic, educational, and moral imperative. Those of vision recognize this imperative and its implications...”

– Richard Paul, letter to educators, in *Education Vision*, 1994

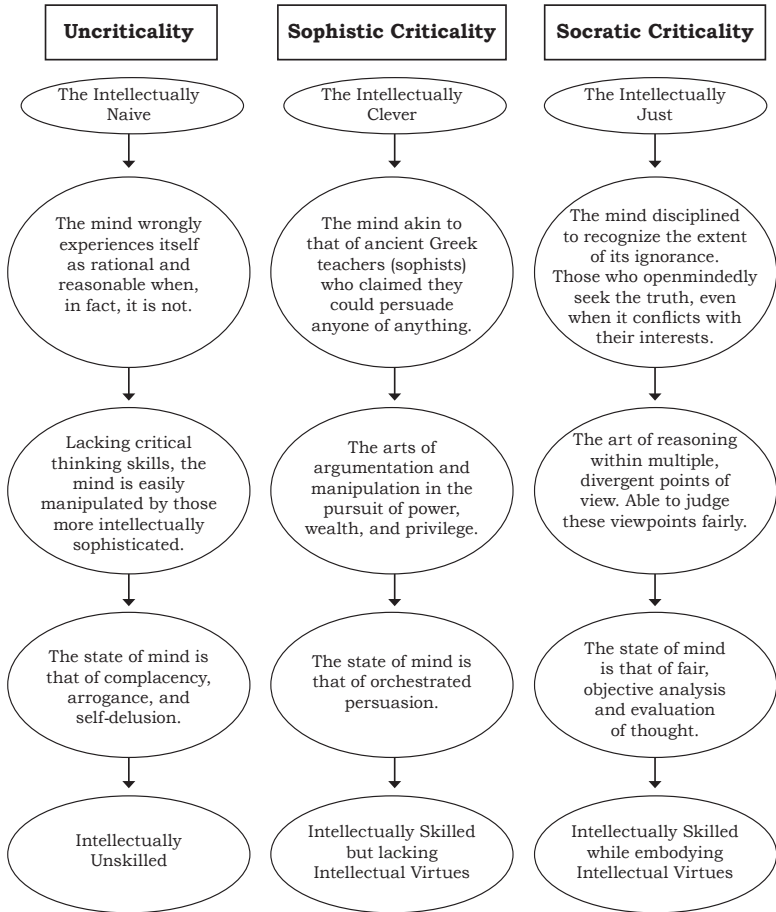
Critical Thinking is Manifested in ALL Forms of Thought



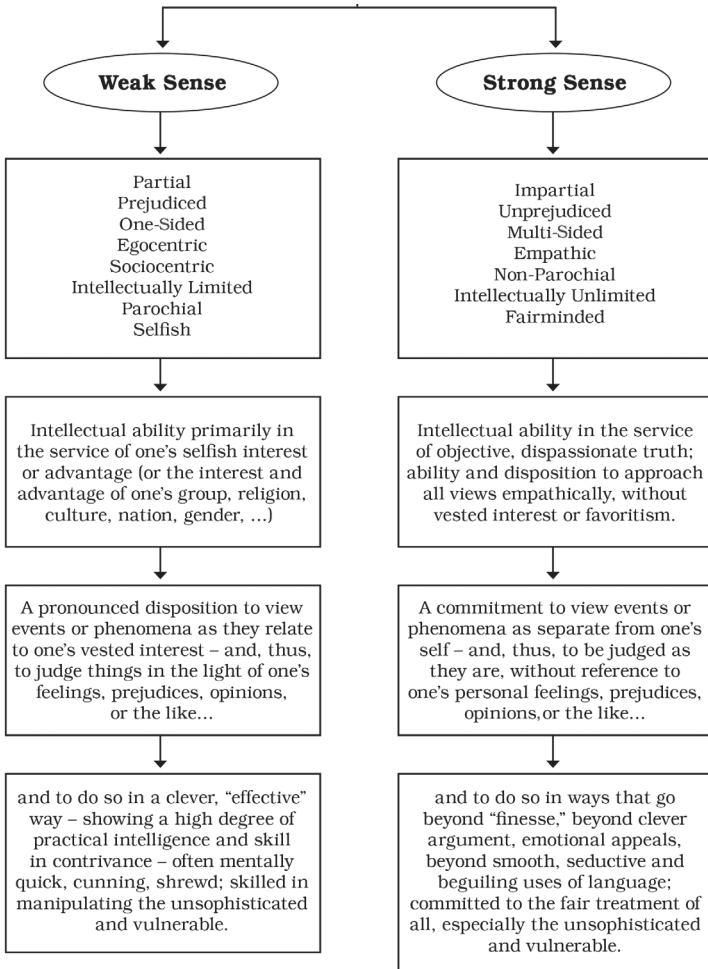
Thinking Within Every Subject and Domain of Human Thought

Anthropological thinking	Thinking like a doctor
Mathematical thinking	Thinking naturopathically
Sociological thinking	Thinking allopathically
Historical thinking	Thinking like a surgeon
Archeological thinking	Thinking like a psychologist
Biological thinking	Thinking like an economist
Botanical thinking	Thinking like a librarian
Zoological thinking	Thinking like a lawyer
Chemical thinking	Thinking like an educator
Biochemical thinking	Thinking like a teacher
Geological thinking	Thinking like a principal
Political thinking	Thinking like a dean
Geographical thinking	Thinking like a classroom teacher
Ecological thinking	Thinking like a novelist
Physiological thinking	Thinking like a dramatist
Astronomical thinking	Thinking like a poet
Financial thinking	Thinking like a writer
Medical thinking	Thinking like a civil engineer
Pharmacological thinking	Thinking like a nurse
Psychological thinking	Thinking like an accountant
Arithmetic thinking	Thinking like an architect
Algebraic thinking	Thinking like a sculptor
Geometrical thinking	Thinking like a painter
Musical thinking	Thinking like a dancer
Artistic thinking	Thinking like a physicist
Biotechnological thinking	Thinking like a parasitologist
Criminological thinking	Thinking like a linguist
Epidemiological thinking	Thinking like a computer scientist
Statistical thinking	Thinking like a judge
Technological thinking	Thinking like a defense attorney
Nano-Technological thinking	Thinking like a prosecutor
Global thinking	Thinking like a police officer
Philosophical thinking	Thinking like a social worker
Metaphysical thinking	Thinking like a physical therapist
_____ thinking	Thinking like a _____

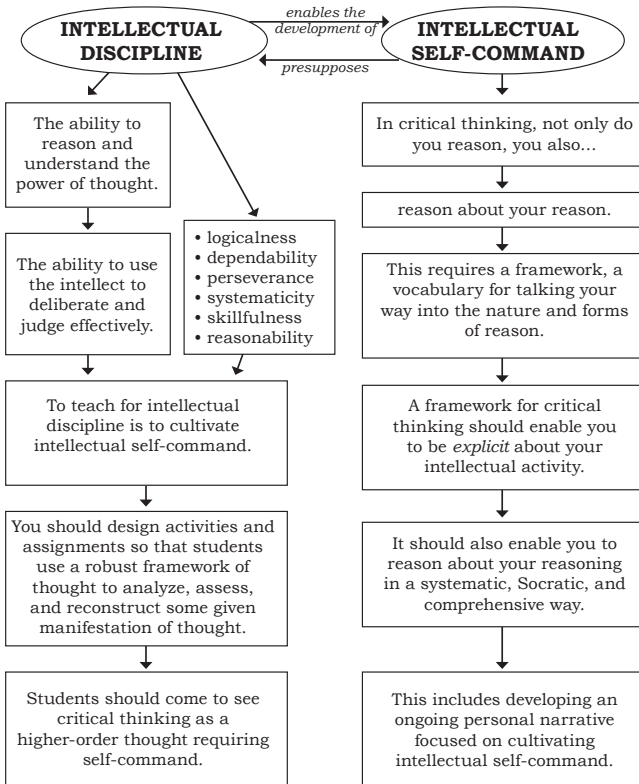
Three Forms of Criticality



Strong- Versus Weak-Sense Critical Thinking



Intellectual Discipline Requires and Presupposes Intellectual Self-Command Can Be Fostered in Teaching and Learning



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 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 and to reason about your reason, logicalness of thought, dependability of thought, perseverance in thought, systematicity of thought, skillfulness in thought, teaching for intellectual discipline, and cultivating intellectual self-command.

Conference Overview

The conference entails the following five types of sessions and learning opportunities:

1. *Focal Sessions* that are designed to foster deep understanding of core critical thinking concepts and principles. These sessions are led primarily by Fellows and Visiting Scholars of the Foundation for Critical Thinking.
2. *Concurrent Sessions and Roundtable Discussions*, which are led by guest faculty, administrators, and others attempting to contextualize critical thinking in instruction and in various domains of life.
3. *Bertrand Russell Distinguished Scholars Program*, which highlights the contributions of important scholars to the conception and realization of fairminded critical societies. This year's Russell Scholar is Daniel Ellsberg.
4. *Evening Social* – Celebrating the Aesthetic Dimension of the Liberally-Educated Mind Through Art, Literature, Music, and Conviviality.
5. *Film and Video Continuous Loop*, highlighting the thinking of Daniel Ellsberg and Richard Paul. Video includes documentary footage of Daniel Ellsberg as well as a movie based on his life. Also see classic footage of Richard Paul exploring the importance of critical thinking to education. Watch videos in the Los Angeles Room before, between, and after sessions. Saturday - Wednesday.



Conference at a Glance

Preconference

Saturday, July 25
and Sunday, July 26
(9:00 a.m. - 4:00 p.m.)

Preconference registrants have chosen one of the following sessions:

- Bringing Critical Thinking into the Heart of Teaching and Learning–
[Linda Elder](#)
California Room
- Critical Writing – Teaching Students How to Write a Paper Using the Principles of Critical Thinking– [Gerald Nosich](#)
Mariposa Room
- Living the Examined Life Through Daily Practice in Critical Thinking: 30 Weeks to Better Thinking and Better Living– [Paul Bankes](#) and [Brian Barnes](#)
Berkeley Room

View Daniel Ellsberg and Richard Paul video (looping) in the Los Angeles Room before sessions begin each day, during breaks and lunch, and after the afternoon sessions. (Sat-Wed)

DAY ONE - Monday, July 27 Opening Ceremony

(8:45 a.m. - 10:00 a.m.)

Welcome and Keynote Address
Linda Elder and Gerald Nosich,
Senior Fellows
Island Ballrooms

Focal Sessions Day One

(10:30 a.m. - 4:00 p.m.)

Conference registrants have chosen one of the following sessions:

- Incorporating Critical Thinking Assessment into the Fabric of Teaching and Learning Every Day–
[Linda Elder](#)
Belvedere Ballroom
- Helping Students Come to Understand Content as a Mode of Thinking– [Gerald Nosich](#)
Yerba Buena Ballroom
- To What Extent Do the Common Core Standards Foster Critical Thinking, World Justice, and Freedom of Thought?– [Paul Bankes](#)
California Room
- *For Returning Registrants:* Transformative Thinkers Throughout History Who Have Cultivated and Advanced the Concept of Freedom of Thought–
[Brian Barnes](#)
Berkeley Room

Conference at a Glance

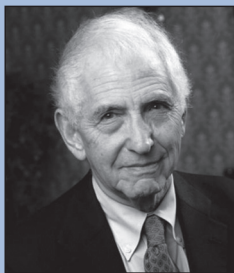
DAY TWO - Tuesday, July 28

Bertrand Russell Distinguished Scholars Lecture and *Conversazione*

Island Ballrooms

(9:00 a.m. - 12:00 noon)

Russell Scholar:
Daniel Ellsberg



Introduction by:

Elizabeth Loftus
Russell Scholar, 2013

All Conference delegates are encouraged to actively participate in this session. Only those registered may attend. Wear name badges to show conference registration.

Roundtable Discussions

1:30 p.m. - 2:30 p.m.

Treasure Ballroom

(see page 67 for details)

Afternoon Focal Sessions (Tues.)

(2:45 p.m. - 4:15 p.m.)

Conference registrants have chosen one of the following sessions:

- Employing Socratic Questioning as a Means to Cultivating the Intellect and Freeing the Mind–
[Gerald Nosich](#)
Belvedere Ballroom
- The Inherent Fallibility of Human Memory and Some Core Implications for Teaching and Learning– [Elizabeth Loftus](#) and [Linda Elder](#)
California Room
- Helping Students Deal with Bad Habits of Mind that Impede Their Learning and Their Development as Thinkers– [Brian Barnes](#)
Yerba Buena Ballroom
- For Administrators: Fostering a Substantive Conception of Critical Thinking Throughout Teaching and Learning– [Paul Bankes](#)
Berkeley Room

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Conference at a Glance

DAY THREE -

Wednesday, July 29

Concurrent Sessions

(see concurrent session program; choose one per time slot)

Concurrent Sessions I:

8:30 a.m. - 9:30 a.m.

- Applying Critical Thinking to Academic Strategic Planning and Leadership– [Doug McElroy](#)
Belvedere Ballroom
- “She Really Makes Me Think” – Studying an Educator’s Long-Term Adoption of the Paul-Elder Model– [Laura MacDonald](#)
California Room
- From Theory to Practice: Using Richard Paul’s Framework for Critical Thinking to Address the Common Core State Standards– [Gary Meegan](#)
Yerba Buena Ballroom
- Critical Thinking About Domestic Abuse– [Vickie Vernon Lott](#)
Mariposa Room
- How to Teach Critical Thinking Elements in the Kindergarten Classroom– [Ivy A. Randle](#)
Berkeley Room
- Critical Thinking Instruction and Authoritarian Educational Systems: Lessons Learned– [Seth Hartigan](#)
Sacramento Room

Concurrent Sessions II (Wed.):

9:40 a.m. - 10:40 a.m.

- University-Wide Critical Thinking Initiative: Two-Year Narrative of Vision and Implementation– [Shreekha Subramanian](#), [Larry Kajs](#), [Troy Voelker](#), and [Kwok-Bun Yue](#)
Belvedere Ballroom
- The Critical Researcher: The Elements of Thought and Intellectual Standards Used to Increase Reading Comprehension and Writing Skills– [Herschel Greenberg](#)
Yerba Buena Ballroom
- Enhancing Critical Thinking Skills in the E-Learning Environment: A Significant Pedagogical Gap
[Teresa Scott](#)
California Room
- Teaching to Think Critically in Turkey – from the Student’s Perspective– [Banu F. Hummel](#)
Mariposa Room
- Using Online Self-Coaching to Develop an Inquiring Mindset– [Barry Kayton](#)
Berkeley Room

View Daniel Ellsberg and Richard Paul video (looping) in the Los Angeles Room before sessions begin each day, during breaks and lunch, and after the afternoon sessions. (Sat-Wed)

Conference at a Glance

Concurrent Sessions III (Wed.): 10:55 a.m. - 11:55 a.m.

- The Creation and Adoption of a Required Class – “Critical Thinking, Decision-Making, and the Art of Leadership” – in a Business Department Curriculum– [Gordon R. Flanders](#)
Yerba Buena Ballroom
- Developing Critical Thinking Skills Through Writing in the Classroom – [Olivia Beverly](#), [Eva Starner](#), and [Ramona Hyman](#)
Belvedere Ballroom
- Thinking Critically about What (Arguably) Matters: Teaching Critical Thinking about Politics, Morality, and Self-Deception– [David Wright](#)
California Room
- Confronting Issues of Race and Ethnicity Employing the Paulian Framework in a Socratic Approach– [Millicent Carvalho-Grevious](#)
Berkeley Room
- Consequential Thinking– [Mohammad Bagher Bagheri](#)
Mariposa Room

Concurrent Sessions IV (Wed.): 1:20 p.m. - 2:20 p.m.

- Developing Critical Thinking Through Online Environments– [Douglas M. Harvey](#)
Yerba Buena Ballroom
- Critical Thinking in Teacher Education: Perceptions and Practices of Teacher Candidates and College Faculty– [Spencer A. Wagley](#)
Belvedere Ballroom
- Bringing Critical Thinking into the Heart of Teaching and Learning– [Antonella Poce](#)
California Room
- Cultivating Critical Thinking in the Elementary Classroom– [Carmen Polka](#)
Berkeley Room
- Using Election Issues to Teach Critical Thinking and Civic Participation– [Kamy Akhavan](#)
Mariposa Room



Conference at a Glance

Concurrent Sessions V (Wed.):

2:30 p.m. - 3:30 p.m.

- Using Critical Thinking to Enrich Teaching and Learning–
[Barbara Rodriguez](#) and [Michelle Jackson](#)
Belvedere Ballroom
- Developing Critical Thinking in First-Year Students Using Formative and Summative Methods–
[David Browning](#)
Yerba Buena Ballroom
- Millennials, Online Learning, and Critical Thinking
[Diane Gusa](#)
California Room
- Critical Thinking in Creative Practice– [Jedediah Morfit](#)
Berkeley Room
- Using Critical Thinking to Save Thinking, Sentient Species Like Apes and Dolphins– [Shawn Thompson](#)
Mariposa Room

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Concurrent Sessions VI (Wed.):

3:45 p.m. - 4:45 p.m.

- Getting Started: A Community College Begins to Think Critically About Critical Thinking–
[Steve Knapp](#) and [Jim Brent](#)
Belvedere Ballroom
- Improving Student Critical Thinking Through Direct Instruction in Rhetorical Analysis– [Lauren McGuire](#)
California Room
- Questions and More Questions for Transfer in Learning Communities–
[Heather Barrack](#)
Mariposa Room
- Philosophical Assumptions in Psychotherapy: An Analysis of Harry Stack Sullivan's Interpersonal School of Psychiatry and Viktor Frankl's Logotherapy– [Sally Carey](#)
Berkeley Room
- Higher-Order mLearning: Cultivating Creative and Critical Thinking Through the Use of Mobile Devices–
[Shawn McCann](#)
Yerba Buena Ballroom
- Cultivating Critical Thinkers in the Academic Writing Course for Non-Native English Ph.D. Candidates– [Bo Gao](#)
Sacramento Room

Conference at a Glance

DAY THREE - Wednesday, July 29, cont. Evening Social

*Celebrating Through Art, Literature,
Music, and Conviviality*

7:00 p.m. - 10:15 p.m.
Quarter Deck

For all delegates.
See evening program on p. 103

DAY FOUR - Thursday, July 30 Morning Focal Sessions (9:00 a.m. - 11:00 a.m.)

Conference registrants have chosen one of the following sessions:

- Teaching Students to Pursue Transformative Concepts within Academic Disciplines—
[Gerald Nosich](#)
California Room
- The Philosophy of Richard Paul and Some Core Implications for Teaching and Learning—
[Paul Bankes and Brian Barnes](#)
Mariposa Room
- Creating Lifelong Critical Thinkers: Integrating the Paulian Critical Thinking Approach into a General Education Program—
[Amanda Hiner](#)
Belvedere Ballroom

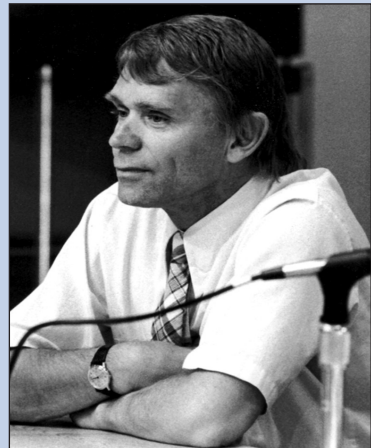
- Understanding the Inherent Barriers to Freedom of Thought and the Emancipated Mind—
[Linda Elder](#)
Berkeley Room

Closing Session (Thurs.)

Where Do We Go from Here?

(11:30 a.m. - 12:15 p.m.)
Yerba Buena and
Treasure Ballrooms)

Led by the Fellows of the Foundation for Critical Thinking. All conference participants are invited.



Preconference Schedule

Daily Schedule July 25-26, 2015

Saturday - July 25

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

Sunday - July 26

9:00 a.m. - 10:30 a.m.	Preconference Sessions continue
10:30 a.m. - 10:45 a.m.	Break
10:45 a.m. - 11:45 a.m.	Preconference Sessions continue
11:45 a.m. - 1:15 p.m.	Lunch — on your own
1:15 p.m. - 2:45 p.m.	Preconference Sessions continue
2:45 p.m. - 3:00 p.m.	Break
3:00 p.m. - 4:00 p.m.	Preconference Sessions end

View Daniel Ellsberg and Richard Paul Videos in the Los Angeles Room before sessions begin each day, during breaks and lunch, and after the afternoon sessions. (Sat-Wed)

Conference Begins

Daily Schedule July 27-28, 2015

Days One and Two

Monday - July 27

7:00 a.m. - 8:40 a.m.	Registration & Check-In
8:45 a.m. - 10:00 a.m.	Opening Ceremony – Island Ballrooms
10:00 a.m. - 10:30 a.m.	Break
10:30 a.m. - 12:00 p.m.	Day One Sessions begin
12:00 p.m. - 1:30 p.m.	Lunch — on your own
1:30 p.m. - 2:45 p.m.	Day One Sessions continue
2:45 p.m. - 3:00 p.m.	Break – Angel Ballroom
3:00 p.m. - 4:00 p.m.	Day One Sessions continue

Tuesday - July 28

9:00 a.m. - 10:00 a.m.	Bertrand Russell Scholars Program begins – Honoring Daniel Ellsberg*
10:00 a.m. - 10:30 a.m.	Working Break during Russell Scholars Program
10:30 a.m. - 12:00 p.m.	Bertrand Russell Scholars Program continues
12:00 p.m. - 1:30 p.m.	Lunch — on your own
1:30 p.m. - 2:30 p.m.	Roundtable Sessions
2:30 p.m. - 2:45 p.m.	Break
2:45 p.m. - 4:15 p.m.	Day Two Afternoon Sessions

* See *Bertrand Russell Distinguished Scholars Critical Thinking Series* on page 29.

View Daniel Ellsberg and Richard Paul Videos in the Los Angeles Room before sessions begin each day, during breaks and lunch, and after the afternoon sessions. (Sat-Wed)

Conference Continues

Daily Schedule July 29-30, 2015

Days Three and Four

Wednesday - July 29

Concurrent sessions. To choose concurrent sessions, see the concurrent session program on page 70.

8:30 a.m. - 9:30 a.m.	Concurrent Sessions I
9:40 a.m. - 10:40 a.m.	Concurrent Sessions II
10:40 a.m. - 10:55 a.m.	Break
10:55 a.m. - 11:55 p.m.	Concurrent Sessions III
11:55 p.m. - 1:20 p.m.	Lunch — on your own
1:20 p.m. - 2:20 p.m.	Concurrent Sessions IV
2:30 p.m. - 3:30 p.m.	Concurrent Sessions V
3:30 p.m. - 3:45 p.m.	Break
3:45 p.m. - 4:45 p.m.	Concurrent Sessions VI
7:00 p.m. - 10:15 p.m.	Evening Social for All Delegates

Thursday - July 30

9:00 a.m. - 11:00 a.m.	Day Four Morning Sessions
11:00 a.m. - 11:30 a.m.	Break
11:30 a.m. - 12:15 p.m.	Closing Session

Focal Session Presenters

Senior Fellows of the Foundation for Critical Thinking



Dr. Linda Elder is an educational psychologist and a leading 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 both 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 24 Thinker's Guides on critical thinking. Dr. Elder has developed an original stage theory of critical thinking development. Concerned with understanding and illuminating the relationship between thinking and affect, and with the barriers to critical thinking, Dr. Elder has placed these issues at the center of her thinking and her work.



Dr. Gerald Nosich is a prominent authority on critical thinking, and has given more than 250 national and international workshops on the subject. He has worked with the U.S. Department of Education on a project for the National Assessment of Higher Order Thinking skills, served as the Assistant Director of the Center for Critical Thinking, and has been featured as a Noted Scholar at the University of British Columbia. He is Professor Emeritus at both SUNY Buffalo State and the University of New Orleans. He is the author of two books including *Learning to Think Things Through: A Guide to Critical Thinking Across the Curriculum*.

Elder and Nosich are first-generation Paulian Scholars; each has experienced the rare opportunity of studying directly with Richard Paul for more than 20 years. The works of Paul, Elder, and Nosich are translated into many languages worldwide, including Chinese, Japanese, Turkish, Korean, French, German, Arabic, Spanish, Thai, Greek, and Polish.



Guest Focal Session Presenters



Elizabeth Loftus is Distinguished Professor at the University of California, Irvine. She holds faculty positions in three departments (Psychology & Social Behavior; Criminology, Law & Society; Cognitive Sciences), and in the School of Law. Since receiving her Ph.D. in Psychology from Stanford University, she has published twenty-two books (including the award-winning *Eyewitness Testimony*) and 500 scientific

articles. Loftus's research of the last 30 years has focused on the malleability of human memory. She has been recognized for this research with six honorary doctorates (from universities in the U.S., Norway, the Netherlands, Israel, and Britain), and election to the National Academy of Sciences. She is past president of the Association for Psychological Science. Loftus has been recognized in the Review of General Psychology as one of the 100 most eminent psychologists of the 20th century. Elizabeth Loftus was named Bertrand Russell Distinguished Scholar at the 33rd International Conference.



For more than ten years, Dr. Paul Banks has played an important leadership role in fostering the Paulian conception of critical thinking in instruction across his district in Colorado. As a school principal, he led the implementation of this critical thinking approach to achieve state-recognized levels of achievement in three different Title I schools – a high school, a middle school, and an elementary school. He helped author the

reasoning portion of the Colorado Academic Standards that are based on the Paul-Elder framework. In addition to his administrative experience, Dr. Banks has taught courses at the college level in critical thinking and served as an elementary teacher. Banks is a Visiting Scholar of the Foundation for Critical Thinking.

Guest Focal Session Presenters, cont.



Dr. Brian Barnes has taught critical thinking courses for seven years at the university level. He has earned grants from Hanover College, the James Randi Education Foundation, and the University of Louisville focused on developing critical thinking in everyday life. He holds a Masters degree in Philosophy and a Ph.D. in Culture, Criticism, and Contemporary Thought from the University of Louisville, which fosters the Paulian Approach to critical thinking

across the curriculum. Mr. Barnes is a Visiting Scholar of the Foundation for Critical Thinking.



Dr. Amanda Hiner, Assistant Professor of English at Winthrop University, Rock Hill, SC, has taught graduate- and undergraduate-level courses in critical thinking, academic writing, and literature for over twenty years. She holds a Master's Degree in British and American literature and a Ph.D. in Eighteenth-Century British literature from Washington University. Dr. Hiner serves as coordinator for the Critical Reading, Thinking,

and Writing courses at Winthrop University, an institution that integrates the Paulian Framework for critical thinking substantively into both its Writing Program and its General Education Program. Over the last five years, Dr. Hiner has focused on integrating the Paulian Framework for critical thinking into classroom instruction – publishing articles, presenting at conferences, developing curricula, and educating faculty in the Paul-Elder approach to critical thinking.

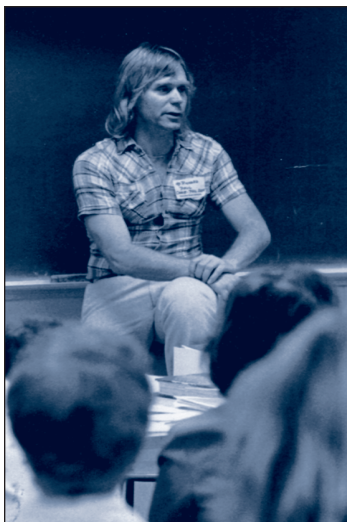
About Richard Paul

In 1968, Richard Paul completed his doctoral dissertation for the Ph.D. in Philosophy. His dissertation focused on the following seminal questions:

To what extent do traditional philosophical approaches to the analysis and assessment of reasoning effectively guide one in determining what makes sense to believe and what to reject? More specifically, to what extent do these approaches provide adequate theory for determining when questions have been adequately answered and when assertions or claims have been sufficiently validated?

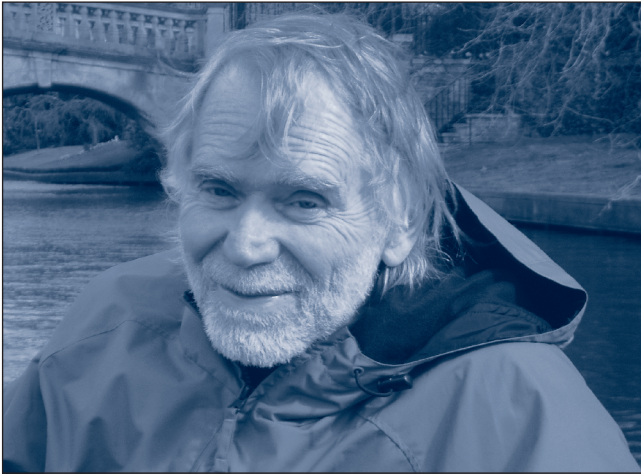
In his critique of traditional philosophical approaches to reasoning, Paul illuminated the conflicting nature of these approaches, as well as the limitations and often glaring inconsistencies within and among them. He asserted the need for replacing the fragmented, inconsistent, and conflicting philosophical approaches to reasoning with an integrated, systematic, and – if possible – universal approach.

Paul argued that the primary task of the logician is to develop tools for the analysis and assessment of reasoning in every discipline and domain of human thought – tools to be used in reasoning through life’s many complex problems and issues. He emphasized the importance of the “logic of language” to human



reasoning. He set forth the idea that every subject and discipline has a fundamental logic that could and should be explicitly formulated (and that an adequate theory of reasoning would provide the foundation for that logic).

Paul’s focus on the importance of explicating intellectual tools for analyzing and assessing reasoning in his 1968 dissertation laid the groundwork for what would become his life’s work. It planted the seeds for the critical thinking theory Paul would develop throughout many years of thinking about the problematics in thinking, and about the concepts that can be used to



intervene in these problematics, thereby improving thinking.

Paul developed, throughout his lifetime, precisely what he called for in his early critique of philosophy: an integrated approach to the analysis and assessment of reasoning, now used by perhaps millions of people throughout the world.



Almost 50 years after the completion of his dissertation, after many years of doggedly pursuing the questions he opened up in it, the name “Richard Paul” and the concept of critical thinking are virtually synonymous throughout the world.

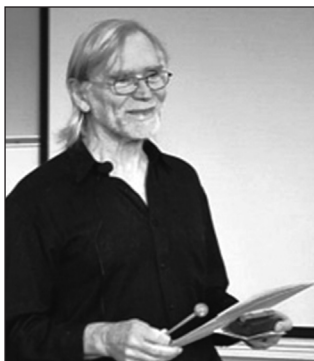
The importance of Paul’s work lies in its richness and in its universal application to human decisions and interactions, in its simplicity and in its complexity, in its delineation of ethical versus unethical critical thought, and in its integration of insights from many domains of human reasoning. Through a developed lens of critical thinking, Paul has detailed a multilogical, multidisciplinary approach to understanding and improving the human mind – and, thus, the human condition.

Richard Paul has been a living example of a critical mind at work, systematically employing intellectual skills human minds rarely learn, even at foundational levels. His genius lies, among other things, in his willingness to take ideas seriously, to resolutely pursue those ideas through strict adherence to intellectual

standards, to clearly distinguish in his own mind what is known from what is simply believed, and to sincerely embrace and embody the intellectual virtues of the cultivated mind – and to do all of these things routinely and consistently even, and most especially, in his own personal life.

Richard Paul has developed and cultivated theory that, were it to be taken seriously in any broad-scale way, would greatly reduce suffering and the pervasive injustices that exist throughout the world. For Paul has articulated a fairminded conception of criticality accessible to all humans through their own natural languages.

We dedicate this program to Richard Paul, who cannot be with us this year due to illness. As we celebrate Paul's work and life, we envision, most especially, hope for a more forgiving world, a more compassionate world, and in his name, a more merciful world.



The Bertrand Russell Distinguished Scholars Critical Thinking Series



This year's conference marks the fourth year of our Bertrand Russell Distinguished Scholars Critical Thinking Series. This series highlights 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...

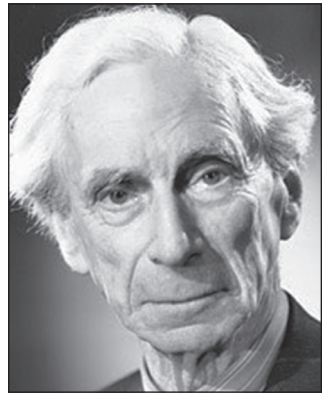
The world that I should wish to see would be one freed from the virulence of group hostilities and capable of realizing that happiness for all is to be derived rather from cooperation than from strife. I should wish to see a world in which education aimed at mental freedom rather than at imprisoning 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).

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 criticizing, 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.

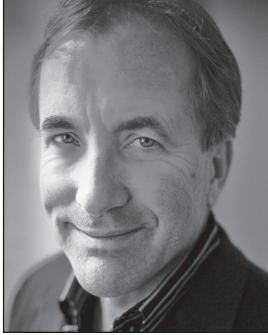


References:

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 Scholars Previously Honored



Michael Shermer
at the 32nd Conference



William Robinson
at the 32nd Conference



Elizabeth Loftus
at the 33rd Conference



Ralph Nader
at the 34th Conference

Bertrand Russell Scholars Named and Honored Posthumously



Socrates

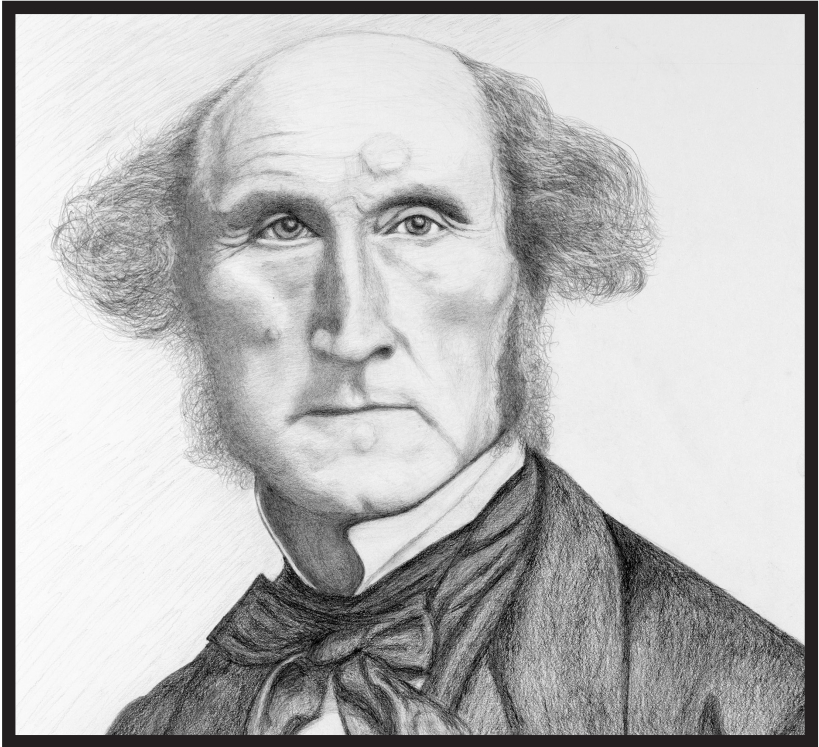
Named at the 34th Conference

Bertrand Russell Scholar Named Posthumously at the 35th Conference

A pupil from whom nothing is ever demanded which he cannot do, never does all he can. –*John Stuart Mill*

This year we honor John Stuart Mill as the second Bertrand Russell Distinguished Scholar to be named posthumously.

John Stuart Mill, born in London in 1806, was educated by his father, James Mill, a leading exponent of radicalism. John Stuart Mill later became one of the most widely-recognized authorities on utilitarianism.¹ His most famous works include *On Liberty*, *Representative Government*, *Utilitarianism*, and *The Subjection of Women*.



Drawing by Linda Elder, taken from a photo dated circa 1870

¹ The utilitarian philosophy is grounded in the principle that right actions are to be measured in proportion to the greatest good they achieve for the greatest number.

Mill was educated almost exclusively by his father who required him to read widely, even at a very young age. At the age of 8, he became schoolmaster to the other children in the family. He was taught Latin and Greek; at age 12, he began a thorough study of the scholastic logic, at the same time reading Aristotle, and a year later reading Adam Smith and Ricardo with his father.



The most important part of Mill's education seems to have been the close association it involved with the strenuous character and vigorous intellect of his father. From his earliest days he spent much time in his father's study and habitually accompanied him on his walks in North London. The accuracy of Mill's impressions was tested by his subsequently drafting a "resumé" of their conversations. Mill thus learned to grapple with difficulties and accustom himself to the necessity of precision in argument and expression. He acquired his father's speculative opinions. James Mill said, "One of the grand objects of education should be to generate a constant and anxious concern about evidence." The duty of collecting and weighing evidence for himself was at every turn impressed upon John Mill; he was taught to accept no opinion on authority. He was educated as an "apostle of reasoned truth," not an apostle of any dogmatic system.

In the mid 1850's, Mill wrote his *Autobiography*. In it we find, among other things, a remarkable story of a father (James Mill) dedicated to the intellectual development of his son, as is evidenced in the methods he used to instruct, guide, and direct John Stuart Mill to ever deeper levels of understanding, insight, and knowledge. James Mill carefully crafted a one-on-one tutorial approach, with emphasis on the development of critical thinking abilities, traits, and dispositions. His fundamental purpose was to develop, in his son, a mind in control of itself, ever reaching for the truth. Of his father's instructional methods, Mill said:

The path was a thorny one even to him, and I am sure it was so to me, notwithstanding the strong interest I took in the subject. He was often, and much beyond reason, provoked by my failures in cases where success could not have been expected; but in the main his method was right, and it succeeded. I do not believe that any scientific teaching ever was more thorough, or better fitted for training the faculties, than the mode in which logic

and political economy were taught to me by my father. Striving, even in an exaggerated degree, to call forth the activity of my faculties, by making me find out everything for myself, he gave his explanations not before, but after, I had felt the full force of the difficulties; and not only gave me an accurate knowledge of these two great subjects, as far as they were then understood, but made me a thinker in both. I thought for myself, almost from the first, and occasionally thought differently from him, though for a long time only on minor points, and making his opinion the ultimate standard (p. 43).

John Stuart Mill emerged as a leading Utilitarian in the 19th century. Fearing mass conformity - what he saw as sheep-like uniformity which imposed narrow parochial views and arbitrary rules on those more enlightened - Mill was concerned to illuminate these problems in advancing more just societies. On Mill's view, a critical society would necessarily entail freedom of thought and the granting of fundamental individual rights. In speaking of human freedom, in his classic essay *On Liberty*, Mill says:

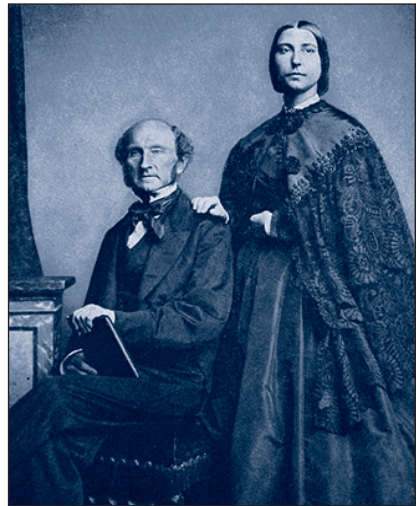
[The appropriate region of human liberty] comprises, first, the inward domain of consciousness; demanding liberty of conscience in the most comprehensive sense; liberty of thought and feeling; absolute freedom of opinion and sentiment on all subjects, practical or speculative, scientific, moral, or theological. The liberty of expressing and publishing opinions... is practically inseparable from it. Second, the principle requires liberty of tastes and pursuits; of framing the plan of our life to suit our own character; of doing as we like, subject to such consequences as may follow; without impediment from our fellow-creatures, so long as what we do does not harm them, even though they should think our conduct foolish, perverse, or wrong... No society in which these liberties are not, on the whole respected, is free, whatever may be its form of government; and none is completely free in which they do not exist absolute and unqualified. The only freedom which deserves the name, is that of pursuing our own good in our own way, so long as we do not attempt to deprive others of theirs, or impede their efforts to obtain it (p. 50).

Mill finely detailed the problem of the masses silencing the voices of the few, and reminds us of the importance of upholding individual freedoms if we are to cultivate civilized societies:

If all mankind minus one were of one opinion, and only one

person were of the contrary opinion, mankind would be no more justified in silencing that one person, than he, if he had the power, would be justified in silencing mankind...the peculiar evil of silencing the expression of an opinion is, that it is robbing the human race; posterity as well as the existing generation; those who dissent from the opinion, still more than those who hold it. If the opinion is right, they are deprived of the opportunity of exchanging error for truth; if wrong, they lose, what is almost as great a benefit, the clearer perception and livelier impression of truth, produced by its collision with error (p. 53).

We can never be sure that the opinion we are endeavoring to stifle is a false opinion; and if we were sure, stifling it would be an evil still. First: the opinion which it is attempted to suppress by authority may possibly be true. Those who desire to suppress it, of course, deny its truth; but they are not infallible. They have no authority to decide the question for all mankind, and exclude every other person from the means of judging. To refuse a hearing to an opinion, because they are sure it is false, is assuming that their certainty is the same thing as absolute certainty. All silencing of discussion is an assumption of infallibility...for the majority of the eminent men of every past generation held many opinions now known to be erroneous, and did or approved numerous things which no one will now justify (p. 54-56).



John Stuart Mill with Helen Taylor circa 1869

As an exemplar of intellectual courage, intellectual humility, and confidence in reason, we honor, posthumously, the life and work of John Stuart Mill through the Bertrand Russell Distinguished Scholars Series.

Mill, J. *On Liberty* (Originally published in 1859, this reference is taken from *Mill: The Spirit of the Age, On Liberty, The Subjection of Women* (1997), edited by Alan Ryan, New York: Norton and Company.

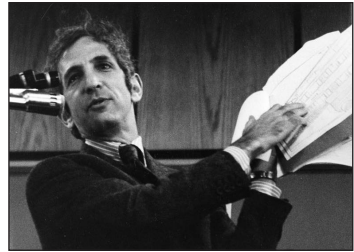
Mill, J. *Autobiography*, 1989, Penguin Books, England, Clays Ltd., St Ives plc.

Bertrand Russell Distinguished Scholar for the 35th International Conference

This feature of the conference highlights the work and thinking of distinguished thinkers within subjects, fields, disciplines, or about specific topics or issues. This year's scholar is Dr. Daniel Ellsberg. All conference participants are invited to the Russell Scholars Program. See p. 64 for this year's Russell Program format.

Daniel Ellsberg was born in Chicago in 1931. After graduating from Harvard in 1952 with a B.A. in Economics, he studied for a year at King's College, Cambridge University, on a Woodrow Wilson Fellowship. Between 1954 and 1957, Ellsberg spent three years in the U.S. Marine Corps, serving as rifle platoon leader, operations officer, and rifle company commander.

In 1959, Ellsberg became a strategic analyst at the RAND Corporation and consultant to the Defense Department and White House, specializing in problems of the command and control of nuclear weapons, nuclear war plans, and crisis decision-making. In 1961, he drafted the guidance from Secretary of Defense Robert McNamara to the Joint Chiefs of Staff on the operational plans for general nuclear war. He was a member of two of the three working groups reporting

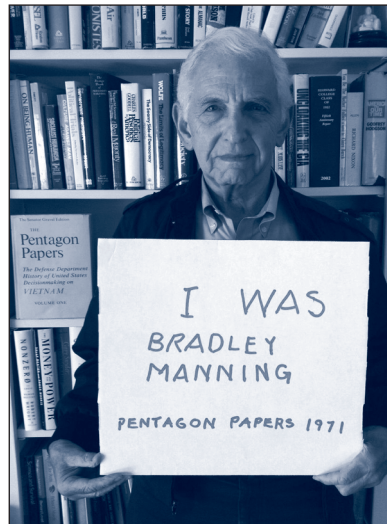




to the Executive Committee of the National Security Council (EXCOM) during the Cuban Missile Crisis in 1962.

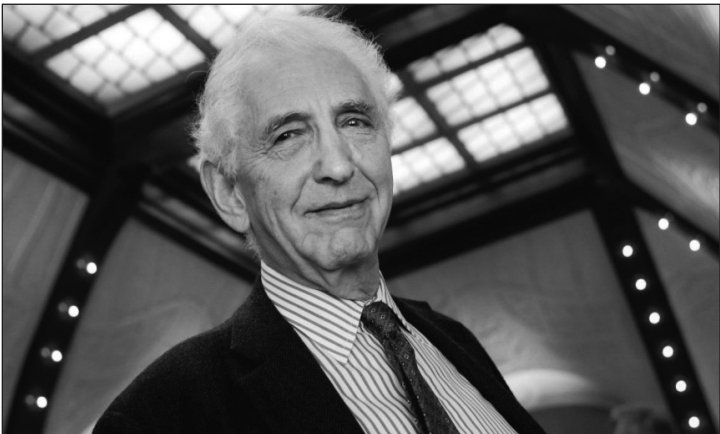
Ellsberg joined the Defense Department in 1964 as Special Assistant to Assistant Secretary of Defense (International Security Affairs) John McNaughton, working on the escalation of the war in Vietnam. He transferred to the State Department in 1965 to serve two years at the U.S. Embassy in Saigon, evaluating pacification in the field.

On returning to the RAND Corporation in 1967, Ellsberg worked on the top secret McNamara study of U.S. Decision-making in Vietnam, 1945-68, which later came to be known as the Pentagon Papers. In 1969, he photocopied the 7,000 page study and gave it to the Senate Foreign Relations Committee; in 1971 he gave it to the New York Times, the Washington Post, and seventeen other newspapers. His trial on twelve felony counts, posing a possible sentence of 115 years, was dismissed in 1973 on grounds of governmental misconduct against him. This led to the convictions of several White House aides and figured in the impeachment proceedings against President Nixon.



Ellsberg is the author of three books: *Papers on the War* (1971), *Risk, Ambiguity and Decision* (2001), and *Secrets: A Memoir of Vietnam and the Pentagon Papers* (2002). In December 2006 he was awarded the Right Livelihood Award, known as the “Alternative Nobel Prize,” in Stockholm, Sweden, “...for putting peace and truth first, at considerable personal risk, and dedicating his life to inspiring others to follow his example.”

Since the end of the Vietnam War, Ellsberg has been a lecturer, writer, and activist on the dangers of the nuclear era, wrongful U.S. interventions and the urgent need for patriotic whistleblowing. He is a Senior Fellow of the Nuclear Age Peace Foundation.



From *The Emancipated Mind* (in press)...

Critical Societies, its Barriers, and the Advancement of Human Freedoms

By Linda Elder with Richard Paul

The following sections have been taken from The Emancipated Mind... currently in press through the Foundation for Critical Thinking. These sections illuminate the concept of critical societies, a term in little use today, but one in great need of advancement, cultivation, and integration into human life at all levels and in all domains. The book is due for release later this year.

Cultivating Critical Thinking Is the Key to Critical Societies

To envision a critical society, imagine a world in which problems are routinely solved through reasoning based on openmindedness and mutual respect, rather than vested interest and power. Imagine a world that protects maximum freedoms and liberties, a world free from hunger and homelessness, a world in which people work to understand the viewpoints of others, especially those with whom they disagree. Imagine a world in which people are encouraged to think for themselves, rather than mindlessly conform.

To comprehend these possibilities, we must also be able to imagine a world in which, from the beginning of life, people are intensely and routinely focused on understanding the problems in thinking that cause most of the problems we face—in our relationships, in our work, in every part of our lives. We must begin to take thinking seriously, each of us, as a routine matter of fact. When we do so, we can begin to systematically foster critical societies. We can begin to emancipate the mind.

The long and the short of it is that to fix the problems looming before us, there is one thing we must get command of – our thinking. Everything we do is determined, usually to a large extent, by our thinking. Consider these implications of thinking: When we divert waterways for irrigation, we do so because we *think* the positive implications of doing so outweigh its negative implications. When we dump pollutants into the oceans, we do so because we *think* the oceans can absorb the waste. When we create unjust laws, we do so

because we *think* that being tough on crime significantly deters it. When we send our children to schools that fail to teach them basic intellectual skills, we do so because we *think* that teachers know best. When we send our parents and grandparents to end their lives in nursing homes, we do so because we *think* there are no other feasible options. When we torture for state purposes (or for “security,” “liberty,” or any other manufactured reason), we do so because we *think* the agenda of the state precedes the ethical rights of those being tortured (and because we *think* it will produce reliable information).

Critical societies can and will emerge only to the extent that people take a *primary interest* in their own thinking as well as the thinking of others. Critical societies will emerge when people come to recognize thinking as a complex phenomenon that must be routinely illuminated, discussed and critiqued in every relationship, family, business, organization, field, discipline, indeed every part of human life.

In short, because the human mind is naturally riddled with problems, the creation of critical societies depends on people within societies taking thinking seriously, studying its problems, its tricks and stratagems, its weaknesses and strengths, its native tendencies, its rational capacities.

If we are ever to create critical societies, then, thinking and its problematics must become a routine object of our thought.

Critical Thinking Is Largely Ignored in Today's Societies

Since thinking is at the heart of every human action (because everything we do is either determined or influenced by our thinking) there is no more important set of skills, abilities, and dispositions to develop than those of the critical mind. To create critical societies we must begin – as a species, across countries, religions, genders, and races – to take thinking seriously. We must begin to address it as we address the development of complex skill sets in any domain of life, such as training as an athlete, learning to play an instrument, and other areas of life requiring disciplined, routine, committed practice to achieve a given skill set. We must assume that improvement will occur only incrementally, throughout many years, and will depend on daily practice driven by sheer grit and determination.

At present, little attention is given to the *thinking* that underlies our decisions, actions, emotions, and desires. Though every field and subject of study presupposes skilled, disciplined thought, few people within any field at present *think about the thinking* at the heart of their disciplines. Few explicitly concern themselves with the thinking that determines the questions they ask and the assumptions at the root of their thinking; few are aware of the

concepts that determine the information they consider and the conclusions they draw; few realize they have developed a point of view from which they view issues within the field and that, hence, this viewpoint might be reasonably questioned like any other.

In 1936, in a book titled *Clearer Thinking*, A. E. Mander conceptualized the development of thinking as requiring training and discipline and entailing skills that must be practiced over time. He says:

Thinking is skilled work. It is not true that we are naturally endowed with the ability to think clearly and logically – without learning how, or without practicing than those people who have never learnt and never practiced can expect to find themselves good carpenters, golfers, bridge-players, or pianists. Yet our world is full of people who apparently do suppose that thinking is entirely unskilled work; that thinking clearly and accurately is so easy and so “natural” that “anybody can think”; and that any person’s thinking is quite as reliable as any other person’s. This accounts for the fact that, as a people, we are so much less efficient in this respect than we are in our sports. For nobody assumes that any game is so easy that we are all first-class players “naturally,” without having to learn how to play or without practice (p. vii).

Thus the first and most important characteristic of a critical society is that thinking is taken seriously and studied carefully. Consistently high-quality reasoning is understood to entail an integrated, agreed-upon, explicit set of skills, abilities, and traits that must be developed over time through committed practice.

Critical Societies Support Maximum Freedoms

Because humans will always be social creatures, what we need is what might be termed a *socio-egalitarian* orientation – a worldview that values and affirms equal rights for all, that does not favor one’s own group over others, and that consistently and actively pursues fair treatment of any and all creatures. We might juxtapose the term sociocentric with *criticocentric*, the latter referring to groups that truly and deeply value critical thinking.

Critical societies, then, take seriously the importance of human freedoms. Such societies simultaneously cultivate and systematically reward many forms of freedoms, including freedom of thought, freedom of speech, freedom of religion, freedom of movement, political freedom, economic freedom, intellectual freedom, freedom to learn, freedom to dissent, academic freedom, freedom of peaceful assembly and association, freedom to participate in government, sexual freedom, freedom from inhumane

20 BARRIERS TO CRITICAL SOCIETIES

To illustrate the fact that we as humans tend not to take thinking seriously in today's cultures, consider the following 20 barriers to critical societies.

Most people:

1. are only superficially aware of critical thinking.
2. cannot clearly articulate the ideal of critical thinking, know of it only as a positive buzz term, and, in any case, habitually violate its standards, and in multiple ways. Most humans, in other words, have not aspired to the ideal of critical thought, and most who have done so (having only an implicit idea of it) have succeeded only modestly.
3. uncritically accept the traditional, mainstream views and beliefs of their culture.
4. are "culture bound" (enslaved within social conventions).
5. uncritically accept the views of authority figures.
6. are not aware of, and do not attempt to explicitly use, intellectual standards in their thinking.
7. do not understand either their own thinking or the thinking of others, or the impediments to reasonability.
8. (unconsciously) believe much that is arbitrary or irrational.
9. uncritically accept bureaucratic rules, procedures, and formulas.
10. accept a variety of forms of authoritarianism (such as blindly following a religious or political ideology).
11. are uncreative and unoriginal.
12. are trapped in their social class.
13. never come to think well within any subject and have no sense of what it is to think beyond subject-matter compartments.
14. do not believe in freedom of thought and speech, or in a wide range of other inalienable freedoms.
15. are gender, culture, species, and/or politically biased.
16. use their intellects only superficially.
17. have little command over their primitive emotions and desires; rather, they tend to be at the mercy of their own impulses and passions.
18. do not value true spontaneity, naturalness, or artlessness.
19. are unable and/or unwilling to think within the viewpoints of others who hold a different worldview.
20. are unable to achieve self-actualization, self-command, or enlightenment because they lack command of their thoughts and lack an understanding of the relationship between thoughts and emotions.

treatment, and the freedom to maintain one's own privacy. Each of these freedoms supports one another. And most are presupposed in the others. Their coexistence becomes a powerful underlying dynamic for moving from the narrow provincialism now prevalent in human societies to cosmopolitan internationalism, from the vulgar dogmatic worldviews now pervasive to cultivated ethical worldviews now so rare.

One of the most valued characteristics of critical societies is freedom of thought. Freedom of thought presupposes freedom of speech. If we cannot freely and openly discuss ideas of every kind – ideas that critique the way things are in the society, ideas that call into question mainstream views, ideas that may even undermine the status quo – it cannot be said that we live in a free society. If we cannot dissent without being stereotyped, typecast, pigeon-holed, marginalized – if we cannot openly disagree with, oppose, contest, and resist irrational and unfair laws and rules – we are not a free society.

In the early nineteenth century, H. L. Menken (1923), arguably the most distinguished journalist in U.S. history, illuminated the importance of allowing maximum individual freedoms. He said:

I believe in liberty. And when I say liberty, I mean the thing in its widest imaginable sense – liberty up to the extreme limits of the feasible and tolerable. I am against forbidding anybody to do anything, or say anything, or think anything so long as it is at all possible to imagine a habitable world in which he would be free to do, say, and think it. The burden of proof, as I see it, is always upon the policeman, which is to say, upon the lawmaker, the theologian, the right-thinker. He must prove his case doubly, triply, quadruply, and then he must start all over and prove it again. The eye through which I view him is watery and jaundiced. I do not pretend to be “just” to him – any more than a Christian pretends to be just to the devil. He is the enemy of everything I admire and respect in this world – of everything that makes it various and amusing and charming. He impedes every honest search for the truth. He stands against every sort of good-will and common decency. His ideal is that of an animal trainer, an archbishop, a major general in the army. I am against him until the last galoot's ashore.

Critical Societies Encourage Intellectual Autonomy and Responsibility

The creation of critical societies presupposes not only maximum freedoms but an explicit and pervasive emphasis on disciplining the mind, including fostering individual responsibility and intellectual autonomy.

In his book *Ideas and Opinions*, Albert Einstein (1954) discussed the importance of intellectual autonomy to the creation of critical societies, and the problem of mindless conformity to group influences:

Only the individual can think, and thereby create new values for society, nay, even set up new moral standards to which the life of the community conforms. Without creative personalities able to think and judge independently, the upward development of society is as unthinkable as the development of the community. ... In politics not only are leaders lacking, but the independence of spirit and the sense of justice of the citizen have to a great extent declined. ... In two weeks the sheeplike masses of any country can be worked up by the newspapers into such a state of excited fury that men are prepared to put on uniforms and kill and be killed ... the present manifestations of decadence are explained by the fact that economic and technologic developments have highly intensified the struggle for existence, greatly to the detriment of the free development of the individual ... there is such a thing as a spirit of the times, an attitude of mind characteristic of a particular generation, which is passed on from individual to individual and gives its distinctive mark to a society. Each of us has to do his little bit toward transforming this spirit of the times. ... Let every man judge by himself, by what he has himself read, not by what others tell him (pp. 15, 29–30).

In an open letter to the *Society for Social Responsibility in Science*, Einstein (1954) emphasized the importance of independence of mind to living an ethical life and creating a civilized world, even when this means defying the laws or expectations of society:

The problem of how man should act if his government prescribes actions or society expects an attitude which his own conscience considers wrong is indeed an old one. It is easy to say that the individual cannot be held responsible for acts carried out under irresistible compulsion, because the individual is fully dependent upon the society in which he is living and therefore must accept its rules. But the very formulation of this idea makes it obvious to what extent such a concept contradicts our sense of justice. External compulsion can, to a certain extent, reduce but never cancel the responsibility of the individual. In the Nuremberg trials this idea was considered to be self-evident. Whatever is morally important in our institutions, laws, and mores, can be traced back to interpretation of the sense of justice of countless individuals. Institutions are in a moral sense impotent unless they

are supported by the sense of responsibility of living individuals. An effort to arouse and strengthen this sense of responsibility of the individual is an important service to mankind (p. 27).

Intellectual freedom, the freedom to think for oneself, to determine what to believe and what to reject on one's own using disciplined thought, is essential to the critical society. It requires open access to, and free exchange of, information. It enables us to see through indoctrination and propaganda. It requires a host of interrelated freedoms that much be protected.

Critical Societies Entail the Following Six Hallmarks

Let us now consider six hallmarks of a critical society. Critical societies will develop only to the extent that these dimensions are present. Each overlaps with and illuminates all the others.

1. Critical thinking is highly valued when people in the culture:

- see critical thinking as essential to living reasonably, rationally, and fruitfully.
- come to understand, from an early age, that, generally speaking, the development of their thinking takes precedence over their development in every other skill area, because the quality of every part of their life, and their ability to live peacefully with other people, depends on the quality of their thinking.
- continue to develop the skills, abilities, and traits of the disciplined mind throughout life.
- understand that the development of critical thinking occurs in stages and in accordance with one's level of commitment and the willingness to practice.
- are committed to becoming increasingly more skilled at fairminded critical thinking over time.
- recognize the importance of all people in societies learning to think critically, and work together to help one another develop intellectually.

2. The problematics in thinking are an abiding concern when people in the culture:

- recognize that everyone falls prey to mistakes in thinking and therefore are constantly on the lookout for problems in their own thinking and in the thinking of others.
- systemically discourage closedmindedness and systematically encourage openmindedness.
- recognize egocentric and sociocentric thinking as significant barriers to critical thought.

- routinely study and diminish irrational thought.
- avoid manipulating, controlling or using others to serve their selfish interests; avoid being manipulated, controlled, or used by others.
- recognize and guard against the natural tendencies of the human mind toward self-deception, rationalization, hypocrisy, conformism, intellectual arrogance, and other related pathologies.

3. Intellectual virtues are consistently fostered when people in the culture:

- think for themselves and avoid uncritically accepting the thinking or behavior of others.
- regularly and routinely enter the viewpoints of those with whom they disagree in order to understand those viewpoints and to acknowledge any merit that might be found in them.
- encourage and foster multicultural worldviews; consider themselves citizens of the world, just as concerned with the well-being of all people on the planet as they are with the well-being of their own families, neighbors, societies, and countries.
- routinely and willingly engage in open and free discussion in reasoning through issues and problems.
- do not fear new ideas and ways of looking at things. Rather, they regularly think within ideas that may at first seem “strange” or “dangerous” in order to understand them.
- are not trapped in ideological systems.
- systematically apply the same standards to themselves as they do to others, expecting as much, or more, from themselves than they do from others.
- regularly seek and willingly admit to problems in their reasoning.
- regularly distinguish between what they know and don’t know.
- believe deeply in the idea that their interests, and those of society, are best served by giving the freest play to reason.
- regularly examine their beliefs and are willing to publicly disagree with others on issues they have deeply thought through.
- persevere through the difficulties in issues and problems, using their best reasoning abilities; do not give up when faced with complexities in thought.
- communicate and relate with others through civility and mutual respect.

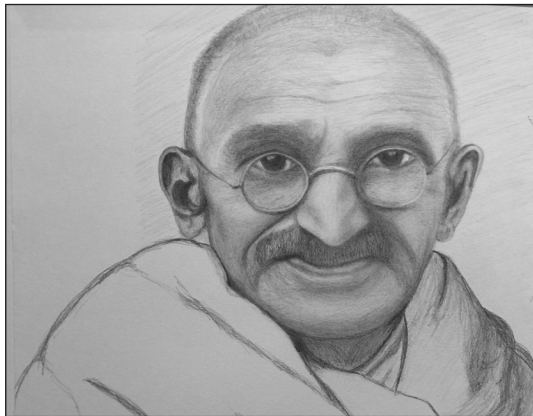
4. Ethical reasoning is systematically fostered when people in the culture:

- treat the rights and needs of others as equal to their own.

- do not use other people to serve their selfish interests.
 - are routinely encouraged and expected to question the rules, mores, requirements, and taboos of the culture.
 - are taught the important distinctions between ethics, social rules, laws, and religious belief systems.
 - do not confuse theological beliefs and social rules with ethics.
 - do not see their groups as superior to other groups in terms of fundamental human rights.
 - do not perceive the rights of humans as superior to the rights of other sentient creatures.
 - use intellectual skills and abilities for the betterment of people and sentient creatures across the world and not to serve power and vested interests.
 - recognize the intimate connection between how we live today, the health of the planet, and the well-being of future generations.
- 5. The analysis and assessment of reasoning are routinely used as primary tools for determining what to believe when people in the culture:**
- recognize the predominant role of reasoning in human thought, the fact that the main activity of the human mind is reasoning.
 - recognize that all reasoning contains eight elements: it targets *purposes*, formulates *questions*, pursues *information*, makes *inferences*, begins with *assumptions*, is shaped by *concepts*, is guided by a *point of view*, and leads to *implications*.
 - are skilled at analyzing thinking; routinely analyze their own and others' thinking in order to assess its quality.
 - continually improve their ability to take thinking apart in order to better understand it and find potential flaws in it.
 - routinely assess reasoning using universal intellectual standards such as *clarity*, *accuracy*, *relevance*, *breadth*, *depth*, *logic*, *precision*, and *fairness*.
 - are keenly aware of the relationship between uses of language and the mind's conceptualizations, and routinely study connections between the two.
 - do not use language to manipulate other people; do not allow other people to manipulate them through their use of language.
 - recognize the important role of questions in living a rational life; recognize that thinking is driven by questions, that significant questions lead to significant understandings, that superficial questions lead to superficial understandings.

- recognize that their point of view, assumptions, and conceptualizations guide the way they interpret information and the conclusions they come to.
- 6. Freedom of thought and action are protected when people in the culture:**
- work together to protect the maximum freedoms for all people.
 - work together to minimize the number of laws in the society.
 - do not allow irrational power – through systems of justice, the police, or government – to undermine human freedoms.

Hopefully it is apparent that the characteristics laid down in this section are merely a beginning place. When deeply understood, they serve as organizers for a much broader and more detailed conceptualization of a critical society, which has yet to be developed. These understandings provide the scaffolding for a reasonable conception of critical societies. Perhaps as significantly, they illuminate the distance between current thinking (and practices) and those that would exist in critical societies.



“An eye for an eye will only make the whole world blind.” -Gandhi*

This section has been taken from *The Emancipated Mind...* by Linda Elder, currently in press through the Foundation for Critical Thinking.

*Drawing by Linda Elder.

Einstein, A. (1954). *Ideas and opinions*. New York: Random House.

Einstein, A. (1979). *Autobiographical Notes*. Chicago, Illinois: Open Court Publishing Company.

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Menken, H. (1923, December 5). On liberty. *Nation Magazine*.

Conference Sessions

All conference delegates and attendees have registered for their choices from the following sessions. See your confirmation sheet (in your packet) if you are unclear on 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/Sunday)

Saturday and Sunday (9:00 a.m. - 4:00 p.m.)

Bringing Critical Thinking into the Heart of Teaching and Learning...

Linda Elder

California Room

Bringing critical thinking into instruction entails understanding the concepts and principles within 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 potentially all levels of instruction. These strategies are powerful and useful, because each is a way to engage students in actively thinking about what they are trying to learn. Each represents a shift of responsibility for learning from teacher to student. Through these strategies, students learn to discipline their thinking as they reason their way through content. They learn the importance of using critical thinking principles in reasoning through problems and issues in every subject and discipline.

This session will lay the foundation for all conference sessions and is therefore highly recommended for new conference attendees. It will introduce you to some of the most basic understandings in critical thinking – namely, how to analyze thinking, how to assess it, and how to develop and foster intellectual virtues or dispositions.

One conceptual set we will focus on is the Elements of Reasoning, or Parts of Thinking. These elements or parts of reasoning are those essential dimensions of reasoning that are present whenever and wherever reasoning occurs, independent of whether we are reasoning well or poorly. Working together, these elements shape reasoning and provide a general logic to the use of thought. They are presupposed in every subject, discipline, and domain of human thought.

A second conceptual set we will focus on is that of universal Intellectual

Preconference Session Descriptions Continued

Standards. One of the fundamentals of critical thinking is the ability to assess reasoning – to be skilled at assessment requires that we consistently take apart thinking and examine its parts with respect to standards of quality. We do this using criteria based on clarity, accuracy, precision, relevance, depth, breadth, logicalness, and significance. Critical thinkers recognize that whenever they are reasoning, they reason to some purpose (element of reasoning). Implicit goals are built into their thought processes. But their reasoning is improved when they are clear (intellectual standard) about that purpose or goal. Similarly, to reason well, they need to know that – consciously or unconsciously – they are using relevant (intellectual standard: relevance) information (element of reasoning) in their thinking. Furthermore, their reasoning improves if and when they make sure that the information that they are using is accurate (intellectual standard: accuracy).

A third essential conceptual set in critical thinking is Intellectual Virtues or Traits. Critical thinking does not entail merely intellectual skills; rather, it is a way of orienting oneself in the world. It is a way of approaching problems that differs significantly from that which is typical in human life. People may have critical thinking skills and abilities, and yet still be unable to enter viewpoints with which they disagree. They may have critical thinking abilities, and yet still be unable to analyze the beliefs that guide their behavior. They may have critical thinking abilities, and yet be unable to distinguish between what they know and what they don't, to persevere through difficult problems and issues, to think fairmindedly, or to stand alone against the crowd. Thus, in developing as a thinker and fostering critical thinking abilities in others, it is important to develop intellectual virtues – virtues of fairmindedness, intellectual humility, intellectual perseverance, intellectual courage, intellectual empathy, intellectual autonomy, intellectual integrity, and confidence in reason.

Finally, we will illuminate two intrinsic barriers to critical thinking development – egocentric and sociocentric thought. These natural pathological tendencies will be briefly introduced and explored.

In short, we introduce, in this preconference session, the foundations of fairminded critical thinking. Throughout the two days, we will introduce and explore critical thinking theory while applying this theory to teaching and learning.

Preconference Session Descriptions Continued

Critical Writing – Teaching Students How to Write a Paper Using the Principles of Critical Thinking... Gerald Nosich

Mariposa Room

Skilled writing presupposes skilled reflection while writing. Unlike the impressionistic mind, the reflective mind seeks meaning, monitors what it writes, and draws a clear distinction between its thinking and the thinking of its audience. The reflective mind, being purposeful, adjusts writing to specific goals. Being integrated, it interrelates the ideas it is writing with ideas it already commands. Being critical, it assesses what it writes for clarity, accuracy, precision, relevance, depth, breadth, logic, significance, and fairness. Being open to new ways of thinking, it values new ideas and learns from what it writes. It engages in research whenever it is needed, and it reflects on the quality and interpretation of that research. The reflective mind improves its thinking by thinking (reflectively) about it. Likewise, it improves its writing by thinking (reflectively) about writing. It moves back and forth between writing and thinking about how it is writing. It moves forward a bit, and then loops back upon itself to check on its own operations. It rises above itself and exercises oversight. This applies to the reflective mind while writing – or while reading, listening, or making decisions. This session focuses on bringing the tools of critical thinking to the writing process, and offers suggestions for fostering substantive writing in instruction.

Living the Examined Life Through Daily Practice in Critical Thinking: 30 Weeks to Better Thinking and Better Living... Paul Bankes and Brian Barnes

Berkeley Room

There is nothing we do as humans that does not involve thinking. Our thinking tells us what to believe, what to reject, what is important, what is unimportant, what is true, what is false, who are our friends, who are our enemies, how we should spend our time, what jobs we should pursue, where we should live, who we should marry, and how we should parent. Everything we know, believe, want, fear, and hope for, our thinking tells us.

It follows, then, that the quality of our thinking is the primary determinant of the quality of our lives. It has implications for how we go about doing literally everything we do. The quality of your work is determined by the quality of your thinking as you reason through the problems you face as you work. The quality of your relationships is determined by the thinking you do about and in those relationships.

Preconference Session Descriptions Continued

Therefore, learning to think at the highest level of quality, or to think critically, is too important to leave to chance. Critical thinking is the disciplined art of ensuring that you use the best thinking you are capable of in any set of circumstances. Through developed critical capacities, you can take command of the thinking that commands you. In this preconference session, we will use the book: *30 Days to Better Thinking and Better Living* (by Elder and Paul) as a launch pad for taking command of the thinking that guides everything we do, and all the ways in which we experience life.



Conference Focal Session Descriptions (Monday)

Day One: Monday (10:30 a.m. - 4:00 p.m.)

Incorporating Critical Thinking Assessment into the Fabric of Teaching and Learning Every Day... Linda Elder

Belvedere Ballroom

The purpose of assessment in instruction is improvement. The purpose of assessing instruction for critical thinking is improving the teaching of discipline-based thinking (historical, biological, sociological, mathematical thinking...). It is to improve students' abilities to think their way through content, using disciplined reasoning.

However, there is often a crucial missing link between what we teach and how we assess what we teach. In instruction we tend to think of our primary purpose as "teaching the content." Temporally, we tend to dedicate the first part of the course to "teaching the first part of the content." We then at some point "assess" what students have "learned" in our courses (often with a "test" which covers the "content" the students have presumably learned during this first period of the course). This same pattern is frequently repeated several times in a course, so that instructors come to believe they have thoroughly "covered" their content as long as students perform at a "sufficient" level on their tests.

But to internalize powerful ideas embedded in content entails assessing one's learning while one is engaged in learning. Learning and the assessment of learning are intimately integrated in the mind of the disciplined reasoner. Put another way, the skilled reasoner intertwines learning and accurate assessment of that which has been learned. Students come to take responsibility for their learning when they understand the intimate relationship between appropriate assessment of thought and the internalization of content. It is this for which we are aiming when we bring critical thinking and assessment to the core of teaching and learning. This session will focus on methods for systematically integrating assessment, through critical thinking, into the teaching and learning process.

Helping Students Come to Understand Content as a Mode of Thinking...

Gerald Nosich

Yerba Buena Ballroom

A key insight into content (and into thinking) is that all content represents a distinctive mode of thinking. Math becomes intelligible as one learns to *think* mathematically. Biology becomes intelligible as one learns to *think* biologically. History becomes intelligible as one learns to *think* historically. This is true because all subjects are: generated by thinking, organized by thinking, analyzed

Conference Focal Sessions Continued (Mon.)

by thinking, synthesized by thinking, expressed by thinking, evaluated by thinking, restructured by thinking, maintained by thinking, transformed by thinking, *learned* by thinking, *understood* by thinking, and *applied* by thinking. If you try to take the thinking out of content, you have nothing – literally nothing – remaining. Learning to think within a unique system of meanings is the key to learning any content whatsoever. This session explores the intimate, indeed the inseparable, relationship between content and thinking.

To What Extent do the Common Core Standards Foster Critical Thinking, World Justice, and Freedom of Thought?... Paul Bankes

California Room

The majority of states in the U.S. have adopted the Common Core Standards. Many, if not most, of these standards presuppose critical thinking to some degree. But to what extent do Common Core Standards foster substantive, fairminded criticality in schools? To what extent do these standards foster Intellectual Virtues or Traits of mind – such as intellectual humility, intellectual empathy, confidence in reason, intellectual integrity, intellectual perseverance, intellectual courage, and intellectual civility? To what extent do the Core standards cultivate freedom of thought? To what extent do these standards encourage students to think beyond their own (usually parochial) worldview – to consider how others across the world might conceptualize world issues and problems? To what extent do Common Core Standards enlighten students as to the importance of working toward world justice and egalitarianism? How can we use the platform of Common Core Standards to foster substantive critical thinking? These are among the questions that will be explored in this session. Be prepared for lively intellectual discussion.

For Returning Registrants: Transformative Thinkers Throughout History Who Have Cultivated and Advanced the Concept of Freedom of Thought... Brian Barnes

Berkeley Room

Throughout history, the concept of *freedom of thought* has been developed through the thinking of many important scholars and intellectuals. In this session, we will read in the works of several such thinkers, and explore their contributions to a substantive conception of critical thinking. We will include readings from the works of Bertrand Russell, John Stuart Mill, John Bury, Paulo Friere, Emma Goldman, and Erich Fromm. Near the end of the session, participants will have an opportunity to suggest their own candidate(s) as scholars who have made one or more important contributions to a rich concept of fairminded critical thinking.

Conference Focal Sessions (Tuesday)

Day Two: Tuesday Afternoon (2:00 p.m. - 4:30 p.m.)

Employing Socratic Questioning as a Means to Cultivating the Intellect and Freeing the Mind... Gerald Nosich

Belvedere Ballroom

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, understanding and assessing the thinking of others, and 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 truth.

Conference Focal Sessions Continued (Tues.)

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 Inherent Fallibility of Human Memory and Some Core Implications for Teaching and Learning... Elizabeth Loftus and Linda Elder

California Room

Through the groundbreaking research of Elizabeth Loftus (beginning more than three decades ago), and other researchers who have followed in Loftus' path, we have come to better appreciate the intrinsic fallibility and pervasive malleability of human memory. Loftus' research has played a pivotal role in redefining how lawyers, judges, and juries across the world view eyewitness testimony.

But how does fallibility in human memory affect teaching and learning? How can we take into account the key insights illuminated in Loftus' work as we design instruction – to minimize the problem of false memories in student thought? How can the tools of critical thinking help us avoid the cultivation of false memories? Where do false memories “come from,” or in other words, what are some of the ways in which false memories are formed in human thought? How do false memories “serve” the thinking of students? How do they serve the thinking of faculty? Of administrators? How are memories altered within departments and institutions over time? How do false memories influence our historical thinking as humans? How do false memories influence our work in the professions? These are some of the key questions at the heart of this session, which begins with an overview of Loftus's research on the fallibility of memory, and then moves to implications for instruction.

Helping Students Deal with Bad Habits of Mind that Impede Their Learning and Their Development as Thinkers... Brian Barnes

Yerba Buena Ballroom

Students do not come to us as blank slates. They come to us with an established, but still developing, worldview. This worldview has unfortunately emerged from a largely impoverished world culture that tends not to highlight problems in thinking, nor to offer substantive approaches to those problems. Most students have no sense that within each of us are self-defeating attitudes and behaviors nor that many of these attitudes and behaviors are habitual. Most students have little understanding of how their bad habits of thought affect their learning, and

Conference Focal Sessions Continued (Tues.)

hence their long-term futures. It is therefore important for students to deeply explore and probe the habits of mind that impede their learning.

For instance, it is important for students to see that they, like all people, are often intellectually arrogant, and that this tendency gets in the way of their learning. It is important for students to see that they, like all people, often fail to persevere through difficulties when learning complex ideas – and that this tendency also gets in the way of their learning. It is important, in short, for students to understand the general problems in thinking experienced by all humans that lead to self-defeating attitudes and behavior. Students can then use these understandings to uncover their own particular, dysfunctional patterns of thought. This session will focus on helping students understand the bad habits of thought common to all humans, so they can begin to see how their own habitual attitudes and behaviors serve as formidable barriers to self-development and self-realization.

For Administrators: Fostering a Substantive Conception of Critical Thinking Throughout Teaching and Learning... Paul Bankes

Berkeley Room

Critical thinking, deeply understood, provides a rich set of concepts that enable us to think our way through any subject or discipline, and 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, and 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 presents a professional development model that can provide the vehicle for deep change across the curriculum, across the institution.

Conference Focal Sessions (Thursday)

Day Four: Thursday Morning (9:00 a.m. - 4:00 p.m.)

Teaching Students to Pursue Transformative Concepts Within Academic Disciplines... Gerald Nosich

California Room

Concepts are ideas we use in thinking. They enable us to group things in our experience into 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, and all subjects or disciplines are defined by their foundational concepts. For instance, a fundamental concept in ecology is *ecosystem*, defined as a group of living things dependent on each other and living in a particular habitat. Ecologists study how differing ecosystems function and how they interrelate with other ecosystems. They are concerned with *ecological succession* – the natural pattern of change occurring within every ecosystem when natural processes are undisturbed. This pattern includes the birth, development, death, and then replacement of natural communities. Ecologists have grouped communities into larger units called *biomes* – regions throughout the world classified according to physical features, including temperature, rainfall, and type of vegetation. Ecologists use all of these seminal concepts as they reason through ecological problems. Other key concepts for ecologists include imbalances, energy, nutrients, population growth, diversity, habitat, competition, predation, parasitism, adaptation, coevolution, succession, climax communities, and conservation.

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? Can you exemplify how the core ideas in the discipline are important in life? These are some of the questions to be explored in this session.

Conference Focal Sessions Continued (Thurs.)

The Philosophy of Richard Paul and Some Core Implications for Teaching and Learning... Paul Bankes and Brian Barnes

Mariposa Room

Richard Paul is widely considered to be a seminal thinker in the field of Critical Thinking Studies. In this session, we will consider some of Paul's important contributions to the substantive conception of critical thinking that has been cultivated in the past 40 years or more. We will view and discuss video footage of Paul articulating the theory of critical thinking and how to foster it throughout instruction. We will read and discuss excerpts from Paul's anthology, *Critical Thinking: What Everyone Needs to Survive in a Rapidly Changing World*, a text which laid the groundwork for what has come to be known as the Paulian Approach to Critical Thinking or Paul-Elder Framework.

Creating Lifelong Critical Thinkers: Integrating the Paulian Critical Thinking Approach into a General Education Program... Amanda Hiner

Belvedere Ballroom

“Many college and university professors say they have little time to focus on the students’ thinking because of the need to cover content. These professors fail to see that thinking is the only means by which the mind digests content. They fail to see that undigested content is content unlearned or mislearned. They fail to see that all content is embedded in ideas, that ideas have logical connections, that logical connections must be thought through to be grasped... Furthermore, though this problem is ancient, the negative consequences are daily becoming more and more significant. The nature of professional and everyday life increasingly demands critical thinking. Indeed the cost of generating a growing mass of uncritical thinkers as workers and citizens is staggering... Intellectually undisciplined, narrow-minded thinking will not solve increasingly complex, multidimensional problems, let alone provide the basis for democratic decision-making.”

– Richard Paul, in an Open Letter to Educators (1990)

Writing in 1990, Richard Paul recognized and alerted educators to an alarming trend in higher education: more and more college graduates enter a complex, rapidly-changing workforce woefully ill-equipped to face and overcome intellectual, social, economic, and political challenges. Many college

Conference Focal Sessions Continued (Thurs.)

graduates lack skills in critical thinking, analysis, and written communication; recent research suggests that these intellectual deficits result in lower rates of employment and professional advancement. Despite the inclusion of the words “critical thinking” in university mission statements, the typical higher-education pedagogical model still focuses heavily on “content” instruction in specific disciplines. This fails to recognize the crucial role of critical thinking in substantive learning and in application of course content across disciplines and in the workplace.

In 2003, with sensitivity to the fact that employers increasingly noted a lack of “soft skills” and critical thinking in recent college graduates, faculty members at Winthrop University in Rock Hill, South Carolina, began a process of re-conceptualizing and restructuring our General Education core courses. The focus is on providing students with a common set of intellectually rigorous coursework intentionally focused on critical thinking, critical reading, and critical writing. After careful research and assessment of many critical thinking models, Winthrop faculty members elected to teach the Paulian model of critical thinking developed by Richard Paul and Linda Elder, and promoted and taught by Dr. Gerald Nosich and other Paulian Scholars. This initiative to place the Paul-Elder approach to critical thinking at the heart of Winthrop’s General Education Program has had a profoundly transformative effect on our university, changing the way students research and write; the way professors teach; and the way critical thinking concepts are integrated into multiple programs, approaches, and courses within and outside the General Education Program.

This focal session will address the far-reaching implications and consequences of our deliberate inclusion of Paulian Critical Thinking in Winthrop University’s General Education Program, including rethinking the mission of the General Education Core, coordinating and providing supportive training and workshops for faculty members, redesigning curricula and writing assignments, and assessing students in critical thinking and critical writing. The session will provide both a broad pedagogical context based on research by Paul and Elder, and practical strategies and examples of how to integrate critical thinking into writing assignments and classroom activities.

Conference Focal Sessions Continued (Thurs.)

Understanding the Inherent Barriers to Freedom of Thought and the Emancipated Mind... Linda Elder

Berkeley Room

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, and 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 other words, humans are naturally egocentric and sociocentric, while also having the capacity for criticality and reasonability.

Human egocentric and sociocentric tendencies serve as powerful barriers to freedom of thought and the emancipated mind. To develop as reasonable persons – to free ourselves from the dysfunctional tendencies in thought pervasive throughout human societies – requires that we understand these pathological tendencies and how they impede our development as free persons, liberal-minded citizens, and persons capable of contributing to a more rational world. In this session, we will explore egocentric and sociocentric thought as intrinsic mental phenomena that get in the way of our development and the cultivation critical societies. We will also briefly explore strategies for overcoming these tendencies.



Ralph Nader at the 34th International Conference

Bertrand Russell Distinguished Scholars Program

Island Ballrooms

Lecture by Russell Scholar Daniel Ellsberg

Tuesday, July 28 9:00 a.m. - 10:00 a.m.

Introduction by Dr. Elizabeth Loftus

Process: Working Break

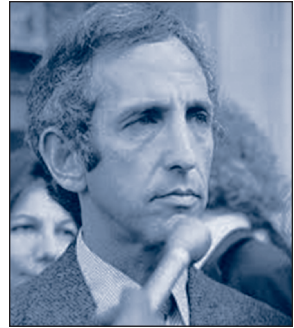
10:00 a.m. - 10:30 a.m.

Conversazione with Daniel Ellsberg

10:30 a.m. - 11:45 a.m.

Book Signing to Follow

This important dimension of the conference highlights the work and thinking of distinguished scholars throughout history who have contributed significantly to the conception, and advancement, of fairminded critical societies. Russell scholars may come from any subject, field, or discipline, or from any domain of human thought. This year's scholar is Daniel Ellsberg. All conference participants are invited to participate in the Russell program. Only conference registrants will be admitted.



Following the initial lecture, and to draw out the critical thinking implicit in the thinking of the Russell Scholar, the following design for



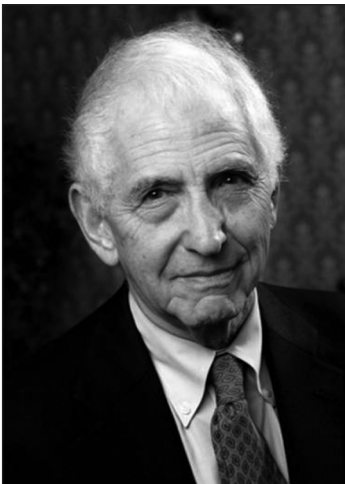
The Bertrand Russell Scholars Program Continued

the Working Break and the *Conversazione* is used:

Working Break – Participants will break for coffee while working together in small groups to reason within some of the dimensions of Ellsberg’s worldview. Guidelines for this process will be given before the break. One part of the process will be to formulate one or more questions that might be posed to Dr. Ellsberg after the working break. Find coffee in the Angel Ballroom, then form groups of two to three. Work in the lobby, atrium, restaurant and lounge, or wherever you can find to quickly sit and begin. Make notes of your discussion.

Conversazione – To draw out the critical thinking implicit in the thinking of the Russell Scholar, the following unique design for the conversation will be used: One or more fellows of the Foundation for Critical Thinking will lead a Socratic dialogue with Dr. Ellsberg (approximately 30 minutes). This will be followed by 15 minutes of questions to Dr. Ellsberg by conference delegates and attendees. There will then be another 15 minutes of Socratic dialogue between the Fellow(s) and Dr. Ellsberg.

The program will be followed by a book signing. A limited number of Ellsberg’s books will be sold at the conference.





Roundtable Discussions

Tuesday, July 28, 2015

1:30 p.m. – 2:30 p.m.

Treasure Ballroom

The roundtable discussions offer an opportunity for dialogue about important topics in education and society. Where possible, we have clustered roundtable presentations into group discussions by topic. Each roundtable discussion will begin with a brief (10-15 minute) presentation by each presenter. This will be followed by dialogue among all participants in the roundtable, led by an assigned group facilitator. Join any roundtable discussion. Bring your issues, questions, and concerns to the discussion and expand it accordingly. After initial presentations and discussions, feel free to move among tables.

During the dialogue, use relevant Intellectual Standards in assessing each key idea being presented. (Adhere to essential Intellectual Standards – see *The Thinker's Guide to Analytic Thinking* – pp. 8-9).

Critical Thinking Professional Development

- **Both Sides of the Same Coin: Teaching and Learning About Critical and Creative Thinking (Professional Development of Prospective Educators)** (Eddie Caropreso, Associate Professor of Education, University of North Carolina Wilmington)
- **Critical Thinking at the Heart of Teaching and Learning: A Case Study of a Systemic Organizational Development Approach to Reducing Barriers** (Maria Ortiz, Assistant Professor and Assessment Coordinator, School of Business and Communication, Dixie State University)

Critical Thinking Pedagogy: Higher Education

- **Academic Controversy as a Pedagogical Tool to Enhance Writing and Critical Thinking Skills** (Darryl Brown, Assistant Professor, Department of Business Administration, Illinois Wesleyan University)
- **Enhancing Student Critical Thinking Abilities in Higher Education Classrooms** (Jack Gordon Phelan, Professor, Humanities Department, California Polytechnic State University)
- **Incorporating Critical Thinking Assessment into the Fabric of Teaching and Learning Every Day** (Sigmund Topor, Lecturer, Toyo University, Japan)

Roundtable Discussions Continued

Critical Thinking and Literacy

- **Critical Thinking in the Teaching of Literature to Non-Literature College Students** (David Layton, Professor, College of Liberal Arts & Sciences, DeVry University)
- **Critical Thinking and Reading Practice for EFL Readers** (Young Mi Kim, Professor, English Language and Literature, Duksung Women's University, South Korea)



Elizabeth Loftus at the 34th International Conference

Critical Thinking and Technology

- **Teaching Critical Thinking Online** (Teresa Hayes, Professor, DeVry University)
- **Cultivating Critical Thinking in Solving Technology Problems** (Malose Kola, University of Limpopo, South Africa)
- **Designing a Problem-Based Learning Model in an ICT-Based Environment to Promote Critical Thinking** (Andrew Lim Swee Leong, Educational Technology Officer, Ministry of Education, Singapore)

Critical Thinking and the Social Studies

- **Utilizing the Socratic Method in Understanding and Healing Emotional Traumas in Women** (Crystal N. Mitchell, Neuro-Linguistic Programming Practitioner)

Critical Thinking and the Concept of Multiple Intelligences

- **Teaching Critical Thinking to Kinesthetic Learners** (Ellen Vincent, Environmental Landscape Specialist, School of Agricultural, Forest, and Environmental Sciences, Clemson University)

Roundtable Discussions Continued

Critical Thinking and the Acquisition of Knowledge

- **The Relationship Between Students' Ability to Recall and Thinking Critically** (Reihaneh Sheikhy Behdani, Lecturer, Azad University - Lahijan Branch, Iran and Nima Shakouri, Lecturer, Azad University - Roudbar Branch, Iran)
- **The Importance of Quickly Navigating, Finding, Evaluating, and Applying Knowledge for Modern Graduates** (Svetlana Pashayan, Researcher and Lecturer, Institute for Physical Research, National Academy of Sciences, Armenia)

Critical Thinking in Middle and High School

- **Strategies and Tools for Teaching Collaboration, Communication, and Critical and Creative Thinking to Middle and High School Students** (Jenna Kamp, English Department Chair, Central City Value High School)



Concurrent Sessions Program

Wednesday, July 29, 2015

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

Schedule Overview:

Wednesday

8:30 a.m. – 9:30 a.m.	Concurrent Sessions I
9:40 a.m. – 10:40 a.m.	Concurrent Sessions II
10:40 a.m. – 10:55 a.m.	Break
10:55 a.m. – 11:55 p.m.	Concurrent Sessions III
11:55 p.m. – 1:20 p.m.	Lunch — on your own
1:20 p.m. – 2:20 p.m.	Concurrent Sessions IV
2:30 p.m. – 3:30 p.m.	Concurrent Sessions V
3:30 p.m. – 3:45 p.m.	Break
3:45 p.m. – 4:45 p.m.	Concurrent Sessions VI

Concurrent Sessions I

(8:30 a.m. – 9:30 a.m., Wednesday)

Applying Critical Thinking to Academic Strategic Planning and Leadership

Doug McElroy

Associate Vice President for Academic Affairs

Western Kentucky University

Belvedere Ballroom

Defined by Bryson as “a disciplined effort to produce fundamental decisions and actions that shape what an organization (or other entity) is, what it does, and why it does it,” strategic planning sounds like a classic application of critical thinking. In fact, it is easy to map the requirements, process, and value of strategic planning against the Elements, Standards, and Traits of critical thinking. But it is here that the languages diverge. Planning dialogues readily drift into the terminology of clarifying vision, mission, and goals, and of formulating and implementing objectives and activities as well as performance indicators. Focus shifts to turning the crank on a cyclical process, which rapidly becomes the end in itself; the reflective depth of critical thinking is lost, as is the ability to evaluate critical decisions within the framework of a consistent

Conference Concurrent Sessions Continued

purpose. If, however, we can be disciplined in maintaining an outcomes-based focus built on multi-system reasoning, then we can better ensure that our decision-making is fair, consistent, well-reasoned, and thus intellectually defensible.

“She Really Makes Me Think” – Studying an Educator’s Long-Term Adoption of the Paul-Elder Model

Laura MacDonald

Associate Professor

University of Manitoba

California Room

“She really makes me think” is a common expression shared by many students regarding one instructor’s teaching style, this being consistent over the past ten years. Why? In that time period, the instructor schooled herself in the Paulian Framework of critical thinking, purposefully and explicitly planning for critical thinking to be ever-present in the classroom and evidenced always in student works – whether these be in-class contributions or submitted, written artifacts. A case-study approach was used to capture pivotal moments or turning points in the academic’s critical thinking journey, when knowing to know critical thinking as a concept transformed to knowing critical thinking as a knower of it, and then knowing to be a critical thinker being a critical thinker – all in the context of being an educator who is responsible and accountable for facilitating learning in others.

Themes emerged in the journey:

“momentum-building critical thinking skills via reflect, reflection, reflexivity”;
epistemological turning from knowing oneself as teacher to knowing oneself as facilitator;
“thinking about thinking while thinking”; and perseverance and courage, despite the despising.



Conference Concurrent Sessions Continued

From Theory to Practice: Using Richard Paul's Framework for Critical Thinking to Address the Common Core State Standards

Gary Meegan

Chair of the Theology Department
Junipero Serra High School

Yerba Buena Ballroom

The Common Core State Standards affect how teachers plan lessons, conduct learning strategies, and construct assessments. Embedded within the Standards are Richard Paul's Elements of Thought and Intellectual Standards. This session will show how the Paul-Elder framework for critical thinking directly addresses the Common Core, provides highly effective teaching strategies, and offers a justification to administrators for its implementation. Participants will be walked through a rationale for including Paul's work in their classroom, and will experience critical thinking strategies that can be used immediately in instruction. A PowerPoint for teaching critical thinking, along with classroom materials, will be provided.

Critical Thinking About Domestic Abuse

Vicki Vernon Lott

Former Provost and Vice President for Academic & Student Affairs
Huston-Tillotson University

Mariposa Room

Numerous reports show that domestic abuse permeates our society regardless of age, race, culture, occupation, income, or social status, with more than twelve million incidents per year. It has also been found that abusiveness has little to do with how a man feels, and everything to do with how he thinks. In other words, the abuser has a distorted perspective that justifies his use of power, control, and mental manipulation. Because abuse by intimate partners normally occurs at home behind closed doors, there are particular challenges rooted in the victim's fear, and perhaps in her self-esteem being negatively affected to a point that damages her ability to demonstrate intellectual courage.

Several high-profile cases in the sports arena have recently drawn national attention to this subject, leading to powerful public service announcements, heightened awareness of crisis centers, and protracted discussion on assuring that abusers are punished. But what are we doing to look deeper into the causes, and to take proactive steps to consider implications and consequences BEFORE the abuse occurs? This session will consider that question and propose ways

Conference Concurrent Sessions Continued

to apply the Intellectual Standards to the Elements of Reasoning in order to develop Intellectual Traits that can lead to a reduction in domestic abuse cases in the first place.

How to Teach Critical Thinking Elements in the Kindergarten Classroom

Ivy A. Randle

Educator

Chicago Public Schools

Berkeley Room

I believe the instructional strategy (my hypothesis) that I am testing in my current research provides an option that will be used in the classroom to promote critical thinking. It is an instructional strategy that I have used for about seven years in the kindergarten classroom, and I have seen the transformation in how students attack questions they were once afraid to answer. I want students to be able to process information in such a way that they can actively propose viable answers to demonstrate practiced thinking. This will come from the explicit teaching of critical thinking skills and opportunities. My proposal is to connect research with the field (the classroom) in order to meet the Common Core Standards (critical thinking). To this end, I have developed a workshop to share with kindergarten teachers on how to employ strategies via Math Stations that will give students opportunities to practice thinking.

Components of the presentation include, very specifically, three Intellectual Standards that can be taught in any kindergarten classroom: fairness, accuracy, and clarity. The Math Stations are carefully designed and embedded to teach these standards. The protocol will show how to use traditional math skills along with the treatment of teaching fairness, clarity, and accuracy to promote critical thinking in kindergarteners.

I will explicitly show stakeholders what this approach looks like and how to implement these strategies in the kindergarten classroom. The stations that I have designed give students what I call a “Mental Gym” in which to practice thinking. Included in my “Mental Gym” are questions designed from the Bloom’s Taxonomy Chart; additionally, my questions have threads of the elements of Socratic Questioning, which “helps students develop sensitivity to clarity, accuracy, and fairness” (Foundation for Critical Thinking Press, 2007). This presentation will show the gap in literature around having precise tools to explicitly teach Intellectual Standards to kindergarteners along with the traditional math curriculum.

Conference Concurrent Sessions Continued

Critical Thinking Instruction and Authoritarian Educational Systems: Lessons Learned

Seth Hartigan

Senior Tutor

Xian Jiaotong Liverpool

University, China

Sacramento Room

This presentation will highlight current practices of university instructors delivering a critical thinking module at a joint Sino-British university in Suzhou, China and the challenges which confront them. Faculty has had success in blending traditional Socratic-dialogue methods of instruction with a multi-level communicative approach adopted from academic language instruction. Rather than adhering strictly to the one-to-one, instructor-to-student method of Socratic dialogue – popular in philosophy courses and law schools – instructors at this university use pair work, small-group and whole-classroom Socratic dialogue, and one-to-one methods to break down some of the affective filters raised by students' prior learning experiences.

Many Chinese university students enter universities having primarily learned in a strict, teacher-centered environment that discourages outward displays of criticality by the student. Moreover, the national government's Patriotic Education Campaign has stressed the duty among students to unquestioningly support the Party and Chinese Nation. Given these prior learning experiences, the university's students nevertheless can be encouraged to embrace critical

scholarship when care is taken in choosing Socratic dialogue topics, methods of interaction, and through a supportive but rigorously-challenging classroom environment. This presentation will highlight how university faculty have addressed these unique challenges in China, and how instructors in other restrictive environments may benefit from a blended Socratic-dialogue method.



Conference Concurrent Sessions Continued

Concurrent Sessions II

(9:40 a.m. – 10:40 a.m., Wednesday)

University-Wide Critical Thinking Initiative: Two-Year Narrative of Vision and Implementation

Shreerekha Subramanian

Associate Professor, School of Human
Sciences and Humanities
University of Houston-Clear Lake

Larry Kajs

Associate Dean
University of Houston-Clear Lake

Troy Voelker

Associate Professor, School of Business
University of Houston-Clear Lake

Kwok-Bun Yue

Professor, Science and Computer Engineering
University of Houston-Clear Lake



Belvedere Ballroom

In early 2013, University of Houston-Clear Lake boldly moved toward articulating, adapting, and absorbing critical thinking (CT) in every sphere of our university life – students, faculty, staff, and all who belong to our community. We have included all university personnel in the Foundation for Critical Thinking (FCT) workshops, and this is a continuing trend of greater inclusion of all the university's facets.

We have put in years of labor to finesse a Quality Enhancement Plan (QEP) for syllabi that reflect our faculty's learning the principles gleaned from FCT workshops on our campus, and that also reflect the methods by which this learning emerges in the vision, strategic practices, and assessment taking place in classrooms. So far, we have successfully launched three cohorts of faculty through a series of four 1-2 day workshops, and have developed an array of QEP-approved courses being taught in all four colleges of our university.

Dr. Larry Kajs, School of Education, will present the institutional vision and systematic implementation of this initiative as the project's administrative lead. Dr. Troy Voelker, School of Business, will share the process of constructing

Conference Concurrent Sessions Continued

CT-centered syllabi and the success in bringing aboard a sizeable group of business faculty to invest in this endeavor. Dr. Kwok-Bun Yue, School of Science and Computer Engineering, will address the significance and implications of CT skills in the fast-growing and globally-dynamic disciplines of Science, Technology, Engineering, and Mathematics (STEM). Dr. Shreerexha Subramanian, School of Human Sciences and the Humanities, will speak about ground-level classroom practices and how CT-centered discourse impacts and changes the lives of students on our campus, and will discuss a special university degree-earning program for men in prison. Our panel seeks to demonstrate the effective institutional and individual impact of adapting critical thinking as daily practice in the university classroom.



The Critical Researcher: The Elements of Thought and Intellectual Standards Used to Increase Reading Comprehension and Writing Skills

Herschel Greenberg

Adjunct Instructor, English Department
Mt. San Antonio College

Yerba Buena Ballroom

Do your students moan when they hear the words “research paper”? In this session, find out how to use the Elements of Thought and Intellectual Standards to teach an easy, effective method for research that will allow your students to find and use the best information available.

First, students will learn to summarize an article by finding the twelve most important words. Second, they will learn to use the Elements of Thought by critiquing the article and writing responses for each Element. Finally, students will grade each Element using the Intellectual Standards. Each letter grade is explained, and the final discussion includes whether or not the article chosen is worthy of being quoted in an essay. Your students will immediately respond to this process, and the end result is that they will be more critical researchers, which increases reading comprehension and improves the skills needed to express opinions in essays.

Conference Concurrent Sessions Continued

Enhancing Critical Thinking Skills in the E-Learning Environment: A Significant Pedagogical Gap

Teresa Scott

Lecturer, School of Human Services and Social Work
Griffith University, Australia

California Room

Research has demonstrated that embedding the explicit teaching of critical thinking (CT) skills in a discipline-specific context can deliver improved capacity for reasoned, thoughtful, purposeful analysis and decision-making based on sound knowledge, but there is limited research in teaching this in the online environment – especially within disciplines like social work. There are specific challenges to teaching critical thinking skills in an e-learning environment, especially when it comes to encouraging students to practice these skills outside of specific academic assessment tasks.

Social workers work with disadvantaged, oppressed, and vulnerable individuals, groups, and communities in a dynamic, globalizing world. The issues they face on a daily basis are challenging, complex, and multi-dimensional. Increasing their capacity to think and reflect upon the full implications of their actions with clients is essential to good professional practice, and will lead to improved outcomes for their client groups.

In 2014, I developed and implemented a number of different tools and strategies to educate social work students, and to encourage them to apply CT while on their first field placement (eighteen weeks in a social-work setting). These tools and strategies were based on the Paul-Elder framework. I would like to share what I've learned, and engage with other like-minded workshop participants in developing CT teaching strategies for online university students. The significance of my research is heightened by the dramatic increase in online tertiary educational opportunities taking place across the world.



Conference Concurrent Sessions Continued

Teaching to Think Critically in Turkey – from the Student’s Perspective

Banu F. Hummel

Psychology Instructor

Psychotherapist

Bilgi University, Turkey

Mariposa Room

I propose to discuss qualitative data, collected this semester, about students’ reflections on critical thinking course content, its purpose, and its influence on their personal learning processes and perspectives. As an instructor of Critical Thinking in Psychology at Bilgi University in Istanbul, Turkey, I have become interested in how students perceive and experience this particular learning process and environment. Although Turkish education has traditionally been based on the transfer of knowledge from teacher to student, several universities in Turkey – involving faculty and administrators alike – have begun to make critical thinking a priority in higher education. While the value of learning critical thinking in Turkish universities has been explored, and the importance of promoting critical thinking within a Middle Eastern context is also part of the academic discourse on higher education, Turkish students’ personal reflections and experiences of these classes have not been documented. In addition to analyzing students’ experiences and attitudes, I plan to explore the impact of collectivist culture on critical thinking development, which has primarily evolved within an individualistic cultural paradigm.



Conference Concurrent Sessions Continued

Using Online Self-Coaching to Develop an Inquiring Mindset

Barry Kayton

CEO

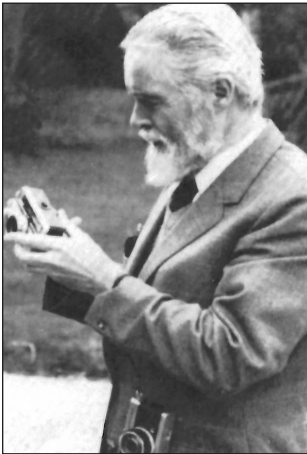
Cognician, Inc.

Berkeley Room

In 2012, the South African College of Applied Psychology (SACAP) commissioned the instructional designers at Cognician to create an online learning program titled, “Research and Study Skills.” SACAP provided the source material for the course on information competency, and the instructional designers then adapted this material into 26 coaching guides, or “cogs” for short. Each cog consists of a series of questions on a topic, with supporting material in a sidebar. As students work through the cogs, they read the supporting material and write their responses to the questions.

The 26 cogs are designed to provoke critical and creative thinking in order to help students appreciate the difference between a “pretending mindset” and an “inquiring mindset” (which is a combination of critical and creative thinking), and to develop affinity for the latter. Eight cohorts of students have completed the course to date. This paper explores the aims, experience, and outcomes of this course and the self-coaching methodology of the Cognician platform.

The critical thinking framework embedded in this course includes purposes, questions, information, concepts, assumptions, and inferences or conclusions. But questions are undoubtedly the lynchpin of the self-coaching methodology used. In fact, students regularly volunteer how they begin to apply the questioning mode as a habit in their own thinking.



Conference Concurrent Sessions Continued

Concurrent Sessions III

(10:55 a.m. – 11:55 p.m., Wednesday)

The Creation and Adoption of a Required Class – “Critical Thinking, Decision-Making, and the Art of Leadership” – in a Business Department Curriculum

Gordon R. Flanders

Associate Professor

Montana Tech of The University of Montana

Yerba Buena Ballroom

Montana Tech of the University of Montana in Butte now requires all students pursuing a degree in Business to take a course in critical thinking. The course, titled, “BGEN 285: Critical Thinking, Decision Making and the Art of Leadership,” emphasizes the importance of understanding how critical thinking assists in the process of comprehending and analyzing arguments in order to improve decision-making.

The course presents critical thinking as a tool and skill to be used for improved understanding, evaluation, and construction of arguments. The goal is to leave students with the ability to reason well and improve their analytical skills. The class emphasizes the Elements of Thought, thinking and writing using SEE-I, application of Intellectual Standards and Traits, the importance of asking questions, learning how to make arguments, identifying fallacious arguments, problem-solving, appreciation of multiple points of view, how to remove emotion and bias from the thought process, how to improve decision-making, and understanding the implications of decisions. Finally, the class dives into the importance of developing coping skills, dealing with the unknown, and how to become a better leader by applying the principles of critical thinking.

There is no exam for this course; students are asked to demonstrate reflective thinking on a daily basis. They are assigned the task of identifying controversial articles and other readings, identifying the arguments in these readings, and then identifying the points of view as well as the strength and soundness of the arguments. The “final” for the course is a paper in which students argue for the grade they deserve in the class. According to students, this is the most difficult paper they have been asked to write.

Student evaluations suggest this is the best and most important class they have ever taken at Montana Tech, or any other institution, as it has taught them

Conference Concurrent Sessions Continued

the process of becoming a critical thinker. The class has now been approved as a humanities option, and is also approved as an honors class.

Developing Critical Thinking Skills Through Writing in the Classroom

Olivia Beverly

Director, QEP

Coordinator, Faculty Development

Oakwood University

Eva Starner

Assistant Professor, Department of Psychological Sciences

Oakwood University

Ramona Hyman

Associate Professor, English & Foreign Languages Department

Oakwood University

Belvedere Ballroom

In 2012, Oakwood University adopted the critical thinking model by Drs. Richard Paul and Linda Elder to embed critical thinking skills in the classroom. This primary emphasis is in direct response to our Quality Enhancement Plan (QEP) initiative to develop critical thinking skills in our students, as demonstrated through their writing.

The journey to this point has been, and continues to be, extremely exciting as we provide teacher support on many levels: from certification for all instructors who teach designated QEP courses, to ongoing professional development training and experiences with our critical thinking initiative. This supports self-assessment and continuous improvement for the entire university.

Oakwood University believes that the ability to think critically requires a higher level and order of thinking, which goes beyond the process of simply recalling facts, figures, and information. Equipping students to think and write critically requires intentional curriculum development and instructional methods that provide them opportunities to practice and enhance their higher-level reasoning skills, both in scholarly and practical applications. Therefore, the university works to facilitate an environment of learning that fosters the development of a critical thinking disposition which will continue to impact the student's thought processes and decision-making beyond the university classroom.

This presentation will share curricular and instructional strategies that facilitate the processes and methodologies for embedding critical thinking skills

Conference Concurrent Sessions Continued

in the classroom. It will also include practical classroom assessment techniques and activities that engage students in critical thinking and writing. Additionally, the session will share strategies to enhance professional development activities among faculty and staff.

Thinking Critically about What (Arguably) Matters: Teaching Critical Thinking about Politics, Morality, and Self-Deception

David Wright

Visiting Assistant Professor of Philosophy
Sam Houston State University

California Room

Teaching critical thinking often involves a concern for guiding students to think about normative concepts, such as what sources they should consult and how they ought to evaluate evidence. While these are no doubt important norms to impart to students, in my critical thinking courses I have also found success in having students engage with morally and politically normative topics – especially topics in social, moral, and political psychology – and in inviting students to write about how the lessons from these fields can apply to their daily practices.

After having students read and discuss Daniel Kahneman’s research on dual-process psychology and the various cognitive errors to which we are often susceptible (outcome bias, hindsight bias, the “What You See Is All There Is” rule, etc.), I introduce them to recent empirical psychological findings as they are outlined by a variety of psychologists and philosophers, including Jonathan Haidt (moral and political psychology), Kevin Timpe (self-deception and intellectual humility), and John Doris (situationist moral psychology). In addition, I have a class devoted to discussing a speech from the writer David Foster Wallace, who offers some trenchant advice for how one can avoid self-deception, engage in cognitive empathy with strangers in commonplace situations, and properly deliberate about the values that sit at the center of each of our lives.

Once students have been introduced to this material, they are required to write a paper where they conduct an informal experiment in which they critically apply at least two of these ideas to their own lives. Students report striking instances of how they have come to recalibrate the pursuit of several of their life goals (career, family, and religion), recognize the ways in which they have been self-deceived in their pasts (in romances, friendships, and the workplace), and live more thoughtful and prudent lives through practices of cognitive empathy.

Conference Concurrent Sessions Continued

Confronting Issues of Race and Ethnicity Employing the Paulian Framework in a Socratic Approach

Millicent Carvalho-Grevious

Diversity and Inclusion
Coordinator, Office of
Equality and Diversity
Drexel University

Berkeley Room



This session aims to increase sensitivity to implicit bias

and micro-aggressions by enhancing critical thinking. The Paul-Elder critical thinking framework provides the roadmap for a relational cultural approach (or mutual-empowerment approach) to facilitating dialogue on matters of diversity. Participants will engage in a facilitated Socratic dialogue that aims to increase “thinking about one’s own thinking” (e.g., assessment of one’s own assumptions and worldview), while increasing levels of self-awareness and understanding of perspectives beyond one’s own.

Diversity work and conflict often go hand in hand. Productive conflict resolution can help facilitate open and honest discussion, yet there **MUST** be an organized process for transforming conflict related to difference. Encouraging participants to listen to each other’s experiences without evaluating them is a key part of the dialogic process. Through guided discussion and application of the ethic of discourse (e.g., sincerity, openness, respect, and fair self-examination), a dialogue focuses on bringing all participants into the discussion (inclusion) and moves thinking forward through the exchange of perceptions, experiences, and ideas.

Guided Questions for Discussion:

1. How have recent events covered in the media regarding race and the criminal justice system affected you?
2. What has been your experience?
3. What can we do (as individuals and members of college and university communities) to improve the situation?

Conference Concurrent Sessions Continued

Consequential Thinking

Mohammad Bagher Bagheri

Professor

Science and Research Branch

Islamic Azad University, Iran

Mariposa Room

Thinking, as the main function of the mind, is apparently a covert and private activity happening within the confinement of human minds. However, this tacit activity is manifested in words, decisions, behaviors, and actions. In fact, thoughts generally do not tend to stay within the mind. They announce their presence somewhere: in the things we say, the decisions we make, and the actions we take.

In the model of critical thinking developed by Richard Paul and Linda Elder, this important aspect of thinking has not been neglected. They aptly focus on the components of implications and consequences to indicate their significance in analyzing any kind of thinking. It is imperative to notice that thinking leads somewhere; in fact, it leads to implications and consequences. In this way, any responsible human being is expected to consider how his or her thinking might influence other human beings. We can think of this virtue as Intellectual Responsibility.

In this session, the presenter will try to focus on this aspect of critical thinking. What is meant by the concept of “implication”? What does “consequence” mean here? Why have these two concepts been grouped together? In what ways can we differentiate them from each other? How can one consider the implications and consequences that might follow from



a line of reasoning? The participants will be actively engaged in considering the implications and consequences of their thinking.

Conference Concurrent Sessions Continued

Concurrent Sessions IV

(1:20 p.m. – 2:20 p.m., Wednesday)

Developing Critical Thinking Through Online Environments

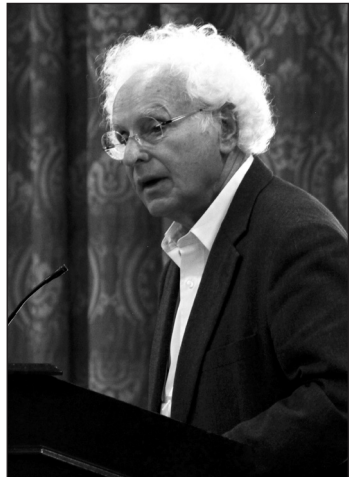
Douglas M. Harvey

Associate Professor of Instructional Technology
Stockton University

Yerba Buena Ballroom

Online coursework has become a common format for college courses, but establishing an asynchronous learning environment that fosters critical thinking can be difficult due to constraints of the format. For example, the value of back-and-forth exchange of ideas and points can be muted by the lag time between asynchronous “discussion” posts. Students also tend to view forum posting as an individual writing activity, and not as the debate or discussion that faculty designed such environments to foster.

Some research has supported the use of online forums for developing critical thinking due to the additional reflection time provided for students to create thoughtful responses, and due to the value of anonymity or lack of face-to-face pressure from a live classroom. This session will discuss the practices of supporting critical thinking development through the use of online environments for learning activities and communication, and will consider how such environments might help develop the traits and habits of critical thinkers.



Jerry Mander at the 34th International Conference

Conference Concurrent Sessions Continued

Critical Thinking in Teacher Education: Perceptions and Practices of Teacher Candidates and College Faculty

Spencer A. Wagley

Associate Professor of Education

Sterling College

Belvedere Ballroom

Within teacher preparation, critical thinking is used in many different ways. Teaching and critical thinking can be linked together to provide students with more appropriate and beneficial educational experiences. The majority of research examines the critical thinking skills of students, but few studies focus on the understanding of critical thinking by educators. Research by Haas and Keely (1998) suggest that educators lack the necessary knowledge to enhance the critical thinking skills of their students. Critical thinking education should begin with faculty members (Burroughs, 1999; Hobaugh, 2005). Therefore, the issues of critical thinking in both teaching and learning should be viewed together. It is not known whether the current critical thinking perceptions of faculty practices are modeled for teacher education candidates.

The purpose of this study was to examine the critical thinking perceptions and practices of teacher candidates and college faculty. Specifically, the study aimed to explore the knowledge, skills, and dispositions toward critical thinking that teacher education candidates and teacher education faculty possess. Teaching reasoning skills should be a prime aim of education at all levels (Paul, 1990; Burbules & Berk, 1999). Modeling and transferring knowledge, skills, and dispositions may be unintentional, accidental, or not done at all. A heightened awareness of critical thinking could lead to more intentional teaching of it.



Conference Concurrent Sessions Continued

Bringing Critical Thinking into the Heart of Teaching and Learning

Antonella Poce

Researcher and Lecturer, Department of Education
Roma Tre University, Italy

California Room

The idea behind the series of projects I have been coordinating in my department is that of verifying the effectiveness of a model built to increase critical thinking skills, with the aim of applying it in different settings – both in higher education and training.

Surely, the context that young generations of Western countries find themselves living in highlights an inadequate attention to those cultural resources which represent the backbone to implementing innovation and progress in any sector. As Harold Bloom reminds us, European history was built upon the cultural canons of the West.

The issue raised by Bloom is real, and must be faced with strength. To counter the tendency to be addicted to the system, interventions – ones aimed at compensating for the lack of reference structures needed to build young generations' cultural repertoire – are to be promoted and validated through dedicated research projects.

The project I will present in this session attempts to assess whether technology enables us to provide spaces for further cultural insights that represent stable architectures – ones which tend to fill certain easily-noticeable gaps in the present student population – facilitating the construction of a responsible and unbiased critical awareness in new generations.

In this session, the methodology adopted, the analyses carried out, and the results collected over a three-year project time – when different cohorts of education students attended the online module “Critical thinking skills and the reading of the classics” – will be reported.

Conference Concurrent Sessions Continued

Cultivating Critical Thinking in the Elementary Classroom

Carmen Polka

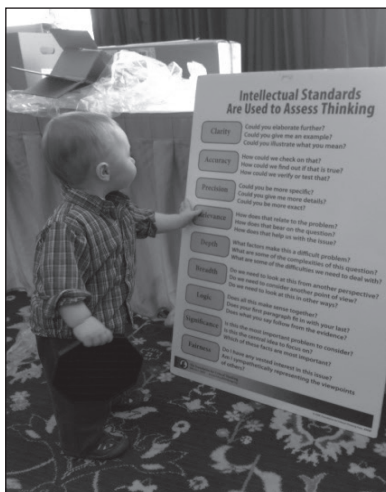
Elementary Educator

Thompson School District

Berkeley Room

Cultivating strong-sense critical thinking in the elementary classroom is essential to fostering students who use critical thinking as a disposition for learning and a pathway to accessing content, all while producing quality thinking. Using the Paul-Elder framework - specifically the Elements of Thought, Intellectual Standards, and Intellectual Virtues – one can begin to rethink how students are asked to learn, what they are asked to learn, and how they can share their thinking. Additionally, close reading, Socratic dialogue, diads, and other instructional strategies bring critical thinking to life in even the youngest of students. Children need not be taught what to think, but rather how to think critically.

This session will bring critical thinking to the forefront of all instruction, provide real classroom vignettes of students doing intellectual work, and shift one's thinking to the urgency of creating critical thinking classrooms systemically. "The important thing is to not stop questioning," Albert Einstein stated; this is the preface for my work as a primary-school educator who utilizes the Paul-Elder framework as my primary source for restructuring the educated classroom and, in result, the educated mind.



Conference Concurrent Sessions Continued

Using Election Issues to Teach Critical Thinking and Civic Participation

Kamy Akhavan

President & Managing Editor

ProCon.org

Mariposa Room

Many people in the United States vote for candidates based on uninformed or misinformed views. Learning how to weigh and consider candidates and issues requires critical thinking, which many people use on unimportant matters (which fruit to pick, which route to take, which outfit to wear), yet often fail to apply to important decisions like who to vote for. The objective of this presentation is to show attendees how people typically make election decisions, how to improve that process so that decisions use more critical thinking and are thus more informed, and how to teach these improvements to students so they are engaged and educated in candidate selection as soon as they can vote.

The presentation will first highlight research on voting behaviors in the last few presidential elections, focusing on voter education, motivation, and decision-making. The presentation will then explore methods of better informing voters about candidates – some of which have worked well, and others of which have not. The presentation will conclude with showcasing which methods work best and how to incorporate them into simple lessons and exercises.



Conference Concurrent Sessions Continued

Concurrent Sessions V

(2:30 p.m. – 3:30 p.m., Wednesday)

Using Critical Thinking to Enrich Teaching and Learning

Barbara Rodriguez

District Director, QEP
Broward College

Michelle Jackson

Professor of English
Broward College

Belvedere Ballroom



As part of the accreditation process, Broward College is focusing on a college-wide initiative to improve students' critical thinking skills. The College has adopted the Paul-Elder model, and as a result of this initiative, faculty have seen improvements in students' abilities to think critically. The presenters will share specific teaching and learning strategies that faculty from multiple disciplines employ, and will also share outcomes-based assessment results after one year of implementation. Participants will have the opportunity to engage in activities that foster critical thinking, while gaining concrete and applicable strategies to use in the classroom.

Developing Critical Thinking in First-Year Students Using Formative and Summative Methods

David Browning

Professor
Life Chiropractic College West

Yerba Buena Ballroom

This session focuses on a practical method used to help freshman students learn the Paul-Elder model of critical thinking and how to apply it to course topics. Methods presented are currently being utilized in a health-sciences philosophy course. A rubric for the Intellectual Standards and examples of the worksheets that are given to students will be shared and discussed. A formative, feedback-driven series of structured group assignments is used, which culminates in an

Conference Concurrent Sessions Continued

individual summative assessment for each student. Students are challenged beyond the levels of other course work and have responded enthusiastically to these methods.

Millennials, Online Learning, and Critical Thinking

Diane Gusa

Adjunct Professor

State University of New York at Canton

California Room

When I left last year's conference, my biggest takeaway was to build my online modules around conceptual development. Working with millennial and non-traditional students, I revamped modules and developed new assignments and rubrics that encourage critical thinking in my students. This workshop session will discuss:

- Current research on millennial and online students. (What are their needs?)
- The Community of Inquiry framework (Garrison, D.R., Archer, W., 2000), which recognizes that community, critical reflection, and knowledge construction are essential for online learning.
- Examples of essential questions from a variety of disciplines (social sciences, humanities, and business) used in discussion forums.
- Web 2.0 tools that support critical thinking.
- Assignments that help students activate conceptual understanding.

The session will conclude in analyzing rubrics I have used, and in a participant discussion of how these rubrics can be further developed and adapted to participants' disciplinary needs.



Conference Concurrent Sessions Continued

Critical Thinking in Creative Practice

Jedediah Morfit

Associate Professor

Richard Stockton College of New Jersey

Berkeley Room

As a professor of sculpture, I held the same opinion as most of my colleagues: that art (and art instruction) is primarily a matter of intuition, emotion, and free association, and that it requires a kind of thinking more or less the opposite to the systematic, logical, critical thinking required by other academic disciplines. After I attended the 2012 International Conference on Critical Thinking and Educational Reform, I became convinced that successful creative practice actually depends on effective critical thinking skills. Surprisingly, studio courses are an excellent place to teach these skills.

The goal of this presentation will be to articulate the relationship between critical thinking and creative practices, and to provide some practical pedagogical tools for using creative process as an arena for developing critical thinking skills. This workshop will be highly interactive, utilizing the eight Elements of Thought and the Intellectual Standards, with particular emphasis placed on Fundamental and Powerful concepts.



Conference Concurrent Sessions Continued

Using Critical Thinking to Save Thinking, Sentient Species Like Apes and Dolphins

Shawn Thompson

Assistant Professor

Thompson Rivers University

Mariposa Room

In February of 2015, I was chair of an expert advisory committee that wrote a ground-breaking report on humane and ethical treatment of orangutans in captivity. This report was for a court case in Argentina dealing with an orangutan in the Buenos Aires zoo.



Orangutans – a thinking, sentient species threatened with extinction – have demonstrated the ability to reason, plan, communicate, form culture, be self-aware, and understand concepts of right and wrong on a rudimentary level.

The foundations of the court report I wrote included the work I have done on applying reason and critical thinking to ethics, my work on overcoming the abyss between empiricism and ethical principles that Kant identified, and my personal knowledge on orangutans as the author of a published book on the species.

This session will explore the barriers to applying critical thinking to ethical principles for the rights of apes, and will discuss the solution I have proposed in the categorization of suffering as a marker of needs and rights. In the application of critical thinking and ethics, it would also examine the difference between ethical arguments in philosophy and ethical arguments in the specific rational structure of the legal system, where interesting efforts are being made to change the rights of apes. The law is an institutionalized system of critical thinking that has an internal consistency, and it contrasts with critical thinking outside the system.

Conference Concurrent Sessions Continued

Concurrent Sessions VI

(3:45 p.m. – 4:45 p.m., Wednesday)

Getting Started: A Community College Begins to Think Critically About Critical Thinking

Steve Knapp

Professor of English
Arkansas State University at Beebe

Jim Brent

Associate Professor of Social Sciences
Arkansas State University at Beebe

Belvedere Ballroom

This concurrent session will share the experiences of an infant critical thinking initiative at a small, two-year liberal arts college in Arkansas as it tries to crawl from an idea to a curriculum-integrated critical thinking program. The session will focus on how ideas can be transferred from the conference directly into the classroom. How-to information, as well as sample simulations and participatory exercises, will be included to show how we have begun to adapt and introduce critical thinking theory into our classes and how – through presentations and workshops – we are working toward building a dedicated faculty coalition. This coalition is committed to fostering explicit learning and learner autonomy in employing critical thinking techniques across the curriculum, which will provide valid assessment results useful for institutional planning.



Conference Concurrent Sessions Continued

Improving Student Critical Thinking Through Direct Instruction in Rhetorical Analysis

Lauren McGuire

Professor of English

Victor Valley College

California Room

Purposeful implementation of Dr. Richard Paul and Dr. Linda Elder's Elements of Thought, Intellectual Standards, and of Socratic questioning could strengthen students' perceptions of critical thinking and their own critical thinking abilities. Educators can cultivate these Intellectual Traits by encouraging students to develop the skills necessary for clearly and logically evaluating the credibility and reliability of rhetoric.

Assuming that an argument can be any wording – written or spoken, aural or visual – that expresses a point of view, it is vitally important that educators challenge students to consider new perspectives on topics they may feel they already understand, and for those educators to provide practice in analyzing the sorts of arguments that their students will be assigned in various courses.

Implementing the Elements of Thought, Intellectual Standards, and Socratic questioning through direct instruction in rhetorical analysis could encourage students to detect and evaluate the assumptions, egocentrism, and sociocentrism in rhetoric which they are exposed to in literature, the media, and their own writing. Consistent application of Paul and Elder's Intellectual Standards provides students with the tools necessary for acquiring intellectual humility as they approach the complexities of life with clarity, accuracy, and precision; explore multiple perspectives of difficult problems; and learn to sympathetically acknowledge the viewpoints of others with breadth and clarity.

This session will focus primarily on designing teaching strategies that integrate direct instruction in rhetorical analysis. Emphasis will be placed on incorporating Paul and Elder's Intellectual Standards and Elements of Thought. Participants will work in small groups and will be offered instructional methodologies which encourage the evaluation of expository and argumentative discourse, and which develop students' critical thinking, reading, and writing skills.

Conference Concurrent Sessions Continued

Questions and More Questions for Transfer in Learning Communities

Heather Barrack

Writing Department
Bergen Community College

Mariposa Room

The critical thinking vocabulary of Elements of Thought, Intellectual Standards, and Intellectual Virtues must be emphasized as necessary transferrable knowledge for students and faculty. This emphasis should take place from the introduction of the syllabus to the specific assignments (including the rubrics for assignments), discussions, and tests and research.



This workshop will look at learning communities and paired courses to consider how the connectivity of these models in science, philosophy, world cultures, literature, history, sociology, and composition can serve as a foundation for critical thinking (Paul-Elder model) across the curriculum.

The design will include the opportunity to observe changes in discussions and assignments as faculty modify lectures, assignments, and tests to explore assumptions, evidence, conclusions, and implications from different curricula.

Philosophical Assumptions in Psychotherapy: An Analysis of Harry Stack Sullivan's Interpersonal School of Psychiatry and Viktor Frankl's Logotherapy

Sally Carey

Assistant Professor of Philosophy
Notre Dame College

Berkeley Room

This paper examines two necessary and foundational assumptions inherent in all forms of psychotherapy: a view of the person, and a view of reality. Indeed, without these assumptions, therapy could neither be practiced nor achieve its goals. Grounded upon the school of thought in which they originate, the author demonstrates how these foundations are both paradigm-specific and have an ineliminable, normative force for the client. Two contrasting schools of thought are analyzed in this regard, namely, Harry Stack Sullivan's Interpersonal

Conference Concurrent Sessions Continued

School of Psychiatry and Viktor Frankl's Logotherapy. Consideration is given to the prevailing trend of eclectic psychotherapeutic practices, and rather than exonerating therapists from critically investigating the foundations of such practices, this places an even greater moral obligation upon them for the sake of their client's well-being.

Higher-Order mLearning: Cultivating Creative and Critical Thinking Through the Use of Mobile Devices

Shawn McCann

Train the Trainer School

United States Marines

Yerba Buena Ballroom

This presentation explores the literature regarding development of higher-order learning through student participation in technology-enhanced environments – specifically, the use of mobile devices in the practice of critical thinking by leveraging their inherent elements and affordances of temporality, space, and connectedness.

The literature on mobile learning only recently began to explore critical thinking, and remains focused on content delivery. However, the collaboration, just-in-time, learning-on-the-go capabilities of mobile learning hold potential for deeper discourse within the context of higher-order learning. This presentation argues that carefully designed learning spaces, accessible by technology in hand, create beneficial opportunities for reflection and critical thinking that drive academia, business, and military organizations. However, poor definitions of critical thinking compromise its effective development and evaluation. Through an inquiry of higher-order learning, critical thinking, mobile learning, and technology-enhanced learning, the author defines and recognizes reflection as an essential component of critical thinking, identifies gaps in research associated with higher-order mobile learning, and establishes the importance of critical thinking in mobile learning.

Cultivating Critical Thinkers in the Academic Writing Course for Non-Native English Ph.D. Candidates

Bo Gao

English Lecturer, School of Foreign Languages
Beijing Institute of Technology, China

Sacramento Room

Badly-constructed Chinese English is characterized by redundancy, inaccuracy, and lack of logic. The author argues this phenomenon is essentially caused by the lack of critical thinking rather than the English chunks, grammar, or culture. The academic writing course, therefore, prepares PhD candidates to think critically, rationally, and empathically in the content-based instruction. Four-year practice of Socrates-Plato questioning tasks has effectively enhanced students' linguistic and logical clarity and accuracy, both in their English academic writing and in their research. More importantly, integrating critical thinking with academic writing enlightens them to the long-term mind control of the government, so that they become mentally and spiritually independent citizens who value their essential human right to think and speak freely.



Concurrent Sessions and Roundtable Discussions

Presenter Information

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President & Managing Editor
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Islamic Azad University
Iran

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Olivia Beverly

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Concurrent Sessions and Roundtable Discussions

Presenter Information, continued

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Claire Nader at the 34th International
Conference

Concurrent Sessions and Roundtable Discussions

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Concurrent Sessions and Roundtable Discussions

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Evening Social

Celebrating the Aesthetic Dimension of the Liberally-Educated Mind Through Art, Literature, Music, and Conviviality

For All Delegates

Wednesday, July 29, 2015

7:00 p.m. – 10:15 p.m.

Quarter Deck

If we respected only what is inevitable and has a right to be, music and poetry would resound along the streets. When we are unhurried and wise, we perceive that only great and worthy things have any permanent and absolute existence, and that petty fears and petty pleasures are but the shadow of the reality. This is always exhilarating and sublime.

– Henry David Thoreau... *Walden*, 1854

People often have the misconception that critical thinking is dull and boring. Nothing could be more untrue. Those who think critically in the highest sense are not only creative, but also spontaneous and unique. They share a zest for life and seek self-realization or self-actualization through living both an ethical life, and one that connects with high culture or aesthetics. Being free in thought, they are able to command their minds so as to enjoy some part of life every day, even under difficult or distressing conditions. They often seek self-refinement through aesthetic experiences and astutely interweave the world of ideas with that of art – of music, dance, literature, and so on.

Furthermore, those who think critically in the highest sense recognize unique contributions made through the academic disciplines to our conception of the liberally-educated mind. They leverage these contributions to actively cultivate the aesthetic dimension of their own thought. And of course, there are strong aesthetic dimensions to our fields and disciplines themselves: for instance, beauty can be found wherever we find truth – in education, in math and engineering, in experimentation and research, in historical and anthropological thought, in scientific and psychological thought, and so on.

Let us enjoy together, on our last evening, in a unique evening social in which we share, discuss, and appreciate aesthetic experiences and experience the conviviality of the critical thinking community.

Evening Social, cont.

Join us for any – hopefully all – of the evening’s events. If attending the artistic presentation and Poetry/Essay Reading, please enter and exit quietly so as not to interrupt the presentations.

Wine and light refreshments will be served...

Schedule:

7:00 – 7:30 p.m. – **Music by the Gypsy Swing Club**, from the Northern California Coast... Enjoy the refreshments.

7:30 – 8:00 p.m. – **Exploring Artistic Thinking as a Vehicle for Emotional Well-Being**

The evening begins with a brief discussion by Dr. Linda Elder on the relationship between artistic thinking, criticality, and art as a vehicle for emotional healing and well-being. She will share some of her recent experiences with art as a positive – and even potentially fruitful – way of dealing with deep emotional turmoil and distress. Dr. Elder will also discuss the critical dimension of the artistic process, as she has experienced it. She will exhibit some of her artwork, including a series of drawings of her husband, Dr. Richard Paul.



Some art materials will be available for those who would like to try some of the fundamental and powerful ideas Dr. Elder will be discussing. She works with graphite pencil on acid-free paper.

8:00 – 8:15 p.m. – **Musical interlude by the Gypsy Swing Club**

8:15 – 8:45 p.m. – **Poetry and Essay Reading**

All are invited to read a poem or brief essay (no more than 2-3 paragraphs or so). Feel free to read either a piece you have personally written, or a piece from a distinguished thinker.

8:45 – 10:15 p.m. – **Music by the Gypsy Swing Club**

Conversation and dancing during the rest of the evening, as you wish...

Fostering Critical Thinking Across the Curriculum Must Be Given Priority in Education

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 focus 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
- 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 they become committed to living an examined life? Is it 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.

History and Outreach of the Foundation for Critical Thinking

The Center for Critical Thinking was established in 1981 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.

Conferences, Academies and Workshops

The First Conference on Critical Thinking, sponsored by the Center for Critical Thinking, marked the year of our birth (1981). 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.

On-Site 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).

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.

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, Persian, Polish, Thai, and Turkish. Spanish is the leading group with 12 works translated;
4. over 100 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. scores of hours of critical thinking videos freely accessible;
6. an online college credit course for teachers that focuses on integrating critical thinking across the curriculum.

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

Translations of Our Work – Dozens of 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 cct@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

University of Houston - Clear Lake:

Quality Enhancement Plan: Applied Critical Thinking (ACT) for Lifelong Learning and Adaptability

As the University of Houston-Clear Lake (UHCL) continues to prepare its students for the twenty-first century, it recognizes the necessity of equipping them with the relevant knowledge, skills, and dispositions to succeed in a rapidly changing environment where the ability to reason and adapt to new information is vital. To this end, UHCL has developed a Quality Enhancement Plan (QEP) topic of Applied Critical Thinking for Lifelong Learning and Adaptability. The

need for students to develop Applied Critical Thinking (ACT) skills has been identified through the internal analysis of student data, intensive discussion among UHCL constituents (i.e., faculty, staff, students), and several national reports conducted by external professional communities and organizations. By addressing this need, UHCL aspires to enrich the quality of its students' overall educational experiences.

The heart of UHCL's QEP for Applied Critical Thinking for Lifelong Learning and Adaptability is a curriculum revision project that will incorporate key critical thinking skills, concepts, and activities into courses, based on best practices. Such skills and practices will form the framework for redesigning the curriculum, helping the university to develop a common definition of Applied Critical Thinking, and for classroom activities that foster these skills in undergraduate students.

The goals of UHCL's QEP are:

- To increase the Applied Critical Thinking skills of students.
- To provide faculty the support and resources they need to develop the Applied Critical Thinking skills of students.

Thus, the key student learning outcomes of the QEP are:

- Students will use curiosity to identify a particular problem or area of interest within a discipline.
- Students will make connections to their particular issues or problems based upon evidence acquired by research methodologies and writing styles within the discipline.
- Students will demonstrate creativity through a divergent mental approach exploring original alternative views and solutions.
- Students will communicate outcomes through writing and/or presentations.

In order to ensure a successful implementation of the QEP, faculty will be afforded multiple opportunities to participate in professional development workshops and conferences, both on- and off-campus, that center on strategies for teaching and assessing ACT skills. Through these activities, the university hopes to instill critical thinking in all of its students, so that the knowledge they gain during their academic careers at UHCL can translate directly into real-world career experiences. In doing so, the university will enhance the educational quality of its graduates and, in fulfillment of its mission, provide a benefit to the larger community through the contributions of these graduates.

Contact: Kevin Barlow, Executive Director
Office of Institutional Effectiveness
barlowk@uhcl.edu

Oakwood University:

Critical Thinking Development Through Writing

Oakwood University's Quality Enhancement Plan (QEP) was initiated in the Fall of 2012. *Critical Thinking Development through writing* was the topic selected by University stakeholder groups. The critical thinking curriculum is based on the work of Drs. Paul and Elder of The Foundation for Critical Thinking (FCT). The initial planning included consultation with FCT Fellow Gerald Nosich and follow-up workshops that included several Foundation consultants. The QEP initiative focuses on the development and assessment of students' critical thinking skills, as demonstrated in writing. To accomplish the goal, critical thinking competencies are embedded in four general education courses. The Paul-Elder approach provided the framework for revised syllabi, rubric assessments and teaching/learning strategies. In addition to course materials, display of critical thinking posters in departments across the University provided an added instructional value. Extensive on-going preparation of course instructors essential to the success of the initiative was implemented. Also, other faculty/ staff responded enthusiastically to open invitations to take advantage of the critical thinking professional development opportunities that included: FCT on-site workshops, an on-line course focused on critical thinking concepts – instructional applications and faculty representatives' attendance at several of the National and International Conferences hosted by the Foundation for Critical Thinking. Additionally, on going faculty-facilitated seminars that utilize FCT resources are conducted throughout the academic year. These professional development experiences stimulate cross-disciplinary conversations and promote the campus-wide initiative. The seminars ensure that instruction and learning objectives are deeply understood, systematically implemented, and appropriately assessed throughout the academic year. Continued progress in embedding critical thinking in the University curriculum and the common language reflected among faculty and students will contribute to sustaining this initiative.

For more Information about the program, please contact:
Jeannette R. Dulan, Ph.D., QEP Director, jdulan@oakwood.edu
Oakwood University, 256 726 7000, www.Oakwood.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. “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.

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

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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 academic discipline

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 and in your packet. You will find an area map, information about local restaurants, information about the sessions and room assignments, and general information about the Foundation for Critical Thinking.
3. Please bring all of your Thinker's Guides to every conference session. This enables the presenter (and you) to use any or all of them throughout the conference.
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 reception area.
6. Please wear your nametag at all times when you are in the conference sessions, so that we know you are a paid registrant, and for group activities.
7. Please attend only the sessions you have registered for. All conference 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. Please feel free to ask for assistance or information during breaks and lunch at the information desk.
9. Coffee and tea will be provided before the sessions as well as during the breaks, and water will be provided all day. If you would like anything in addition to this, including snacks, feel free to bring those as you wish.
10. We will have several of our materials and publications available for sale at the reception area. Our bookstore is open during breaks and lunch, and at the end of each day's sessions. Our bookstore 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. The hotel offers food options, and can also provide information on restaurants in the area.
12. Please see Concierge for information on airport transportation.

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 the Bookstore 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, and (3) to provide DVD video clips for educational purposes.

Can I get a list of all conference participants?

We design conference sessions so that participants frequently work with others in pairs and small groups. This enables those interested in establishing personal contacts at the conference 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 Angel Ballroom.

How do the concurrent sessions work?

All concurrent sessions will be held on Wednesday. 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, process what they have learned at the conference, and think about next steps for moving forward. This session will be led by the Fellows of the Foundation for Critical Thinking.

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 by emailing 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 – www.criticalthinking.org/pages/index-of-articles/1021/

How can I get information on assessment regarding critical thinking?

Information is available on our website regarding tests and assessment. www.criticalthinking.org/pages/critical-thinking-testing-and-assessment/594. Also, you received two Thinker's Guides on assessment during registration – *Critical Thinking Competency Standards*, and *The International 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



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/store:

- Critical Thinking: What Every Person Needs to Survive in a Rapidly Changing World
- Critical Thinking: Tools For Taking Charge of Your Learning and Your Life, Third Edition
- Critical Thinking: Tools for Taking Charge of Your Professional and Personal Life, Second Edition
- Critical Thinking: Learn the Tools the Best Thinkers use
- Learning to Think Things Through: A Guide to Critical Thinking Across the Curriculum
- 30 Days to Better Thinking and Better Living With Critical Thinking
- 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 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 Thinker's 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
- 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
- The Student Guide to Historical Thinking
- The Instructor's Guide to Critical Thinking
- Historical Thinking: Bringing Critical Thinking Into the Heart of Historical Study



What previous attendees say about the conference...

- Among the most stimulating days I've ever spent intellectually.
- Thanks for all the sharing. It's been a catalyst for self reflection, and the integration of all the ideas I've ever heard but never really thought seriously about.
- Taking time to evaluate the intellectual traits as they apply to ourselves and developing a deeper understanding of those traits.
- This conference stimulated "instructional" creativity. It also showed how to help students develop their understanding of, and appreciation for, asking questions.
- Recognizing/affirming the importance of significant ideas, which generate significant "live" questions.
- Your "stepping-out" on the proverbial "limb" in designing this conference was worthwhile. The info was clearly presented, usable, concrete, and even FUN!
- 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!
- Excellent identification of intellectual traits and introspection to identify barriers.
- Great suggestions on how to focus on students' strengths, not weaknesses, and how to apply the tools to empower them as critical thinkers.
- It provides a depth of understanding that isn't possible from reading.
- The conference is invigorating, both intellectually and emotionally, and it provides a wealth of practical strategies/methods.
- 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!
- The most valuable thing was rebuilding a relationship with critical thinking methodology – which has reignited the flame!
- I have gained many good ideas from my colleagues. The conference has raised as many questions as it has given answers.
- 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.

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

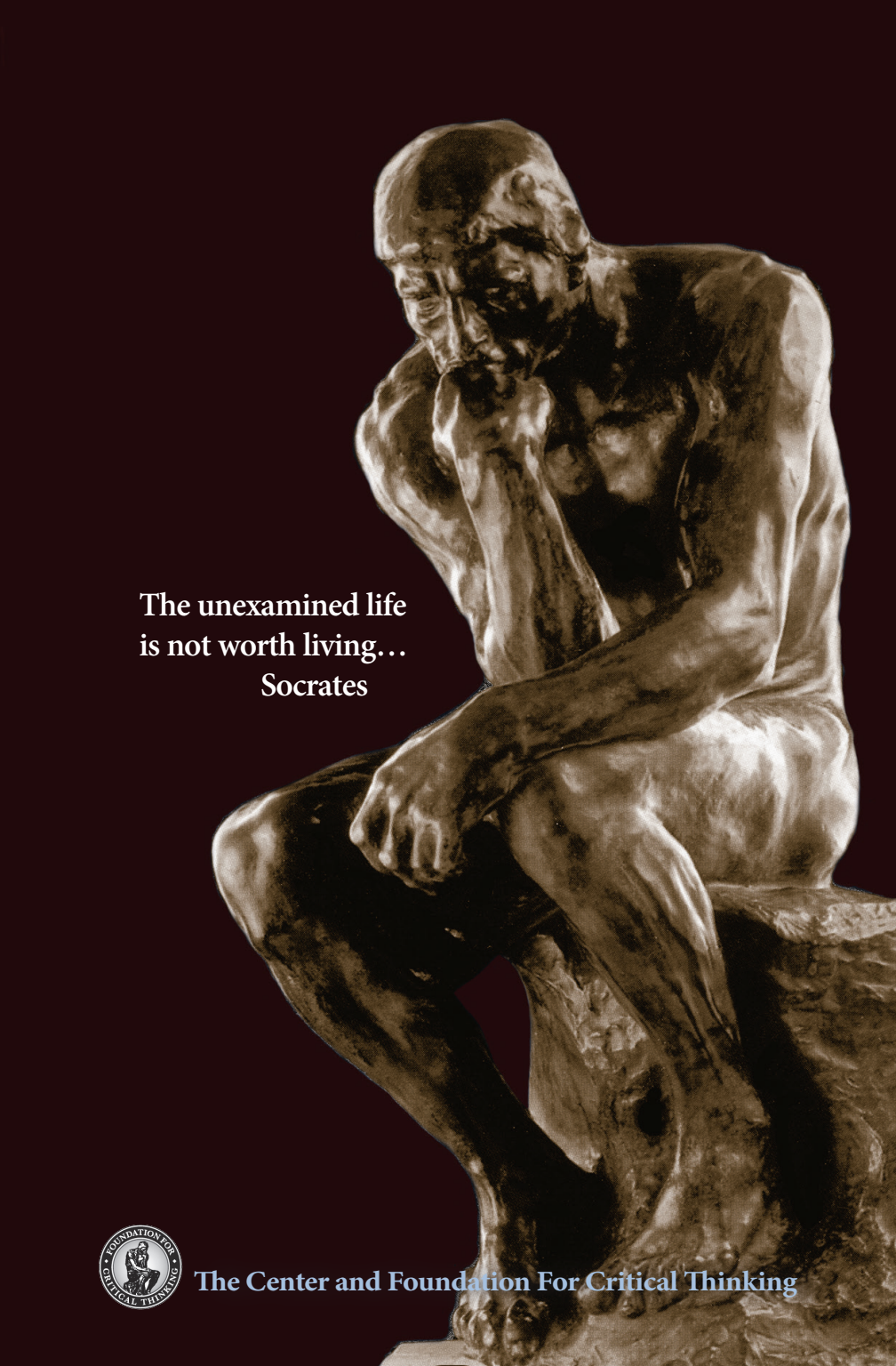
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The unexamined life
is not worth living...
Socrates



The Center and Foundation For Critical Thinking