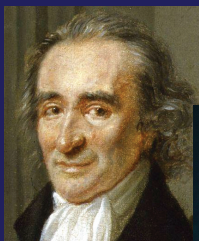


Honoring  
Bertrand Russell  
Scholars



Thomas Paine



Carol Tavris

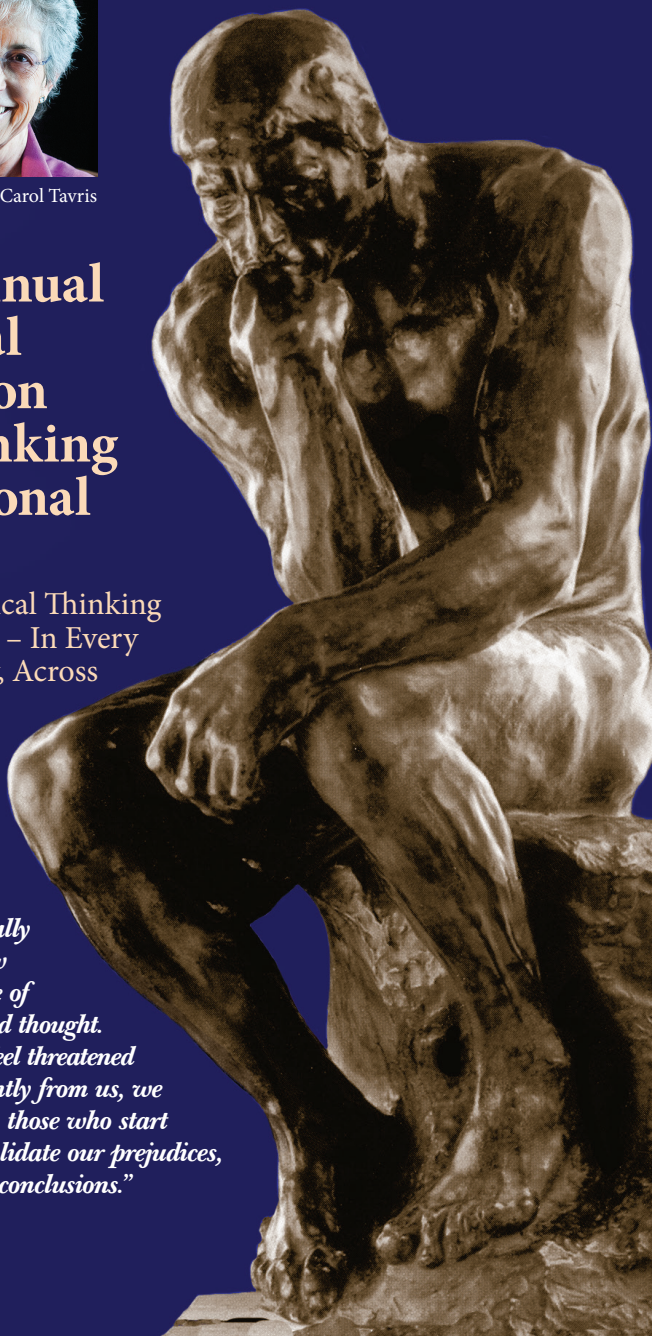
# The 36th Annual International Conference on Critical Thinking and Educational Reform

Fostering Robust Critical Thinking  
Across the Disciplines – In Every  
Classroom, Every Day, Across  
the World

July 2016

*“...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







Proceedings of  
the  
36th Annual  
International Conference  
on  
Critical Thinking and  
Educational Reform



July 25 - 29, 2016



## From Past Conferences



*Henry Steele  
Commanger  
at the 1<sup>st</sup> Conference*



*Neil Postman  
at the 2<sup>nd</sup> Conference*



*Edward Glaser  
at the 4<sup>th</sup> Conference*



*Carol Tavris  
at the 7<sup>th</sup> Conference*



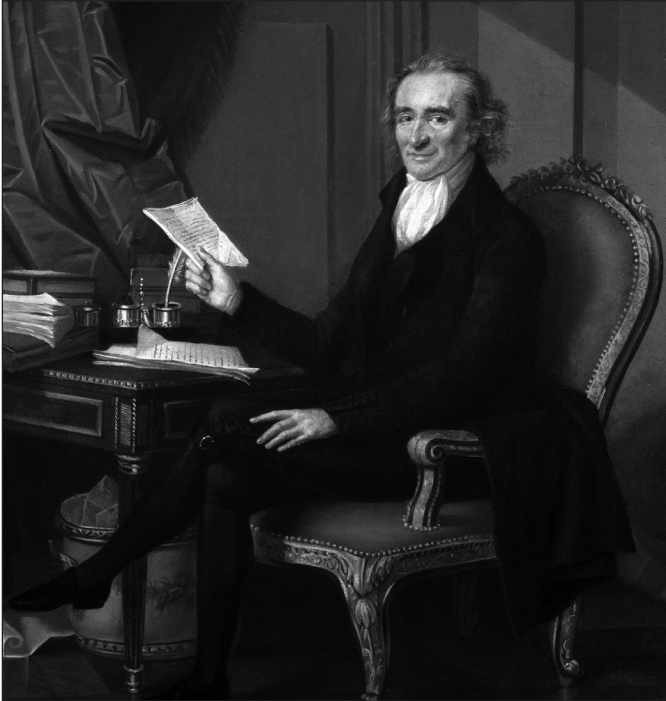
*David Perkins  
at the 7<sup>th</sup> Conference*



*Matthew Lipman  
at the 10<sup>th</sup> Conference*



*George Hanford  
at the 10<sup>th</sup> Conference*



## Dedication to Thomas Paine

The proceedings of the 36th International Conference on Critical Thinking are dedicated to Thomas Paine, revolutionary and staunch defender of the rights of all humans. Though Paine's contributions to political and social theory were largely ignored during his lifetime, and though he was ostracized by his own government during the French revolution, he continued to fight for "The rights of man beyond the American Revolution." We honor him at this year's conference as Bertrand Russell Scholar named posthumously for advancing fairminded critical societies.

## Table of Contents

<b>Dedication to Thomas Paine</b> .....	3
<b>Introduction to the Conference</b> .....	6
<b>Graphic Illustrations That Illuminate a Rich Conception of Critical Thinking</b> .....	8
<b>Conference Overview</b> .....	13
Conference at a Glance .....	14
Preconference Schedule .....	19
Conference Schedule .....	20
Focal Session Presenters .....	22
Guest Focal Session Presenters .....	23
<b>About Richard Paul, Our Founder</b> .....	24
<b>Bertrand Russell Distinguished Scholars Critical Thinking Series</b> .....	27
Bertrand Russell Scholars Previously Honored .....	30
Russell Scholars Honored Posthumously .....	31
Thomas Paine as Bertrand Russell Scholar Named Posthumously .....	32
Bertrand Russell Distinguished Scholar for the 36th International Conference: Dr. Carol Tavris.....	35
<b>Two Conflicting Theories of Knowledge, Learning, and Literacy: The Didactic and the Critical...</b> <i>by Richard Paul</i> .....	37
<b>Conference Sessions and Events</b> .....	
Preconference Sessions Descriptions .....	45
Focal Sessions Descriptions .....	48
Bertrand Russell Scholars Program .....	58
Roundtable Discussions .....	60
Concurrent Sessions Program .....	63
Concurrent Sessions and Roundtable Discussions Presenter Information .....	79
Evening Social: Celebrating Through Art, Music, and Conviviality .....	81
<b>Fostering Critical Thinking Across the Curriculum Must Be Given Priority in Education</b> .....	83

## Table of Contents, cont.

### History and Outreach of the Foundation for Critical Thinking

Theoretical Development, Scholarship, and Research .....	85
Conferences, Academies, and Workshops .....	86
On-Site Professional Development Programs .....	86
Testing and Assessment Tools in Critical Thinking .....	86
Publication and Dissemination of Books and Instructional Materials .....	88
Dynamic Website - Free Resources for Educators at All Levels .....	88
Translations of Our Work – Dozens of Languages .....	88
Institutions Using Our Approach – A Sampling .....	88

### General Conference Information

Important Announcements .....	97
Answers to Frequently Asked Questions .....	99
Foundation for Critical Thinking Books and Guides .....	102



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. (2012)

## Introduction to the Conference

The Center and Foundation for Critical Thinking have together hosted critical thinking academies and conferences for thirty-six years. During that time, we have played a lead 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

**Conference Theme:  
Fostering Robust Critical  
Thinking Across the  
Disciplines– In Every  
Classroom, Every Day,  
Across the World**

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 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.

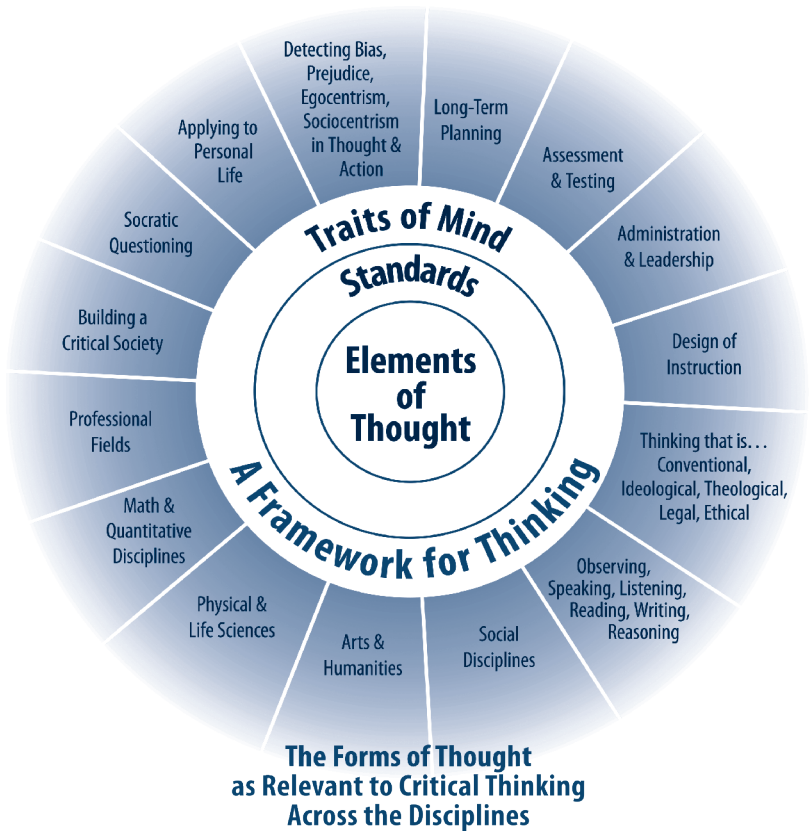
All conference sessions are designed to converge on basic critical thinking principles, and to enrich a core concept of critical thinking with practical teaching and learning strategies.



“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

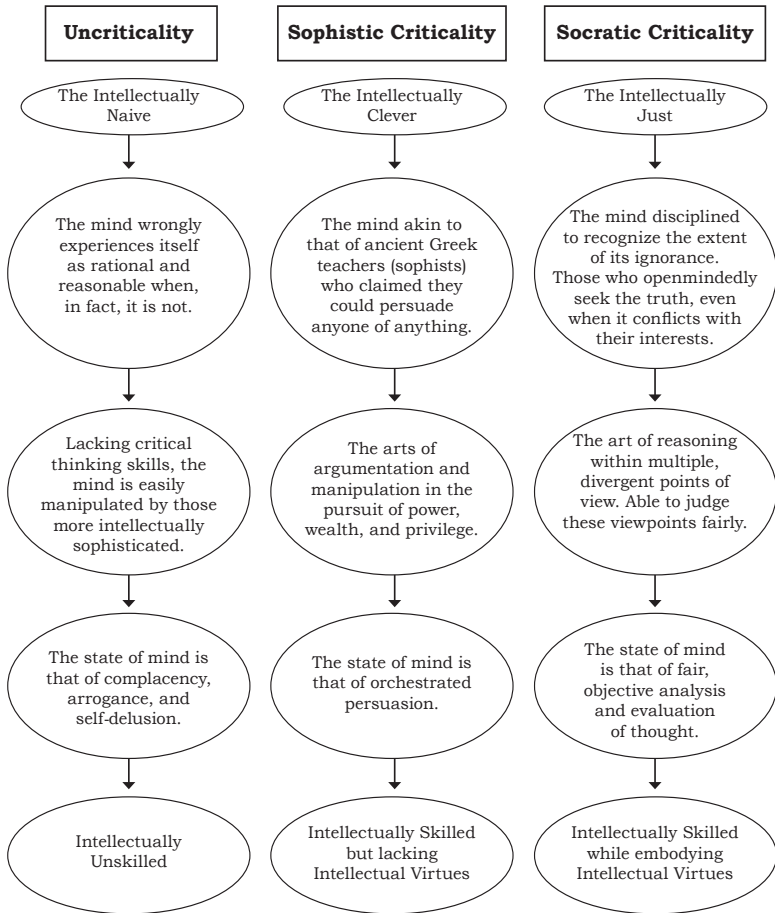
# Critical Thinking is Manifested in ALL Forms of Thought



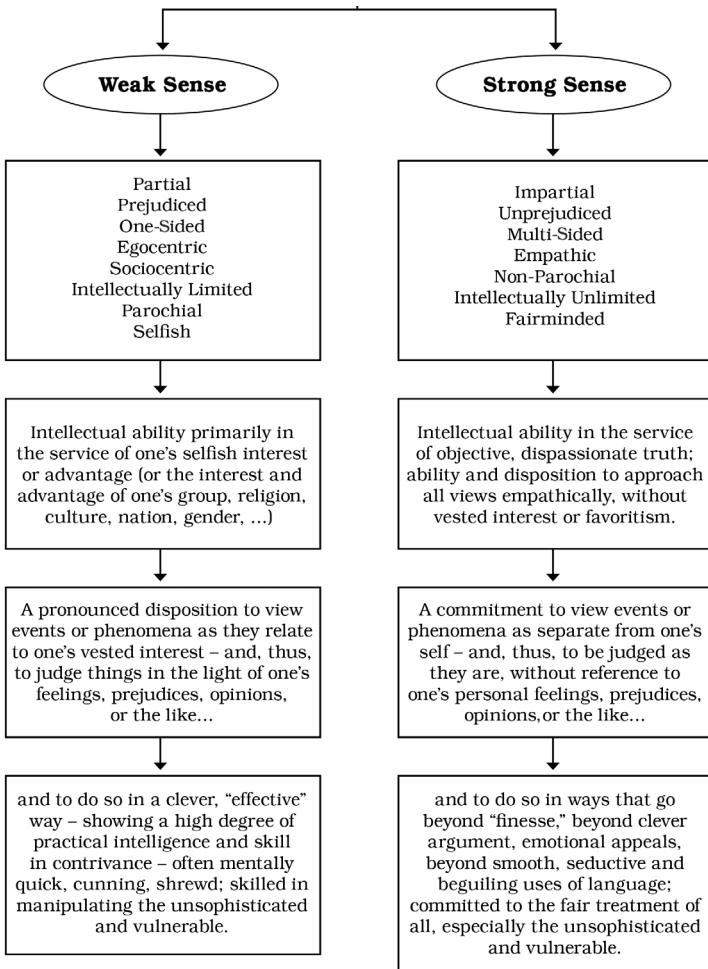
## Thinking Within Every Subject and Domain of Human Thought

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 _____

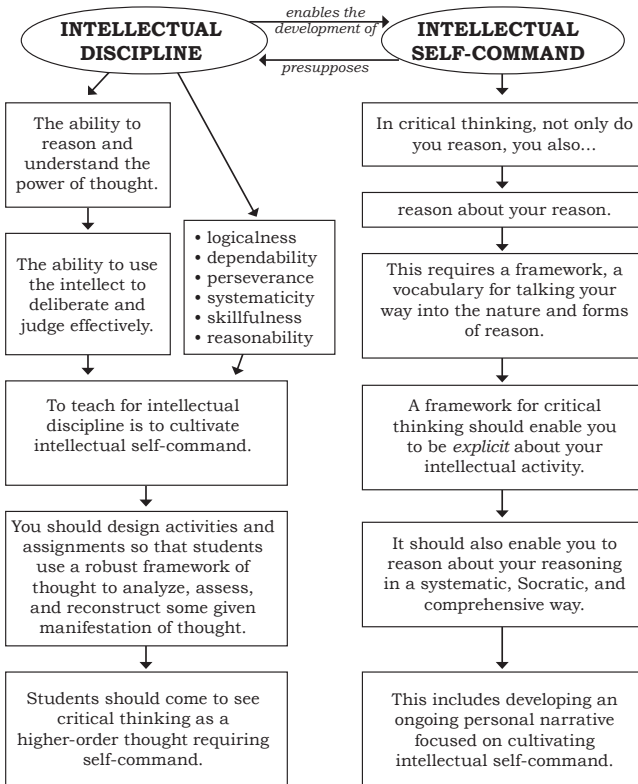
# Three Forms of Criticality



## 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 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 Dr. Carol Tavis.
4. *Evening Social* – Celebrating the Aesthetic Dimension of the Liberally-Educated Mind Through Art, Music, and Conviviality.
5. *Film and Video Continuous Loop*, highlighting the thinking of Richard Paul. Video includes classic footage of Richard Paul exploring the importance of critical thinking to education. Watch videos in our bookstore before, between, and after sessions. Tuesday - Thursday.



## Conference at a Glance

### Preconference

Monday, July 25  
(9:00 a.m. - 4:00 p.m.)

Preconference registrants have chosen one of the following sessions:

- Teaching Students to Think Within the Logic of your Discipline– [Gerald Nosich](#)  
*Bennet Valley*
- Fostering Critical Thinking in the K-12 Classroom: Practical Strategies– [Carmen Polka](#)  
*Russian River Valley*
- The Life and Work of Richard Paul...How We Lived and Learned Together– [Linda Elder](#)  
*Dry Creek Valley*



### DAY ONE -

Tuesday, July 26

### Opening Ceremony

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

Welcome and Keynote Address  
**Linda Elder and Gerald Nosich,**  
**Senior Fellows**  
*Ballrooms C & D*

### Focal Sessions Day One

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

Conference registrants have chosen one of the following sessions:

- Critical Thinking as Essential to the Development of Intellectual Skills in Higher Education–  
[Gerald Nosich](#)  
*Cooperage Building Room 2*
- Critical Thinking as Essential to the Acquisition of Knowledge in K-12 Education– [Linda Elder](#)  
*Cooperage Building Room 1*
- *Advanced Session:*  
The Important Ideas of Tom Paine, His Revolutionary World View, and Why He Was Ultimately Vilified– [Brian Barnes](#)  
*Cooperage Building Room 3*



## Conference at a Glance

**DAY TWO -  
Wednesday, July 27**

**Bertrand Russell  
Distinguished Scholars  
Lecture and *Conversazione***

*Cooperage Building Rooms 1 & 2*

(9:00 a.m. - 11:45 a.m.)

**Russell Scholar:  
Dr. Carol Tavis**



*All Conference delegates are  
encouraged to actively participate  
in this session.*

### Roundtable Discussions

1:15 p.m. - 2:30 p.m.

*Ballrooms B, C, & D*

(see page 60 for details)

### Afternoon Focal Sessions Day Two

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

Conference registrants have chosen one of the following sessions:

- Why Intellectual Virtues are Essential to a Robust Conception of Critical Thinking– [Gerald Nosich](#)  
*Cooperage Building Room 2*
- Critical Reading as Primary Vehicle for Cultivating the Intellect– [Carmen Polka](#)  
*Cooperage Building Room 3*
- Why We Need Concern Ourselves With Human Pathologies in Cultivating the Disciplined Mind– [Linda Elder](#)  
*Cooperage Building Room 1*



View Richard Paul video (looping) in our bookstore before sessions begin each day, during breaks and lunch, and after the afternoon sessions. (Tuesday-Thursday)

## Conference at a Glance

### DAY THREE - Thursday, July 28 Concurrent Sessions

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

#### Concurrent Sessions I: 8:30 a.m. - 9:30 a.m.

- The Weaving of Critical Thinking Teaching Methods Throughout a Healthcare Curriculum–  
[Pauletta Baughman](#)  
*Cooperage Building Room 3*
- Teaching Critical Thinking to MBAs Online– [Eileen Z. Taylor](#)  
*Russian River*
- Turning Critical Thinking Theory into Practice: The Experience of Saint Margaret's Secondary School–  
[Siong Boon Lee and Nur Filzah Zainal Abidin](#)  
*Bennet Valley*
- Suggested Strategies to Guide Students in Meeting the Goal of Critical Thinking Within the Social Science Course– [Mel Manson](#)  
*Cooperage Building Room 1*



#### Concurrent Sessions II (Thurs.): 9:40 a.m. - 10:40 a.m.

- Critical Thinking in Syllabus Design–  
[Mark Berg](#)  
*Cooperage Building Room 2*
- Critical Thinking in Upper-Division, Discipline-Specific Courses Through Team-Based Learning and Writing–  
[Tina Zappile](#)  
*Bennet Valley*
- Experimentation on Fostering Critical Thinking in STEM Education– [Kwok-Bun Yue and Wei Wei](#)  
*Cooperage Building Room 3*
- Improving Student Critical Thinking Through Direct Instruction in Rhetorical Analysis–  
[Lauren McGuire](#)  
*Dry Creek*
- Critical Thinking in the Collaborative Classroom: Infusing Core Critical Thinking Concepts and Skills into Standards Based Collaborative Learning and Constructivist Activities–  
[Jenna Kamp](#)  
*Russian River*
- Proposing a Design for Teaching Critical Thinking –  
[Mohammad B. Bagheri and Shiva Hadadianpour](#)  
*Cooperage Building Room 1*

## Conference at a Glance

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

- Why Explicit Discussion of Intellectual Standards is Essential in the Classroom from a Student's Perspective– [Rachael Collins](#)  
*Cooperage Building Room 1*
- Teaching Scientific Thinking–  
[Fran Johnson](#)  
*Russian River*
- Critical Thinking Within the Discipline of Information Literacy–  
[Cindy M. Campbell](#)  
*Dry Creek*
- Integrating Critical Thinking into a Writing in the Major Program–  
[Shirley F. Manigault](#), [Pamela Simmons](#), [Jill Keith](#), and  
[Morris Clarke](#)  
*Cooperage Building Room 3*
- Fostering Dialectical Thinking Outside the Classroom Walls–  
[Bonnie Zare](#), [Tracey Owens Patton](#),  
[Sagan Hunsaker](#), and [Chicory Bechtel](#)  
*Bennet Valley*

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

- Fuel the Flame of Critical Thinking– [Barbara J. Rodriguez](#) and [Ana Cowo](#)  
*Cooperage Building Room 3*
- Cultivating Moral Integrity in the Sciences Through Cross-Cultural Engagement– [Craig A. Hassel](#)  
*Russian River*
- Assessing Critical Thinking Through the Framework of “Think Aloud”– [Jeremy R. Dicus](#)  
*Cooperage Building Room 1*
- Designing Learning Environments for Critical Thinking: A Perspective from Instructional Design –  
[Dawit T. Tiruneh](#)  
*Bennet Valley*



## Conference at a Glance

### DAY THREE -

**Thursday, July 28, cont.**

#### Afternoon Focal Sessions

##### Day Three

(2:35 p.m. - 4:30 p.m.)

Conference registrants have chosen one of the following sessions:

- Teaching Students to Formulate and Reason Through Essential Questions in Teaching and Learning– [Gerald Nosich](#)  
*Cooperage Building Room 2*
- Teaching Students to Study and Learn Using the Principles of Critical Thinking– [Carmen Polka](#)  
*Cooperage Building Room 3*
- Teaching Students to Internalize and Think Within the Ideas of the Deepest Thinkers: Reaching Back Through History to Classic Works– [Linda Elder](#)  
*Cooperage Building Room 1*

#### Thursday Evening Social

*Celebrating Through Art, Music,  
and Conviviality*

7:00 p.m. - 10:00 p.m.  
*Lobo's*

For all delegates.  
See evening program on pp. 81-82

### DAY FOUR -

**Friday, July 29**

#### Morning Focal Sessions

(9:00 a.m. - 11:00 a.m.)

Conference registrants have chosen one of the following sessions:

- For Administrators: Placing Critical Thinking at the Heart of the Institution's Mission– [Brian Barnes](#)  
*Bennett Valley*
- Teaching Students to Think Conceptually, and to Take Command of the Concepts that Guide Their Lives– [Linda Elder](#)  
*Ballroom D*
- Socratic Dialogue as Primary Tool for Cultivating Critical Thinking in Instruction– [Gerald Nosich](#)  
*Ballroom B*

#### Closing Session (Friday)

*Where Do We Go from Here?*

(11:30 a.m. - 12:15 p.m.)

*Ballroom C*

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

## Preconference Schedule Daily Schedule July 25, 2016

### Monday - July 25

8:00 a.m. - 9:00 a.m.	Registration & Check-In
9:00 a.m. - 10:30 a.m.	Preconference Focal Sessions begin
10:30 a.m. - 10:45 a.m.	Break
10:45 a.m. - 11:45 a.m.	Preconference Focal Sessions continue
11:45 a.m. - 1:15 p.m.	Lunch
1:15 p.m. - 2:45 p.m.	Preconference Focal Sessions continue
2:45 p.m. - 3:00 p.m.	Break
3:00 p.m. - 4:00 p.m.	Preconference Focal Sessions end

*View Richard Paul video (looping) in our bookstore before sessions begin each day, during breaks and lunch, and after the afternoon sessions. (Tuesday-Thursday)*



## Conference Begins

### Daily Schedule July 26-27, 2016

#### Days One and Two

#### Tuesday - July 26

7:00 a.m. - 8:40 a.m.	Registration & Check-In
8:45 a.m. - 10:00 a.m.	Opening Ceremony
10:00 a.m. - 10:30 a.m.	Break
10:30 a.m. - 11:45 a.m.	Day One Focal Sessions begin
11:45 a.m. - 1:15 p.m.	Lunch
1:15 p.m. - 2:45 p.m.	Day One Focal Sessions continue
2:45 p.m. - 3:00 p.m.	Break
3:00 p.m. - 4:00 p.m.	Day One Focal Sessions continue

#### Wednesday - July 27

9:00 a.m. - 10:00 a.m.	Bertrand Russell Scholars Program begins – Honoring Dr. Carol Tavis *
10:00 a.m. - 10:30 a.m.	Working Break during Russell Scholars Program
10:30 a.m. - 11:45 a.m.	Bertrand Russell Scholars Program continues
11:45 a.m. - 1:15 p.m.	Lunch
1:15 p.m. - 2:30 p.m.	Roundtable Program
2:30 p.m. - 2:45 p.m.	Break
2:45 p.m. - 4:15 p.m.	Day Two Focal Sessions begin

\* See *Bertrand Russell Distinguished Scholars Critical Thinking Series* beginning on page 27.

*View Richard Paul video (looping) in our bookstore before sessions begin each day, during breaks and lunch, and after the afternoon sessions. (Tuesday-Thursday)*

## **Conference Continues Daily Schedule July 28-39, 2016 Days Three and Four**

### **Thursday - July 28**

Concurrent sessions. To choose concurrent sessions, see the concurrent session program on page 63.

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 a.m.	Concurrent Sessions III
11:55 a.m. - 1:20 p.m.	Lunch
1:20 p.m. - 2:20 p.m.	Concurrent Sessions IV
2:20 p.m. - 2:35 p.m.	Break
2:35 p.m. - 4:30 p.m.	Day Three Focal Sessions begin
7:00 p.m. - 10:00 p.m.	Evening Social for All Delegates

### **Friday - July 29**

9:00 a.m. - 11:00 a.m.	Day Four Focal 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 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

### Scholars of the Foundation for Critical Thinking



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.



Carmen Polka has worked diligently to infuse critical thinking into her classroom instruction, curriculum and assessment for more than 15 years. Focused on transforming education through implementation of quality instructional practices, Ms. Polka instigated and co-authored the writing of the Colorado Academic State Standards targeting research and reasoning based on the Paul-Elder framework. As a leader and critical thinking expert in her district, she led professional development and coached K-12 teachers to effectively utilize the Paulian theory. Ms. Polka is a Doctoral candidate in the Educational Leadership and Policy Studies program at the University of Northern Colorado. In addition, she is a licensed Elementary teacher, K-12 Special Education teacher and licensed principal.



## About Richard Paul

### The Founder of the Center and Foundation for Critical Thinking

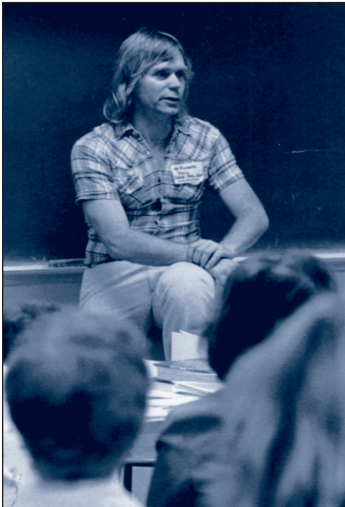
In 1968, Richard Paul completed his doctoral dissertation for the Ph.D. in Philosophy. His dissertation focused on the following seminal questions:

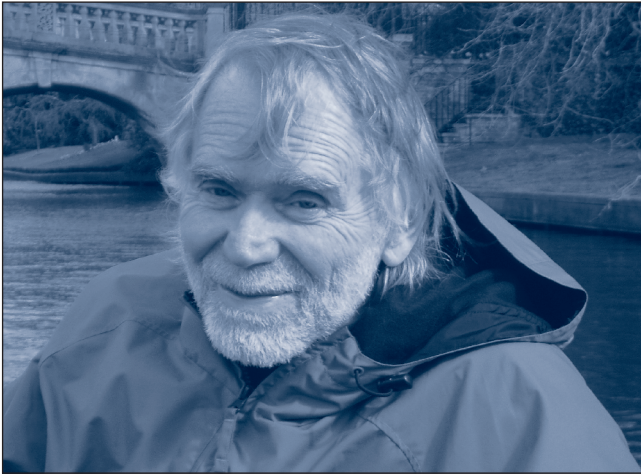
To what extent do traditional philosophical approaches to the analysis and assessment of reasoning effectively guide one in determining what makes sense to believe and what to reject? More specifically, to what extent do these approaches provide adequate theory for determining when questions have been 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 was a living example of a critical mind at work, systematically employing intellectual skills human minds rarely learn, even at foundational levels. His genius lay, 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 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 developed a fairminded conception of criticality accessible to all humans through their own natural languages.

Richard Paul died in August of 2015, but we carry forward his vision 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 fifth 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...

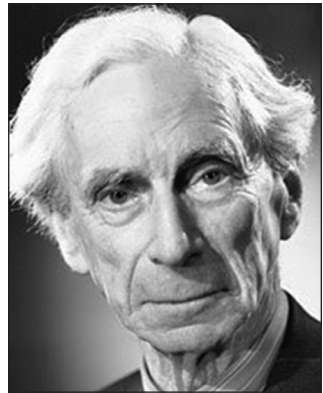
The world that I should wish to see would be one freed from the virulence of group hostilities and capable of realizing that happiness for all is to be derived rather from cooperation than from strife. I should wish to see a world in which education aimed at mental freedom rather than at imprisoning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



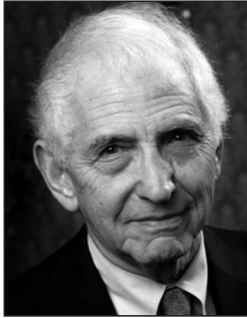

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References:

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



Daniel Ellsberg  
*at the 35nd Conference*



Ralph Nader  
*at the 34th Conference*



Elizabeth Loftus  
*at the 33rd Conference*



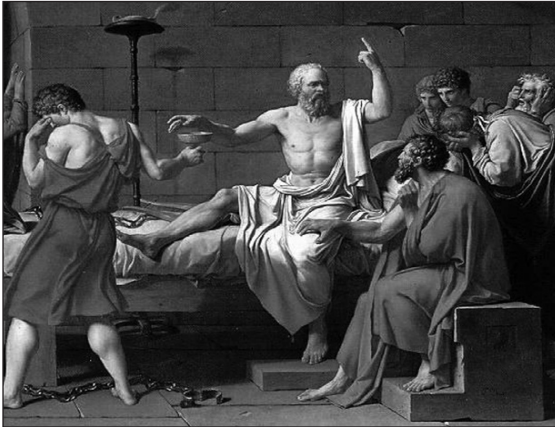
William Robinson  
*at the 32nd Conference*



Michael Shermer  
*at the 32nd Conference*

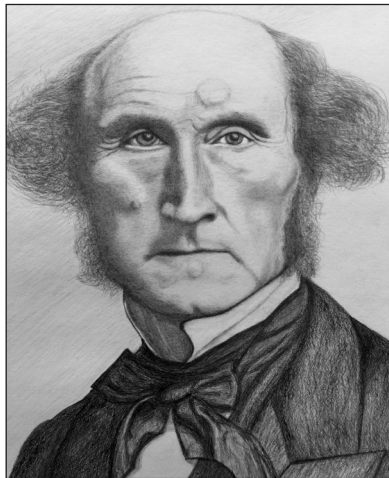


## Bertrand Russell Scholars Previously Honored Posthumously



Socrates

*Named at the 34th Conference*



John Stuart Mill\*

*Named at the 35th Conference*

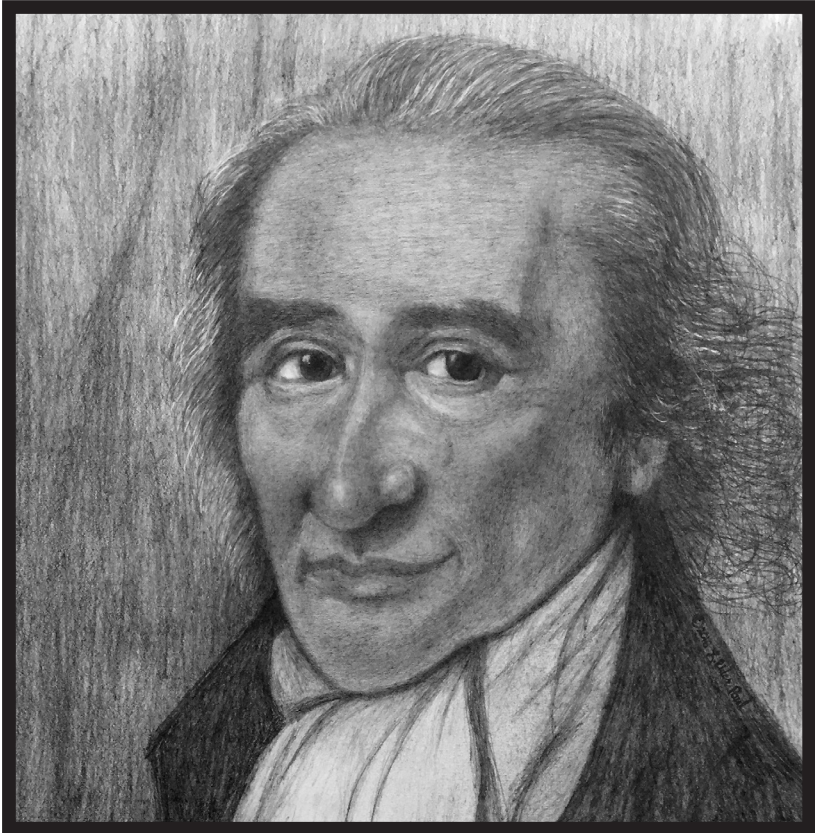
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\* Drawing by Linda Elder using graphite on acid-free paper, 2015.

## Bertrand Russell Scholar Named Posthumously at the 36th Conference

We are pleased to honor, as this year's *Posthumous Bertrand Russell Distinguished Scholar*, the 18th-century English-American writer, philosopher, and revolutionary, Thomas Paine. We name Thomas Paine this year's posthumous Russell Scholar for his defense of rationality, his advocacy for the rights of the common people, and his fierce and uncompromising opposition to slavery.

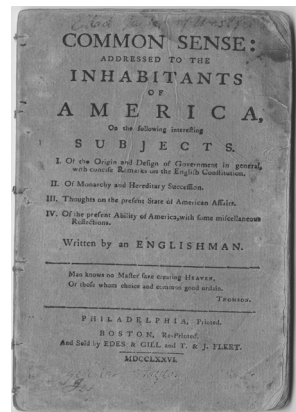
We honor Paine for questioning the social conventions of his day, most especially those that denied the common people fundamental human rights – including the resources and means to feed and shelter themselves, and to have



Drawing by Linda Elder using graphite on acid-free paper, primarily taken from a photo dated 1791.



other basic needs met. We honor Paine for his eloquent, foundational arguments detailing the importance of designing governments that in fact advance the public interest, and which hence protect the people from tyrannical governance. Paine said that governments “may all be comprehended under three heads. First, superstition. Secondly, power. Thirdly, the common interest of society and the common rights of man. The first was a government of priestcraft, the second of conquerors, the third of reason” (p. 139). We may all judge for ourselves the extent to which any human society has reached the third level of government.

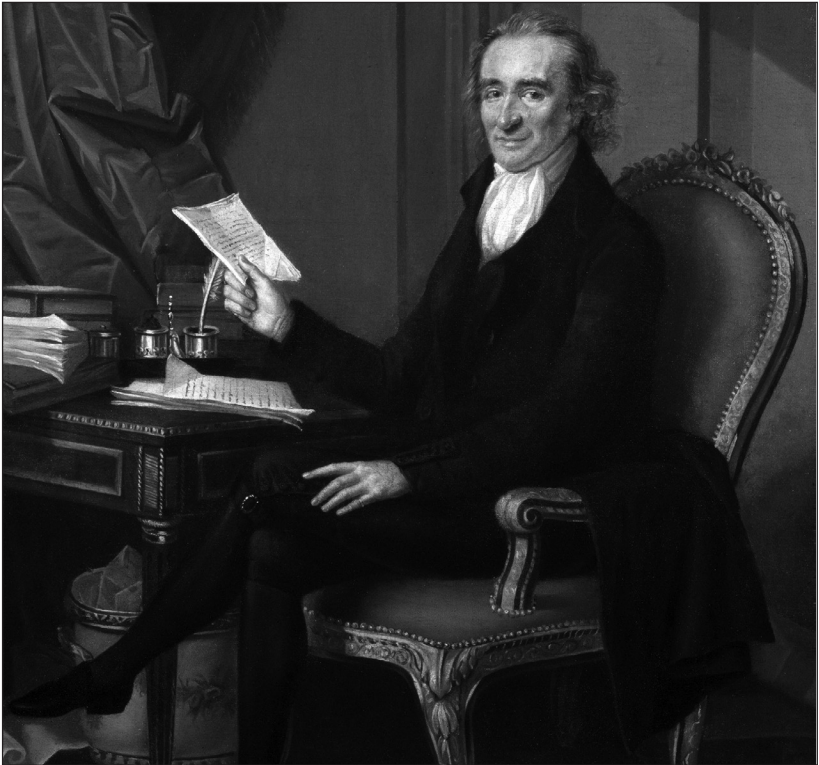


Though Paine played major roles in two revolutions during his lifetime, he was vilified by George Washington and other American and international leaders for his role in fighting for true democracy across human societies, after the American Revolution. Paine was imprisoned during the French revolution, while Washington and other influential aristocratic American leaders did nothing to intervene until months into his imprisonment, and until political pressure surmounted, requiring it of them.

In Bertrand Russell’s essay entitled, “The Fate of Tom Paine,” Russell says of

Paine, “he had his faults, like other men; but it was for his virtues that he was hated, and successfully calumniated...(p. 134)...he set an example of courage, humanity, and single-mindedness. When public issues were involved, he forgot personal prudence. The world decided, as it usually does in such cases, to punish him for his lack of self-seeking (p. 147). Paine was consistently opposed to every form of cruelty, whether practiced by his own party or by his opponents” (p. 143).

It is to the great detriment of the people that we cannot seem to cultivate, in today’s political climate, real statesmen such as Thomas Paine to serve the people at the highest levels of government. When and if fairminded critical societies emerge, wise thinkers such as Paine will be daily celebrated, their ideas will be taken seriously, and the rights of the people will become a priority.



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\*All of the references in this section come from Bertrand Russell’s book, entitled, *Why I Am Not A Christian*, NY, NY: Simon and Schuster. (1957)

Painting of Thomas Paine by Laurent Dabos, circa 1791.

## Bertrand Russell Distinguished Scholar for the 36th 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. Carol Tavris. All conference participants are invited to the Russell Scholars Program. See p. 58 for this year's Russell Program format.

Dr. Carol Tavris has devoted her professional life – as writer, teacher, and lecturer – to educating the public about psychological science. Her book with Elliot Aronson, *“Mistakes Were Made (But Not by ME): Why we justify foolish beliefs, bad decisions, and hurtful acts”* (Mariner Books, 2015), applies cognitive dissonance theory to a wide variety of topics, including politics, conflicts of interest, memory (everyday and “recovered”), the criminal justice system, police interrogation, the daycare sex-abuse epidemic, family quarrels, international conflicts, and business.

Tavris has spoken to students, psychologists, mediators, lawyers, judges, physicians, business executives, and general audiences on, among other topics, self-justification; science and pseudoscience in psychology; gender and sexuality; critical thinking; and anger. In the legal arena, she has given many addresses and workshops to attorneys and judges on the difference between testimony based on good





psychological science and that based on pseudoscience and subjective clinical opinion.

Carol Tavris is a Charter Fellow of the Association for Psychological Science. Her honors and awards include the 2014 Media Achievement Award from SPSP; an honorary doctorate from Simmons college in 2013; the Distinguished Media Contribution Award from the American Association of Applied and Preventive Psychology (for *The Mismeasure of Woman*), the Heritage Publications Award from Division 35 of the American Psychological Association (for *The Mismeasure of Woman*), the “Movers and Shakers” Award from Southern California Library for Social Studies and Research, the Distinguished Contribution to Women’s Health Award from the APA Conference on Women’s Health, and an award from the Center for Inquiry, Independent Investigations Group, for contributions to skepticism and science.



We are pleased to honor Carol Tavris, at this year’s conference, for her important contributions to our understanding of the human mind.

From the archives, excerpt from...

## Two Conflicting Theories of Knowledge, Learning, and Literacy: The Didactic and the Critical\*

By Richard Paul

Most instructional practice in most academic institutions around the world presupposes a didactic theory of knowledge, learning, and literacy, ill-suited to the development of critical minds and literate persons. After a superficial exposure to reading, writing, and arithmetic, schooling is typically fragmented into more or less technical domains each with a large vocabulary and an extensive content or propositional base. Students “take in” and reiterate domain-specific details. Teachers lecture and drill. Students rarely integrate their daily non-academic experiences. Teachers spend little time stimulating student questions. Students are rarely encouraged to doubt what they hear in the classroom or read in their texts. Students’ personal points of view or philosophies of life are considered largely irrelevant to education. In most classrooms teachers talk and students listen. Dense and typically speedy coverage of content is usually followed by content-specific testing. Students are drilled in applying formulas, skills, and concepts, then tested on nearly identical items. Instructional practices fail to require students to use what they learn when appropriate. Practice is stripped of meaning and purpose.

Interdisciplinary synthesis is ordinarily viewed as the personal responsibility of the student and is not routinely tested. Technical specialization is considered the natural goal of schooling and is correlated with getting a job. Few multi-logical issues or problems are discussed or assigned and even fewer teachers know how to conduct such discussions or assess student participation in them. Students rarely engage in dialogical or dialectical reasoning and few teachers can analyze such reasoning. Knowledge is viewed as verified intra-disciplinary propositions and well-supported intra-disciplinary theories. There is little or no discussion of the nature of prejudice or bias, little or no discussion of metacognition, little or no discussion of what a disciplined, self-directed mind or self-directed thought require. We expect students to develop into literate, educated persons from years of content memorization and ritual performance.

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\* This excerpt is taken from *Critical Thinking: What Every Person Needs To Survive in a Rapidly Changing World*, Tomales, CA: FCT Press. (2012)

The above dominant pattern of academic instruction and learning assumes an uncritical theory of knowledge, learning, and literacy coming under increasing critique by those concerned with instruction fitted to new interpretations of the emerging economic and social conditions and changing conditions for human survival. (Passmore, 1967)<sup>1</sup> (Scheffler 1973, 1965)<sup>2</sup> Those whose teaching reflects the didactic theory rarely formulate it explicitly. Some would deny that they hold it, though their practice implies it. In any case, it is with the theory implicit in practice that we are concerned.

### *A Glimpse at the Historical and Social Background of Didactic Instruction and Uncritical Learning*

The didactic theory of knowledge, learning, and literacy, though unsuited to in-depth learning or critical thinking, has been functional to some extent for the maintenance of routine life in what have been to date largely uncritical societies. Schooling has been first and last a social process, reflecting ascendant social forces and thinking largely subservient to them. Much of what happens in schools results from social and economic decisions made predominantly by non-academics. Epistemo-logic is traditionally subordinate to socio-logic.

We must remember that knowledge, however extensive, is a highly limited social construction out of an infinitude of possible such constructions. Although all humans live in a veritable sea of potentially expressible truths, they express only a few of them, only a few become knowledge. The constraints that we must live within inevitably limit the social production of knowledge. We are therefore highly selective and directional in that production. We don't randomly express truths. We systematically seek the knowledge which serves our interests, meets our needs, and solves our problems. The human mind and social life being what it is, we generate a good deal of pseudo-knowledge intermixed with the genuine. We also avoid producing and disseminating knowledge that might undermine our social engagements and vested interests. Not all learning is ipso facto rational, and irrational practices are often deeply embedded in day-to-day social life. We do this spontaneously and naturally, without guile or conscious malice. We are not truth seekers by nature but functional knowledge seekers. And widely accepted pseudo-knowledge is often quite functional. Hence, to take an obvious example, in a racist society it is functional to be racist. Rationally unjustified beliefs often enable us to get ahead and stay out of trouble. Ordinary social life, whether we like it or not, is

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1 Passmore, John. "On Teaching to Be Critical." *The Concept of Education*, Routledge & Kegan Paul, London: 1967. pp. 192-211

2 Scheffler, Israel. *Conditions of Knowledge*, Scott Foresman, Chicago. 1965.



filled with innumerable functional falsehoods.

As long as societies functioned primarily as self-contained systems independent of each other and the repercussions of economic, social, and political conflicts were manageable, functional falsehoods and suppressed knowledge (the avoidance of unpleasant truth) was tolerable. We should remember that the systematic search for particular dimensions of knowledge as an organized and specialized endeavor is itself quite recent in human history. It is at most 2,000 years old while the species is somewhere between 1,000,000 and 3,000,000 years old. Most disciplines have emerged as significant endeavors only within the last 300 or so years. Wholesale mass schooling is only about 100 years old. Schools and socialization historically have armed the mass of people with minimum levels of superficial knowledge, functional falsehoods, and socially approved biases. Only a few were encouraged to approach the ideal of critical thought, and even these only in a limited way. As scientific disciplines emerged it became necessary for some to understand particular disciplines deeply. What Kant called scientific ignorance - knowing clearly what we do not yet know - became necessary for advancing intra-disciplinary progress. But most people were not expected to contribute to the advances in specialized disciplines, only to use in a limited way some tools that a technological application of those advances made possible.

Furthermore, the overwhelming majority of people were each expected to find a particular niche within the complex structures of social life, not to engage in social critique, not to detect social contradictions, not to expose pseudo-knowledge or to articulate suppressed knowledge. That learning was all of a piece for the typical (uncritical) learner - truth, half-truth, bias, and falsehood blended together - created no insoluble economic or social problems for society. Problems aplenty there were, but on the whole people in the same societies shared the same basic beliefs, true or false, rational or irrational. Anarchy did not result from the fact that "Truth" meant no more in the last analysis to ordinary people than "We believe it" or "It agrees with our beliefs" or "It was said by someone with authority and prestige."

But the relative homogeneity and isolation of societies began to break down with the advent of science and the emergence of a technological world. More and more individuals became, are increasingly becoming, aware of differences in belief, not just of people outside but of people inside their societies as well. And interdependence has dramatically and increasingly emerged. What were previously local decisions with nothing more than local consequences are becoming international matters. Knowledge production and dissemination can no longer be premised on an intra-societal world and humanity cannot

survive indefinitely with masses of people whose ultimate de facto test of knowledge is personal desire or social conformity.

### *What, Then, Is Critical Thinking?*

It is certainly of the nature of the human mind to think - spontaneously, continuously, and pervasively - but it is not of the nature of the human mind to think critically about the standards and principles guiding its spontaneous thought. It has no built-in drive to question its innate tendency to believe what it wants to believe, what makes it comfortable, what is simple rather than complex, and what is commonly believed and socially rewarded. The human mind is ordinarily at peace with itself as it internalizes and creates biases, prejudices, falsehoods, half-truths, and distortions. Compartmentalized contradictions do not, by their very nature, disturb those who take them in and selectively use them. The human mind spontaneously experiences itself as in tune with reality, as directly observing and faithfully recording it. It takes a special intervening process to produce the kind of self-criticalness that enables the mind to effectively and constructively question its own creations. The mind spontaneously but uncritically invests itself with epistemological authority with the same ease with which it accepts authority figures in the world into which it is socialized.

Learning to think critically is therefore an extraordinary process that cultivates capacities merely potential in human thought and develops them at the expense of capacities spontaneously activated from within and reinforced by normal socialization. It is not normal and inevitable or even common for a mind to discipline itself within a rational perspective and direct itself toward rational rather than egocentric beliefs, practices, and values. Yet it is possible to describe the precise conditions under which critical minds can be cultivated. The differences between critical and uncritical thought are increasingly apparent.

Nonetheless, because of the complexity of critical thinking - its relationship to an unlimited number of behaviors in an unlimited number of situations, its conceptual interdependence with other concepts such as the critical person, the critical society, a critical theory of knowledge, learning, and literacy, and rationality, not to speak of the opposites of these concepts - one should not put too much weight on any particular definition of critical thinking. Distinguished theoreticians have formulated many useful definitions which highlight important features of critical thought. Harvey Siegel has defined critical thinking as “thinking appropriately moved by reasons.” This definition highlights the contrast between the mind’s tendency to be shaped by phenomena other than reasons: desires, fears, social rewards

and punishments, etc. It points up the connection between critical thinking and the classic philosophical ideal of rationality. Yet clearly the ideal of rationality is itself open to multiple explications. Similar points can be made about Robert Ennis' and Matthew Lipman's definitions.

Robert Ennis defines critical thinking as "rational reflective thinking concerned with what to do or believe." This definition usefully calls attention to the wide role that critical thinking plays in everyday life, for, since all behavior depends on what we believe, all human action depends upon what we in some sense decide to do. However, like Siegel's definition it assumes that the reader has a clear concept of rationality and of the conditions under which a decision can be said to be "reflective." There is also a possible ambiguity in Ennis' use of "reflective." As a person internalizes critical standards the application of these standards to action becomes more automatic, less a matter of conscious effort, hence less a matter of overt "reflection," assuming that Ennis means to imply by "reflection" a special consciousness or deliberateness.

Matthew Lipman defines critical thinking as "skillful, responsible, thinking that is conducive to judgment because it relies on criteria, is self-correcting, and is sensitive to context." This definition is useful insofar as one clearly understands the difference between responsible and irresponsible thinking, as well as what the appropriate self-correction of thought, the appropriate use of criteria, and appropriate sensitivity to context mean. Of course, it would be easy to find instances of thinking that were self-correcting, used criteria, and responded to context in one sense and nevertheless were uncritical in some other sense. One's criteria might be uncritically chosen, for example, or the manner of responding to context might be critically deficient in numerous ways.

I make these points not to deny the usefulness of these definitions, but to point out limitations in the process of definition itself when addressing a complex concept such as critical thinking. Rather than to work solely with one definition of critical thinking, it is better to retain a host of definitions, for two reasons: 1) to maintain insight into the various dimensions of critical thinking that alternative definitions highlight, and 2) to help oneself escape the limitations of each. In this spirit I will present a number of my definitions of the cluster of concepts whose relationship to each other is fundamental to critical thinking. These concepts are: critical thinking, uncritical thinking, sophistic critical thinking, and fairminded critical thinking. After so doing, I will analyze one definition at length.

## CRITICAL THINKING

- a) the art of thinking about your thinking while you're thinking so as to make your thinking more clear, precise, accurate, relevant, consistent, and fair
- b) the art of constructive skepticism
- c) the art of identifying and removing bias, prejudice, and one-sidedness of thought
- d) the art of self-directed, in-depth, rational learning
- e) thinking that rationally certifies what we know and makes clear wherein we are ignorant

## UNCRITICAL THINKING

- a) thought captive of one's ego, desires, social conditioning, prejudices, or irrational impressions
- b) thinking that is egocentric, careless, heedless of assumptions, relevant evidence, implications, or consistency
- c) thinking that habitually ignores epistemological demands in favor of its egocentric commitments

## SOPHISTIC CRITICAL THINKING

- a) thinking which meets epistemological demands insofar as they square with the vested interests of the thinker
- b) skilled thinking that is heedless of assumptions, relevance, reasons, evidence, implications and consistency only insofar as it is in the vested interest of the thinker to do so
- c) skilled thinking that is motivated by vested interest, egocentrism, or ethnocentrism rather than by truth or objective reasonability

## FAIRMINDED CRITICAL THINKING

- a) skilled thinking which meets epistemological demands regardless of the vested interests or ideological commitments of the thinker
- b) skilled thinking characterized by empathy into diverse opposing points of view and devotion to truth as against self-interest
- c) skilled thinking that is consistent in the application of intellectual standards, holding one's self to the same rigorous standards of evidence and proof to which one holds one's antagonists
- d) skilled thinking that demonstrates the commitment to entertain all

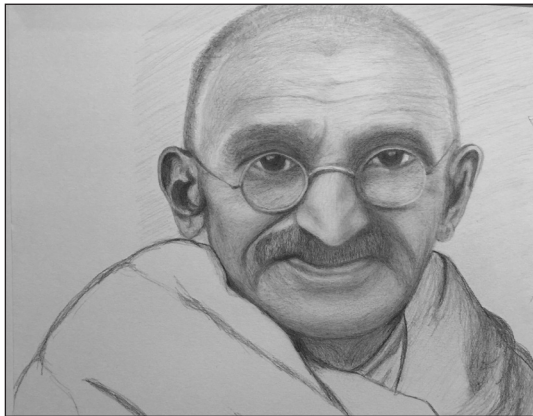
viewpoints sympathetically and to assess them with the same intellectual standards, without reference to one's own feelings or vested interests, or the feelings or vested interests of one's friends, community or nation

It is important not only to emphasize the dimension of skills in critical thinking, but also to explicitly mark out the very real possibility of a one-sided use of them. Indeed, the historical tendency for skills of thought to be systematically used in defense of the vested interests of dominant social groups and the parallel tendency of all social groups to develop one-sided thinking in support of their own interests, mandates marking this tendency explicitly. We should clearly recognize that one-sided critical thinking is much more common than fairminded critical thought.

### *Conclusion*

The pace of change in the world is accelerating, yet educational institutions have not kept up. Indeed, schools have historically been the most static of social institutions, uncritically passing down from generation to generation out-moded didactic, lecture-and-drill-based, models of instruction. Predictable results follow. Students, on the whole, do not learn how to work by, or think for, themselves. They do not learn how to gather, analyze, synthesize, and assess information. They do not learn how to analyze the diverse logics of the questions and problems they face and hence how to adjust their thinking to them. They do not learn how to enter sympathetically into the thinking of others, nor how to deal rationally with conflicting points of view. They do not learn to become critical readers, writers, speakers, or listeners. They do not learn how to use their native languages clearly, precisely, or persuasively. They do not, therefore, become "literate," in the proper sense of the word. Neither do they gain much genuine knowledge since, for the most part, they could not explain the basis for their beliefs. They would be hard pressed to explain, for example, which of their beliefs were based on rational assent and which on simple conformity to what they have heard. They do not see how they might critically analyze their own experience or identify national or group bias in their own thought. They are much more apt to learn on the basis of irrational than rational modes of thought. They lack the traits of mind of a genuinely educated person: intellectual humility, courage, integrity, perseverance, and faith in reason.

Fortunately, there is a movement in education today striving to address these problems in a global way, with strategies and materials for the modification of instruction at all levels of education. It arises from an emerging new theory of knowledge, learning, and literacy which recognizes the centrality of independent critical thought to all substantial learning, which recognizes the importance of higher order multilogical thinking for childhood as well as adult learning, to foundational learning in monological as well as multilogical disciplines. This educational reform movement does not propose an educational miracle cure, for its leading proponents recognize that many social and historical forces must come together before the ideals of the critical thinking movement will be achieved. Schools do not exist in a social vacuum. To the extent that the broader society is uncritical, so, on the whole, will society's schools. Nevertheless the social conditions necessary for fundamental changes in schooling are increasingly apparent. The pressure for fundamental change is growing. Whether and to what extent these needed basic changes will be delayed or side-tracked, and so require new periodic resurgences of this movement, with new, more elaborate articulations of its ideals, goals, and methods - only time will tell.



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

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\*Drawing by Linda Elder using graphite on acid-free paper, 2015.

## 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 (Monday)

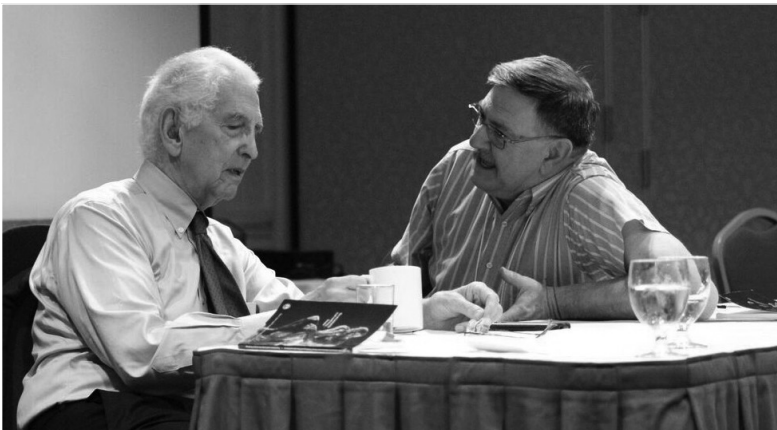
**Monday (9:00 a.m. - 4:00 p.m.)**

**Teaching Students to Think Within the Logic of your Discipline...**

**Gerald Nosich**

*Bennet Valley*

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



## Preconference Session Descriptions Continued

### Fostering Critical Thinking in the K-12 Classroom: Practical Strategies...

Carmen Polka

*Russian River Valley*

Bringing critical thinking into the K-12 classroom entails understanding the concepts and principles embedded in critical thinking and then applying those concepts throughout the curriculum. It means developing powerful strategies that emerge when we begin to understand critical thinking. In this session we will focus on strategies for engaging the intellect at the K-12 level. These strategies are powerful and useful, because each is a way to routinely engage students in thinking about what they are trying to learn as they are learning. Many of the strategies offer students methods for questioning, and for appropriately analyzing and assessing, the ideas they are “receiving” in the schooling process. Each strategy represents a shift of responsibility for learning from teacher to student. These strategies suggest ways to help your students learn to do the (often) hard work of learning.

### The Life and Work of Richard Paul...How We Lived and Learned Together...

Linda Elder

*Dry Creek Valley*

Richard Paul is widely considered a seminal thinker in the field of Critical Thinking Studies. Though Richard passed away in the fall of 2015, his work and original theory is explicit in the best conceptions of critical thinking and the best work in critical thinking. In this session we will consider some of Paul’s important contributions to critical thinking. We will focus especially on some of Paul’s significant contributions to the field that often receive less attention than his primary contributions, going beyond, or deeper into, the areas of analysis and assessment of thought and the advancement of intellectual virtues.

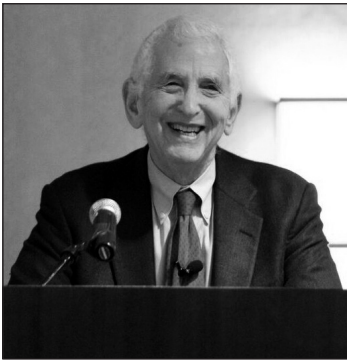
We will also discuss some of the significant ways in which Richard and I worked together on a daily basis, as colleagues, to advance our understanding of critical thinking theory, to develop theory of pedagogy in critical thinking, to contextualize critical thinking within fields and domains of thought, and to advance the concept of fairminded critical thinking and fairminded critical societies through our work at the Foundation for Critical Thinking. We will explore the study habits Richard and I used, and developed, during our time together, to increasingly strengthen our intellectual development.

By way of illustration or example, I will detail some of the ways in which Richard related with me, and the ways in which we related to one another



personally, as we employed the tools of critical thinking on a daily basis in thinking through complex issues in parenting, and through our twenty year marriage.

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*.



## Conference Focal Session Descriptions (Tuesday)

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

#### Critical Thinking as Essential to the Development of Intellectual Skills in Higher Education... Gerald Nosich

*Cooperage Building Room 2*

There is no more important goal in higher education than cultivating the intellect, but we cannot achieve this goal unless we place intellectual development at the heart of instruction. To do this, we must approach our students as thinkers, as persons capable of figuring things out for themselves, as persons with their own thoughts, emotions, and desires, as persons with minds of their own. However, thinking is often ignored in colleges and universities (and indeed in society). Historically critical thinking has been treated in higher education as another add-on, as something interesting we combine with other things we do. But when we understand what it takes to cultivate the intellect we bring the concepts and principles of critical thinking into everything we do in the classroom. Critical thinking becomes the centerpiece of instruction. This is true because it is through critical thinking that we make explicit the intellectual tools students need to live successfully and reasonably, to grapple with the complex problems they will inevitably face, to think their way through content of any kind. However, we can't foster critical thinking if we don't understand it ourselves. This session will introduce some of the foundations of critical thinking. We focus on initial internalization of these foundations, coupled with application to classroom structures and strategies.



## Conference Focal Sessions Continued (Tues.)

### **Critical Thinking as Essential to the Acquisition of Knowledge in K-12 Education... Linda Elder**

*Cooperage Building Room 1*

Students are increasingly assessed on the acquisition of their knowledge in K-12 schooling. But what knowledge should students be acquiring? How do we decide which is most significant, and which can be left behind? Who decides? Who should decide? How do students acquire knowledge? How do critical thinking, the acquisition of knowledge, and the educated person interrelated as powerful concepts? How do the tools of critical thinking lead to the acquisition of knowledge? How does activated knowledge differ from activated ignorance and inert information? In this session we will explore these questions as we introduce the Paulian Conception of Critical Thinking (Paul-Elder Approach). We will focus on understanding the importance of intellectual virtues in the mind of the educated person and in the acquisition of knowledge. We will briefly explore the analysis of thought and the critical role played by intellectual standards in the acquisition of knowledge at the K-12 level.

### **Advanced Session: The Important Ideas of Tom Paine, His Revolutionary World View, and Why He Was Ultimately Vilified... Brian Barnes**

*Cooperage Building Room 3*

At this year's conference we honor, as posthumous Bertrand Russell Scholar, the ideas, work, and life of Tom Paine. Paine was a political activist, philosopher and revolutionary who is considered one of the Founding Father of the United States. He authored several important and influential treatises during his lifetime - including *Common Sense* and *Rights of Man*. Excerpts from both books will be explored during this session, from the point of view of critical thinking. We will also explore why, despite his many important contributions to freedom, Paine was later vilified by many Americans, including famous politicians, and why his ideas are essential to the educated person and those who aspire to become critical persons.

## Conference Focal Sessions (Wednesday)

### Day Two: Wednesday Afternoon (2:45 p.m. - 4:15 p.m.)

#### Why Intellectual Virtues are Essential to a Robust Conception of Critical Thinking... Gerald Nosich

*Cooperage Building Room 2*

Critical thinking is not just a set of intellectual skills. 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 know, to persevere through difficult problems and issues, to think fairlymindedly, to stand alone against the crowd. This session introduces the intellectual character traits at the heart of a fairlyminded conception of critical thinking - the traits of mind embodied by fairlyminded critical persons - intellectual virtues such as fairlymindedness, intellectual humility, intellectual perseverance, intellectual courage, intellectual empathy, intellectual autonomy, intellectual integrity, and confidence in reason.

#### Critical Reading as Primary Vehicle for Cultivating the Intellect... Carmen Polka

*Cooperage Building Room 3*

Educated persons are skilled at, and routinely engage in, close reading. They do not read blindly, but purposely. They have a goal or objective they are pursuing as they read. Their purpose, together with the nature of what they are reading, determines how they read. They read differently in different situations for different purposes. Of course, reading has a nearly universal purpose: to figure out what an author has to say on a given subject.

When we read, we translate words into meanings. The author has previously translated ideas and experiences into words. We must take those same words and re-translate them into the author's original meaning using our own ideas and experiences as aids. Accurately translating words into intended meanings is an analytic, evaluative, and creative set of acts. Unfortunately, few students are skilled at this translation. Few are able to accurately mirror the meaning the author intended. They project their own meanings into a text. They unintentionally distort or violate the original meaning of the authors they read.

Reading, then, is a form of intellectual work. And intellectual work requires willingness to persevere through difficulties. But perhaps even more importantly,

## Conference Focal Sessions Continued (Weds.)

intellectual work requires understanding what such work entails. In this session you will be introduced to five levels of close reading and will work through one or two of them closely (as “students”). Accordingly, you will experience the process of critically reading significant texts, so as to better understand how to bring this process into your classrooms, and into your students’ thinking, on a typical day.

### Why We Need Concern Ourselves With Human Pathologies in Cultivating the Disciplined Mind... Linda Elder

*Cooperage Building Room 1*

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

In short, humans are naturally egocentric and sociocentric. At the same time, we are capable of developing as reasonable persons. But to do so requires commitment and some fundamental understandings about the pathological side of the human mind. In this session we will focus on some of these painful truths about the mind. We will explore egocentric and sociocentric thought as intrinsic mental phenomena that get in the way of cultivating the disciplined mind, and hence of the educational process. We will also briefly explore processes for overcoming these pathologies.



## Conference Focal Sessions (Thursday)

### Day Three: Thursday Afternoon (2:35 p.m. - 4:30 p.m.)

#### Teaching Students to Formulate and Reason Through Essential Questions in Teaching and Learning... Gerald Nosich

*Cooperage Building Room 2*

It is not possible to be a good thinker and a poor questioner. Questions define tasks, express problems, and delineate issues. They drive thinking forward. Answers, on the other hand, often bring to thought to an end. Only when an answer generates further questions does thought continue as inquiry. A mind with no questions is a mind that is not intellectually alive. No questions (asked) equals no understanding (achieved). Superficial questions equal superficial understanding, unclear questions equal unclear understanding. If your mind is not actively generating questions, you are not engaged in substantive learning.



So the question is raised, “How can we teach so that students generate essential questions that lead to deep learning?” In this session we shall focus on practical strategies for generating questioning minds — at the same time, of course, that students learn the content that is at the heart of the curriculum.

#### Teaching Students to Study and Learn Using the Principles of Critical Thinking... Carmen Polka

*Cooperage Building Room 3*

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

1. raise vital questions and problems within it, formulating them clearly and precisely.
2. gather and assess information, using ideas to interpret that information insightfully.
3. come to well-reasoned conclusions and solutions, testing them against relevant criteria and standards.
4. adopt the point of view of the discipline, recognizing and assessing, as need be, its assumptions, implications, and practical consequences.

## Conference Focal Sessions Continued (Thurs.)

5. communicate effectively with others using the language of the discipline and that of educated public discourse.
6. relate what one is learning in the subject to other subjects and to what is significant in human life.

To become a skilled learner is to become a self-directed, self-disciplined, self-monitored, and self-corrective thinker who has given assent to rigorous standards of thought and mindful command of their use. Skilled learning of a discipline requires that one respect the power of it, as well as its, and one's own, historical and human limitations. This session will offer strategies for helping students begin to take learning seriously.

This session focuses on a number of instructional ideas that are based in the insight that substantive teaching and learning can occur only when students take ownership of the most basic principles and concepts of the subject. These strategies are rooted in a vision of instruction implied by critical thinking and an analysis of the weaknesses typically found in most traditional didactic lecture/quiz/test formats of instruction. This session, then, focuses on some basic instructional strategies that foster the development of student thinking, and on strategies that require students to think actively within the concepts and principles of the subject.

### **Teaching Students to Internalize and Think Within the Ideas of the Deepest Thinkers: Reaching Back Through History to Classic Works... Linda Elder**

*Cooperage Building Room 1*

One way of deepening our understanding of critical thinking and its role in history is to routinely and systematically interrelate explicit critical thinking concepts and principles with transformative ideas developed by deep thinkers throughout history. Many students have no real understanding of the deepest ideas that have been thought, nor how to access these ideas. In this session, we will consider the works of some of the important thinkers throughout history and how these thoughts interrelate both with one another, and to the conceptual tools in critical thinking. We will employ critical reading as we explore original texts, focusing on the conceptual work of thinkers such as Socrates, Epictetus, Voltaire, John Henry Newman, Jane Austen, Charles Dickens, Eric Fromm, and Albert Ellis.

## Conference Focal Sessions (Friday)

### Day Four: Friday Morning (9:00 a.m. - 11:00 a.m.)

#### For Administrators: Placing Critical Thinking at the Heart of the Institution's Mission... Brian Barnes

*Bennet Valley*

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





## Conference Focal Sessions Continued (Fri.)

### Teaching Students to Think Conceptually, and to Take Command of the Concepts that Guide Their Lives... Linda Elder

#### *Ballroom D*

Ideas are to us like the air we breathe. We project them everywhere. Yet we rarely notice this. We use ideas to create our way of seeing things. What we experience we experience through ideas, often funneled into the categories of “good” and “evil.” We assume ourselves to be good. We assume our enemies to be evil. We select positive terms to cover up the indefensible things we do. We select negative terms to condemn even the good things our enemies do.

We conceptualize things personally by means of experience unique to ourselves (often distorting the world to our advantage). We conceptualize things socially as a result of indoctrination or social conditioning (our allegiances presented, of course, in positive terms).

If we want students to develop as a critical thinkers, they must come to recognize the ideas through which they see and experience the world. They must take explicit command of their concepts. They must become the master of their own ideas. They must learn how to think with alternative ideas, alternative “world views.”

Failure to command important distinctions can significantly influence the way we shape our experience. If, for example, we confuse ethics with arbitrary social conventions or religion or national law, we have no basis for understanding the true basis of universality in ethics: awareness of what does harm or good to humans and other sentient creatures.

When students take command of their concepts, they go beneath the surface of ideas. They strive for ideas to broaden and empower them as free individuals and liberally minded persons. In this session we will come to better understand the role of concepts in human thought, and explore methods for helping students take command of the concepts that guide their lives. We will focus on core concepts in your subjects and disciplines which contribute to self command and intellectual disciplined.

## Conference Focal Sessions Continued (Fri.)

### Socratic Dialogue as Primary Tool for Cultivating Critical Thinking in Instruction...Gerald Nosich

#### *Ballroom B*

Socratic questioning is disciplined questioning that can be used to pursue thought in many directions and for many purposes, including exploring complex ideas, getting to the truth of things, opening up issues and problems, uncovering assumptions, analyzing concepts, distinguishing what we know from what we don't know, and following out logical implications of thought.

The key to distinguish Socratic questioning from questioning per se is that Socratic questioning is systematic, disciplined, and deep; it usually focuses on foundational concepts, principles, theories, issues, or problems.

Teachers, students, and indeed anyone interested in probing thinking at a deep level 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 students' depth of understanding, 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 come to use it in reasoning through complex issues, in understanding and assessing the thinking of others, and in following-out the implications of what they, and others, think.

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

This session will introduce the methodology of Socratic dialogue and its relationship with the language and tools of critical thinking. The session will be interactive as participants briefly practice Socratic questioning using the foundations of critical thinking.



Ralph Nader at the 34th International Conference

## Bertrand Russell Distinguished Scholars Program

*Cooperage Building Rooms 1 & 2*

Lecture by Russell Scholar Dr. Carol Tavris

Wednesday, July 27 9:00 a.m. - 10:00 a.m.

Process: Working Break

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

*Conversazione with Dr. Carol Tavris*

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 Dr. Carol Tavris. All conference participants are invited to participate in the Russell program.



Following the initial lecture, and to draw out the critical thinking implicit in the thinking of the Russell Scholar, the following design for the Working Break and *Conversazione* is used.



## The Bertrand Russell Scholars Program Continued

**Working Break** – Participants will break while working together in small groups to reason within some of the dimensions of Tavis’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. Tavis after the working break. Form groups of two to three and work wherever you can 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: Senior Fellows of the Foundation for Critical Thinking, Dr. Linda Elder and Dr. Gerald Nosich, will lead a Socratic dialogue with Dr. Tavis (approximately 30 minutes). This will be followed by 15 minutes of questions to Dr. Tavis by conference delegates and attendees. There will then be another 15 minutes of Socratic dialogue between the Fellows and Dr. Tavis.

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



## Roundtable Discussions

**Wednesday, July 27, 2016**

**1:15 p.m. – 2:30 p.m.**

**Ballrooms B, C, & D**

The Roundtable Discussions offer an opportunity for us to engage in lively informal dialogue about important topics in education and society. Each roundtable will begin with a brief (10-15 minute) introduction by the presenter. Join any discussion as you wish.

### Using Stakeholder Theory to Enhance Critical Thinking in Case Analysis

**Annette Nemetz**

**Associate Professor**

**Chair, Business and Economics Undergraduate Program**

**George Fox University**

Stakeholder theory contrasts with shareholder primacy theory in providing a model for managers and organizations to evaluate multiple forces and pressures for strategic decision-making. This model is particularly useful when evaluating international issues arising for multinational enterprises. Incorporating the stakeholder theory model into student exercises promotes critical thinking by asking students to carefully evaluate the relevant critical stakeholders and their respective positions in regard to the particular issue(s) raised in the case. Stakeholder positions are often competing and conflict-ridden, though some may also be collaborative in nature. Evaluating a strategic decision in light of all relevant stakeholder positions requires students to think critically during the analysis.

### Using the 'Claim, Evidence, Reasoning' Framework Supported by ICT to Develop Scientific Critical Thinking in Elementary Students

**Choon Boh Teo**

**Educational Technology Officer**

**Ministry of Education Singapore**

The Claim, Evidence, Reasoning (CER) framework can be used to develop critical thinking skills in science, and in particular, scientific reasoning and explanation skills. In a Singaporean primary school, the CER framework was put into practice for a unit of science lessons on the topic of plant systems. To capture the thinking of students and make it visible for feedback from the teacher and peers, ICT was seamlessly integrated in the scientific inquiry process. Students demonstrated abilities to explore scientific questions

## Roundtable Discussions Continued

underlying real-world issues derived further demonstrated abilities to apply scientific reasoning. They worked collaboratively online to write their own claims, and to identify and gather evidence to support their claims. They employed a variety of methods and resources, and created digital artifacts to support their conclusions as well as communicate and persuade others of their findings. Based on the evaluation of students' artifacts, there were positive indications that students were able to construct scientific explanations.



Elizabeth Loftus at the 34th International Conference

### Exploring Critical Thinking in Online Discussion

**Petrea Redmond**

**Senior Lecturer**

**University of Southern Queensland, Australia**

Discussion forums can be established and facilitated to provoke a variety of thinking and action from learners, ranging from social interactions to high levels of reflection and metacognition to achieve deep learning. They enable learners to make their thinking visible, similar to the 'thinking aloud' approach used by educators in the past. With the increased use of online discussions in different educational contexts, it is an opportune time to investigate the ways that different disciplines use and promote critical thinking within dynamic online-learning environments. Instructors should distinguish between critical and creative thinking and low-level thinking in surface comments and experiences shared online. This discussion will explore how different disciplines use online discussions as learning and thinking tools, and will suggest some implications for practice. In addition, participants will be encouraged to present their own experiences and observations of critical thinking within online discussions across disciplines.

## Roundtable Discussions Continued

### Strategies to Help Parents Foster Critical Thinking Skills at Home

**Lemi-Ola Erinkitola**

**Founder**

**The Critical Thinking Child, LLC**

The moment when young learners begin to ask “Why?” presents a unique opportunity for parents. While the question may seem tedious at times, it represents a child’s natural desire to understand their world. Parents simply need the tools to turn these questions into strategic learning opportunities. In this session, participants will explore and evaluate strategies designed to instill critical thinking skills at home through high-level, thoughtful questions. We will assess techniques that cultivate deeper thinking, help to better children’s understanding, and foster a lifelong desire to investigate and learn.

### Social Issues Session

**Rachael Collins**

**Scholar and Executive Assistant to the President**

**Foundation for Critical Thinking**

To what extent is it possible to realize and advance fairminded critical thinking, given today’s political climate? In the US and abroad, significant political forces impede the cultivation of substantive critical thinking, both in our schools and in society more generally. Yet there are people across the world who are arguing for, and even fighting for, critical thinking in education, in our social institutions, in the world of business, and in daily life. In this Roundtable session, conference delegates will discuss and debate the political forces that they perceive as either impeding critical thinking, or which serve to advance fairminded critical thinking. Those attending this session will be divided into groups of four to five for discussion. Near the end of the session, each group will briefly report their “answers.” At the beginning of the session, guidelines for critical discussion will be given to those participating by the session leader, Ms. Rachael Collins, a scholar of the Foundation for Critical Thinking.



## Concurrent Sessions Program

**Thursday, July 28, 2016**

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:

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 a.m.	Concurrent Sessions III
11:55 a.m. – 1:20 p.m.	Lunch
1:20 p.m. – 2:20 p.m.	Concurrent Sessions IV
2:20 p.m. – 2:35 p.m.	Break

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### Concurrent Sessions I

(8:30 a.m. – 9:30 a.m., Thursday)

#### The Weaving of Critical Thinking Teaching Methods Throughout a Healthcare Curriculum

**Pauletta Baughman**

Associate Clinical Professor

University of Louisville, School of Dentistry

*Cooperage Building Room 3*

As a Co-Course Director for a first- and fourth-year dental class, it has been my responsibility to explicitly incorporate critical thinking skills. A few examples from the first year include a reality-based/reality-simulated learning exercise and rubric-assessed written assignment to critically evaluate dental products using the Paul-Elder framework. Also, to deepen and document learning, written reflections and meta-reflection of clinical rotations are submitted utilizing the Elements and Standards. In addition, students are assessed by a rubric on the quality of their questions in Discussion Boards, again explicitly incorporating the Elements and Standards. As a high-stakes assessment of critical thinking in the fourth year, a Capstone project incorporates independently creating solutions and alternatives to complex, multi-layered problems. Critical thinking is not simply taught, it is interwoven throughout the curriculum in a culture of inquiry.

## Conference Concurrent Sessions Continued

### Teaching Critical Thinking to MBAs Online

**Eileen Z. Taylor**

Associate Professor of Accounting  
North Carolina State University

*Russian River*

In this session, I will share my approach to teaching MBAs critical thinking skills in an online setting. I will discuss the progressive assignments I use to help students analyze, evaluate, and justify their beliefs. I will also address syllabus and grading issues, and the unique challenges in teaching this course online. Participants will leave with time-tested assignments that they can apply this fall.

### Turning Critical Thinking Theory into Practice: The Experience of Saint Margaret's Secondary School

**Siong Boon Lee**

Acting Subject Head, Curriculum Innovation & Research

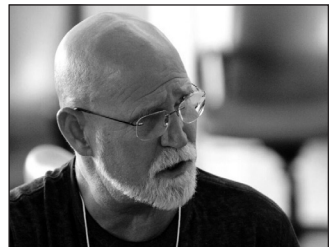
Saint Margaret's Secondary School, Singapore

**Nur Filzah Zainal Abidin**

Teacher

Saint Margaret's Secondary School, Singapore

*Bennet Valley*



This session presents the experience of St Margaret's Secondary School in applying the Paulian model of critical thinking to curriculum design across a range of subjects. These subjects include the humanities, English Language, Chinese Language, mathematics, science, and project work. The school adopts a dual approach in the use and application of the Paul-Elder model of critical thinking. Besides being explicitly taught in different subject areas, the Elements of Thought are also used in an implicit manner to help teachers design lessons that reveal the inter-relationships between these Elements. At St Margaret's, the Elements of Reasoning wheel is not just a pedagogical instrument; it is part of our curriculum design framework.

## Conference Concurrent Sessions Continued

### Suggested Strategies to Guide Students in Meeting the Goal of Critical Thinking Within the Social Science Course

**Mel Manson**

Professor of Sociology and Psychology  
Endicott College

*Cooperage Building Room 1*

Students learn best in an environment where classroom instructional pedagogy guides them to better ways of thinking and reasoning. As faculty, we are responsible for designing courses that motivate and engage students in thinking and questioning within the logic of our disciplines. Creation of knowledge within the social sciences is based on questions formed by the scientific-research method model. By using the Elements of Reasoning and the Intellectual Standards, an instructor is able to prepare meaningful class content and assignments that allow students to develop and use these thinking abilities so that close reading, substantive writing, and a questioning mind become routine behaviors – both in and out of the classroom. Practical examples of such teaching strategies and assignments will be introduced in this session, in such a way as to allow Concurrent Session participants to discuss how to incorporate some of these, or other, ideas in new class assignments and strategies that will help guide students in the ways of critical thinking.



## Conference Concurrent Sessions Continued

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### Concurrent Sessions II

(9:40 a.m. – 10:40 a.m., Thursday)

#### Critical Thinking in Syllabus Design

**Mark Berg**

Associate Professor of Psychology  
Stockton College

*Cooperage Building Room 2*

The Stockton Critical Thinking Institute has been running for three consecutive years with great success. Each year the institute works with twelve Stockton University faculty members from various disciplines to integrate explicit critical thinking pedagogy into their classrooms. One of the most important aspects of this integration is development of a syllabus that clearly reflects the fundamental and powerful concepts for the course. Such a syllabus sets the foundation for focusing on concepts, rather than content, throughout a semester. This session will demonstrate how example syllabi from various disciplines such as Psychology and Sculpture were built, and will explain how they were implemented with students. This session will give practical instruction for building your own syllabus.

#### Critical Thinking in Upper-Division, Discipline-Specific Courses Through Team-Based Learning and Writing

**Tina Zappile**

Assistant Professor of Political Science  
Stockton College

*Bennet Valley*

This session is a workshop in applying the Foundation for Critical Thinking's emphasis on disciplinary logic, fairminded critical thinking, Socratic questioning, and Intellectual Standards in a writing-intensive Team-Based Learning undergraduate course. Using course materials, I will share strategies on how this course design can achieve goals of improving fairminded critical thinking, effectively evaluating arguments, and developing original arguments, among others. Specifically, I will provide the structure of a critical thinking-based TBL course design with examples of team worksheets, writing prompts and samples of student work, and reading questions and quizzes. Formal student evaluation scores and informal feedback indicate that this approach is successful.

## Conference Concurrent Sessions Continued

### Experimentation on Fostering Critical Thinking in STEM Education

**Kwok-Bun Yue**

Professor of Computer Science  
University of Houston-Clear Lake

**Wei Wei**

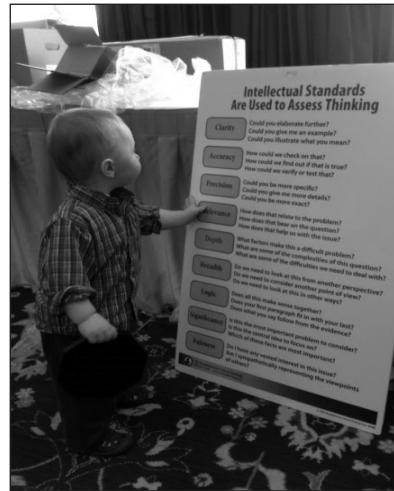
Professor of Computer Science  
University of Houston-Clear Lake

*Cooperage Building Room 3*

For accreditation purposes, the University of Houston-Clear Lake adopted a Quality Enhancement Plan (QEP) entitled “Applied Critical Thinking (ACT) for Lifelong Learning and Adaptability” in 2012. To foster critical thinking (CT) in individual courses, the QEP established a formal process for endorsing ACT syllabi.

This process is based on incorporating selected critical thinking elements into the student learning outcomes (SLOs), identifying CT-enhancing activities, and setting up CT assessment plans according to a common evaluation guideline. The School of Science and Engineering currently has eighteen approved ACT courses encompassing ten majors. Based on our experience and experimentation on ACT courses in computer science and computer information systems, we elaborate how the CT framework of the Foundation of Critical Thinking (FCT) was used to pillar our incorporation of ACT.

Concrete examples will show how the FCT’s Elements of Thought, Intellectual Standards, and theories and techniques (such as ‘Fundamental and Powerful Concept’ and ‘State, Elaborate, Exemplify – Illustrate’) were imbibed into SLOs, lectures, classroom activities, assignments, and assessments in our courses. Results of accompanying surveys will be shared with a discussion of lessons learnt from our experimentation. It will include a special focus on the concept map, a visual and versatile knowledge-representation tool that we used in many ACT activities.



## Conference Concurrent Sessions Continued

### Improving Student Critical Thinking Through Direct Instruction in Rhetorical Analysis

**Lauren McGuire**

Professor of English

Victor Valley Community College

*Dry Creek*

It is vitally important for educators to challenge students to consider new perspectives on topics they may feel they already understand, and to provide practice for analyzing the sorts of arguments they will be assigned in their various courses. Implementing Paul and Elder's 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 within the rhetoric 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 instruction which integrates direct instruction in rhetorical analysis. Emphasis will be placed on incorporating Paul and Elder's Intellectual Standards and the 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

### Critical Thinking in the Collaborative Classroom: Infusing Core Critical Thinking Concepts and Skills into Standards-Based Collaborative Learning and Constructivist Activities

**Jenna Kamp**

Teacher

English Department Chair

University Prep Value High School

*Russian River*

In this engaged lecture presentation, I will demonstrate to middle and high school teachers some strategies and tools designed to develop students' learning of essential



21st century skills—the “4 Cs” of Collaboration, Communication, Critical Thinking, and Creative Thinking—that will help students achieve success into, throughout, and beyond university academics. Session participants will learn the fundamentals of effective classroom collaboration and its management, and will learn how the Common Core Listening and Speaking standards develop and support such collaboration. More importantly, however, session participants will learn how to infuse the fundamentals of critical thinking as developed by the Foundation for Critical Thinking into collaborative activities that foster academic discussion and thoughtfulness. The combination of critical thinking language and practices married to a successful collaborative structure can provide students with active applications of both, encouraging deeper learning and critical classroom discussions. I will incorporate evidence of student collaborative teams working on standards-based curricular activities that develop and demonstrate effective critical thinking concepts, terms, and skills; and, through a PowerPoint presentation, handouts, and some activities, I will provide participants with the documents, procedures, and practice necessary for immediate application into the classroom.

## Conference Concurrent Sessions Continued

### Proposing a Design for Teaching Critical Thinking

**Mohammad B. Bagheri**

University Lecturer

Islamic Azad University, Science and Research Branch, Iran

**Shiva Hadadianpour**

Gynecologist

Shahid Beheshti University, Iran

*Cooperage Building Room 1*

The curriculum question of how critical thinking should be taught has always been a major issue in critical thinking circles. Lack of consensus among scholars on how it should be incorporated into a total curriculum has made this issue a debatable topic. In the first part of this session, four possible approaches to teaching critical thinking across curriculum - namely General, Infusion, Immersion, and Mixed Model - will be briefly discussed, and the efforts made by different critical thinking scholars in material development will be reviewed. Then, a new design for material development and teaching of critical thinking at the university level will be proposed. Having about two decades of teaching experience in the field of foreign language instruction has encouraged Dr. Bagheri to propose a mixed model of critical thinking instruction in which he draws heavily on Second Language Instruction principles. The participants will be provided with a handout containing 40 critical thinking strategies, drawing heavily from the Paul-Elder model, which can be used in the classroom.





## Conference Concurrent Sessions Continued

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### Concurrent Sessions III

(10:55 a.m. – 11:55 a.m., Thursday)

#### Why Explicit Discussion of Intellectual Standards is Essential in the Classroom from a Student's Perspective

**Rachael Collins**

Scholar and Executive Assistant to the President  
Foundation for Critical Thinking

*Cooperage Building Room 1*

My purpose in this session is to explore, from a student perspective, the extent to which different faculty use different standards when grading student papers, and how inadequately expressing the standards they adhere to is a hindrance to students' growth as well as to the teaching and learning process.

I will engage participants in a grading activity to exemplify this problem. I will then share some of my experiences in English writing classes, and share some examples of both student and faculty edits which clearly demonstrate the extent to which students and faculty tend to adhere to Intellectual Standards when assessing written work.



## Conference Concurrent Sessions Continued

### Teaching Scientific Thinking

**Fran Johnson**

Phillips Exeter Academy

Science Instructor

*Russian River*

What is Scientific Thinking, and why do we all need it? Many a student graduates from high school with the hazy notion that Scientific Thinking has something to do with hypotheses. It is not just about hypotheses, for all hypotheses (inferences) are not equally valid. We all need to be able to evaluate inferences; for example, the idea that human activity will cause a rise in sea level, or that certain city policies will have a predicted effect on crime. Ideas are likely to be true not based on what political party we belong to (sociocentric thinking) or whether we want to believe them (wishful thinking), but whether they are supported by evidence. This is the heart of Scientific Thinking: evaluating inferences based on evidence. In this session I will discuss activities I use in regular high school science classes, built on the Paul-Elder critical thinking model, that focus on evaluating hypotheses. These include alterations to labs that invite, nay, challenge students to compare competing hypotheses.

### Critical Thinking Within the Discipline of Information Literacy

**Cindy M. Campbell**

Faculty Librarian

Florida SouthWestern State College

*Dry Creek*

Information literacy requires students to recognize when they need information, where to find information, and how to evaluate that information. Information literacy skills will enable students to do credible and reliable research.

Critical thinking is the art of analyzing and evaluating thinking to improve it. Information literacy will help a student to evaluate the information they find, and to use it to improve their understanding of the topic. Applying the Elements of Thought and Intellectual Standards to the concepts of information literacy will teach students the value of both sets of Paulian concepts and how they work together. Students will learn how to combine critical thinking and information literacy skills to enhance their understanding and value of these two vital skill sets within their research activities.

## Conference Concurrent Sessions Continued

### Integrating Critical Thinking into a Writing in the Major Program

**Shirley F. Manigault**

Professor of English  
Winston-Salem State University

**Pamela Simmons**

Associate Professor of English  
Winston-Salem State University

**Jill Keith**

Professor of Biology  
Winston-Salem State University

**Morris Clarke**

Professor of Biology  
Winston-Salem State University

*Cooperage Building Room 3*

Winston-Salem State University has implemented a program in Writing in the Major (WIM) as part its Quality Enhancement Project (QEP) for SACSCOC accreditation. The WIM Program is based in writing research and theory which acknowledges the relationship between deep thinking and deep writing (Lavelle and Guarino 2003). This session will focus on faculty efforts to integrate critical thinking formally into the program via WIM courses. Some faculty members have a history of integrating critical thinking into their courses; others are relatively new at it, having been inspired by the recent workshop on thinking and writing in the majors led by Dr. Gerald Nosich, Senior Fellow at the Foundation for Critical Thinking. Faculty from programs in English and Biology will present strategies employed in their courses and share results (impact on student learning outcomes) with session attendees.



## Conference Concurrent Sessions Continued

### Fostering Dialectical Thinking Outside the Classroom Walls

#### **Bonnie Zare**

Professor of Gender and Women's Studies  
University of Wyoming

#### **Tracey Owens Patton**

Director of African American & Diaspora Studies  
Professor of Communication & Journalism  
University of Wyoming

#### **Sagan Hunsaker**

Coordinator of Alternative Breaks and Volunteer Programs  
University of Wyoming

#### **Chicory Bechtel**

Graduate Student in Educational Administration  
Adult and Postsecondary Education  
University of Wyoming

#### *Bennet Valley*

While textbooks and lectures have their place in the University and always will, students often achieve exponential growth through experience-based learning guided by a mentor outside the classroom walls. Our first two speakers, Bonnie Zare and Tracey Owens Patton, will evaluate how their overseas courses (in Hyderabad, India and in London,



England respectively) promote a number of critical skills, including awareness and acceptance of the limits of one's knowledge and the benefit of making the familiar strange. Our third speaker, Sagan Hunsaker, will describe how students in alternative break programs explore pressing social issues and foster civic engagement through co-curricular experiences. Chicory Bechtel will conclude with a discussion of how co-curricular diversity programming can challenge sociocentric thinking. All presentations will emphasize the value of dialectical thinking to avoid contributing to a hegemonic and conformist model of the world; we will also discuss the importance of kinaesthetic learning and of learning to recognize classist, racist, and Orientalist beliefs.

## Conference Concurrent Sessions Continued

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### Concurrent Sessions IV

(1:20 p.m. – 2:20 p.m., Thursday)

#### Fuel the Flame of Critical Thinking

**Barbara J. Rodriguez**

District Director, QEP

Broward College

**Ana Cowo**

Professor of English

Broward College

*Cooperage Building Room 3*

Through examples and hands-on activities, this session discusses Broward College's conceptual framework to enhance students' critical thinking skills using the Paul-Elder model of critical thinking. The framework includes professional development, teaching and learning strategies, and outcomes-based assessment.

For the last three years, Broward College has focused on critical thinking as an essential skill for students to cultivate. As a result, faculty from various disciplines focus on the Elements of Thought and Intellectual Standards, which has resulted in data that indicates the improvement of students' critical thinking skills. By attending this session, participants will gain strategies that will help them 'fuel the flame' of critical thinking in the classroom.



## Conference Concurrent Sessions Continued

### Cultivating Moral Integrity in the Sciences Through Cross-Cultural Engagement

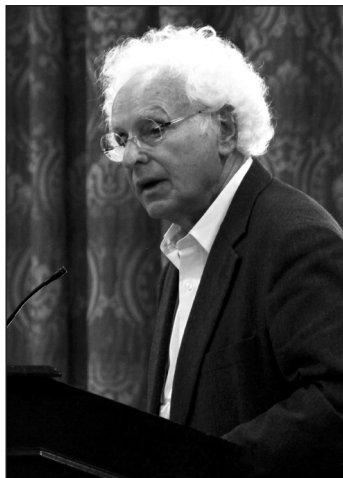
**Craig A. Hassel**

Associate Professor and Extension Specialist, Food and Nutrition  
University of Minnesota

#### *Russian River*

This session will demonstrate how Paulian concepts of moral integrity, Strong-Sense critical thinking, and Intellectual (epistemological) Virtues can be developed through the practice of cross-cultural engagement (CCE). CCE is the craft of bringing together and critically engaging communities that hold culturally different understandings of food and health. Its practice creates the 'intellectual space' to acknowledge and empathically consider culturally different perspectives, practices, knowledge, and understandings.

A long-standing case involving University of Minnesota agricultural research, Anishinaabe Tribal communities, and their contrasting views of how wild rice (manoomin) should be harvested, respected, and otherwise treated will highlight this session. The case illustrates a collision of worldviews and highlights distinctions in 'Weak-Sense' and 'Strong-Sense' critical thinking as delineated by Richard Paul. Participants in this session will have the opportunity to review the perspective(s) of a tribal community leader and/or a university agricultural scientist. Participants will empathically and dialectically reason within colliding perspectives by exercising the developmental skill of cognitive frameshifting, a practice of temporarily stepping outside of habitual thought patterns and into unfamiliar frameworks of background assumptions. We will de-brief the case with explicit attention to Paulian Intellectual Virtues and concepts of moral integrity.



Jerry Mander at the 34th International Conference

## Conference Concurrent Sessions Continued

### Assessing Critical Thinking Through the Framework of ‘Think Aloud’

**Jeremy R. Dicus**

Assistant Professor

Slippery Rock University

*Cooperage Building Room 1*

The assessment of critical thinking is often difficult to quantify, but institutions are tasked with providing evidence of critical thinking outcomes. ‘Think Aloud’ is a strategy that has been widely used to model thinking and/or assess one’s ability to think through a task. While this strategy has often been focused on the end result or answer, Think Aloud can provide educators a tool for intentionally examining the thought process. In this session, participants will be introduced to the Think Aloud process and how it might be used to assess someone’s ability to think critically as identified in the Paul-Elder Approach.



## Conference Concurrent Sessions Continued

### Designing Learning Environments for Critical Thinking: A Perspective from Instructional Design

**Dawit T. Tiruneh**

Research Assistant, Centre for Instructional Psychology & Technology  
University of Leuven, Belgium

*Bennet Valley*

The issue of embedding critical thinking (CT) skills within specific subject-matter domains has aroused considerable controversy over the past three decades. Some argue that well-designed subject-matter instruction by itself is sufficient to promote the development of relevant CT skills, and can equip students to competently perform CT tasks across domains (Immersion approach). Others contend that explicit emphasis on general principles of CT within specific subject-matter instruction is essential for effective acquisition of transferrable CT skills across domains (Infusion approach). These debates have been conducted mostly without reference to instructional design research.

By all appearances, the systematic design of learning environments that apply empirically valid instructional principles to foster CT skills within specific subject-matter instruction has not been sufficiently explored. In this session – which I designed with University of Leuven colleagues Jan Elen and Mieke de Cock – we will report our practices of designing, implementing, and evaluating subject-matter instruction – more exactly, in the domain of physics – based on Immersion-and-Infusion CT instructional approaches. We will particularly share the main findings of two empirical studies conducted in ecologically valid



instructional settings, and will reflect on how systematic design of learning environments may stimulate the acquisition of domain-specific and domain-general CT skills.



## Concurrent Sessions and Roundtable Discussions

### Presenter Information

**Nur Filzah Zainal Abidin**

Teacher  
Saint Margaret's Secondary School,  
Singapore

**Mohammad B. Bagheri**

University Lecturer  
Islamic Azad University, Science  
and Research Branch, Iran

**Pauletta Baughman**

Associate Clinical Professor  
University of Louisville, School of  
Dentistry

**Chicory Bechtel**

Graduate Student in Educational  
Administration  
Adult and Postsecondary Education  
University of Wyoming

**Mark Berg**

Associate Professor of Psychology  
Stockton College

**Cindy M. Campbell**

Faculty Librarian  
Florida SouthWestern State College

**Morris Clarke**

Professor of Biology  
Winston-Salem State University

**Rachael Collins**

Scholar and Executive Assistant to  
the President  
Foundation for Critical Thinking

**Ana Cowo**

Professor of English  
Broward College

**Jeremy R. Dicus**

Assistant Professor  
Slippery Rock University

**Lemi-Ola Erinkitola**

Founder  
The Critical Thinking Child, LLC

**Shiva Hadadianpour**

Gynecologist  
Shahid Beheshti University, Iran

**Craig A. Hassel**

Associate Professor and Extension  
Specialist, Food and Nutrition  
University of Minnesota

**Sagan Hunsaker**

Coordinator of Alternative Breaks  
and Volunteer Programs  
University of Wyoming

**Fran Johnson**

Phillips Exeter Academy  
Science Instructor

**Jenna Kamp**

Teacher  
English Department Chair  
University Prep Value High School



## Concurrent Sessions and Roundtable Discussions

### Presenter Information, continued

**Jill Keith**

Professor of Biology  
Winston-Salem State University

**Siong Boon Lee**

Acting Subject Head, Curriculum  
Innovation & Research  
Saint Margaret's Secondary School,  
Singapore

**Shirley F. Manigault**

Professor of English  
Winston-Salem State University

**Mel Manson**

Professor of Sociology and  
Psychology  
Endicott College

**Lauren McGuire**

Professor of English  
Victor Valley Community College

**Annette Nemetz**

Associate Professor  
Chair, Business and Economics  
Undergraduate Program  
George Fox University

**Tracey Owens Patton**

Director of African American &  
Diaspora Studies  
Professor of Communication &  
Journalism  
University of Wyoming

**Petrea Redmond**

Senior Lecturer  
University of Southern Queensland,  
Australia

**Barbara J. Rodriguez**

District Director, QEP  
Broward College

**Pamela Simmons**

Associate Professor of English  
Winston-Salem State University

**Eileen Z. Taylor**

Associate Professor of Accounting  
North Carolina State University

**Choon Boh Teo**

Educational Technology Officer  
Ministry of Education, Singapore

**Dawit T. Tiruneh**

Research Assistant, Centre for  
Instructional Psychology &  
Technology  
University of Leuven, Belgium

**Wei Wei**

Assistant Professor of Computer  
Information Systems  
University of Houston-Clear Lake

**Kwok-Bun Yue**

Professor of Computer Science  
University of Houston-Clear Lake

**Tina Zappile**

Assistant Professor of Political  
Science  
Stockton College

**Bonnie Zare**

Professor of Gender and Women's  
Studies  
University of Wyoming

## Evening Social

Join us for an evening of music, conviviality and dancing

Thursday, July 28, 2016

7:00 p.m. – 10:00 p.m.

Lobo's

If we respected only what is inevitable and has a right to be,  
music and poetry would resound along the streets.

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

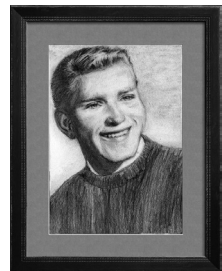
People often have the misconception that critical thinking is dull and boring. Nothing could be more untrue. Those who think critically in the highest sense are not only creative, but also spontaneous and unique. They share a zest for life and seek self-realization or self-actualization through living 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.

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.

Schedule:

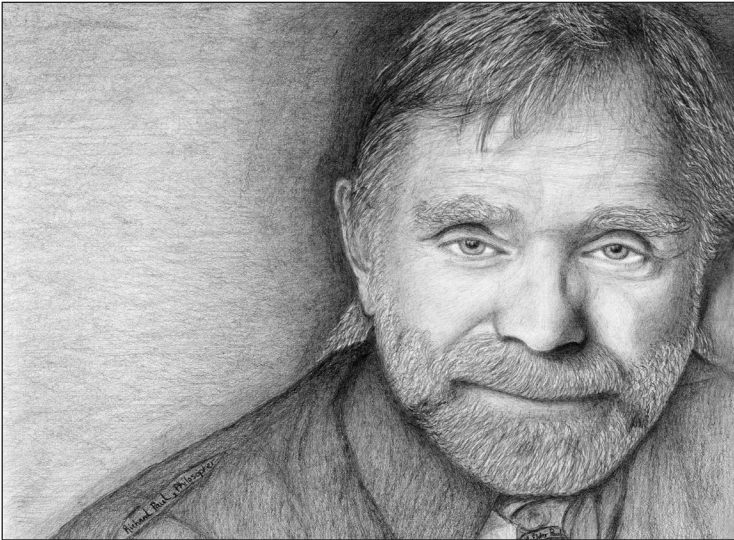
7:00 – 7:45 p.m. – **Art Exhibit and Refreshments**

View the *Linda Elder Art Gallery*. Dr. Elder will exhibit some of her artwork, including a series of drawings of her late husband, Dr. Richard Paul. Dr. Elder will be available to discuss 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.



## Evening Social, cont.

- 7:45 – 8:30 p.m. – **Beginner’s Lesson in partner dancing**, with a Tango emphasis – by Stephen Rose (for everyone new to partner dancing)
- 8:30 – 10:00 p.m. – **Dancing to Argentine Tango and contemporary music.**



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The drawings on this and the previous page were rendered by Linda Elder using graphite on acid-free paper. The drawing on page 81 was taken from a photograph dated 1957. The drawing on page 82 was taken from a photograph dated 1997.

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

During the past 36 years, 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](mailto: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](mailto: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](mailto:jdulan@oakwood.edu)  
Oakwood University, 256 726 7000, [www.Oakwood.edu](http://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](mailto: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](http://www.angelina.edu/QEP/institutional_effectiveness.html)

For more information about the program, please contact:

Monica Y. Peters, Ph.D.

Coordinator of Institutional Effectiveness and QEP

Angelina College

Lufkin, TX

(936) 633-5250

[mpeters@angelina.edu](mailto: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](mailto:jgood@beaconcollege.edu)

Please see this link for additional information:

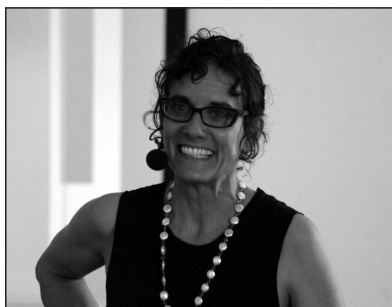
<http://www.beaconcollege.edu/qualityenhancementplan.asp>

## 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 during the breaks, and water will be provided all day in the Sonoma Valley room on the second floor of the Student Center. 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 at 1:00 p.m. on Friday.
11. **DO NOT CHANGE SLEEPING ROOMS!** Your room key is specifically for the room you have been assigned as well as the entrance to the suite. If you have any issues with your assigned lodging, please see Rachael Collins.

11. **Meal information (please read):** The cafeteria is called “The Kitchens” and is “all you care to eat.” It is located on the first floor of the Student Center. Since the campus has multiple events at the same time, each event is assigned a line time for its attendees meals. Our line times are as follows: 7:00-7:30 a.m. for breakfast, 11:45 a.m.-12:00 p.m. for lunch and 6:00 p.m.-6:30 p.m. for dinner. Please arrive during these assigned times to ensure there is enough space and that the food is fresh. These are line times, meaning you need to enter the dining hall during the assigned times. Once in, you can take as long as needed to eat. If you arrive outside of the line time, admission is at the discretion of the attendant on duty. The Kitchens is set up like a food court with several stations offering different items to suit a variety of dietary needs and preferences. Vegetarian and vegan options are easy to provide, and we source as many items from local farms and businesses as possible.
12. **Shampoo and conditioner will not be provided.** Please plan to bring these items with you. There are toiletries available to purchase at the campus bookstore, and there is a 7-Eleven within walking distance. (Soap is provided.)



## 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 Sonoma Valley room.

### How do the concurrent sessions work?

All concurrent sessions will be held on Thursday. 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. There is a general professional development proposal included in your registration packet. 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 [collins@criticalthinking.org](mailto:collins@criticalthinking.org)

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

We have a new certification program that is available. There is information provided in your registration packet. If you have questions you can visit the information desk in the Sonoma Valley room or email [cct@criticalthinking.org](mailto: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/](http://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](http://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](http://www.seagifts.com)



This Persian rug was commissioned by Mohammad B. Bagheri in honor of our founder Richard Paul as a memorial gift to the Foundation for Critical Thinking.

## 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](http://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](http://criticalthinking.org) to learn about our publications, videos, workshops, conferences, and professional development programs.

### Contact the Fellows:

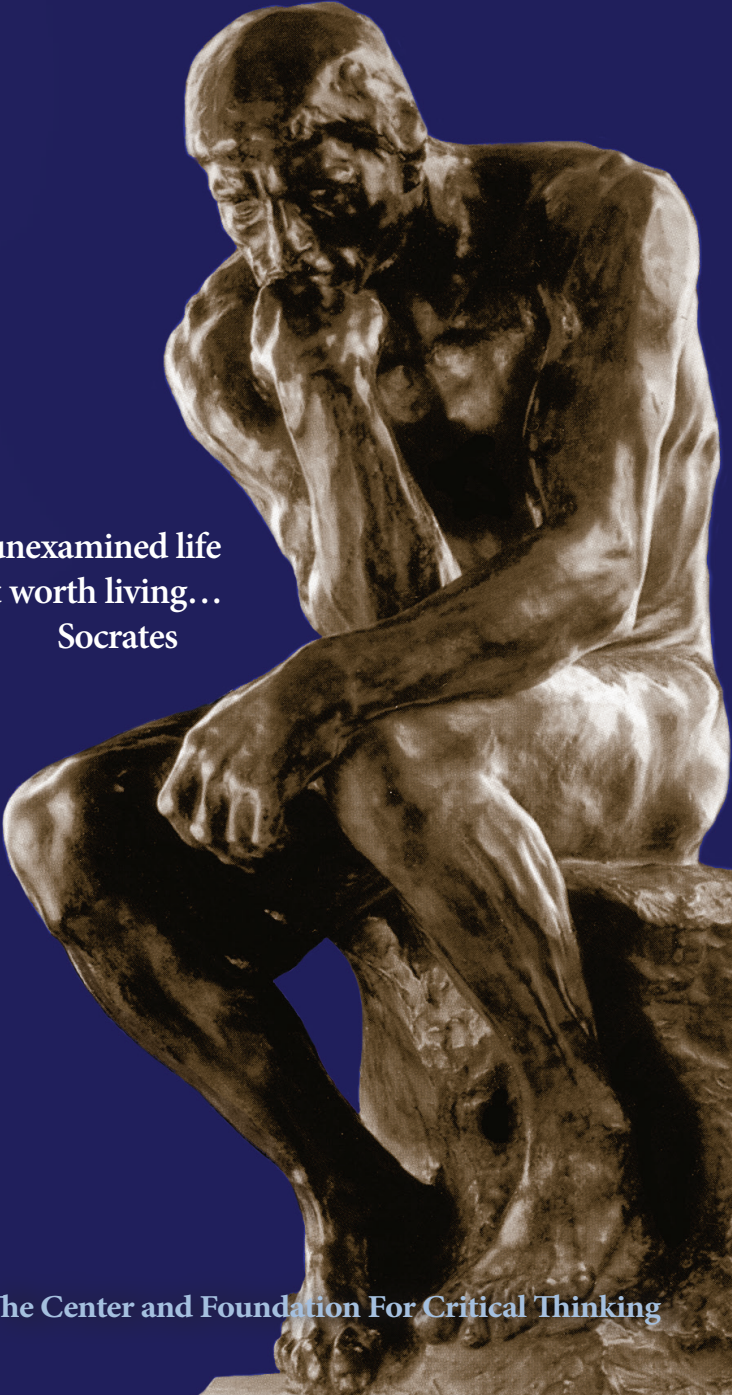
Linda Elder    elder@criticalthinking.org  
 Gerald Nosich    nosich@criticalthinking.org

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Editor: Linda Elder  
 Graphic Design: Kathy Abney  
 Concurrent Sessions Program: Rachael Collins and  
 Jon Kalagorgevich  
 Proofreading/Editing: Jon Kalagorgevich  
 Printing Oversight: Rachael Collins

### Contact us:

Phone    707-878-9100  
 Fax    707-878-9111  
 Toll free    800-833-3645  
 E-mail    cct@criticalthinking.org  
 Web site    www.criticalthinking.org  
 Mail    Foundation for Critical Thinking  
           P.O. Box 196  
           Tomales, CA 94971



The unexamined life  
is not worth living...  
Socrates



The Center and Foundation For Critical Thinking