The 13th Annual International Conference On Critical Thinking And Educational Reform

The Center for Critical Thinking and Moral Critique
Sonoma State University
PROCEEDINGS OF
THE
THIRTEENTH ANNUAL
INTERNATIONAL CONFERENCE
ON
CRITICAL THINKING AND
EDUCATIONAL REFORM

Critical Thinking:
A Global Economic Imperative

AUGUST 1–4, 1993

UNDER THE AUSPICES OF THE
Center for Critical Thinking and Moral Critique
SONOMA STATE UNIVERSITY
(707) 664-2940
The proceedings of the 13th International Conference on Critical Thinking are dedicated to the memory of the late Edward M. Glaser whose commitment to critical thinking was lifelong and whose contribution was seminal and far-reaching.

### TABLE OF CONTENTS

#### INTRODUCTION
- About the Center for Critical Thinking ........................................... 1
- Staff Development........................................................................... 9
- Conference History ......................................................................... 15
- Conference Theme .......................................................................... 19
- Pseudo Critical Thinking ................................................................. 25

#### CONFERENCE SCHEDULING
- How to Find the Session You Want to Attend ................................. 29
  - Audience Codes and Campus Map .................................................. 31
  - Planning Guide ............................................................................. 32
- Conference Schedule ....................................................................... 35
  - Special Interest Groups ................................................................. 58
  - Selected Sessions (Listed by Audience Code) ................................. 61

#### CONFERENCE ABSTRACTS
- Session Abstracts ........................................................................... 79
- Presenter's Addresses ...................................................................... 187

#### NCECT
- National Council for Excellence in Critical Thinking ....................... 202
ABOUT THE CENTER FOR CRITICAL THINKING:

The Center conducts advanced research and disseminates information on critical thinking and moral critique. It has been working closely with the Foundation for Critical Thinking, the California State Department of Education, the College Board, the Association for Supervision and Curriculum Development, the National Education Association, the U.S. Department of Education, and numerous school districts to facilitate implementation of high standards of critical thinking instruction from kindergarten through college. Its major works include the International Conference on Critical Thinking and the Staff Development Series.

ABOUT THE FOUNDATION FOR CRITICAL THINKING:

The Foundation for Critical Thinking is a nonprofit public benefit corporation, legally independent from Sonoma State University. It works cooperatively with the Center for Critical Thinking and Moral Critique, PBS Adult Learning Satellite Service, the College Board, and other research centers, institutes, and public institutions to publish and disseminate a variety of critical thinking resources.
ABOUT THE CENTER

About the National Council for Excellence in Critical Thinking:

The goal of the NCECT is to become an independent, nonprofit, professional organization parallel to the National Council of Teachers of Math, English, ... and domain specific associations such as the American Psychological Association, and the American Philosophical Association. At present, the NCECT is legally and financially a part of the Foundation for Critical Thinking and shall remain so until it is able to function independently.

Philosophy

Critical thinking holds the potential for helping students learn how to learn, with discipline and depth, in any subject they choose to study. It offers the thinker the opportunity to develop well-grounded self-confidence in his or her ability to come to a well-reasoned idea on any issue or topic. It provides the developmental foundation for good judgment, a quality highly prized by all.

The Center for Critical Thinking and Moral Critique is based on the singular goal of helping critical thinking reach its potential. The objectives of our research, our teaching, our writing, and our critique is to reach out to students, to teachers, to administrators, to parents, and to business people who are all striving to develop well-reasoned ideas, and to develop people of good judgment.

Principles

• Every person is capable of improving his or her thinking.
• We learn what to think only as we learn how to think.
• Critical thinking always involves the thinker’s continuous self-assessment of the thinking as the thinking develops.
• We will gain significant knowledge only if we value gaining it.
• To be educated means to predictably come to well-reasoned ideas, beliefs, and decisions.
• Speedy and shallow coverage, which is the survey approach to education, often produces mislearning which retards deeper understanding and tends to breed intellectual arrogance.

About the Center

The staff at the Center and the Foundation for Critical Thinking, committed to the furthering of critical thinking, welcomes inquiries via phone, fax, or E-mail. We will do our best to answer your questions or direct you to other sources, when appropriate. Inquiries regarding the conference, staff development services, and academic credit should be directed to the Center. Questions regarding Regional Workshops and critical thinking books and tapes should be directed to the Foundation. Below is a list of organizational and project managers. These individuals and their staff welcome your communications.

Center for Critical Thinking
Sonoma State University
Rohnert Park, CA 94928
phone: (707) 664-2940
fax: (707) 664-4101

Foundation for Critical Thinking
4655 Sonoma Mountain Road
Santa Rosa, CA 95404
phone: (707) 546-4926
fax: (707) 546-4718

Please Call ...

The Center for Critical Thinking and Moral Critique is based on the singular goal of helping critical thinking reach its potential. The objectives of our research, our teaching, our writing, and our critique is to reach out to students, to teachers, to administrators, to parents, and to business people who are all striving to develop well-reasoned ideas, and to develop people of good judgment.

Trish Taylor
Director of Operations
Renee Denise
Coordinator, Center for Critical Thinking
John Pruess
Coordinator, Foundation for Critical Thinking
Kelly Grogan
Assistant Inservice Coordinator
J. J. Jones
Conference Presenter Representative
Annalise O’Brien
Conference Registration Coordinator
David Grady
Assistant Conference Coordinator
Charles Evans
Foundation Shipping Manager
Emiko Lewis
Resource Order Coordinator
Mike Lanham
Accountant
Rena Ferric
Workshop Registration Coordinator
### What is Critical Thinking?

<table>
<thead>
<tr>
<th>A Unique Kind of Purposeful Thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>In any subject area or topic, whether academic or practical, requiring intellectual fitness training for the mind and physical fitness training for the body</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>In Which the Thinker Systematically and Habitually</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actively develops traits such as intellectual integrity, intellectual humility, fairmindedness, intellectual empathy, and intellectual courage</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Imposes Criteria and Intellectual Standards Upon the Thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifies the criteria of solid reasoning, such as precision, relevance, depth, accuracy, sufficiency, and establishes a clear standard by which the effectiveness of the thinking will be finally assessed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Taking Charge of the Construction of Thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness of the elements of thought such as assumptions and point of view, that are present in all well- reasoned thinking; a conscious, active and disciplined effort to address each element is displayed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Guiding the Construction of the Thinking According to the Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continually assessing the course of construction during the process, adjusting, adapting, improving, using the candles of criteria and standards to light the way</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assessing the Effectiveness of the Thinking According to the Purpose, the Criteria, and the Standards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deliberately assessing the thinking to determine its strengths and limitations, according to the defining purpose, criteria and standards, studying the implications for further thinking and improvement</td>
</tr>
</tbody>
</table>

---

**Business and Economic Experts Call for Critical Thinking**

**John Sculley**, CEO and Chair of Apple Computer:

"... as a nation, we have gone from being resource-rich in the old economy to resource-poor in the new economy almost overnight! Our public education has not successfully made the shift from teaching the memorization of facts to achieving the learning of critical thinking skills. We are still trapped in a K–12 public education system which is preparing our youth for jobs that no longer exist." (Sculley, John. Remarks to then President-Elect Clinton, December, 1992)

**Laura Tyson**, Chair, President's Council of Economic Advisors:

"High productivity work-place organizations depend on workers who can do more than read, write, and do simple arithmetic, and who bring more to their jobs than reliability and a good attitude. In such organizations, workers are asked to use judgment and make decisions rather than to merely follow directions." (Tyson, Laura D'Andrea. "Failing Our Youth: America's K–12 Education," New Perspectives Quarterly, Nathan Gordels, editor. Winter, 1993, p. 53)

**Robert Reich**, Secretary of Labor

"... mastery of old domains of knowledge isn't nearly enough to guarantee a good income...... What is more valuable is the capacity to effectively and creatively use the knowledge." (Reich, Robert. *The Work of Nations*, Vintage Books, NY, NY. 1992, p. 182)
YEHUDI O. WEBSTER is an expert in critical thinking and social problems. He provides workshops on infusing critical thinking into instruction, but is especially concerned with a critical thinking approach to multi-culturalism and the “classification” of people into ethnic and racial groups. He emphasizes the transferability of critical thinking abilities and traits across disciplines and the significance of reason in everyday communication and action. Dr. Webster teaches in the Sociology Department at CSU, Los Angeles, and has written *The Racialization of America.*

GERALD NOSICH is a noted authority on critical thinking and the author of *Reasons and Arguments.* He is presently working on a book on critical thinking across the curriculum. His ability to give subject-specific examples of critical thinking, as well as his command of diverse teaching strategies, have made him a popular staff development leader. A regular presenter at conferences on critical thinking, he has also given many workshops across the country.

DAN WEIL is a specialist in critical thinking in elementary school as well as in multi-cultural education, K-12. He has taught kindergarten, first, and second grades for four years; has lived in Central America for three years; and is fluent in Spanish. He has conducted many inservices in the United States and in Mexico. Dr. Weil is acutely aware of the concerns of classroom teachers and is skilled at giving examples involving the immediate application of critical thinking to the classroom.

JANE WILLEN, Assistant Director of the Center for Critical Thinking, is an internationally recognized authority on critical thinking, with five books and over 50 articles published on the subject. Professor Paul has given lectures on critical thinking at many universities in both the United States and abroad, including Harvard, the University of Chicago, the University of Illinois, and the universities of Puerto Rico, Costa Rica, and Amsterdam. He has been regularly teaching beginning and advanced courses in critical thinking at the university for over 14 years. His workshops have been attended by thousands of educators, both K-12 and university.

ABOUT THE CENTER

RESEARCH AND INSERVICE TEAM

RICHARD W. PAUL, Director of the Center for Critical Thinking, is a specialist in working with elementary and middle school teachers and students, with at-risk students, in character education, and with parents. She has taught at the elementary and middle school level, counseled at middle school, and is working extensively with business groups in helping teachers appreciate what abilities and traits business is looking for in future employees. She also developed the character education/critical thinking program, *Let's Talk Sportsmanship* for elementary and middle school students, parents, and teachers.

JANE WILLEN, Assistant Director of the Center for Critical Thinking, is a specialist in working with elementary and middle school teachers and students, with at-risk students, in character education, and with parents. She has taught at the elementary and middle school level, counseled at middle school, and is working extensively with business groups in helping teachers appreciate what abilities and traits business is looking for in future employees. She also developed the character education/critical thinking program, *Let's Talk Sportsmanship* for elementary and middle school students, parents, and teachers.

RICHARD W. PAUL, Director of the Center for Critical Thinking, is an internationally recognized authority on critical thinking, with five books and over 50 articles published on the subject. Professor Paul has given lectures on critical thinking at many universities in both the United States and abroad, including Harvard, the University of Chicago, the University of Illinois, and the universities of Puerto Rico, Costa Rica, and Amsterdam. He has been regularly teaching beginning and advanced courses in critical thinking at the university for over 14 years. His workshops have been attended by thousands of educators, both K-12 and university.

JANE WILLEN, Assistant Director of the Center for Critical Thinking, is a specialist in working with elementary and middle school teachers and students, with at-risk students, in character education, and with parents. She has taught at the elementary and middle school level, counseled at middle school, and is working extensively with business groups in helping teachers appreciate what abilities and traits business is looking for in future employees. She also developed the character education/critical thinking program, *Let's Talk Sportsmanship* for elementary and middle school students, parents, and teachers.

RICHARD W. PAUL, Director of the Center for Critical Thinking, is an internationally recognized authority on critical thinking, with five books and over 50 articles published on the subject. Professor Paul has given lectures on critical thinking at many universities in both the United States and abroad, including Harvard, the University of Chicago, the University of Illinois, and the universities of Puerto Rico, Costa Rica, and Amsterdam. He has been regularly teaching beginning and advanced courses in critical thinking at the university for over 14 years. His workshops have been attended by thousands of educators, both K-12 and university.
THE CENTER FOR Critical Thinking (in cooperation with its sister organization, the Foundation for Critical Thinking) offers four avenues for continuing professional development:

- Inservice at your school or district: For one day, two days, or longer we come to your institution to offer a seminar designed to meet your individual needs. We are also available to meet with administrators and parents at the K-12 level to discuss the importance of critical thinking for a child's development and employment opportunities.

- Ten Regional Workshops: Two exciting, interactive days of critical thinking theory and practice with sections designed for K-8, High School, University, and Advanced. One unit of academic credit is available.

- "How to Teach" Series on 9 videocassettes: The structure of this course involves teaming up with a colleague. Assignments are included. Academic credit is available through Sonoma State University.

- Resource Materials: We offer several books on critical thinking as well as audio and video presentations by a variety of presenters that can be used for self-study. (See the summary of selections on page ajab.)
STAFF DEVELOPMENT

Regional Workshops

Short of bringing the team onto your campus for an “all-faculty” event, the next best option is an intensive critical thinking workshop offered in your region.

The Staff Development team hits the road again this year for ten Regional Workshops (see registration form for schedule).

These weekend opportunities can perform a pivotal role in revitalizing instruction for you and your colleagues. Two full days of foundational work, both hands-on practice and solid theory are integrated in the seminar, with emphasis on designing assignments that require reasoning, building student self-assessment techniques with your students, and grounding all class work in universal intellectual standards. Accentuated again is an emphasis on the practical, on classroom strategies that any teacher or professor can use to empower students through the use of their own innate, but typically underdeveloped, capacity to reason.

Participants who are ready for an advanced session on critical thinking strategies will have that option available at these workshops. Materials will be sent to these registrants in advance for careful review. The advanced session begins with the assumption that every participant is conversant with the basic vocabulary of critical thinking. Both K–12 and post-secondary educators are welcome to select the advanced session if they so desire.

Academic Credit

One unit of graduate level credit is available for each of the Regional Workshops. The cost is $30, payable to Extended Education at Sonoma State University. Applications for this credit are available at the Workshop.

Regional Workshop Registration Form

Name: __________________________________________
Title: __________________________________________
Grade Level or Area of Specialization: ________________
Address: Work ☐ Home ☐ ____________________________
City, State, Zip: ____________________________
School District or Institution: ______________________
Number in Group: ________________
I would like to attend the Regional Workshop in:
☐ Dallas, October 2-3, 1993, at Plaza of the Americas Hotel
☐ Atlanta, Nov. 13-14, 1993, at Ritz-Carlton Hotel
☐ Cancun, Jan. 5-8, 1994, at Hyatt Regency Cancun
☐ Washington D.C., Jan. 15-16, 1994, at Ritz-Carlton Pentagon City
☐ New York City, Jan. 22-23, 1994, at Hotel Macklowe
☐ Vancouver, B.C., Feb. 26-27, 1994, at Four Seasons Hotel
☐ Milwaukee, March 5-6, 1994, at Hyatt Regency
☐ Kansas City, March 19-20, 1994, at Ritz Carlton Hotel
☐ Phoenix, April 9-10, 1994, at Ritz-Carlton Hotel
☐ Honolulu, May 14-15, 1994, at Hyatt Regency Waikiki
Please Check One: K–12 Univ __________ Advanced

Fee: $195
For Groups of 4 or more: $150

Regional Workshop Fee: $ __________

Make checks payable and mail to:
Foundation for Critical Thinking
4655 Sonoma Mountain Road, Santa Rosa, CA 95404
phone: (707) 546-4926, fax: (707) 546-4718
Critical thinking is essential to all effective academic work and activities. Below is a sampling of the themes of some of our staff development inservice programs. The inservice team is experienced in working with a wide range of audiences, from standard academic disciplines to specific and innovative fields. Inquiries regarding presenters, session-breakdowns, costs, and alternative emphases or themes are available upon request from the Center for Critical Thinking.

**KINDERGARTEN THROUGH HIGH SCHOOL**
- How to Infuse Critical Thinking Across the K-12 Curriculum
- Critical Thinking: The Role of the Administration
- Questioning Students, and Teaching Students to Question: K-12
- Ethics Without Indoctrination: Moral Reasoning Across the K-12 Curriculum
- How to Establish Intellectual Standards Across K-12 Curriculum
- Dimensions of Critical Thinking and Instructional Redesign
- Reading and Writing as Modes of Thinking
- Remodeling Lessons in the K-12 Curriculum to Foster Thinking
- Critical Thinking and Primary School Mathematics Instruction
- Critical Thinking About Historical and Contemporary Issues of Social Concern
- How to Infuse Critical Thinking in Whole Language Instruction

Also available for each inservice at the K-12 level is an evening presentation for parents, community, and business persons interested in critical thinking and the implications for educational reform in their school community.

**AT THE COLLEGE LEVEL**
- Infusing Critical Thinking into College and University Instruction
- Ethics Without Indoctrination: Moral Reasoning Across the College/University Curriculum
- Using Questioning Strategies to Teach College and University Students to Reason Persuasively, Master Content, and Discipline Their Minds
- College Reading and Writing as Modes of Thinking
- How to Establish Intellectual Standards Across College/University Curriculum
- Critical Thinking: The Role of Administration
- Remodeling Courses to Foster Critical Thinking
- Thinking Within a Discipline and Teaching Thinking Within a Discipline
- Thinking in a Unified Way Across the Disciplines
- How to Generate Appreciation of the Subject Matter and Make Knowledge Memorable to Students Through the Concept of Discovery and Critical Thinking
- Critical Thinking and Nursing Education
The Foundation for Critical Thinking, sister organization to the Center for Critical Thinking, will have an extensive exhibit of resources available for participants during the 13th International Conference.

On display will be two new volumes of Richard Paul's works: *Critical Thinking: What Every Person Needs to Survive in a Rapidly Changing World,* and *Critical Thinking: How to Prepare Students to Survive in a Rapidly Changing World.* The first volume is designed for the general public, and the second is tailored to the needs of educators. Each has three new chapters:

- Accelerating Change: Increasing the Complexity and Quality of Our Thinking
- Critical Thinking: Identifying the Targets
- Pseudo Critical Thinking in the Educational Establishment

The books have been redesigned with a more reader-friendly format and new introductions. They provide the serious student of critical thinking with valuable insights into the potential and challenge of comprehensive critical thinking.

The Foundation also has on display two video tape series, *How to Teach for Critical Thinking* (9 tapes), and the *PBS Series.* The following additional tapes were produced especially for this conference.

- Pseudo Critical Thinking
- Critical Thinking: Global Economic Realities and Educational Reform
- Critical Thinking and Parenting

Information on the Regional Workshops and membership information for the National Council for Excellence in Critical Thinking will also be available at the Resources display. Members of the Foundation staff, led by John Pruess, will be available to answer your questions at the exhibit, located in the Dining Commons.

---

**Conference History**

The 1993 CONFERENCE on Critical Thinking and Educational Reform reflects the development implicit in the twelve annual conferences which have preceded it. From the beginning, the First National Conference on Critical Thinking, Moral Education, and Rationality (1981), the concept of critical thinking we have fostered has been a comprehensive and deep one supported by intellectual standards and an emphasis on self-assessment, while remaining linked to broadly-based ethical concerns.

We began, in 1981, by bringing together some of the finest philosophical minds to reflect upon this crucial area of concern. Nicholas Rescher, Michael Scriven, Joseph Ullian, Julius Moravcsik, Ruth Marcus, Ralph Johnson, J. Anthony Blair, and Mary Anne Warren were among those who set us on our way. Beginning with those thinkers capable of the most profound and self-critical thought was an excellent foundation on which to build, however, we quickly saw that if progress were to be made, we had to expand our efforts to involve decision-makers at all levels of education. We were well aware that reports on educational reform would not reform education. Very often these reports themselves were in need of critique.

Subsequent conferences have been expanded progressively, growing to include more emphasis on students' crucial early years and on the forces and factors affecting the realities of teaching. We have sought to augment and unfold sound theory with models of sound practice — hence our growing emphasis on workshops and video-tapes modeling instruction which are offered by our sister organization, The Foundation for Critical Thinking. An exhibit of the resources of the Foundation will
be located in the Dining Commons. This year, nearly 300 presenters will join us at Sonoma State University for lively discussions, intense intellectual growth, and opportunities to see how far-reaching the growth in the critical thinking movement has become. The global pressures we face, given the accelerating change of our world and the increasing complexity of our problems, supports our earlier perceptions: critical thinking is an imperative for all, not a luxury for the few. More and more national leaders in every field are sounding the echo. The question is how we can help educators and business people to respond effectively.

Within the education family, there have been two central problems which we have faced in bringing together K-12 and college instructors. Many college instructors and theoreticians have had little experience trying to translate the results of their research into classroom strategies at the K-12 level. Many K-12 teachers, in turn, have little sympathy or patience for any theory that cannot immediately be so translated. The tension between the need for a theoretical foundation, a critical thinking foundation for critical thinking if you will, and the urgency for teachers to have in their hands tools to deal with the severity of student apathy and poor thinking is tempering for both K-12 and college instructors. The conference is an opportunity to join together and take a fairminded view toward the need for both theory and practice.

It is important to recognize that we are still very much in the beginning stages of educational reform based on the goal of creating critical thinking classrooms and workplaces. The challenge is with us to communicate the broadest, most comprehensive vision of critical thinking to teachers, to business people, and to parents. We have reason to think that the need for an annual conference in critical thinking will continue indefinitely and expand to serve more and more astute individuals who come to see the larger picture. Inertia is a powerful force. The deeply entrenched compartmentalization of knowledge, the increasing sophistication of propaganda and mass manipulation techniques, the continuing dominance of rote memorization and recall of facts as modes of learning, the growth of television and the electronic media, the increasing conflict of opposing ideologies in the global village, the acceleration of misunderstanding and stereotype in international politics, the growing desire for a simplistic explanation of life wherein opposing groups are identified as essentially "good" or "evil," — all argue for the pressing need for fairminded critical thinking abilities and traits, underpinned with intellectual standards so necessary for self-assessment of thinking and thus, for continuous improvement.

We assume that all of the participants in the conference bring to it a shared general interest in critical thinking, understood as a family of interdependent intellectual skills and abilities in need of support by a complex of rational passions. We assume as well, then, that all participants share a commitment to the principle that such abilities and affective qualities can only be developed over an extended period of time and as the result of careful cultivation. We expect, therefore, that all participants will have some interest in the unique and necessary contributions of others working in diverse subject areas and at various educational levels.

Those who teach the early grades need to understand and appreciate the superstructure that is to be built upon the foundations they help to lay. Those who teach the middle grades need to understand and appreciate what has come before and what is to follow. And those who teach the later grades need to provide the capstones that will solidify the skills, insights, and passions that can secure life-long learning grounded in deeply internalized critical thinking abilities. Thus we hope that all participants will make some effort to communicate with and build connections to others, to reach out beyond the parochialism of subject matter and grade level.

At the same time, we realize that special interest groups exist within the critical thinking movement and need to develop along a manifold of directions. We will be accommodating this need in numerous ways: 1) by classifying all presentations with a label that indicates possible special interest concerns (see audience code chart on page a1b and facing the inside back cover), 2) by listing sessions by special interest categories (see the grouped by interest section on page a1b), and 3) by setting up a meeting time on Sunday evening (7:00 pm) for groups to organize themselves into networks (see the section entitled Special Interest Groups, page a1b, for more information on these special interest meetings).

The evening social hours are intended to be an integral part of the conference. We are encouraging all of the presenters to make themselves available for the social hours in order to facilitate exchanges which are rarely possible in question and answer periods. We welcome you to this feast for the mind!
EACH YEAR A conference theme is selected to address a current concern within the critical thinking community and to provide a thread of continuity between the various presentations. This year's conference focuses on the new global economic realities and their implications for teaching and learning, business and politics, human rights and human conflicts, and population and the environment. Distinguished economist and social critic, Robert Heilbroner will join Richard Paul in three dialogue sessions that will focus on the social, political, and educational implications of global changes. The nature of the new global economic realities are addressed in Paul's recently revised book, *Critical Thinking: What Every Person Needs to Survive in a Rapidly Changing World*. Excerpts from the new chapter, "Accelerating Change, the Complexity of Problems, and the Quality of Our Thinking" are printed below. (Available in the Commons, are books by Richard Paul, Robert Heilbroner, Robert Reich, and Lester Thurow concerning the new global realities.)

**THE NATURE OF THE POST-INDUSTRIAL WORLD ORDER**

The world is swiftly changing and with each day the pace quickens. The pressure to respond intensifies. New global realities are rapidly working their way into the deepest structures of our lives: economic, social, environmental realities — realities with profound implications for teaching and learning, for business and politics, for human rights and human conflicts. These realities are becoming increasingly complex; and
they all turn on the powerful dynamic of accelerating change. This chapter explores the general character of these changes and the quality of thinking necessary for effectively adapting to them.

We can no longer rely on the past to be the guide for the future.

Consider the quiet revolution that is taking place in communications. From fax machines to e-mail, from bulletin board systems to computer delivery systems to home shopping, we are providing opportunities for people to not only be more efficient with their time, but to build invisible networks where goods, services, and ideas are exchanged with individuals the world over. But how is one to interface with this revolution? How much is one to learn and how fast? How much money should one spend on this or that new system? When is the new system cost effective? When should one wait for a newer development?

Can we deal with incessant and accelerating change and complexity without revolutionizing our thinking? Traditionally our thinking has been designed for routine, for habit, for automation and fixed procedure. We learned how to do something once, and then we did it over and over. Learning meant becoming habituated. But what is it to learn to continually re-learn? To be comfortable with perpetual re-learning? This is a new world for us to explore, one in which the power of critical thinking to turn back on itself in continual cycles and re-cycles of self-critique is crucial.

Accelerating change is intermeshed with another powerful force, the increasing complexity of the problems we face. Consider, for a moment, solid waste management. This problem involves every level of government, every department: from energy to water quality, to planning, to revenues, to public health. Without a cooperative venture, without bridging the territorial domains, without overcoming the implicit adversarial process within which we currently operate, the responsible parties at each tier of government cannot even begin to solve these problems. When they do communicate, they often do not speak honestly about the issues given the human propensity to mask the limitations of one's position and promote one's narrow but deeply vested interests.

These two characteristics, then, accelerating change and increasing complexity — with their incessant demand for a new capacity to adapt, for the now rare ability to think effectively through new problems and situations in new ways — sound the death knell for traditional methods of learning how to survive in the world in which we live. How can we adapt to reality when reality won't give us time to master it before it changes itself, again and again, in ways we cannot anticipate?

We can no longer rely on the past to be the guide for the future. Technology will continually race ahead, creating links that make the world smaller and smaller. New opportunities will continually emerge but within them are embedded new problems, hence the need for acute readiness and disciplined ingenuity. At every step along the way, how-

World-class, internationally-competitive companies recognize the need to play a new game...

ever, polished, satiny voices will tempt us astray with slick, simplistic messages that appear to guide us back to the "tried and true." Often, these voices in fact coax us into policies and practices that continually sacrifice our long-term interests to someone's short-term gain. In business, education, and politics, the same sirens echo.

World-class, internationally-competitive companies recognize the need to play a new game and have re-organized themselves accordingly. As Laura Tyson explains,

*High productivity work-place organizations depend on workers who can do more than read, write, and do simple arithmetic, and who bring more to their jobs than reliability and a good attitude. In such organizations, workers are asked to use judgment and make decisions rather than to merely follow directions. Management layers disappear as workers take over many of the tasks that others used to do — from quality control to production scheduling. Tasks formerly performed by dozens of unskilled individuals are turned over to a much smaller number of skilled individuals.*

Bold changes in business organization and practices require parallel changes in education. Yet the U.S. public school systems, like most U.S. businesses, remain mired in the past, focused on lower order skills, and unresponsive to the need for higher order abilities. Again, as Laura Tyson puts it, "[Higher-order tasks] ... require higher-order language, math, scientific, and reasoning skills that America's K-12 education system is not providing."

Our students deserve at least a fighting chance to compete, to rise to the challenges of the day. Reconstructing and adapting our business and educational systems to teach our managers as well as our teachers and administrators how to create these higher order workplaces and classrooms, and then to expect them to do so in the ordinary course of their professional obligations, is our first major challenge. Today, at every level, we are failing this test, failing our students and workers, jeopardizing our future. What is missing is a genuine sense of what accelerating change entails and a shared public vision of the need for fundamental changes. Many of our leading economic analysts are struggling to create just such a new frame of reference within which we can come to terms with the new imperatives.

The necessary paradigm shifts, however, do entail the cultivation of critical thinking across the work force, up and down the lines of labor and management, across industries, across educational levels, and into the everyday discussions of national and international issues. This shift is painfully against the American grain, contrary to our traditional folk wisdom, and incompatible with much current thinking of both business and labor leaders.

Implications

What, then, do we need to do?

1) We must parent differently. We must respond differently to our children's "Why?" questions. We must not give them short didactic answers, but must encourage them to conjecture as to the answers. We must call more attention to the extent of our own ignorance and not try to convince our children that adults have good answers for most of their questions.

2) We must work differently. We must bring the reality of cooperative critical thinking into the workplace in a thorough way. This means that we must abandon quick-fix strategies and recognize the counterfeits of substantial change. We must become aware of the difference, for example, between the jargon of "Total Quality Management" (which we now have in abundance) and the reality (which we almost entirely lack).

3) We must educate differently. We can no longer afford the high cost of educators who have few or no critical thinking skills, and little or no motivation to develop them. Teachers and administrators who do not themselves think critically, cannot design changes in curriculum and instruction that foster critical thinking. We must come to terms with the most fundamental problem in education today and that is "the blind leading the blind." Many educators do not realize that they are functionally blind to the demands of our post-industrial world.
Pseudo critical thinking is a form of intellectual arrogance masked in self-delusion or deception, in which thinking which is deeply flawed is not only presented as a model of excellence of thought, but is also, at the same time, sophisticated enough to take many people in. No one takes a rock to be a counterfeit diamond. It is simply other than diamond. But a zircon mimics a diamond and is easily taken for one and hence can be said to be a pseudo diamond.

Because critical thinking is becoming more and more important, there is more and more pseudo critical thinking being sold. Below you can read an example of the kind of battle you may be called upon to fight in your own state or country. Richard Paul made the following statement at a press conference in the governor’s press room on July 14, 1993. The political battle is now under way.

Good morning, and thank you very much for coming. I’m Richard Paul, director of the Center for Critical Thinking at Sonoma State University and the chair of the National Council for Excellence in Critical Thinking, an organization founded by 700 concerned national educational leaders. The Council has established 12 Centers around the country concerned to ensure that fundamental intellectual standards are entrenched in education and to sound the alarm on ill-conceived approaches to education and thinking. We are today releasing a study, entitled “Pseudo Critical Thinking...”
in the Educational Establishment." It demonstrates that the new California reading and writing assessment is so flagrantly ill-conceived and designed, and so poorly implemented, that it constitutes no less than educational malpractice. We intend this term in its literal meaning of "professional practice leading to injury" — in this case, injury to the students who will mislearn reading and writing under its sway and influence.

We are therefore calling on the governor, on the new superintendent of public instruction, on the State Board of Education, and on all interested citizens and civic leaders to act directly and unequivocally to ensure that this goliath of educational incompetence not be used as a guide for teaching and instruction, and that appropriate and significant reading and writing skills be identified, sound intellectual standards adopted, and a well-grounded assessment instrument developed, one which will truly serve the interests of all of our children.

Let me explain why we think this an issue of public importance. The ability to think critically and reason in a disciplined manner is now well-recognized to be an essential ability for students to develop. It often decides issues of survival in a world of accelerating change and intensifying complexity.

The National Education Goals Panel (consisting of 8 governors, two administration members, and four members of Congress), in its 1992 Goals Report, has declared critical thinking and sound reasoning to be national goals. Joined with this bi-partisan effort, the U.S. Departments of Labor and of Commerce have been working with the Department of Education to facilitate the development of national standards and assessment of critical thinking, problem-solving, and communication skills.

A growing number of business leaders, such as John Scully, President of Apple Corporation, have emphasized the importance of critical thinking. Scully, in fact, identifies the schools' ignoring of critical thinking to be the fundamental reason for their failure. He sees critical thinking as indispensable for the jobs of the future. Even the California Department of Education itself has given lip service to the importance of critical thinking in its curriculum frameworks and many of its other publications.

But here is the crucial link for our purpose today. The manner in which students learn to read and write is an indispensable cornerstone in their development of tools essential for their economic survival. Indeed, critical thinking and disciplined reasoning play a pivotal role in competent reading and writing. Many basic and essential reading and writing skills are none other than the skills of a critical reader and writer. These include such basic abilities as:

**IN READING**
- the ability to identify the main purpose of an author
- the ability to identify, analyze, and assess basic assumptions of an author
- the ability to identify, analyze, and assess the conclusions of an author and what the author is basing her conclusions on

**IN WRITING**
- the ability to write for a specific purpose and to a specific audience
- the ability to formulate significant questions, problems, and issues
- the ability to gather relevant information and evidence
- the ability to give good reasons and engage in sound reasoning in supporting what one is saying

Finally, I should note — for it is here that the California assessment is most deficient — that the hallmark of disciplined thinking is given in its regular use of traditional intellectual standards, such as clarity, precision, relevance, and consistency, which sound thinkers learn to apply routinely to their own thinking in cycles of self-correction.

Unfortunately, however, the California Department of Education's new reading and writing tests roundly ignore critical reading and writing. Instead they have developed, at great public expense, over a number of years, involving thousands of work hours of hundreds of people, an assessment that is hopelessly subjective and ill-conceived. It is an assessment instrument so riddled with fundamental flaws that it can only be called a colossal example of educational malpractice. It systematically encourages the use of vague categories and deficient practices. It guarantees that teachers, students, and the general public will be misled. It systematically rewards the wrong set of values: those which are subjective, idiosyncratic, and irrational.

The result is, ironically, that were the writings of Adolph Hitler to be assessed by their adopted standards, he would literally receive the highest possible score, that of exemplary writing, under the CAP system! Furthermore, it is clear that the test has been devised precisely to raise test scores, particularly those of racial and ethnic minorities. The high test scores guaranteed by the ill-conceived California Language Arts Assess-
ment will doubtless produce political gain for both the Department of Education and for the local educators who can then celebrate over their "success". But the children and the economy will pay the price for that success.

Employers are not looking for workers who, when required to read, figure out, and apply basic material in a technical manual, will create a "creative and subjective interpretation" of what is there. Instead they want workers who can identify clearly and precisely what the manual actually says. They want workers who can write clear and precise sentences, who can contribute by their disciplined reading, writing, speaking, and listening to effective problem identification, analysis, and solution.

These fundamental needs of business and industry, these fundamental abilities of the truly educated and disciplined reader and writer, are systematically ignored in the new California reading and writing assessment. The assessment tool as it now stands is not just an educational Edsel, it is an educational Titanic. It guarantees that our children will remain hopelessly undisciplined and unskilled, unable to read and write with clarity, precision, and accuracy, unable to use reading, writing, speaking, and listening as basic tools of everyday problem solving and communication. Well-reasoned reading and writing is essential to our children's lives as citizens, as family members, and as workers.

Furthermore, without the basic skills of critical reading and writing in place, our children will have no hope of developing the ability to reason scientifically, to reason mathematically, to reason historically, to reason geographically, to reason, in short, as a well-educated person must to be successful in a world increasingly dependent on complex problem solving and high quality thinking. We can ill afford to exchange our children's future and our economic well-being for the short-term political gains which the new California test is designed, wittingly or unwittingly, to achieve.

We are therefore calling, as I have said, on the governor, on the superintendent of public instruction, on the State Board of Education, and on all interested citizens and civic leaders to act directly and unequivocally to ensure that this goliath of educational malpractice not be used as a guide for teaching and instruction. Instead, appropriate and significant critical reading and writing skills should be identified, sound intellectual standards articulated and adopted, and a well-grounded assessment instrument developed, one which will well serve the interests of all our children by preparing them to compete effectively in a rapidly changing world.

---

**How to Find the Sessions You Want to Attend**

Due to the large number of sessions, we have designed the Conference Schedule with a number of special sections, each of which lists the sessions in a unique way: chronologically, by presenter name, and some sessions listed by selected audience codes (see page 61). The following recommendations may make planning your conference attendance easier.

- Each session has audience codes which indicate areas addressed.
  - Most of these codes are assigned by the presenter. The key to these codes is located on page 31, as well as on the last page of the program.
- The conference schedule section is best used to view the schedule as a whole. It lists the sessions chronologically, giving the presenter name(s), session title, location, and audience codes. The abstracts can be located by referencing the presenter's name.
- The abstracts are listed alphabetically by presenter's name. If there are some speakers you especially want to see, you can find out what talks they will give and when.
- There is also a listing of some sessions by selected audience codes. This section is not intended to give a complete list of every session addressing that category, but rather to highlight some that have especially strong emphasis in those areas. Again, the abstracts can be found by referencing the presenter's name.
• If you’re especially interested in hands-on sessions, check the abstract. Many abstracts describe the nature of the session, as well as more detail about the content. If the abstract is unclear, arrive early and ask the presenter if the session is hands-on.

• For your convenience, we’ve included a planning guide on page 32. This worksheet can be used to list the sessions you plan to attend, as well as back up options.

• Some sessions will inevitably attract many attendees. Because this is difficult to predict, you should always have one or two back-up sessions selected just in case your first and second selections are already filled.

• Mark all changes from the Special Announcements and Changes Sheet (included in the conference handouts picked up at registration) in your schedule.

**AUDIENCE CODES**

- ELEM...elementary school
- MID/HIGH.middle/high school
- K-12.kindergarten-12th grade
- COLL.post-secondary education
- ADV.advance session
- BEG.beginners in critical thinking
- BUS.business
- CONF THEME.related to conference theme
- COMPUTER ASST ED..computer assisted instruction
- ECON.economics
- ENV.environment
- FEM.feminism
- G.general
- HEALTH.health sciences
- H CON.human conflicts
- H RIGHTS.human rights
- LANG.language arts/English
- MATH/SCI.math/science
- MEDIA.media, media literacy
- MULT-CULT.multi-culturalism
- PEACE.peace studies
- POL.politics, political science
- PSYCH.psychology
- SOC STUD.social studies
- SOCIOEconomics.sociology
- STAFF DEV.staff development
- TEST.testing and assessment
- THEORY.theoretical orientation
### Individual Planning Guide

<table>
<thead>
<tr>
<th>SUNDAY</th>
<th>MONDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8:45 AM</strong> to <strong>10:15 AM</strong></td>
<td>9:00 AM</td>
</tr>
<tr>
<td>Keynote # 1 Richard Paul (Commencement area)</td>
<td></td>
</tr>
<tr>
<td><strong>10:30 AM</strong> to <strong>12:00 PM</strong></td>
<td><strong>10:30 AM</strong> to <strong>12:00 PM</strong></td>
</tr>
<tr>
<td>Keynote # 2 Robert Heilbroner (Commencement area)</td>
<td></td>
</tr>
<tr>
<td><strong>Please Note:</strong> Lunch Break from 12:00 pm - 1:30 pm OR 1:45 pm - 3:00 pm (Dorm residents between 11:30 am - 1:30 pm only; in Residence Dining Hall)</td>
<td><strong>Please Note:</strong> Lunch Break from 12:00 pm - 1:30 pm OR 1:45 pm - 3:00 pm (Dorm residents between 11:30 am - 1:30 pm only; in Residence Dining Hall)</td>
</tr>
</tbody>
</table>

| **12:15 PM** to **1:45 PM** | **5:00 PM** to **6:00 PM** |
| **1:30 PM** to **3:00 PM** | **5:30 PM-8:00 PM** Banquet (Commons) |
| **3:15 PM** to **4:45 PM** | **8:00-9:15** National Council Meeting (Commons) |
| **9:00 PM** | **8:00-11:00** Evening Social (SU multi-purpose room) |
| **10:00 PM** | **7:00 PM-11:00 PM** Evening Social (Commons) |
| **11:00 PM** | **11:00 PM** |

<table>
<thead>
<tr>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8:45 AM</strong> to <strong>10:15 AM</strong></td>
<td>Last Session Wrap-up [Ives (Warren)]</td>
</tr>
<tr>
<td><strong>1:30 PM</strong> to <strong>3:00 PM</strong></td>
<td><strong>3:15 PM</strong> to <strong>4:45 PM</strong></td>
</tr>
<tr>
<td><strong>5:00 PM</strong></td>
<td><strong>5:00 PM</strong></td>
</tr>
<tr>
<td><strong>6:00 PM</strong></td>
<td><strong>6:00 PM</strong></td>
</tr>
<tr>
<td><strong>7:00 PM</strong></td>
<td><strong>7:00 PM-11:00 PM</strong></td>
</tr>
<tr>
<td><strong>8:00 PM</strong></td>
<td><strong>8:00 PM</strong></td>
</tr>
<tr>
<td><strong>9:00 PM</strong></td>
<td><strong>9:00 PM</strong></td>
</tr>
<tr>
<td><strong>10:00 PM</strong></td>
<td><strong>10:00 PM</strong></td>
</tr>
<tr>
<td><strong>11:00 PM</strong></td>
<td><strong>11:00 PM</strong></td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 9:00 AM - 10:15 AM | Richard Paul, Commencement Area  
Critical Thinking and Educational Reform for the 21st Century and the New Global Economic Realities |
| 10:30 AM - 12:00 PM | Robert Heilbroner, Commencement Area  
The New Global Economic Realities and Critical Thinking |
| 12:00 PM - 1:30 PM / 1:45 PM - 3:00 PM | Lunch  
Dining Commons  
Dorm residents between 11:30 - 1:30 only: Residence Dining Hall |
| 12:15 PM - 1:45 PM | William A. Dorman, Ralph Johnson, Ives 119  
Media Logic, Media, Mid/High, Coll |
| 12:15 PM - 1:45 PM | Richard Pope, STEV 3008  
The Debating Process Instills Critical Thinking in Your Elementary School Students and Makes You Thinner, Sexier, and Attractive to Movie Stars!  
ELEM, BIC |
| 12:15 PM - 1:45 PM | Peter Facione, Nooreen C. Facione, STEV 2049  
Assuring Critical Thinking in the Professional Nurse: A Response to NLN Criterion 20  
HEALTH, TEST, Coll |
| 12:15 PM - 1:45 PM | Jackie A. Giuliano, ART 108  
The Introduction of Feminist Philosophy and Spirituality into the Classroom Through Environmental Studies  
FEM, BNV, Coll, Math/Sci |
### Sunday

**12:15 PM - 1:45 PM**

**Continued**

<table>
<thead>
<tr>
<th>Speaker(s)</th>
<th>Location</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mary E. Dietz, Bob Van Zant</td>
<td>STEV 3036</td>
<td>Professional Development Portfolio: A Constructivist Approach for Professional Development K-12, STAFF DEV, TEST, ADV</td>
</tr>
<tr>
<td>Richard S. Hall</td>
<td>STEV 3026</td>
<td>The Impact of Critical Thinking on Corporate Training BUS</td>
</tr>
<tr>
<td>Les Gottesman</td>
<td>NICH 204</td>
<td>Asking Dumb Questions G</td>
</tr>
<tr>
<td>C. Lincoln Johnson</td>
<td>STEV 3030</td>
<td>Religious Values and Critical Thinking: The Quest Dimension SICI, MUL-CULT, H CON</td>
</tr>
</tbody>
</table>

**1:30 PM - 3:00 PM**

<table>
<thead>
<tr>
<th>Speaker(s)</th>
<th>Location</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lorenz Boehm</td>
<td>STEV 1002</td>
<td>Natural Allies: Teaching, Learning, Writing, and Critical Thinking, Part I COLL, TEST, MID/HIGH</td>
</tr>
<tr>
<td>Jane Willson</td>
<td>SUMPR</td>
<td>Critical Thinking and Parenting: Expanding Your Critical Thinking Community to Include Parents K-12, STAFF DEV</td>
</tr>
<tr>
<td>Connie De Capite</td>
<td>STEV 3072</td>
<td>Critical Thinking for All Students LANG, SOC STUD, SCI</td>
</tr>
<tr>
<td>Robert Swartz, Sandra Parks</td>
<td>DAR 112</td>
<td>Infusing Critical and Creative Thinking into Content Instruction G</td>
</tr>
<tr>
<td>Bonnie Baker Thorne, Ann Jerabek</td>
<td>IVES 35</td>
<td>Developing Strategies That Use Critical Thinking to Infuse a Global Perspective into the Curriculum K-12, SOC STUD</td>
</tr>
<tr>
<td>William Taylor</td>
<td>STEV 3049</td>
<td>Helping Students Acquire the Knowledge About Which We Want Them to Think Critically COLL, MID/HIGH, SOC STUD</td>
</tr>
<tr>
<td>John O'Brien</td>
<td>IVES 78</td>
<td>Thinking in the Workplace MID, COLL, SG, BUS</td>
</tr>
<tr>
<td>Dennis Martinez</td>
<td>DAR 139</td>
<td>Traditional Indigenous Knowledge and Western Science: Cross-Cultural Perspectives on Environmental Knowledge ENG, MUL-CULT</td>
</tr>
</tbody>
</table>

**3:15 PM - 4:45 PM**

<table>
<thead>
<tr>
<th>Speaker(s)</th>
<th>Location</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leah Shelleda</td>
<td>DAR 137</td>
<td>Does Logic Teach Critical Thinking? COLL, TEST, LANG, ADV</td>
</tr>
<tr>
<td>Michael Feer</td>
<td>STEV 3046</td>
<td>Decision Making and the World Market-Place ECON, CONF THEME</td>
</tr>
<tr>
<td>George M. Luckey, Jr.</td>
<td>STEV 2065</td>
<td>Critical Thinking and Active Learning Across the Curriculum G, TEST</td>
</tr>
<tr>
<td>Paul Ady</td>
<td>IVES 45</td>
<td>Bringing the Play Element into Critical Thinking Instruction: The Brutus Family of Dysfunctional Arguers LANG, MEDIA, G</td>
</tr>
<tr>
<td>Herman Haluza</td>
<td>STEV 3077</td>
<td>Critical Thinking, the Narrative, and the Post-Modern Condition COLL, H CON, LANG, SOC STUD</td>
</tr>
<tr>
<td>Robert Heilbroner, Richard W. Paul</td>
<td>EPT</td>
<td>&quot;The Relentless, Ubiquitous Pressure for Change: How Do We Protect the Public Good G, CONF THEME</td>
</tr>
<tr>
<td>Yehudi O. Webster, Dan, Weil, William Zeiger, Hilda Cabanel-Evans, Susan M. Awbrey</td>
<td>IVES (WARREN)</td>
<td>Panel Discussion on Multi-Culturalism MUL-CULT</td>
</tr>
<tr>
<td>John Chaffee</td>
<td>IVES 119</td>
<td>Teaching and Evaluating Critical Thinking in the Disciplines COLL, MID/HIGH</td>
</tr>
<tr>
<td>Jim Pollard</td>
<td>STEV 3008</td>
<td>A Different Way of Thinking ADV, BUS, H CON, G</td>
</tr>
<tr>
<td>MacGregor Eddy</td>
<td>STEV 2049</td>
<td>From Novice to Expert in the Era of the Information Overload HEALTH, COLL</td>
</tr>
<tr>
<td>Judy R. Downs</td>
<td>ART 108</td>
<td>A Mini-Workshop in Critical and Creative Thinking K-12, COLL, LANG</td>
</tr>
<tr>
<td>Nancy C. Glock</td>
<td>STEV 3072</td>
<td>Towards a More Powerful Model of Critical Thinking: Reclaiming Inter-Cultural Ways of Knowing MUL-CULT, H CON, ADV</td>
</tr>
<tr>
<td>Ann Kerwin, Marlys H. Witte, Charles L. Witte</td>
<td>IVES 35</td>
<td>&quot;The Unanswered Question&quot; Meets &quot;The Ultimate Learning Center&quot; C, HEALTH</td>
</tr>
<tr>
<td>James Geiger</td>
<td>DAR 112</td>
<td>Toward a Philosophy of Critical Thinking H CON, POL</td>
</tr>
</tbody>
</table>
CONFERENCE SCHEDULE

SUNDAY

3:15 PM - 4:45 PM

Continued

RAQUEL HENRY, NELLIE THOROGOOD,
ROSE AUSTIN

STEV 3049
Classroom, Curriculum, and Leadership Reforms: Developing Critical Thinkers in the Community College

COLL, STAFF DEV

JAMES P. MARSHALL

IVES 78
Practicing Democracy in the Classroom Through the Application of Critical Pedagogy

COLL, H CON, MID/HIGH, SOCIOl

GRADY E. WILLIAMS III

DAR 139
A Role-Playing Model for Introducing Critical Thinking and Creative Concept Structuring in Environmental Science

EN, SCI, G

JOHN F. LOASE, SHERRON SARGENT

DAR 122
Sigfluence Our Positive Influence Over Time: A Quantitative and Qualitative Analysis

MATH/SCI, PSYCH, TEST

KRISTAN CAVINA

NICH 173
Teaching Critical Thinking in the Writing Class

LANG, COLL

KATHERINE Z. SMITH, HARRIET CHAMBERLAIN

STEV 3046
Global Peace Games: A Role-Play Using Lawrence Kolberg's Stages of Moral Development

PEACE, POL, PSYCH, H CON

DENNIS MATTHIES

IVES 79
The New Economy, the New Pedagogy

G

PETER FACIONE

DAR 137
Classroom Critical Thinking Assessment — The Basic Ways and Means

TEST, SOC STUD, COLL, MID/HIGH

T. EDWARD DAMER

STEV 3040
A Positive Approach to the Teaching of the Fallacies: A Simple Method for Distinguishing "Good" Arguments from "Bad" Ones

G, ADV

FRAN TOOMEY

STEV 3036
Community Centered Learning: A Model for Creating a Thinking Community

COLL, PSYCH, SOCIOl, HIGH

DIANE D. CHEATWOOD

STEV 2065
Thinking Across the College: The Integrated Thinking Skills (Faculty) Project Expands

HIGH, COLL, STAFF DEV

DONALD R. KLEIN

NICH 204
Critical Thinking and the Committee Process

G, H CON, STAFF DEV

GLEN HARPER

STEV 3028
Come Think With Me: Assumptions, Backing Up to the Start

H CON, K-12, BEG

CONFERENCE SCHEDULE

BARRY LESHOWITZ, ELAINE YOSHIKAWA

IVES 45
How to Reduce Cognitive Bias and Promote Critical Thinking

COLL

JOEL PETERSON, MARY ASPNES, CONNIE STACK

STEV 3030
Thinking on All Four Burners: A Holistic Approach Which Recognizes Diversity in Good Thinking

COLL, LANG

CYNTHIA A. BARNES

STEV 3077
Mapping: Getting Students, Not Faculty, to "Cover the Material"

G

GEORGE COLLISON

STEV 1040
Visiting the Rainforest Via Computer Simulation and Linking up for Awareness of Global Problems

MID/HIGH, ENL, COMPUTER ASSISTED

SPECIAL INTEREST GROUPS

DINING COMMONS

Please see page 58 for details.

EVENING SOCIAL

DINING COMMONS

MONDAY

8:45 AM - 10:15 AM

YEHUDI O. WEBSTER

IVES (WARREN)
Multi-Culturalism and Critical Thinking: Compatibility or Competition?

G, MUL-CULT

EDWARD D’ANGELO

STEV 1002
Critical Thinking in Law

COLL, HIGH, H RIGHTS, H CON

JOHN CHAFFEE

STEV 119
Designing an Effective Course in Critical Thinking

COLL, MID/HIGH

JANE WILLSEN

SUMPR
Critical Thinking: The Magic Wand That Integrates Curriculum

ELEM, MID, STAFF DEV

MARK WEINSTEIN

CAR 68
Critical Thinking and the Goals of Science Education

SCI, COLL, HIGH

JIM POLLARD

STEV 3008
Who Is the Boss? (An Empowerment Workshop)

COLL, BUS, H CON

ROBERT SWARTZ

STEY 2049
Assessing the Quality of Student Thinking: Techniques for Classroom Teachers

TEST, G
**MONDAY**

8:45 AM - 10:15 AM

**JACKIE A. GIULIANO**

Continued

*Noreen Facione, Carol Sanchez, Peter Facione* STEV 3036

*Gender and Critical Thinking — A Look at the Data* FEM, PSYCH, COLL, ADV

**CHARLES V. BLATZ**

*Critical Thinking and the Sovereignty of Political and Economic Communities* ADV, BUS, ECON, POL

**TARA D. KNOTT**

*The Useful of Distance Education Technology* TECHNOLOGY, G

**MONICA M. C. KOEP**

*On the Need for Critical Thinking About Democracy in Namibia* MUL-CULT, H RIGHTS

**GLEN HARPER**

*Come Think With Me: A Look at the Data* STEV 3036

**WILLIAM A. DORMAN**

*In Galileo's Garden: Thinking Critically About a Changed and Changing World* PEACE, POL, ECON

**DAN WEIL**

*Critical Thinking, Critical Writing, and Literature-Based Whole Language Instruction* ELEM

**WENDY OXMAN**

*Many Faces of Critical Thinking* G
CONFERENCE SCHEDULE

MONDAY
10:30 AM - 12:00 PM

Continued

JANET L. WILLIAMSON.................. STEV 3008
Portfolios: Monitoring Student Thinking K-12

PENNY HEASLIP......................... STEV 2049
Shifting Paradigms in Education and Health Care Reform: A Nursing Perspective HEALTH, COLL, CURRICULUM, POL

MARLYS MAYFIELD, KEVIN MCCORMACK .... STEV 3072
Four Approaches to Conscious Problem Solving: A Critical Thinking Tool Kit for Classroom or Community Use G, H CON

DOMINGA L. REYES, KEVIN MCCORMACK .... STEV 3072
Global Education: The Way to Peace MUL-CULT, PEACE, COLL, MEDIA

MARLYS H. WITTE, ANN KERWIN, CHARLES L. WITTE ........ IVES 35
It Pays to Be Ignorant: The Costs and Value of Not-Knowing K-12, COLL, HEALTH

JOSEPHINE NAEBRASS, GAIL KENDALL ........ STEV 3049
"Putting it all together:" An Integrated Staff Development Model G, STAFF DEV

HENRY N. BUSCHER, LIANNE K. SCHNEIDER .... DAR 139

GLORIA PIERCE ....................... IVES 78
The Centrality of Critical Thinking in Educating for Diversity COLL, BUS, MUL-CULT, SOCIAL

MELVIN POAGE ....................... DAR 122
A Critical Thinking Approach to Mathematics MATH, COLL, MIDDLE/HIGH

WILLIAM K. MAREK .................. STEV 3046
Reason (Unreason), Thought (Rational and Irrational), and Human Conflict PEACE, H CON, PSYCH

CHARLES ANGELETTI ............... IVES 79
Relics, Letters, and Walk-Abouts: Creative Expression Through Critical Thinking COLL, SOC STUD

T. EDWARD DAMER ............... STEV 3040
How to Construct Effective Moral Arguments G, ADV

THOMAS TOMINAGA .................. STEV 3026
Agenda of the "Middle-Way" Logic of Buddhist Economics for Economic Realities and their Implications ECON, CONF THEME, MUL-CULT

LAWRENCE WEINSTEIN ............... STEV 3036
Papers Can Wait: A Freshman Composition Course in Which Practice in Inquiry Comes First COLL, LANG

RON McBRIDE, GLENDA W. BEAMON .... STEV 2065
Preparing the Future Critical Thinker: Structuring the Middle School Learning Environment for Critical Thinking MIDDLE, G

LYNN P. DIETER ..................... STEV 3028
A Model to Teach Ethical Decision Making MIDDLE/HIGH, COLL, H CON, LANG

CHRISTINA SLADE ..................... IVES 45
Critical Thinking in Groups COLL, MEDIA, LANG, TEST

JANNA LEE HUGO ..................... STEV 3030
Teaching to the Brain K-12

GRANT LUCKHARDT ................. NICH 304
Criteria for Assessing Authorities COLL, TEST

FLORENCE FAY Pritchard ........ NICH 166
Negotiating and Using Frames to Develop Specific Critical Thinking and Writing Skills LANG, G

CANDACE JESSE STOUT ............. STEV 2083
Writing for Critical Thinking in the Arts G, ART

ERNEST ROSENBERG ................. STEV 1040
What Are the Most Relevant Science and Social Science Curricula for the Future? COMPUTER ASSISTED ED, ENV, ECON, COLL, HIGH

STUART M. KEELEY ..................... IVES (WARREN)
What Can Psychotherapists Tell Us About How to Cope with Resistance to Critical Thinking PSYCH, COLL

MARK WEINSTEIN ................. STEV 1002
Educating for Development: Critical Thinking Across the Disciplines ENV, ECON, H RIGHTS, STAFF DEV

LYNDA N. BROWN, SANDRA A. JONES .... STEV 2049
Critical Thinking: A Super-Ordinate Concept for Teaching Nursing HEALTH, TEST

HILDA CABANEL-EVANS ........... STEV 3072
Ethnic Multi-Culturalism: Not for the 21st Century MUL-CULT

VIRGINIA O'KEEFE .............. IVES 78
Empowering Students and Teachers Through Critical Thinking Research STAFF, DEV, MIDDLE/HIGH, LANG
## CONFERENCE SCHEDULE

### MONDAY

**12:15 PM – 1:45 PM**

**Edward Rippy**  
STEV 3046  
Continued

*The Multiple Costs of "Defense:" Spending Money, Freedom, and Blood to Protect "Our" Vital Interests Around the Globe*  
PEACE, MEDIA, ECON, PSYCH

**Peter F. Bell**  
STEV 3026

*Integrating Race and Gender into the Economics Curriculum: Theory and Classroom Practice*  
ECON, MUL-CULT, FEM, COLL

**Francine Malder Jamin**  
IVES 45

*A Small Band in a Circle of Light — Teaching Writing and Reasoning in a "Quality Circle"*  
LANG, COLL, MID/HIGH

**Robert N. Gilbert**  
STEV 3030

*Doing Survey Research in the Intro Social Science Course: Putting Science Back into Social Science, an Example of Critical Thinking*  
SOC STUD, HIGH

**Letitia M. Johnston, Connie Cantrell**  
STEV 3077

*Risk Taking and Real Issues: A Perspective of the Teacher as Learner*  
CURRICULUM DEVELOPMENT

**Ted Linden**  
STEV 2083

*Toward a New Generation of Educational Software to Teach Critical Thinking*  
COMPUTER, MID/HIGH

**1:30 PM – 3:00 PM**

**Matthew Lipman**  
IVES 119

*Philosophy for Children as Critical/Creative Thinking*  
K-12

**Gerald Nosisch**  
SUMPR

*Critical Thinking in the Disciplines: The "Logic of" a Discipline*  
G, BEG

**Jane Willson**  
CAR 68

*Teaching High School Students How to Assess Their Own Thinking*  
HIGH, TEST, BEG

**Dennis Matthies**  
STEV 3008

*Plowing and Grinding vs. Working Reflectively*  
C, BEG

**John Hoaglund**  
ART 108

*Pre- and Post-Testing a College Critical Thinking Course*  
COLL, TEST

**Richard Ognibene**  
IVES 35

*Thinking Critically about the Total Quality Movement in Education*  
STAFF DEV, K-12

**Eileen Gambrill**  
DAR 112

*Behavioral Analysis: A Complement to Thinking Critically About Global Problems*  
ENV, PSYCH, COLL

### CONFERENCE SCHEDULE

**Deanna Yameen, Lynn Chong, Frederic Torzs, Patricia Allen**  
STEV 3049

*Thinking About Thinking: Uncovering Ideologies in Thought*  
COLL, MUL-CULT

**Richard B. Lewis**  
DAR 122

*Critical Thinking in All Engineering Classrooms*  
ENGINEERING, MATH/SCI, COLL

**John Byrd**  
NICH 173

*Metaphorical Thinking in the 21st Century: Frill, Option, or Sina Qua Non?*  
LANG, SOC STUD, MID/HIGH

**Bradley Bowen**  
STEV 3040

*Justifying Critical Thinking*  
THEORY, COLL

**Timothy M. Melchior**  
STEV 3036

*Connecting Learning Through Thinking Dichotomies: Memorial's (Valley Stream, New York) Polar Conflicts*  
STAFF DEV, K-12

**Ervin Sparapani**  
STEV 2065

*The Thinking/Learning System: A Strategy for Independent Thinking and Learning*  
G

**David Glaubinger**  
STEV 3028

*Don't Worry! We'll Teach You Everything You'll Need to Know*  
ADULT EDUCATION

**Craig Gibson**  
NICH 304

*Critical Thinking in the Research Process*  
LIBRARY SCIENCE, G, SOC STUD

**3:15 PM – 4:45 PM**

**Robert Heilbroner, Richard W. Paul**  
EPT

*Lester Thurow's Vision of the New Global Economic Realities: Can We Develop a First-Rate Economy and First-Rate Standard of Living, if Citizens Learn Merely Work-Related Skills and Cannot Think Critically Within Alternative Points of View?*  
G, CONF THEME

**Lorenz Boehm, Mark Weinstein**  
IVES (WARREN)

*Balancing Acts: Working With Colleagues to Teach Critical Thinking*  
STAFF DEV, COLL

**Yehudi O. Webster**  
STEV 1002

*Are There White and Black People? Reasoning About Racial Classification*  
G, SOC STUD, MUL-CULT

**Dan Weil**  
SUMPR

*Reasoning Within Different Cultural Points of View: Using Language Instruction for Early Childhood Social Studies*  
ELM

**John Chaffee, Sandra Dickinson**  
IVES 119

*Critical Literacy and Critical Thinking: Partners in Education*  
LANG, COLL, MID/HIGH
**MONDAY**

**3:15 PM - 4:45 PM**

Continued

**CHET MEYERS** ........................................ CAR 68
Creating an Active Learning Classroom that Encourages Critical Thinking COLL, MID/HIGH

**JOHN R. FEARE, SANDRA PARKS, ROBERT SWARTZ** ........................................ STEV 3008
Critical Thinking and Global Economics Within a Theological Dimension CONF THEME

**DONALD LAZERE** ........................................ STEV 2049
Literature for Critical Thinking COLL, MID/HIGH

**MAURICE A. FINOCCHIARO** ........................................ ART 108
Galileo and Critical Thinking SCI, H CON, H RIGHTS

**WILLIAM ZEIGER** ........................................ STEV 3072
Freedom of Imagination: Stories and Critical Thinking MUL-CULT, LANG, COLL, MID/HIGH

**VINCENT RYAN RUGGIERO** ........................................ DAR 112
Who’s to Say What’s Right and Wrong? G, H CON

**ELISA DE LA ROCHE** ........................................ IVES 35
Drama, Critical Thinking, and Social Issues DRAMA, H CON, SOC

**JACKIE A. GIULIANO** ........................................ STEV 3049
Critical Textbook Selection — A Fundamental Prerequisite for Teaching: Watching Out for Subtle Gender Bias FEM, COLL, TEST, SOC

**OGDEN MORSE** ........................................ IVES 78
Literature and Problem Solving: The Integration of Thinking Skills and Subject Matter MID/HIGH, COLL

**YUN JA LASSEK** ........................................ DAR 139
Teaching Environmental Ethics Through Various Critical Thinking Methods ENV

**WENDY OXMAN** ........................................ DAR 122
Case Studies in Teaching for Critical Thinking MUL-CULT, G

**WILLIAM TAYLOR** ........................................ DAR 137
Strategies for Teaching Critical Thinking COLL, MID/HIGH, SOC STUD

**MEENAKSHI (MEENA) DALAL** ........................................ STEV 3046
Economic Reality and Human Conflict ECON, CONF THEME

**PETER FACIONE, JOANNE GAINEN** ........................................ NICH 173
Are New College Students Disposed to Think? LANG, COLL, TEST

---

**CONFERENCE SCHEDULE**

- **ROBERT C. PINTO** ........................................ STEV 3040
  Can Learning Logic Help Students Improve Their Thinking? ADV, PSYCH, COLL

- **CARROL STEEDMAN** ........................................ STEV 3026
  Critical Thinking at the Work Site, in Developmental English Classes, and in Continuing Professional Education: Argument and the Case Study COLL, LANG, BUS, H CON

- **RICHARD J. McCALLUM** ........................................ STEV 3036
  Using Writing as a Method of Encouraging Critical Thinking COLL, MID/HIGH, LANG

- **WILLIAM PENDELETON** ........................................ STEV 2065
  Instructional Design for the 21st Century: High School Classrooms That Nourish Critical Thinking for All Students HIGH, MUL-CULT

- **RENATE OTTERBACH, EVA HONSA-HOGG** ........................................ IVES 45
  Cooperative Learning and Critical Thinking: A Winning Combination MID/HIGH, ADV, SOC STUD

- **RENÉE RUDERMAN** ........................................ STEV 3030
  Reading the Spaces Between Words: A Critical Inquiry into Toni Morrison’s Use of Language in The Bluest Eye FEM, LANG, COLL

- **JUDITH SCHWARTZ** ........................................ STEV 3077
  Developing Reflective Practitioners: How Teacher Research Leads to Improved Critical Thinking and Classroom Instruction K-12, STAFF DEV

- **JEANNE BECJOIS** ........................................ NICH 166
  In the MUD: A Critical Reading Strategy HIGH, LANG, MEDIA, SOC STUD

- **KIM SKOOG, DOMINICA K. CALLAGHAN** ........................................ STEV 2083
  Ways to Encourage Critical Thinking in Medical Ethics Classes HEALTH, ETHICS

---

**BANQUET** ........................................ DINING COMMONS

  **5:30 PM - 8:00 PM**

**NATIONAL COUNCIL MEETING** ........................................ SUMPR

  **8:00 PM - 9:15 PM**

**EVENING SOCIAL** ........................................ DINING COMMONS

  **8:00 PM - 11:00 PM**
CONFERENCE SCHEDULE

TUESDAY

8:45 AM - 10:15 AM

RICHARD W. PAUL .................................. IVES (WARREN)
How to Design Assignments and Activities (So That Students Learn
How to Assess Their Own Performances)  G, TEST, BEG

VINCENT RYAN RUGGIERO ...................... STEV 1002
Teaching Thinking Across the Curriculum  G

JOHN CHAFFEE .................................. IVES 119
Critical and Creative Problem Solving  G

GERALD NOSICH ................................. SUMPR
Some Nuts and Bolts of Critical Thinking: Interpreting What People
Say  G, BEG

RALPH H. JOHNSON .................. STEV 3008
Argumentation: A Pragmatic Approach  THEOR

NOREEN C. FACIONE, CAROL A. SANCHEZ ...... STEV 2049
Critical Thinking Research and the Health Professions  HEALTH, PSYCH,
TEST, ADV

JACKIE A. GIULIANO .................. ART 108
Gender and Science: The Impact of the Absence of a Feminist Voice —
Putting the Human Spirit Back into Science Education  FEM, MATH/SCI,
SOC/STUD, ENV

WILLIA L. NWA .................................. STEV 3072
Cultural Diversity: What Should Educators Do About It?  MUL/CULT, H
RIGHTS, COLL, M/L/HIGH

JOHN EDWARDS, TIMOTHY MELCHIOR ........ IVES 35
The Researcher and the Practitioner  MUL/HHIGH, STAFF DEV, BUS, G

CAROL M. ELLIS ............................... STEV 3049
Critical Thinking as Controversy  FEM, LANG, COLL, MUL/CULT

JOHN ENRIGHT ......................... DAR 139
Economology: Managing the Earth (and Us) with Wisdom  ENV, ECON,
PSYCH, CONF THEME

PETER FACIONE .............................. IVES 78
Teaching Critical Thinking Using TV Drama  LANG, COLL, MEDIA,
MUL/HHIGH

OBED NORMAN .......................... DAR 122
Critical Thinking and the Education of Science Teachers: Building a
Community of Meaning Makers  SCI, MUL/CULT, G

JOANN CARTER-WEELS, CINDY L. LYNCH ....... DAR 137
Adult Development and the Assessment of Critical Thinking  TEST,
PSYCH, COLL

GAIL A. KENDALL, DIANE WHEELEER ........ NICH 173
Project Think: An Integrated Language Arts Approach to Critical
Thinking  LANG, MUL/HHIGH, H RIGHTS, ENV

ROBIN SKEWES-COX, BENNET SKEWES-COX .... STEV 3046
How to Think About War and Peace, Part I  H CON, PEACE, G

BURTON VOORHEES ........................ STEV 3040
Moral Orientation and Critical Thinking  ADV, COLL, MATH/SCI

JENNIFER WILD .......................... STEV 3026
Action Science: The Skills Needed to Critically Reflect on Practice
BUS, H CON, PSYCH, ADV

HARRY GAVENTA .......................... STEV 3036
Reconstruction of Classroom Climates: Operations in Skepticism and
Scrutiny  COLL, MUL/HHIGH, SOC STUD

JANIS L. SILVERMAN .................... STEV 2065
Economics for Kids  ECON, K-12, SOC STUD

LYNN J. LOPHTHOUSE, PH.D........ IVES 45
A Prescription for Building Critical Thinking Skills Through
Persuasive Message Construction  G

RICHARD KELDER ......................... STEV 3028
Teaching Critical Thinking and Argumentation from Global
Perspectives  ADV, H CON, H RIGHTS, COLL

KAY BLAIR ............................... STEV 3030
Improving Critical Thinking Through Supplemental Instruction  COLL

ANNE I. LEWIS, KEVIN FELDMAN ........ NICH 304
Activating and Organizing Thinking: Scaffolded Instructional
Strategies for the Heterogeneous Classroom  K-12, SPECIAL ED, LANG

SHANNAH PARNELL ..................... NICH 166
Re-Reading Hawthorne's 'A': Ideologies and Developing Critical
Awareness in the Classroom  LANG, COLL, M/L/HIGH

DOUGLAS B. ARETZ ....................... STEV 2083
School-to-Work Transition (Tech Prep) in Metro-Milwaukee  G, BUS

JANE WILLSEN .............................. IVES 76
Critical Thinking: The Magic Wand That Integrates Curriculum
(Video, in studio)  ELEM, MID, STAFF DEV

10:30 AM – 12:00 PM

RICHARD W. PAUL ................................ IVES (WARREN)
Pseudo-Critical Thinking: Beware! (How to Distinguish Authentic
and Substantial Approaches to Critical Thinking from the Slick
Counterfeits Now Sweeping the Educational Marketplace)  G, TEST, BEG

WILLIAM A. DORMAN ..................... STEV 1002
Perceptions, Misperceptions, and Damned Nonsense: The News
Media and World Affairs  MEDIA, POL, COLL, MUL/HHIGH
CONFERENCE SCHEDULE

TUESDAY
10:30 AM – 12:00 PM

Continued

DAN WELL ........................................ SUMPR
Critical Thinking and Elementary School Mathematics ELM

JOHN BARELL ........................................ IVES 119
Crew Members on Santa Maria: Problem-Based Learning, Inquiry,
and the Pursuit of Deep Understanding G, SOC STUD

MARK WEINSTEIN ........................................ CAR 68
How to Get from Ought to Is: Post-Modern Epistemology and Social
Justice HRIGHTS, THEORY

T. EDWARD DAMER ........................................ STEV 3008
A Code of Conduct for a Critically Thinking Citizenry: A Proposed
Method for Effective Resolution of Conflicts G, H CON

MARYBETH YOUNG ........................................ STEV 2049
Developing Critical Thinking Abilities as a Basis for Nursing
Practice HEALTH, COLL

OGDEN MORSE ........................................ ART 108
Making Meaning in the Classroom: Skills, Perspectives, and Subject
Matter MID/HIGH, COLL, LANG

CONSTANCE DEVEREAUX, WILLIAM G. MUNN ........................................ DAR 112
Is There a Problem Here? A Policy Analysis of Critical Thinking in
California Community Colleges COMM COLL, STAFF DEV, TEST

K. HELMUT REICH, SANDRA PARKS ........................................ STEV 3049
Spirituality and Critical Thinking PSYCH, MUL-CULT

PETER DOW ADAMS ........................................ IVES 78
Critical Thinking in the Core Classroom MUL-CULT, COLL, HUMANITIES, ART

DON WAXMAN, J. THEODORE STANLEY, JOHN ZENTNER ........................................ DAR 139
Restoration of the Natural Landscape: Issues and Examples ENV

JUDY FISHEL ........................................ DAR 122
Benmarks in Critical Thinking: What Skills at What Age? The
Comet Is Coming SCI, MATH, K-12

JEAN ANN FOLEY ........................................ NICH 173
Teacher Ethos: A Veil of Perception That Precludes Critical Thinking
STAFF DEV, ELEM, MATH/SCI

BENNET SKEWES-COX, ROBIN SKEWES-COX ........................................ STEV 3046
How to Think About War and Peace, Part II H CON, PEACE, G

RUBY TROW, MARILYNN FIBECK ........................................ DAR 137
Involving Students in Assessing Academic Performance TEST, G

LUNCH ........................................ DINING COMMONS
Dorm residents between 11:30 – 1:30 only: Residence Dining Hall

THOMAS SECCO ........................................ STEV 3040
The Formation of Knowledge and the Mission of Intelligence ADV

DEBRA M. MURPHY, FRAN TOOMEY ........................................ STEV 3026
Leadership/Leadership Model: “Traveling into the 21st Century”
BUS, COLL

LARRY LITECKY ........................................ STEV 2065
Active Learning, Critical Thinking, and Global Economics COLL, ECON, TEST

SEBASTIAN J. VASTA, MIRIAM K. MLYNARSKI ........................................ NICH 204
Information Access and Critical Thinking: Managing the
Information Explosion G, LIBRARY SCIENCE

M. STAR MAHARA, S. DAWN PATTERSON ........................................ STEV 3028
Writing to Learn: The Use of Journals to Teach and Evaluate
Thinking COLL, TEST, HEALTH

BARBARA J. HITCHKO, DAN BURRITT ........................................ IVES 45
Teaching for the Future and Preparing Students for the Educational
Demands of the 21st Century: Problems, Strategies, and Solutions
K-12

THOMAS J. SCHEFF ........................................ STEV 3030
Alienation in Families and Classrooms: Repairing the Bond ADV, H
CON, SOCIOLOGY, PSYCH

JOHN C. S. KIM ........................................ STEV 3077
Creative Critical Approaches to Educational Reform COLL, MID/HIGH,
MUL-CULT, LANG

BILL GRAVES ........................................ NICH 166
The Reader, the Participant, the Social Order, and the Subversion of
Critical Thinking: Teaching Shirley Jackson’s “The Lottery” for Real
PSYCH, PEACE, LANG, H CON

ROBERT ESFORMES ........................................ STEV 2083
Critical Thinking Journals and Newsletters MEDIA, LANG, COLL

YEHUDI O. WEBSTER ........................................ IVES 76
On Becoming a (Better?) Critical Thinking Instructor: The Elements
of Thought G, VIDEO

JEFFREY REED, SCOTT SCHOEPP ........................................ STEV 1040
Illustrations and the Information Age: Using Visuals to Stimulate
Critical Thinking COMPUTER, MID, SCI, SOC STUD

12:00 PM – 1:30 PM OR 1:45 PM – 3:00 PM

LUNCH ........................................ DINING COMMONS
Dorm residents between 11:30 – 1:30 only: Residence Dining Hall
CONFERENCE SCHEDULE

TUESDAY
12:15 PM - 1:45 PM

M. NEIL BROWNE ........................................ ART 108
Tensions Between Democracy and Critical Thinking: Implications
for Our Teaching  SOC STUD, MID/HIGH, COLL

CYNTHIA A. BARNES ..................................... IVES 35
Developing Teachers: "When the Student Is Ready"  G

DAVID SMOCK ............................................ DAR 139
Thinking Critically About Nature: Using Critical Theory  ENV, SOCIOl,
SOC STUD

NORMAN J. UNRAU ..................................... IVES 78
Critical Thinking in the Narrative Mode: The Force of Stories  LANG,
SOC STUD, G

JAMES HENRY QUINA .................................. NICH 173
Teaching Conflict Resolution Through Metaphor  LANG, H CON, H
RIGHTS, SOC STUD

PAUL J. BAKER ........................................... STEV 3036
Critical Thinking in Social Science and Social Studies: Authentic
Work and Authentic Assessment  HIGH, SOC STUD, SOCIOl, TEST

JONAH RASKIN ........................................... NICH 204
Abbie Hoffman: Critical Thinker?  MEDIA, POL, SOC STUD, LANG

LAUREN COODLEY ...................................... STEV 3028
Psychology as a Critical Thinking Requirement: How to Do it  PSYCH,
COLL

NORMAN J. BETZ ......................................... STEV 3030
Classroom Materials and Methods for a Critical Thinking or Writing
Course  COLL, LANG, MEDIA

JEAN ROBB, HILARY LETTS ............................. STEV 2083
Turning Critical Thinking into an Adventure for All  G

1:30 PM - 3:00 PM

MATTHEW LIPMAN ...................................... IVES 119
Alternatives in Narrative Philosophy  K-12

SUSAN HALES ............................................. SUMPR
Uncovering the Connections Among Self-Esteem, Critical Thinking,
Moral Behavior, and Educational Achievement, Part I  K-12, PSYCH

LES GOTTESMAN ....................................... CAR 68
Toon Logic  G

VINCENT RYAN RUGGIERO ............................ STEV 3008
Critical Thinking and Total Quality Management  BUS, G, STAFF DEV

CONFERENCE SCHEDULE

KIM SKOOG ............................................. STEV 3072
A Cross-Cultural Study of the Interplay Between Reason, Revelation,
and Realization  MUL-CULT

JUDITH COLLISON ..................................... STEV 3049
Multiple Perspectives in Curriculum Development for Teacher
Education  ELEM, MUL-CULT

HARRIET CHAMBERLAIN ............................... STEV 3046
Critical Thinking: Catalyst for "Fairminded" Change  H CON, PSYCH,
BUS

JIM POLLARD ........................................... DAR 137
Learners Can Achieve 100% (A Self-Assessment Workshop)  TEST,
ADV, BUS, G

CONNIE MISSIMER ..................................... STEV 3040
Getting up to Snuff in Theorizing About Critical Thinking  ADV,
THEORY, MUL-CULT

RICHARD L. LAUGHLIN, JANET LAUGHLIN ........ STEV 3036
An Educational Paradigm Shift  G

MANUEL MENA ........................................... STEV 3026
Bridging Academia and Business: A Reality-Based Curriculum  BUS

JARED HAYNES ......................................... STEV 2065
Cultivating Critical Thinking in Classroom Discussions  COLL

LARRY TOMLINSON ..................................... IVES 45
Critical Thinking and Cultural Bashing  POL, SOC STUD, MEDIA

HELEN E. R. DITZHAZY ................................ STEV 3077
Who Eventually Pays?  MID/HIGH, PSYCH, ECON

DAN WEIL ............................................... IVES 76
Constructing a Critical Multi-Cultural Curriculum  ELEM, VIDEO

GEORGE COLLISON ..................................... STEV 1040
Project BioQUEST: New Tools for Critical Thinking and
Constructionist Pedagogy in Life Science Education  G, SCI, ENV,
COMPUTER ASST ED

MARK WEINSTEIN ..................................... STEV 1002
Critical Thinking Across the College Curriculum: What Faculty
Wants and Needs  STAFF DEV, COLL

SUSAN HALES ............................................. SUMPR
Uncovering the Connections Among Self-Esteem, Critical Thinking,
Moral Behavior, and Educational Achievement, Part II  K-12, PSYCH

GERALD NOSICH ....................................... IVES 119
Learning to Think Critically Within a Discipline  G, BEG
CONFERENCE SCHEDULE

TUESDAY
3:15 PM - 4:45 PM
Continued

SANDRA PARKS .................................. CAR 68
Using Graphic Organizers to Improve Thinking and Learning  c

RICHARD POPE .................................. STEV 3008
Elementary School Language Arts and Critical Thinking — The
Process for Generating a Nation of Active Learners  ELEM, LANG

TERRY VALIGA .................................. STEV 2049
The Effect of Planned Teaching and Evaluation Strategies on
Nursing Students' Cognitive Growth and Critical Thinking: Pursuing
Reform Within Nursing Education  HEALTH, NURSING

MARK A. WILCOX .................................. ART 108
The Brain: A Model for the Effective Formation and Utilization of
Technis  PSYCH, HIGH, BUS

JUDI HIRSCH .................................. STEV 3072
The Dynamic Assessment of Learning Potential: Combining the
Theories of Freire and Feuerstein  TEST, MUL-CULT, PSYCH, H RIGHTS

LISA SMITH, JERALDINE G. DAY .......... IVES 35
U.S. Tobacco in the World Market: A Global Economic and Social
Dilemma  HEALTH, ECON, BUS, MEDIA, POL

HILDA CABANEL-EVANS ...................... STEV 3049
Thurrow's Head to Head: An Exercise in Critical Thinking  ECON,
ADV, G

ROBERT McCONNELL, DANIEL C. ABEL .......... DAR 139
Enhancing Critical Thinking Through Quantification of
Population/Environment Issues  ENV, MATH/SCI, G

JOHN EDWARDS .................................. IVES 78
Action Thinking for Change  BUS, STAFF DEV, G

ARTHUR COHEN .................................. STEV 3046
"Become Streetwise!" A Women's Guide to Personal Safety  G, H CON

DONALD LAZERE .................................. NICH 173
Teaching the Political Conflicts in Writing Courses  LANG, SOC STUD,
POL, MEDIA

DONALD HATCHER .................................. DAR 137
Grading the Ennis-Weir Critical Thinking Essay Test  TEST, G

WENDY OXMAN .................................. STEV 3026
The THORP Game  MUL-CULT, G

PRISCILLA AGNEW .......................... STEV 2065
Sex, Death, Advertising, and Children in Our Changing World
MEDIA

CONFERENCE SCHEDULE

ADOLFO SANCHEZ, LUZ E. LOPEZ ............. NICH 204
Making Connections  K-12

VIRGINIA B. EPSTEIN ............................ IVES 45
Critical Reading and Popular Culture: Women as Heroes In Film
FEM, K-12, H CON

MICHAEL McCLAIN-MIDKIFF .................... STEV 3030
Levels of Thoughtfulness in Fifth Grade History and Social Science
Lessons: An Examination of Teacher Practice  K-12, SOC STUD, TEST

DIXON WRAGG .................................... STEV 3077
Critical Thinking and Social Responsibility: From the Classroom to
the World  H RIGHTS, SOCIO, POL, H CON

PATRICIA B. CHEYNE ......................... NICH 166
Global Awareness Through Aesthetic Education  MUL-CULT, K-12, SOC
STUD, ART

PENNY HEASLIP, RICHARD W. PAUL ........ IVES 76
Critical Thinking and Intuition in Nursing Practice  HEALTH, COLL,
CURRICULUM, POL, VIDEO

7:00 PM - 11:00 PM

Evening Social  .................................. DINING COMMONS

WEDNESDAY
8:45 AM - 10:15 AM

RICHARD W. PAUL ............................... STEV 1002
Staff Development: If It Is Not Long-Term and Comprehensive, It
Won't Work!  G, STAFF DEV, BEG

GERALD NOSICH .................................. IVES 119
Some Nuts and Bolts of Critical Thinking: Identifying People's
Assumptions  G, BEG

M. NEIL BROWNE, STUART M. KEELEY ........ ART 108
Getting Started as a Teacher of Critical Thinking: Planning
Curriculum Materials, Assignments, and Evaluation  COLL

R. SCOTT SMITH .................................. STEV 3072
A Framework for Applying Critical Thinking to Inter-Cultural
Encounters  MUL-CULT, H CON

KATY DAWSON .................................. IVES 35
Five, Six, and Seven Year Olds: Powerful Thinkers Right from the
Start!  ELEM, H CON, LANG, MATH, BI-LINGUAL

54
**WEDNESDAY**

**8:45 AM - 10:15 AM**

**Continued**

**LINDA NOWELL** ................................................................. STEV 3049
Critical Talk: Developing Critical Thinking and Critical Consciousness  K-12, LANG, ECON

**RUTH M. LORING** ............................................................... IVES 78
Critical Thinking and Professional Development: An Approach Consistent with “Communitarian Capitalism” TEST, STAFF DEV

**WILLIAM A. HAYES** ........................................................... DAR 122
Designing Effective Thinking Activities in Science: Principles, Theories, Attitudes, Habits, and Skills SCI, MID/HIGH, COLL

**KIRK G. DADDOW** ........................................................... NICH 173
Teaching Critical Thinking in the Advanced Writing Course LANG, MID/HIGH, SOC STUD

**MARGARET N. TURNER, CLAUDETTE FRANKLIN, JUDITH B. SMITH** ........................................................... DAR 137
Restructuring and Reform of Teacher Education: A Liberal Arts College Perspective COLL, EDUC

**RENE TRUJILLO, JR.** .......................................................... STEV 3046
The Debate Over Human Rights and Social Justice After the Spanish Discovery of the “New” World MUL-CULT, POL, H RIGHTS, LANG

**CHARLES V. BLATZ** .......................................................... STEV 3040
Critical Thinking and the Sovereignty of Epistemic Communities ADV, BUS, ECON, POL

**PETER HALL** ................................................................. STEV 3036
Traps and Tools G, BUS

**BRUCE BORAAS** ............................................................. STEV 3026
Education and Training for a Global Perspective — One Collective View from Industry BUS, G

**MARK R. STONER, LINDA MARTIN** ............................................. STEV 2083
Teaching as Therapy: Conveying Thinkers to Holonomy ADV, G, PSYCH

**10:30 AM - 12:00 PM**

**RICHARD W. PAUL** ............................................................ CAR 68

**SALLIE L. WILSON** .......................................................... STEV 3008
Year 2000: Creating a Culture of Thinkers G, ELEM, MATH

---

**CONFERENCE SCHEDULE**

**PAUL J. BAKER, JUDITH LAWSON** ............................................. STEV 2049
Developing Thinking Programs in Three K-8 Schools: Lessons from the Field K-12

**MARK A. WILCOX** .......................................................... ART 108
Did You Ever Have to Make Up Your Mind? Using Whole-Brain Thinking to Make Good Decisions BUS, HIGH, PSYCH

**SUE Y. LUCKEY** ............................................................. STEV 3072
Active Learning Strategies That Enhance Critical Thinking COL, TEST, ACTIVE LEARNING

**LEROI DANIELS, SHARON BAILIN, ROLAND CASE, JERROLD COOMBS** .......................................................... IVES 35
Operationalizing Critical Thinking: A Curriculum, Instruction, and Assessment Model (Project OCRIT) ADV

**HILDA CABANEL-EVANS** .................................................... STEV 3049
Classification Skills: Essential Yet Over-Looked G

**DR. NICKI HOYT** ............................................................. IVES 78
Critical Thinking Teaching Strategies in Nursing and Health Sciences HEALTH, MUL-CULT, H RIGHTS, COLL

**LOWELL COOPER** ............................................................. IVES 79
Using Critical Thought as a Way Out of Negative Relationship Cycles PSYCH, H CON

**ANNIE K. KOSHI** ............................................................. NICH 173
Holistic Grammar Through Socratic Questioning LANG

**CINDY L. LYNCH** ............................................................. STEV 3026
Reflective Judgment in the Business Classroom COLL, BUS, STAFF DEV

**DAVID FITZGERALD** .......................................................... STEV 3030
Integration of Reflective Thinking into the Curriculum COLL, PSYCH, BUS, TEST

---

**LUNCH** ................................................................. DINING COMMONS
Dorm residents between 11:30 - 1:30 only: Residence Dining Hall

---

**Wrap-up** ................................................................. IVES (WARREN)
SPECIAL INTEREST GROUPS
SUNDAY, 7:00 PM

IN ORDER TO facilitate networking between colleagues with similar interests, special interest group meetings will be combined with the Sunday night social held in the Commons. Tables will be designated for various interest groups to meet and organize themselves. The nature and extent of the organization is dependent on the will of the members present. We suggest as a minimum that each group develop a sign-up list with addresses and phone numbers. To facilitate this, a sign-up form will be made available to each group and collected at the end of the evening. Free copies can be requested at the Student Union Copy Center (downstairs) beginning Monday afternoon.

Below is a list of the interest groups which were chosen based on information obtained from your registration forms. Additional groups may be added and impromptu groups will, of course, be welcomed.

CRITICAL THINKING IN THE DISCIPLINES
Critical Thinking in the Arts
Critical Thinking in Business and Management
Critical Thinking and Economics
Critical Thinking and Education
Critical Thinking and Gifted Education
Critical Thinking and Informal Logic
Critical Thinking and Language Arts

Critical Thinking and Mathematics
Critical Thinking in Nursing
Critical Thinking and Philosophy
Critical Thinking and Psychology
Critical Thinking and the Sciences
Critical Thinking and Social Studies and History

CRITICAL THINKING PEDAGOGY
Critical Thinking and Feminism
Critical and Multi-Cultural Thinking
Critical Thinking Staff Development

CRITICAL THINKING AND EDUCATIONAL LEVELS
Critical Thinking and Elementary School
Critical Thinking and Middle School
Critical Thinking and High School
Critical Thinking and the Community College
Critical Thinking and the University
SELECTED SESSIONS
LISTED BY AUDIENCE CODE

ADVANCED

DARLENE BOYD ........................... MONDAY 8:45; IVES 45
Teaching: A Conceptual Analysis  G, ADV

ROBERT C. PINTO ........................... MONDAY 3:15; STEV 3040
Can Learning Logic Help Students Improve Their
Thinking?  ADV, PSYCH, COLL

BURTON VOORHEES ........................ TUESDAY 8:45; STEV 3040
Moral Orientation and Critical Thinking  ADV, COLL, MATH/SCI

BEGINNERS

GERALD NOSICH ........................... SUNDAY 1:30; IVES (WARREN)
An Introduction to Critical Thinking: What Is It? Why
Should I Teach for It? How Can I Teach for It?  G, BEG

LORENZ BOEHM ............................ SUNDAY 1:30; STEV 1002
Natural Allies: Teaching, Learning, Writing, and Critical
Thinking, Part I  COLL, TEST, MID/HIGH

CONNIE DE CAPITE ........................ SUNDAY 1:30; STEV 3072
Critical Thinking for All Students  LANG, SOC STUD, SCI

LORENZ BOEHM ............................ SUNDAY 3:15; STEV 1002
Natural Allies: Teaching, Learning, Writing, and Critical
Thinking, Part II  COLL, TEST, MID/HIGH

JUDY R. DOWNS ............................. SUNDAY 3:15; ART 108
A Mini-Workshop in Critical and Creative Thinking  K-12,
COLL, LANG

GLEN HARPER .............................. SUNDAY 3:15; STEV 3028
Come Think With Me: Assumptions, Backing Up to the
Start  H CON, K-12, BEG
SELECTED SESSIONS

BEGINNERS

Continued

EDWARD D’ANGELO .................. MONDAY 8:45; STEV 1002
Critical Thinking in Law  COLL, HCH, H RIGHTS, H CON

JANE WILLSEN .................. MONDAY 1:30; CAR 68
Teaching High School Students How to Assess Their Own Thinking  HCH, TEST, BEG

DENNIS MATTHIES .................. MONDAY 1:30; STEV 3008
Plowing and Grinding vs. Working Reflectively  G, BEG

LORENZ BOEHM, MARK WEINSTEIN . MONDAY 3:15; IVES (WARREN)
Balancing Acts: Working With Colleagues to Teach Critical Thinking  STAFF DEV, COLL

RICHARD W. PAUL .................. TUESDAY 8:45; IVES (WARREN)
How to Design Assignments and Activities (So That Students Learn How to Assess Their Own Performances)  G, TEST, BEG

GERALD NOSICH .................. TUESDAY 8:45; SUMPR
Some Nuts and Bolts of Critical Thinking: Interpreting What People Say  G, BEG

RICHARD W. PAUL .................. TUESDAY 10:30; IVES (WARREN)
Pseudo-Critical Thinking: Beware! (How to Distinguish Authentic and Substantial Approaches to Critical Thinking from the Slick Counterfeits Now Sweeping the Educational Marketplace)  G, TEST, BEG

GERALD NOSICH .................. TUESDAY 3:15; IVES 119
Learning to Think Critically Within a Discipline  G, BEG

JOHN EDWARDS .................. TUESDAY 3:15; IVES 78
Action Thinking for Change  BUS, STAFF DEV, G

RICHARD W. PAUL .................. WEDNESDAY 8:45; STEV 1002
Staff Development: If It Is Not Long-Term and Comprehensive, It Won’t Work!  G, STAFF DEV, BEG

GERALD NOSICH .................. WEDNESDAY 8:45; IVES 119
Some Nuts and Bolts of Critical Thinking: Identifying People’s Assumptions  G, BEG

RICHARD W. PAUL .................. WEDNESDAY 10:30; CAR 68

BUSINESS

RICHARD S. HALL .................. SUNDAY 12:15; STEV 3026
The Impact of Critical Thinking on Corporate Training  BUS

JIM POLLARD .................. MONDAY 8:45; STEV 3008
Who Is the Boss? (An Empowerment Workshop)  COLL, BUS, H CON

JENNIFER WILD .................. TUESDAY 8:45; STEV 3026
Action Science: The Skills Needed to Critically Reflect on Practice  BUS, H CON, PSYCH, ADV

DOUGLAS B. ARETZ .................. TUESDAY 8:45; STEV 2083
School-to-Work Transition (Tech Prep) in Metro-Milwaukee  G, BUS

DEBRA M. MURPHY, FRAN TOOMEY . . TUESDAY 10:30; STEV 3026
Leadership/Leadership Model: “Traveling into the 21st Century”  BUS, COLL

VINCENT RYAN RUGGIERO ........ TUESDAY 1:30; STEV 3008
Critical Thinking and Total Quality Management  BUS, G, STAFF DEV

MANUEL MENA .................. TUESDAY 1:30; STEV 3026
Bridging Academia and Business: A Reality-Based Curriculum  BUS

BRUCE BORAAS .................. WEDNESDAY 8:45; STEV 3026
Education and Training for a Global Perspective — One Collective View from Industry  BUS, G

COLLEGE

LEAH SHELLEDA .................. SUNDAY 1:30; DAR 137
Does Logic Teach Critical Thinking?  COLL, TEST, LANG, ADV

JAMES P. MARSHALL .................. SUNDAY 3:15; IVES 78
Practicing Democracy in the Classroom Through the Application of Critical Pedagogy  COLL, H CON, MID/HIGH, SOCIOL

FRAN TOOMEY .................. SUNDAY 3:15; STEV 3036
Community Centered Learning: A Model for Creating a Thinking Community  COLL, PSYCH, SOCIOL, H CON

DONALD LAZERE .................. MONDAY 3:15; STEV 2049
Literature for Critical Thinking  COLL, MID/HIGH

JACKIE A. GIULIANO .................. MONDAY 3:15; STEV 3049
Critical Textbook Selection — A Fundamental Prerequisite for Teaching: Watching Out for Subtle Gender Bias  HEM, COLL, TEST, SOCIOL
SELECTED SESSIONS

CONSTANCE DEVEREAX,
WILLIAM G. MUNN ............... TUESDAY 10:30; DAR 112
Is There a Problem Here? A Policy Analysis of Critical
Thinking in California Community Colleges  COMM COLL,
STAFF DEV, TEST

GEORGE COLLISON .................. SUNDAY 3:15; STEV 1040
Visiting the Rainforest Via Computer Simulation and
Linking up for Awareness of Global Problems  M/D/HIGH,
ENV, COMPUTER ASSISTED

ERNEST ROSENBERG .................. MONDAY 10:30; STEV 1040
What Are the Most Relevant Science and Social Science
Curricula for the Future?  COMPUTER ASSISTED, ENV, ECON, COLLEGE

TED LINDEN .......................... MONDAY 12:15; STEV 2083
Toward a New Generation of Educational Software to
Teach Critical Thinking  COMPUTER, M/D/HIGH

JEFFREY REED, SCOTT SCHOEPP ....... TUESDAY 10:30; STEV 1040
Illustrations and the Information Age: Using Visuals to
Stimulate Critical Thinking  COMPUTER, M/D, SCI, SOC STUD

GEORGE COLLISON .................. TUESDAY 1:30; STEV 1040
Project BioQUEST: New Tools for Critical Thinking and
Constructionist Pedagogy in Life Science Education  G,
SCI, ENV, COMPUTER ASSISTED

BONNIE BAKER THORNE, ANN JERABEK .... SUNDAY 1:30; IVES 35
Developing Strategies That Use Critical Thinking to Infuse
a Global Perspective into the Curriculum  K-12, SOC STUD

MICHAEL FEER ....................... SUNDAY 1:30; STEV 3046
Decision Making and the World Market-Place  ECON, CONF THEME

ROBERT HEILBRONER, RICHARD W. PAUL .... SUNDAY 3:15; EPT
"The Relentless, Ubiquitous Pressure for Change:” How Do
We Protect the Public Good  G, CONF THEME

DENNIS MATTHIES ................. SUNDAY 3:15; IVES 79
The New Economy, the New Pedagogy  G

DONALD HATCHER ................... MONDAY 8:45; DAR 112
Thinking Critically About Public Policy Issues  CONF THEME

JUAN MIGUEL FERNANDEZ-BALBOA .... MONDAY 8:45; DAR 139
Educational Reform for Social Transformation and
Environmental Renewal  ENV, SOC STUD, CONF THEME

GEORGE H. HANFORD ............... MONDAY 8:45; STEV 3046
How to Save the World: Through Critical Thinking  MULTICULT, CONF THEME

ROBERT HEILBRONER, RICHARD W. PAUL .... MONDAY 10:30; EPT
Robert Reich's Vision of the New Global Economic
Realities: Do We Need Workers Who Can Think
Critically? How Broadly and Well Must Citizens
Learn to Think?  G, CONF THEME

HENRY BUSCHER, LIANNE SCHNEIDER .... MONDAY 10:30; DAR 139
Environmental Ethics in the New Global Economy: A
Critical Thinking Approach for Secondary Students
M/D/HIGH, ENV, SOCIOLOGY, ECON

THOMAS TOMINAGA .................... MONDAY 10:30; STEV 3026
Agenda of the "Middle-Way" Logic of Buddhist Economics
for Economic Realities and their Implications  ECON, CONF THEME, MULTICULT

ROBERT HEILBRONER, RICHARD W. PAUL .... MONDAY 3:15; EPT
Lester Thurow's Vision of the New Global Economic
Realities: Can We Develop a First-Rate Economy and
First-Rate Standard of Living, if Citizens Learn Merely
Work-Related Skills and Cannot Think Critically Within
Alternative Points of View?  G, CONF THEME

JOHN R. FEARE, SANDRA PARKS,
ROBERT SWARTZ ..................... MONDAY 3:15; STEV 3008
Critical Thinking and Global Economics Within a
Theological Dimension  CONF THEME

MEENAKSHI DALAL ................... MONDAY 3:15; STEV 3046
Economic Reality and Human Conflict  ECON, CONF THEME

LISA SMITH, JERALDINE C. DAY .......... TUESDAY 3:15; IVES 35
U.S. Tobacco in the World Market: A Global Economic
and Social Dilemma  HEALTH, ECON, BUS, MEDIA, POL

MICHAEL FEER ....................... SUNDAY 1:30; STEV 3046
Decision Making and the World Market-Place  ECON, CONF THEME

CHARLES V. BLATZ ................... MONDAY 8:45; STEV 3026
Critical Thinking and the Sovereignty of Political and
Economic Communities  ADV, BUS, ECON, POL
SELECTED SESSIONS

**ECONOMICS**

**THOMAS TOMINAGA**
**Continued**

**MONDAY 10:30; STEV 3026**
Agenda of the “Middle-Way” Logic of Buddhist Economics for Economic Realities and their Implications  
**ECON, CONFI**  
**THEME, MUL-CULT**

**PETER F. BELL**

**MONDAY 12:15; STEV 3026**
Integrating Race and Gender into the Economics Curriculum: Theory and Classroom Practice  
**ECON, MUL-CULT, REM, COLL**

**JOHN ENRIGHT**

**TUESDAY 8:45; DAR 139**
Economology: Managing the Earth (and Us) with Wisdom  
**ENV, ECON, PSYCH**

**HILDA CABANEL-EVANS**

**TUESDAY 3:15; STEV 3049**
Thurso’s Head to Head: An Exercise in Critical Thinking  
**ECON, ADV, G**

**RICHARD POPE**

**SUNDAY 12:15; STEV 3008**
The Debating Process Instills Critical Thinking in Your Elementary School Students and Makes You Thinner, Sexier, and Attractive to Movie Stars!  
**ELEM, BEG**

**JUDITH COLLISON**

**MONDAY 8:45; DAR 122**
Overcoming Math Anxiety of Elementary School Teachers  
**MATH, ELEM, TEST**

**DAN WEIL**

**MONDAY 10:30; SUMPR**
Critical Thinking, Critical Writing, and Literature-Based Whole Language Instruction  
**ELEM**

**DAN WEIL**

**MONDAY 3:15; SUMPR**
Reasoning Within Different Cultural Points of View: Using Language Instruction for Early Childhood Social Studies  
**ELEM**

**JANIS L. SILVERMAN**

**TUESDAY 8:45; STEV 2065**
Economics for Kids  
**ECON, K-12, SOC STUD**

**DAN WEIL**

**TUESDAY 10:30; SUMPR**
Critical Thinking and Elementary School Mathematics  
**ELEM**

**JUDITH COLLISON**

**TUESDAY 1:30; STEV 3049**
Multiple Perspectives in Curriculum Development for Teacher Education  
**ELEM, MUL-CULT**

**DAN WEIL**

**TUESDAY 1:30; IVES 76**
Constructing a Critical Multi-Cultural Curriculum  
**ELEM, VIDEO**

**RICHARD POPE**

**TUESDAY 3:15; STEV 3008**
Elementary School Language Arts and Critical Thinking — The Process for Generating a Nation of Active Learners  
**ELEM, LANG**

**KATY DAWSON**

**WEDNESDAY 8:45; IVES 35**
Five, Six, and Seven Year Olds: Powerful Thinkers Right from the Start!  
**ELEM, H CON, LANG, MATH, Bi-LINGUAL**

**ENVIRONMENT**

**DENNIS MARTINEZ**

**SUNDAY 1:30; DAR 139**
Traditional Indigenous Knowledge and Western Science: Cross-Cultural Perspectives on Environmental Knowledge  
**ENV, MUL-CULT**

**GRADY E. WILLIAMS**

**SUNDAY 3:15; DAR 139**
A Role-Playing Model for Introducing Critical Thinking and Creative Concept Structuring in Environmental Science  
**ENV, SCI, G**

**GEORGE COLLISON**

**SUNDAY 3:15; STEV 1040**
Visiting the Rainforest Via Computer Simulation and Linking up for Awareness of Global Problems  
**MID/HIGH, ENV, COMPUTER ASST ED**

**JUAN MIGUEL FERNANDEZ-BALBOA**

**MONDAY 8:45; DAR 139**
Educational Reform for Social Transformation and Environmental Renewal  
**ENV, SOC STUD, CONFI**  
**THEME**

**HENRY BUSCHER, LIANNE SCHNEIDER**

**MONDAY 10:30; DAR 139**
**MID/HIGH, ENV, SOCIO, ECON**

**YUNJA LASEK**

**MONDAY 3:15; DAR 139**
Teaching Environmental Ethics Through Various Critical Thinking Methods  
**ENV**

**JOHN ENRIGHT**

**TUESDAY 8:45; DAR 139**
Economology: Managing the Earth (and Us) with Wisdom  
**ENV, ECON, PSYCH**

**DON WAXMAN, J. THEODORE STANLEY,**  
**JOHN ZENTNER**

**TUESDAY 10:30; DAR 139**
Restoration of the Natural Landscape: Issues and Examples  
**ENV**

**DAVID SMOCK**

**TUESDAY 12:15; DAR 139**
Thinking Critically About Nature: Using Critical Theory  
**ENV, SOCIO, SOC STUD**

**ROBERT MCCONNELL, DANIEL C. ABEL**

**TUESDAY 3:15; DAR 139**
Enhancing Critical Thinking Through Quantification of Population/Environment Issues  
**ENV, MATH/SCI, G**
SELECTED SESSIONS

Feminist Issues

Jackie A. Giuliano .............................. Sunday 12:15; ART 108
The Introduction of Feminist Philosophy and Spirituality into the Classroom Through Environmental Studies FEM, ENV, COLL, MATH/SCI.

Noreen Facione, Carol Sanchez, Peter Facione ........................ Monday 8:45; STEV 3036
Gender and Critical Thinking — A Look at the Data FEM, PSYCH, COLL, ADV.

Jeanette M. Catsoulis ........................ Monday 8:45; STEV 3030
Gender Conflict: Images of Women in Advertising MEDIA, FEM, SOC STUD.

Jackie A. Giuliano .............................. Monday 3:15; STEV 3049
Critical Textbook Selection — A Fundamental Prerequisite for Teaching: Watching Out for Subtle Gender Bias FEM, COLL, TEST, SOC/STUD.

Reene Ruderman .............................. Monday 3:15; STEV 3030
Reading the Spaces Between Words: A Critical Inquiry into Toni Morrison’s Use of Language in The Bluest Eye FEM, LANG, COLL.

Jackie A. Giuliano .............................. Tuesday 8:45; ART 108
Gender and Science: The Impact of the Absence of a Feminist Voice — Putting the Human Spirit Back into Science Education FEM, MATH/SCI, SOC/STUD, ENV.

Carol M. Ellis .............................. Tuesday 8:45; STEV 3049
Critical Thinking as Controversy FEM, LANG, COLL, MUL-CULT.

Virginia B. Epstein ........................ Tuesday 3:15; IVES 45
Critical Reading and Popular Culture: Women as Heroes in Film FEM, K-12, H CON.

Health

Peter Facione, Noreen Facione ........................ Sunday 12:15; STEV 2049
Assuring Critical Thinking in the Professional Nurse: A Response to NLN Criterion 20 HEALTH, TEST, COLL.

MacGregor Eddy .............................. Sunday 3:15; STEV 2049
From Novice to Expert in the Era of the Information Overload HEALTH, COLL.

Penny Heaslip .............................. Monday 10:30; STEV 2049
Shifting Paradigms in Education and Health Care Reform: A Nursing Perspective HEALTH, COLL, CURRICULUM, POL.

Selected Sessions

Lynda Brown, Sandra Jones ........................ Monday 12:15; STEV 2049
Critical Thinking: A Super-Ordinate Concept for Teaching Nursing HEALTH, TEST.

Noreen Facione, Carol Sanchez ........................ Tuesday 8:45; STEV 2049
Critical Thinking Research and the Health Professions HEALTH, PSYCH, TEST, ADV.

Marybeth Young ........................ Tuesday 10:30; STEV 2049
Developing Critical Thinking Abilities as a Basis for Nursing Practice HEALTH, COLL.

Terry Valiga ........................ Tuesday 3:15; STEV 2049
The Effect of Planned Teaching and Evaluation Strategies on Nursing Students’ Cognitive Growth and Critical Thinking: Pursuing Reform Within Nursing Education HEALTH, NURSING.

Penny Heaslip, Richard W. Paul ........................ Tuesday 3:15; IVES 76
Critical Thinking and Intuition in Nursing Practice HEALTH, COLL, CURRICULUM, POL, VIDEO.

Nicki Hoyt ........................ Wednesday 10:30; IVES 78
Critical Thinking Teaching Strategies in Nursing and Health Sciences HEALTH, MUL-CULT, H RIGHTS, COLL.

Human Conflicts

Jim Pollard ........................ Monday 8:45; STEV 3008
Who Is the Boss? (An Empowerment Workshop) COLL, BUS, H CON.

George H. Hanford ........................ Monday 8:45; STEV 3046
How to Save the World: Through Critical Thinking MUL-CULT, CONF THEME.

William K. Marek ........................ Monday 10:30; STEV 3046
Reason (Unreason), Thought (Rational and Irrational), and Human Conflict PEACE, H CON, PSYCH.

Jennifer Wild ........................ Tuesday 8:45; STEV 3026
Action Science: The Skills Needed to Critically Reflect on Practice BUS, H CON, PSYCH, ADV.

Richard Kelder ........................ Tuesday 8:45; STEV 3028
Teaching Critical Thinking and Argumentation from Global Perspectives ADV, H CON, H RIGHTS, COLL.

Harriet Chamberlain ........................ Tuesday 1:30; STEV 3046
Critical Thinking: Catalyst for "Fairminded" Change H CON, PSYCH, BUS.

Arthur Cohen ........................ Tuesday 3:15; STEV 3046
SELECTED SESSIONS

HUMAN RIGHTS

EDWARD D'ANGELO .......................... Monday 8:45; STEV 1002
Critical Thinking in Law  COLL, HIGH, H RIGHTS, H CON

RENÉ TRUJILLO, JR .......................... Wednesday 8:45; STEV 3046
The Debate Over Human Rights and Social Justice After
the Spanish Discovery of the “New” World  MULT-CULT, POL, H
RIGHTS, LANG

LANGUAGE ARTS, ENGLISH

KRISTAN CAVINA ............................. Sunday 3:15; NICH 173
Teaching Critical Thinking in the Writing Class  LANG, COLL

FLORENCE FAY PRITCHARD ................ Monday 10:30; NICH 166
Negotiating and Using Frames to Develop Specific Critical
Thinking and Writing Skills  LANG, G

FRANCINE MALDER JAMIN ................ Monday 12:15; IVES 45
A Small Band in a Circle of Light — Teaching Writing
and Reasoning in a “Quality Circle”  LANG, COLL, M/D/HIGH

JOHN BYRD ................................. Monday 1:30; NICH 173
Metaphorical Thinking in the 21st Century: Frill, Option,
or Sina Qua Non?  LANG, SOC STUD, M/D/HIGH

DONALD LAZERE ............................ Monday 3:15; STEV 2049
Literature for Critical Thinking  COLL, M/D/HIGH

PETER FACIONE, JOANNE GAINEN ........ Monday 3:15; NICH 173
Are New College Students Disposed to Think?  LANG, COLL, TEST

CARROL STEEDMAN ........................ Monday 3:15; STEV 3026
Critical Thinking at the Work Site, in Developmental
English Classes, and in Continuing Professional Education:
Argument and the Case Study  COLL, LANG, BUS, H CON

RENEE RUDERMAN ........................ Monday 3:15; STEV 3030
Reading the Spaces Between Words: A Critical Inquiry into
Toni Morrison’s Use of Language in The Bluest Eye  fem,
LANG, COLL

JEANNE BECJJOs ............................. Monday 3:15; NICH 166
In the MUD: A Critical Reading Strategy  HIGH, LANG, MEDIA,
SOC STUD

GAIL A. KENDALL, DIANE WHEELER ...... Tuesday 8:45; NICH 173
Project Think: An Integrated Language Arts Approach to
Critical Thinking  LANG, M/D/HIGH, H RIGHTS, ENV

SHANNAH PARNELL ........................ Tuesday 8:45; NICH 166
Re-Reading Hawthorne’s ‘A’: Ideologies and Developing
Critical Awareness in the Classroom  LANG, COLL, M/D/HIGH

NORMAN J. UNRAU ........................ Tuesday 12:15; IVES 78
Critical Thinking in the Narrative Mode: The Force of
Stories  LANG, SOC STUD, G

JAMES HENRY QUINA ........................ Tuesday 12:15; NICH 173
Teaching Conflict Resolution Through Metaphor  LANG, H
CON, H RIGHTS, SOC STUD

DONALD LAZERE ............................ Tuesday 3:15; NICH 173
Teaching the Political Conflicts in Writing Courses  LANG,
SOC STUD, POL, MEDIA

KIRK G. DADDOW ............................ Wednesday 8:45; NICH 173
Teaching Critical Thinking in the Advanced Writing
Course  LANG, M/D/HIGH, SOC STUD

ANNIE K. KOSHI ............................. Wednesday 10:30; NICH 173
Holistic Grammar Through Socratic Questioning  LANG

MATH

JOHN LOASE, SHERRON SARGENT ......... Sunday 3:15; DAR 122
Sigfluence Our Positive Influence Over Time: A
Quantitative and Qualitative Analysis  MATH/SCI, PSYCH, TEST

JUDITH COLLISON ............................ Monday 8:45; DAR 122
Overcoming Math Anxiety of Elementary School Teachers
MATH, ELEM, TEST

MELVIN POAGE .............................. Monday 10:30; DAR 122
A Critical Thinking Approach to Mathematics  MATH, COLL,
M/D/HIGH

JUDY FISHEL ................................. Tuesday 10:30; DAR 122
Benchmarks in Critical Thinking: What Skills at What
Age? The Comet Is Coming!  SCI, MATH, K-12

MEDIA

WILLIAM DORMAN, RALPH JOHNSON .... Sunday 12:15; IVES 119
Media Logic  MEDIA, M/D/HIGH, COLL

BARBARA FORREST .......................... Monday 8:45; STEV 3077
Back to Basics: The Use of Newspapers and Other Print
Media to Teach Analytical Reading, Writing, and
Reasoning  MEDIA, LANG, G

PETER FACIONE ............................. Tuesday 8:45; IVES 78
Teaching Critical Thinking Using TV Drama  LANG, COLL,
MEDIA, M/D/HIGH

WILLIAM DORMAN .......................... Tuesday 10:30; STEV 1002
Perceptions, Misperceptions, and Damned Nonsense: The
News Media and World Affairs  MEDIA, POL, COLL, M/D/HIGH

PRISCILLA AGNEW .......................... Tuesday 3:15; STEV 2065
Sex, Death, Advertising, and Children in Our Changing
World  MEDIA
SELECTED SESSIONS

MIDDLE SCHOOL

RON McBRIDE, GLENDA BEAMON ..... MONDAY 10:30; STEV 2065
Preparing the Future Critical Thinker: Structuring the Middle School Learning Environment for Critical Thinking MID, G

JOHN EDWARDS, TIMOTHY MELCHIOR ..... TUESDAY 8:45; IVES 35
The Researcher and the Practitioner MID/HIGH, STAFF DEV, BUS, G

PREPARING THE FUTURE CRITICAL THINKER: STRUCTURING THE MIDDLE SCHOOL LEARNING ENVIRONMENT FOR CRITICAL THINKING

YEHUDI WEBSTER, DAN WEIL, WILLIAM ZEIGER, HILDA CABANEL-EVANS, SUSAN AWBREY ..... SUNDAY 3:15; IVES (WARREN)
Panel Discussion on Multi-Culturalism MUL-CULT

NANCY C. GLOCK ..... SUNDAY 3:15; STEV 3072
Towards a More Powerful Model of Critical Thinking: Reclaiming Inter-Cultural Ways of Knowing MUL-CULT, H CON, ADV

YEHUDI WEBSTER ..... MONDAY 8:45; IVES (WARREN)
Multi-Culturalism and Critical Thinking: Compatibility or Competition? G, MUL-CULT

ELAINE R. OGNIBENE ..... MONDAY 8:45; STEV 3072
Stories About Schooling: Multi-Cultural Fictions that Challenge and Create MUL-CULT, COLL, FEM, MID/HIGH

GLORIA PIERCE ..... MONDAY 10:30; IVES 78
The Centrality of Critical Thinking in Educating for Diversity COLL, BUS, MUL-CULT, SOCIO

HILDA CABANEL-EVANS ..... MONDAY 12:15; STEV 3072
Ethnic Multi-Culturalism: Not for the 21st Century MUL-CULT

PETER F. BELL ..... MONDAY 12:15; STEV 3026
Integrating Race and Gender into the Economics Curriculum: Theory and Classroom Practice ECON, MUL-CULT, FEM, COLL

YEHUDI WEBSTER ..... MONDAY 3:15; STEV 1002
Are There White and Black People? Reasoning About Racial Classification G, SOC STUD, MUL-CULT

WILLIAM ZEIGER ..... MONDAY 3:15; STEV 3072
Freedom of Imagination: Stories and Critical Thinking MUL-CULT, LANG, COLL, MID/HIGH

WILLIA L. NWA ..... TUESDAY 8:45; STEV 3072
Cultural Diversity: What Should Educators Do About It? MUL-CULT, H RIGHTS, COLL, MID/HIGH

MULTI-CULTURAL

KIM SKOOG ..... TUESDAY 1:30; STEV 3072
A Cross-Cultural Study of the Interplay Between Reason, Revelation, and Realization MUL-CULT

R. SCOTT SMITH ..... WEDNESDAY 8:45; STEV 3072
A Framework for Applying Critical Thinking to Inter-Cultural Encounters MUL-CULT, H CON

RENÉ TRUJILLO, JR. ..... WEDNESDAY 8:45; STEV 3046
The Debate Over Human Rights and Social Justice After the Spanish Discovery of the "New" World MUL-CULT, POL, H RIGHTS, LANG

PEACE

KATHERINE SMITH, HARRIET CHAMBERLAIN ..... SUNDAY 3:15; STEV 3046
Global Peace Games: A Role-Play Using Lawrence Kohlberg’s Stages of Moral Development PEACE, POL, PSYCH, H CON

WILLIAM A. DORMAN ..... MONDAY 10:30; STEV 1002
In Galileo’s Garden: Thinking Critically About a Changed and Changing World PEACE, POL, ECON

EDWARD RIPPY ..... MONDAY 12:15; STEV 3046
The Multiple Costs of “Defense:” Spending Money, Freedom, and Blood to Protect “Our” Vital Interests Around the Globe PEACE, MEDIA, ECON, PSYCH

ROBIN SKEWES-COX, BENNET SKEWES-COX ..... TUESDAY 8:45; STEV 3046
How to Think About War and Peace, Part I H CON, PEACE, G

BENNET SKEWES-COX, ROBIN SKEWES-COX ..... TUESDAY 10:30; STEV 3046
How to Think About War and Peace, Part II H CON, PEACE, G

PSYCHOLOGY

JOHN F. LOASE, SHERRON SARGENT ..... SUNDAY 3:15; DAR 122
Sigfluence Our Positive Influence Over Time: A Quantitative and Qualitative Analysis MATH/SCI, PSYCH, TEST

STUART M. KEELEY ..... MONDAY 12:15; IVES (WARREN)
What Can Psychotherapists Tell Us About How to Cope with Resistance to Critical Thinking PSYCH, COLL

LAUREN COODLEY ..... TUESDAY 12:15; STEV 3028
Psychology as a Critical Thinking Requirement: How to Do It PSYCH, COLL
SELECTED SESSIONS

PSYCHOLOGY

Continued

SUSAN HALES ........................................... TUESDAY 1:30; SUMPR
Uncovering the Connections Among Self-Esteem, Critical Thinking, Moral Behavior, and Educational Achievement, Part I
K-12, PSYCH

SUSAN HALES ........................................... TUESDAY 3:15; SUMPR
Uncovering the Connections Among Self-Esteem, Critical Thinking, Moral Behavior, and Educational Achievement, Part II
K-12, PSYCH

LOWELL COOPER ....................................... WEDNESDAY 10:30; IVES 79
Using Critical Thought as a Way Out of Negative Relationship Cycles PSYCH, H CON

SCIENCE

JOHN F. LOASE, SHEERRON SARGENT ........ SUNDAY 3:15; DAR 122
Sigfluence Our Positive Influence Over Time: A Quantitative and Qualitative Analysis MATH/SCI, PSYCH, TEST

MARK WEINSTEIN ..................................... MONDAY 8:45; CAR 68
Critical Thinking and the Goals of Science Education SCI, COLL, HIGH

MAURICE A. FINOCCHIARO ......................... MONDAY 3:15; ART 108
Galileo and Critical Thinking COLL, SCI, H CON, H RIGHTS

OBED NORMAN ........................................... TUESDAY 8:45; DAR 122
Critical Thinking and the Education of Science Teachers: Building a Community of Meaning Makers SCI, MUL-CULT, G

JUDY FISHEI ............................................ TUESDAY 10:30; DAR 122
Benchmark s in Critical Thinking: What Skills at What Age? The Comet Is Coming! SCI, MATH, K-12

GEORGE COLLISON ................................... TUESDAY 1:30; STEV 1040

WILLIAM A. HAYES ................................. WEDNESDAY 8:45; DAR 122
Designing Effective Thinking Activities in Science: Principles, Theories, Attitudes, Habits, and Skills SCI, MID/HIGH, COLL

STAFF DEVELOPMENT

MARY E. DIETZ, BOB VAN ZANT ............... SUNDAY 12:15; STEV 3036
Professional Development Portfolio: A Constructivist Approach for Professional Development K-12, STAFF DEV, TEST, ADV

RAQUEL HENRY, NELLIE THORGOOD, ROSE AUSTIN .. SUNDAY 3:15; STEV 3049
Classroom, Curriculum, and Leadership Reforms: Developing Critical Thinkers in the Community College COLL, STAFF DEV

Diane D. Cheatwood .............................. SUNDAY 3:15; STEV 2065
Thinking Across the College: The Integrated Thinking Skills (Faculty) Project Expands HIGH, COLL, STAFF DEV

JOSEPHINE NAEHRBASS, GAIL KENDALL .. MONDAY 10:30; STEV 3049
"Putting It all Together:" An Integrated Staff Development Model G, STAFF DEV

VIRGINIA O'KEEFE .................................... MONDAY 12:15; IVES 78
Empowering Students and Teachers Through Critical Thinking Research STAFF DEV, MID/HIGH, LANG

RICHARD OGNIBENE ............................... MONDAY 1:30; IVES 35
Thinking Critically About the Total Quality Movement in Education STAFF DEV, K-12

TIMOTHY M. MELCHIOR ......................... MONDAY 1:30; STEV 3036
STAFF DEVELOPMENT

Continued

LORENZ BOEHM, MARK WEINSTEIN. MONDAY 3:15; IVES (WARREN)
Balancing Acts: Working With Colleagues to Teach
Critical Thinking STAFF DEV, COLL

JEAN ANN FOLEY. TUESDAY 10:30; NICH 173
Teacher Ethics: A Veil of Perception That Precludes Critical
Thinking STAFF DEV, ELEM, MATH/SCI

MARK WEINSTEIN. TUESDAY 3:15; STEV 1002
Critical Thinking Across the College Curriculum: What
Faculty Wants and Needs STAFF DEV, COLL

RICHARD W. PAUL. WEDNESDAY 8:45; STEV 1002
Staff Development: If It Is Not Long-Term and
Comprehensive, It Won't Work! G, STAFF DEV, COLL

RUTH M. LORING. WEDNESDAY 8:45; IVES 78
Critical Thinking and Professional Development: An
Approach Consistent with "Communitarian Capitalism"
TEST, STAFF DEV

TESTING AND ASSESSMENT

LEAH SHELLEDA. SUNDAY 1:30; DAR 137
Does Logic Teach Critical Thinking? COLL, TEST, LANG, ADV

PETER FACIONE. SUNDAY 3:15; DAR 137
Classroom Critical Thinking Assessment — The Basic
Ways and Means TEST, SOC STUD, COLL, MD/MICH

ROBERT SWARTZ. MONDAY 8:45; STEV 2049
Assessing the Quality of Student Thinking: Techniques for
Classroom Teachers TEST, G

GREGORY RICH. MONDAY 8:45; NICH 304
Critical Thinking at Fayetteville State University: An
Initial Assessment TEST, G

JOHN HOAGLUND. MONDAY 1:30; ART 108
Pre- and Post-Testing a College Critical Thinking Course
COLL, TEST

RICHARD W. PAUL. TUESDAY 8:45; IVES (WARREN)
How to Design Assignments and Activities (So That
Students Learn How to Assess Their Own Performances)
G, TEST, BEG

JOANN CARTER-WELLS, CINDY LYNCH. TUESDAY 8:45; DAR 137
Adult Development and the Assessment of Critical
Thinking TEST, PSYCH, COLL

THEORETICAL ORIENTATION

BRADLEY BOWEN. MONDAY 1:30; STEV 3040
Justifying Critical Thinking THEORY, COLL

RALPH H. JOHNSON. TUESDAY 8:45; STEV 3008
Argumentation: A Pragmatic Approach THEOR

MARK WEINSTEIN. TUESDAY 10:30; CAR 68
How to Get from Ought to Is: Post-Modern Epistemology
and Social Justice H RIGHTS, THEORY

CONNIE MISSIMER. TUESDAY 1:30; STEV 3040
Getting up to Snuff in Theorizing About Critical Thinking
ADV, THEORY, MUL-CULT
ADAMS, PETER DOW
Professor of English, Essex Community College

Critical Thinking in the Core Classroom  MUL-CULT, COLL, HUMANITIES, ART

Many colleges and universities have moved toward the inclusion of interdisciplinary core courses in their general education requirements. This workshop will explore the differences between teaching in such a course and teaching an introductory course in a discipline. I will argue that the emphasis in a core course shifts away from covering specific “content” to teaching students how to read a text more perceptively and to think about it more deeply. I use the term “text” to refer to any work which is studied in the course, including examples from literature, philosophy, art, music, dance, psychology, anthropology, and many other disciplines. I will illustrate how these principles play out in the classroom by demonstrating (and occasionally asking those present to participate in) a series of activities from a unit on African masks and figure sculpture. A number of activities involving African art will be presented and discussed. Besides the consideration of critical thinking in the core classroom, participants will also learn a little about African art.

ADY, PAUL
Associate Professor of English, Assumption College

Bringing the Play Element into Critical Thinking Instruction: The Brutus Family of Dysfunctional Arguers  LANG, MEDIA, C

When in teaching important terms in critical thinking do you too often and too rapidly induce MEGO (My Eyes’ Glaze Over) in your students? Frankly, is the language sometimes so distancing, so removed from their culture, that they lose interest? Do you sometimes wish you could find other ways to make all this important material, well, less stuffy, less intimidating for them?
This workshop will discuss and demonstrate ways that we can employ playful strategies to teach argumentation analysis and evaluation. In sharing his own techniques in making such instruction more intriguing to our student culture, the session leader will introduce participants to a “family” that has made argument analysis and the teaching of fallacies more engaging: The Brutus Family of Dysfunctional Arguers (Brutus, his dim bride Edith, their two sons Slick and silent Darryl, daughter Annie, Sprocket the dog). The troubled couple (false analogy) Dick and Jane will show up, too. Arguments encoded in visual media included.

**Agnew, Priscilla**
Professor of Philosophy, Saddleback College

**Sex, Death, Advertising, and Children in Our Changing World**

Every person is exposed to about 1000 advertisements daily. The number of ads seen by children will increase with the proposed introduction of commercial educational programs (together with advertisements) into the classrooms. Sex and death images are found in advertising in the form of subliminal messages which are not readily available to us on a conscious level, so that we are unable to critically evaluate these advertisements. In this slide presentation, we shall look at some of the techniques used by advertisers, and then shall focus on ads which depict children and also use subliminal images of sex and death. We will discuss some of the troubling questions which are raised by the use of these images.

**Angeletti, Charles**
Professor of History, Metropolitan State College of Denver

**Relics, Letters, and Walk-Abouts: Creative Expression Through Critical Thinking**

In this participatory workshop attendees will closely examine three specific writing assignments, as handouts, which challenge college students to think and write critically and creatively in the Social Sciences/Humanities. Participants will be asked to write short responses to a select number of exercises contained within the three writing assignments. Each assignment has an experiential component which can utilize information from a variety of disciplines. Select student papers will also be given out (with permission of authors, of course). Small and large group discussion will focus on an evaluation of these writing exercises, the critical thought processes involved, and the transformative learning emanating from a creative, critical and experiential approach to studying American society and thought.

**Aretz, Douglas B.**
M-TEC Program Coordinator, Tech Prep Department, Milwaukee Area Technical College

**School-to-Work Transition (Tech Prep) in Metro-Milwaukee**

Milwaukee Area Technical College is in the process of assisting schools with educational reform by implementing Tech-Prep principles in classroom lesson units and teacher curricula. The goal is to transform skills, abilities, and knowledge of the student so that he/she is able to adequately perform in the workplace after high school or in a college setting. Through visual and hands-on demonstrations, the audience will experience the Tech-Prep model that schools are experiencing in Southeastern Wisconsin.

**Awbrey, Susan M.**
Associate Professor of Education, Oakland University

**Educating Critical Thinkers for a Democratic Society**

Today we are faced with conditions that demand a resurgence of the vision which was expressed in the writings of John Dewey and C.S. Pierce and which was implicit in the ideals of Greek citizenship if we are to meet the challenges necessary to maintain and enhance our democratic way of life. Our society is undergoing dramatic upheaval and we must respond politically and economically. Philosopher Nicholas Maxwell states that “We urgently need a new, more rigorous kind of inquiry [which] would have as its basic aim to improve, not just knowledge, but also personal and global wisdom ... the capacity to realize what is of value in life.” This session will consider how such wisdom can be taught, why it is the role of the university to teach wisdom, and changes that may be necessary to create a university environment that fosters the development of wisdom. The presenters argue that inquiry and critical thinking form the process for discovering meaning in our lives. Participants will be invited to visualize the critical thinking university of the future.

**Baker, Paul J.**
Professor of Educational Administration, Illinois State University

**Critical Thinking in Social Science and Social Studies: Authentic Work and Authentic Assessment**

This workshop addresses the fundamental problem of helping students read and think at the same time. Students are taught to bring reading and thinking together as an integral process. Making this connection is the authentic work of those who hope to understand the civic culture of their day. Several thinking frames are integrated in a systematic critical thinking model that can be applied to a wide array of case materials: newspaper items, political speeches, popular magazines, articles from learned journals, and books. This workshop also examines the importance of developing various strategies of authentic assessment that are appropriate for the authentic work of critical literacy.

**Baker, Paul J.**
Professor of Educational Administration, Illinois State University

**Judith Lawson**

**Developing Thinking Programs in Three K–8 Schools: Lessons from the Field**

This session examines crucial issues in the development of school-wide programs that foster opportunities for all teachers and students to be involved
Baker Thorne, Bonnie
Professor of Library Science, Sam Houston State University

SUNDAY 1:30; IVES 35

Developing Strategies That Use Critical Thinking to Infuse a Global Perspective into the Curriculum K-12, SOC STUD

Recognizing the growing social, economic, and civic need for citizens who are proficient in reasoning through the problems and issues facing the world, a model was developed to be used to infuse a global perspective into the curriculum. The model consists of five overall goals: 1) to help students accept people as individuals while appreciating both ethnic and cultural diversity and similarities among Americans; 2) to help students develop into environmentally responsible citizens; 3) to help students understand and evaluate various political systems and processes in order to acquire the skills necessary to participate fully as responsible citizens and 5) to help students understand and use various political systems and processes in order to acquire the skills necessary to participate fully as responsible citizens and 5) to help students understand the technological interconnection of the world systems and to develop the technological capability to cope with a rapidly changing society. Using the model as a basis for discussion the participants of this workshop will be asked to develop additional strategies.

Baker Thorne, Bonnie
Professor of Library Science, Sam Houston State University

SUNDAY 1:30; IVES 35

Developing Strategies That Use Critical Thinking to Infuse a Global Perspective into the Curriculum K-12, SOC STUD

Recognizing the growing social, economic, and civic need for citizens who are proficient in reasoning through the problems and issues facing the world, a model was developed to be used to infuse a global perspective into the curriculum. The model consists of five overall goals: 1) to help students accept people as individuals while appreciating both ethnic and cultural diversity and similarities among Americans; 2) to help students develop into environmentally responsible citizens; 3) to help students understand and evaluate various political systems and processes in order to acquire the skills necessary to participate fully as responsible citizens and 5) to help students understand the technological interconnection of the world systems and to develop the technological capability to cope with a rapidly changing society. Using the model as a basis for discussion the participants of this workshop will be asked to develop additional strategies.

Barnes, Cynthia A.
Dean of Educational Development, Community College of Aurora

TUESDAY 12:15; IVES 35

Developing Teachers: “When the Student Is Ready”

Educational reform without educator reform is folly! It is ironic that while the word “education” comes from “educare,” which means “to draw out,” much of what we do in schools today attempts to “jam in”. Education has opportunities for all of us to become the authors of our own stories, not merely the readers of others’ narratives.

Barell, John
Professor, Curriculum, Montclair State College

TUESDAY 10:30; IVES 119

Crew Members on Santa Maria: Problem-Based Learning, Inquiry, and the Pursuit of Deep Understanding

What if you had been a member of Columbus’ crew during that eventful journey in 1492? How would you have responded to the challenges of the elements and the unknown? This is one of several intellectually complex challenges that this session will explore in history, literature, math, and science as models of problem-based learning. These experiences provide opportunities for students to take more active control of their own learning by posing question (using KWHL) and imagining themselves as participants in problematic situations that encourage critical inquiry. Participants in this workshop will engage in problem solving, decision making, and reflecting on their own experiences as means of considering the extent to which their own pedagogical and curricular practices enhance students’ deep understanding of significant concepts and ideas.

Barnes, Cynthia A.
Dean of Educational Development, Community College of Aurora

SUNDAY 3:15; STEV 3077

Mapping: Getting Students, Not Faculty, to “Cover the Material”

This “brains-on” session will acquaint participants with mapping: a tool learners can use to process what they think, see, read, hear, and compose. After a brief mapping fundamentals discussion, including right brain/left brain theory, mapping formats, and real-life examples, self-managed groups of participants will “map” various teaching-for-thinking strategies. Participants will then “map” discipline specific strategies for infusing both mapping and teaching-for-thinking strategies into their courses.

Through participation in this session, teachers will see how mapping can be used to get students themselves to “cover the material.” Someone once said that much of what we call teaching involves, “the notes of the professor getting into the notes of the student without going through the minds of either.” Mapping forces information through the mind. As a tool for mental discipline and mental organization, mapping, inherently, empowers learners to think and organize for themselves.

Barnes, Cynthia A.
Dean of Educational Development, Community College of Aurora

SUNDAY 3:15; STEV 3077

Mapping: Getting Students, Not Faculty, to “Cover the Material”

This “brains-on” session will acquaint participants with mapping: a tool learners can use to process what they think, see, read, hear, and compose. After a brief mapping fundamentals discussion, including right brain/left brain theory, mapping formats, and real-life examples, self-managed groups of participants will “map” various teaching-for-thinking strategies. Participants will then “map” discipline specific strategies for infusing both mapping and teaching-for-thinking strategies into their courses.

Through participation in this session, teachers will see how mapping can be used to get students themselves to “cover the material.” Someone once said that much of what we call teaching involves, “the notes of the professor getting into the notes of the student without going through the minds of either.” Mapping forces information through the mind. As a tool for mental discipline and mental organization, mapping, inherently, empowers learners to think and organize for themselves.
CONFERENCE ABSTRACTS

BECIJS, JEANNE

In the MUD: A Critical Reading Strategy

This workshop demonstrates a critical reading strategy developed to be used with non-fiction text. The theory behind the strategy and its success in classroom research will be examined. The strategy was developed for high school students in order to provide an organized overview of the main factors involved in critical reading. Once the students have received an overview of critical reading, then the teacher may go into depth in regards to the numerous skills and dispositions that relate to critical thinking. The strategy is based on mnemonics and organization. The acronym MUD refers to the idea that a student analyzes a text as to whether it is “in the MUD” (M=meaningless, U=unsupported, D=deceptive) or it is written clearly, logically, and with support. Materials analyzed during the workshop include an editorial, movie review, and National Enquirer article.

BELL, PETER F.

Integrating Race and Gender into the Economics Curriculum: Theory and Classroom Practice

This paper will discuss recent research on the theory and pedagogy of integrating race and gender into the economics curriculum. It seeks to build a race and gender centered approach to course development in both college and high school economics. It draws on the National Science Foundation funded workshop (May 22-26, 1993) which was devoted to this issue.

BETZ, NORMAN J.

Classroom Materials and Methods for a Critical Thinking or Writing Course

In this participatory workshop, attendees will practice critical thinking about current issues in newspapers and magazines and on television ("Juice Bars," "Religion in Adrian Public Schools," "A Gentle Way to Die," "Forfeiture Law"). Participants will see how an awareness of claims, evidence, assumptions, definitions, analogies, etc., should underlie classroom discussion of current events. Participants should be able to use these processes and the handouts from a college writing course to generate some critical thinking skills, some sharper classroom discussion, and more thoughtfully focused writing in their students.

BETZ, CHARLES V.

Critical Thinking and the Sovereignty of Political and Economic Communities

Robert Reich in The Work of Nations, challenges state sovereignty by urging that our nation’s corporations are “global enterprise webs” having exclusive allegiances to their stockholders and customers, not national institutions having allegiances in part to the work force and economy of their home state. Such a view contains just one of the contemporary challenges to the sovereign power of states to order their political and economic affairs of their citizens. In this paper I want to suggest that viewing critical thinking as pragmatic at its foundations, and constructive as well as multi-logical in its practice, allows us to understand both innovations in the rules ordering political and economic associations, and also the limits on such innovations.
their canons. At stake is the legitimate self-determination of groups of inquirers — epistemic communities, with respect to background assumptions, common bodies of knowledge, and strategies of inquiry. I will explore how taking critical thinking as pragmatic at its foundations, and constructive as well as multilogical allows us to understand the possibilities, nature and limits of innovation in epistemic communities.

**Boehm, Lorenz**  
*Professor of English, Oakton Community College*

**Natural Allies: Teaching, Learning, Writing, and Critical Thinking, Part I**  
*COLL, TEST, MID/HIGH*

This two part workshop will introduce specific, practical ways teachers can use writing to help students learn course content and help them develop and strengthen their ability to think critically. While I’ll pay some attention to standard, formal writing (essays, reports, and research papers), the sessions will emphasize “short writes,” “mid writes,” freewriting, journals, and “microthemes.” Sample assignments, designed to foster critical thinking and independent learning, which were created by faculty members from a variety of schools and disciplines, are featured.

**Boehm, Lorenz**  
*Professor of English, Oakton Community College*

**Natural Allies: Teaching, Learning, Writing, and Critical Thinking, Part II**  
*COLL, TEST, MID/HIGH*

In this half of the session we’ll continue to explore ways in which writing can be used to teach and assess CT.

**Boehm, Lorenz**  
*Professor of English, Oakton Community College*

**Mark Weinstein**  
*Associate Director, Institute for Critical Thinking, Montclair State College*

**Balancing Acts: Working With Colleagues to Teach Critical Thinking**  
*STAFF DEV, COLL*

Working with colleagues in order to get critical thinking taught across the curriculum can be a powerful, rewarding, invigorating, delightful experience. It can also be incredibly frustrating, unpleasant, and downright painful. In this session we will offer brief descriptions of how our institutions have addressed this work, and we will explore many of the key issues in faculty development in critical thinking instruction.
Critical Thinking: A Super-Ordinate Concept for Teaching Nursing

A participatory workshop which will focus on teaching strategies and selected assessment techniques relevant for nursing education. Critical thinking will be conceptualized as a super-ordinate concept under which problem solving (nursing process) is subsumed. Critical thinking is defined as analyzing complex meanings, critiquing solutions, exploring alternatives, and making contingency-related value judgments.

Tensions Between Democracy and Critical Thinking: Implications for Our Teaching

As teachers of critical thinking, we presume we are contributing to the democratic spirit. We speak of critical thinking as empowering. However, both the acquisition of critical thinking competencies and the evaluation of their use may be quite inconsistent with democracy.

This session begins by my presentation of as strong an argument as I can create, moving toward the conclusion that in important ways the teaching of critical thinking must be antagonistic to democracy. What we as teachers are encouraging through the actual process of teaching critical thinking, as well as in our assignments and evaluation techniques, contain anti-democratic elements.

The bulk of the session will consist of our interaction concerning the argument. My hope is that you can persuade me of my error. Is there a critical thinking pedagogy that is both democratic and effective?

Getting Started as a Teacher of Critical Thinking: Planning Curriculum Materials, Assignments, and Evaluation

Now that you are committed to teaching critical thinking, how can you best achieve your intentions? This session is designed to share experiences and lessons from over 20 years of teaching critical thinking. The presentation will proceed logically through the entire teaching process from the creation of course objective through assessment of student performance. Emphasis of the presentation will be on the practical. Numerous handouts will be provided to serve as stimuli for thinking about typical problems and options. Experienced members of the audience will be given the opportunity to spell out which of our approaches and strategies that they have found especially effective.


This session is a participatory workshop in which the cultural, political, and educational obstacles to the transformation of thinking about new global realities in regard to economics, ethics and the environment are explored. Participants will be invited to undertake several small group exercises in critical reading, concept identification, and implication analysis using graphic organizers which are designed to foster interdisciplinary learning at the secondary level in order to overcome these obstacles.

Metaphorical Thinking in the 21st Century: Frill, Option, or Sine Qua Non?

This participatory workshop will examine the crucial role of the metaphor in human communication and thought. The metaphor — more than merely words — is a way of thinking which extends far beyond the province of poets and literature teachers to the language of pre-kindergartners, to politics, business, and psychology, and to virtually every area of discourse. The paramount role of language in the new world of the 21st Century requires that we develop an awareness of, and sensitivity to, the metaphor. Since metaphors allow us to understand ourselves and our world in unique ways, we must give attention in our teaching to this crown jewel of imaginative/logical expression.

Ethnic Multi-Culturalism: Not for the 21st Century

Although the diversity that multi-culturalism has brought into the classroom is a most welcome antidote to previous ethnocentricity, its implementation has distorted global realities for the understanding of race, gender, ethnic background, culture and variety in United States history and society. Our multi-cultural classroom further warps an authentic world view, since it is primarily the inhabitants from dysfunctional societies, rather than satisfied citizens, who tend to emigrate.
The socioeconomic, political and cultural realities of the future have to deal with a global village wherein ideals were fostered by both East and West, North and South, in proportions unrelated to the curriculum, a point on which I will elaborate. I will also contend that a multi-cultural ideology should emphasize foreign language acquisition for all students, beginning at the elementary level and continuing through higher education. A foreign language, by mirroring a different culture and expressing different forms of thought is also a boon to the development of critical thinking.

**CABANEL-EVANS, HILDA**

*Professor of Philosophy, Humanities, and Foreign Languages, Rio Hondo College*

**Thurow's Head to Head: An Exercise in Critical Thinking**

*ECON, ADV, C*

The purpose of this presentation is to suggest a model for the type of analysis we want from our students. Based on the Foundation for Critical Thinking’s elements, standards and (I hope) abilities for reasoning, *form* will be at least as important as *content*. Thurow’s assessment of the economic landscape of the twenty-first century, as one of the recommended readings to be used as a point of departure for this conference, provides a natural springboard for an intellectual exercise of this kind.

Since the reconstruction of the author’s tacit assumptions and the determination of implications and consequences is (to some degree) drawn from the reviewer’s frame of reference, the analysis will be broadened and enhanced by a discussion that will include other viable points of view and an evaluation of the model under consideration. The end result should be a fair-minded appraisal of both the contents of the text, its proposals and predictions, and a possible paradigm for text analysis, synthesis and evaluation.

**CABANEL-EVANS, HILDA**

*Professor of Philosophy, Humanities, and Foreign Languages, Rio Hondo College*

**Classification Skills: Essential Yet Over-Looked**

*C*

The ability to mentally organize by means of the principles of classification is a most important thinking tool that has largely been neglected in the classroom. Useful and relevant all across the curriculum (not only in science, as some believe), the ability to classify provides a framework from which intellectual standards and reasoning abilities can be attained, and is a springboard for meaningful analysis, synthesis and evaluation. It even spills into everyday life by providing better patterns from which to rank preferences. Enhancing and rectifying these skills is all the more urgent because numerous social factors contribute to distort them. Yet the essential underpinnings of these skills are relatively easy and brief to acquire, as this workshop on the basics will attest. It will be followed by a discussion on how to best implement them in all levels and areas of instruction.
Teaching and Evaluating Critical Thinking in the Disciplines

This interactive session will present a comprehensive model for teaching and evaluating critical thinking in a variety of disciplines. Workshop participants will explore practical strategies for fostering critical thinking; assess the level of critical thinking evidenced in sample curricular materials; and engage in critical thinking activities that can be applied to teaching their courses. The workshop will also examine an interdisciplinary critical thinking program which involves 30 faculty and 900 students annually. The program, originated in 1979, integrates an independent Critical Thinking course with an initiative for infusing critical thinking across the disciplines through faculty development and curriculum redesign.

Designing an Effective Course in Critical Thinking

Teaching an effective course in critical thinking is an aspiring journey of unanticipated challenges and unexpected triumphs. The prospect of expanding students’ thinking implies redefining who they are as human beings, a transformational process that is education at its best. This interactive session will address every phase of designing and teaching a successful critical thinking course: topical content, structural organization, teaching strategies, student activities, and evaluation. Workshop participants will engage in sample activities drawn from several units of the LaGuardia Critical Thinking course, and will analyze excerpts of a provocative critical thinking videotape, Thinking Towards Decisions.

Critical Literacy and Critical Thinking: Partners in Education

The development of sophisticated thinking abilities is closely tied to the development of complex language abilities, a relationship captured in Lev Vygotsky’s comment, “A thought may be compared to a cloud shedding a shower of words.” Participants in this workshop will explore a conceptual model for understanding the intimate connections between thought and language and will engage in a variety of activities designed to foster effective critical thinking and language abilities. This integrated approach to language and thinking forms the basis of an interdisciplinary LaGuardia program in which students enrolled in a Critical Thinking course linked to writing, reading, and oral communication courses have consistently demonstrated impressive gains in both language skills and thinking abilities.

Critical and Creative Problem Solving

Solving challenging problems effectively involves an integrated set of critical and creative thinking abilities. This workshop will introduce a versatile approach useful for analyzing complex problems in an organized and creative fashion. Individually and in groups participants will work through a sequence of diverse problems that will allow them to critically reflect on and discuss the problem solving process. They will also explore ways of incorporating problem solving approaches into the courses that they teach at every educational level.

Critical Thinking: Catalyst for “Fairminded” Change

Most people agree that change in education, health care, and in our current economic, social, and political policies is necessary. However, in the process of bringing about desired change, there is natural opposition that we are forced to confront in others — and even in ourselves. In addition, all of us must often deal with changes that are unsought, and sometimes beyond our control, both at home and in our work. In short, change is inevitable. This discussion will focus on three aspects of change: presentation of evidence from various domains acknowledging the need for change; the natural physiological and psychological resistance to change; application of principles and practices of “fairminded” critical thinking as catalytic agents for facilitating desired, and/or necessary valued change.

A variety of approaches will be introduced that can be used by all persons interested in applying critical thinking in the “strong sense” to facilitate change at home, at work, and in the causes they serve.

Thinking Across the College: The Integrated Thinking Skills (Faculty) Project Expands

Faculty success with the Community-College of Aurora’s Integrated Thinking Skills Project (ITSP), combined with an institutional philosophy of a community of learners supporting both personal and professional growth,
enabled staff for the first time to join faculty in a year-long project with outstanding results.

Thinking Across the College modeled after ITSP included workshops in which participants practiced proceduralizing problem solving, decision making, and mapping and determined how to apply these skills in their work or class situations. Interdisciplinary teams also collaborated on content/process objectives, designed evaluative strategies, and implemented peer coaching.

Participants in this workshop will 1) analyze how this format can be adapted at their schools, 2) try a workshop activity which has helped students and staff use thinking skills, and 3) develop transfer applications for thinking skills in their courses.

Cheyne, Patricia B. Instructor of Art, Colorado State University

Global Awareness Through Aesthetic Education

Goals: 1. To enhance our ability to think critically about other cultures, we must begin to understand how different peoples process the world. Aesthetic education enables the learner, in a tangible way, to begin to understand peoples in other parts of the globe. This workshop will begin with a brief presentation about the use of aesthetic education as an important tool to increase the understanding of a global perspective and to enhance the learner's sensitivity to cultures and environments other than his or her own. After this presentation, the workshop participants will have an opportunity to experience what it is like to be a part of a different culture by creating a work of art based on another culture's aesthetic. Finally, participants will gather together to exchange ideas and discuss, in a critical way, the experience of working within a different cultural context. No previous artistic experience is required for this workshop. Both the "artistic" and the "untalented" will benefit greatly.

Cohen, Arthur President, Target Consultants International

"Become Streetwise!" A Women's Guide to Personal Safety

The "Become Streetwise" workshop begins with a member of the audience participating in a street confrontation. The group will learn to analyze the options of the "mark" or "target" and that of the criminal. The visual program uses a variety of slides i.e. news headlines, street pictures, cartoons, etc., and audience interaction. The program will cover rape and other crimes against women. A Color Coded System of alertness will be presented. A variety of additional solutions will be presented including use of body language, mental alertness and passive resistance. Audience involvement is stressed throughout the program. The program attempts to motivate people to take action and promote crime and rape prevention education in their schools and community.
Multiple Perspectives in Curriculum Development for Teacher Education

Educational reform depends on the classroom teachers. If critical thinking is to be an integral part of the curriculum at all levels and in all disciplines, it has to be a major component of teacher education programs. Constructivist approach to learning requires a constructivist approach to curriculum development. Curriculum development in general, and lesson planning in particular, must integrate teaching techniques, learning theory, and the requirements of specific disciplines. In this session we will discuss how to teach curriculum development and lesson planning to include multiple points of view, multi-embodiment of ideas, consideration of multiple intelligences or learning styles, authentic assessment, multi-cultural issues, and equity in the classroom.

Psychology as a Critical Thinking Requirement: How to Do it

I will present the psychology course which I developed to meet the Critical Thinking requirement for CSU transfer from the community college system. Several years ago, I began researching how many, if any, psychology courses addressed critical thinking and I found no more than five. I developed my course, "Learning and Problem-Solving" (Psychology 100) specifically to address this need.

I would like to share both the course outline and the texts I have chosen to use. I will describe the skills developed by the course, and how it places critical thinking within the domain of psychology. In the workshop, we will do some activities done in the class, such as working with left and right hemispheres and the development of logic and spatial skills to address math anxiety. The course also involves a rethinking of students' previous educational experiences and an introduction to "paired thinking" assignments; these will also be demonstrated.

Using Critical Thought as a Way Out of Negative Relationship Cycles

This is a participatory workshop intending to go through a series of self-analytical steps in thinking one's way out of a relationship dilemma. Each participant will be asked to focus on one relationship issue they are currently struggling with. We will then go through a series of questions intending to direct and focus thought from emotional and psychological confines of a recurrent cycle, to a more open space for creative and critical relationship molding. Each participant will start his or her process with a definition of the problem. We will then ask questions, such as: what is personally compelling about the confining pattern? What is the personal price of staying in the pattern? What does the open space look like? And, ultimately, how can an individual experiment in a freer space? This workshop is a guided thought exercise involving a challenge to self-critical, self-analytic abilities. Each member will work privately, following their personal process and narrative. We will share questions that arise about the process.

Thinking, Language, and the Human Project: Re-Discovering the Meaning or Significance of Plato’s Allegory of the Cave

What is the relationship between thinking, language and the Human Project? This question is explored in a most illuminating way in Plato’s Allegory of the Cave. The prisoners have “fallen into” a non-reflective way of using their minds which, in effect, keeps them chained in the Cave. It is only as they are willing to question, to be reflective and “do therapy” on their current language-meanings (Wittgenstein) that they can begin the liberating process. It is my contention that the multiple crises we are experiencing in our society are rooted in our “everyday” (non-reflective, non-critical, mechanical) way of thinking. Engaging in a dialogue with the Allegory can open up our understanding of what it means to be thinking, to be involved in the educational process, to be fulfilling our unique Human Project. In my analysis of the Allegory, I will be drawing primarily on the perspective of Existential Phenomenology. This session will be in the seminar format, with an initial 20-25 minute presentation.

Critical Thinking in Law

A presentation of various critical thinking skills and their application to legal cases. An analysis will be made of the arguments used by the U.S. Supreme Court to justify certain decisions. The cases presented will be geared toward the interests of secondary school and college students (abortion, pornography, compulsory male draft registration). A participatory workshop will enable attendants to use critical thinking in the analysis of Baby M (surrogate motherhood) and Bowers v. Hardwick (sodomy).

Teaching Critical Thinking in the Advanced Writing Course

While all composition teachers actively seek the well written piece which shows evidence of higher order thinking, many times our courses seem almost to discourage this type of thought. This presentation will focus on...
strategies which can be utilized to enhance thinking skills in narrative, descriptive, and the various types of expository writing commonly assigned in the public schools. A variety of handouts will be distributed and the focus will definitely be on practical methods which can be employed on a day-to-day basis.

**DALAL, MEENAKSHI (Meena)**

*Associate Professor of Economics, Wayne State College*

**Economic Reality and Human Conflict**

ECON, CONF THEME

A fundamental economic problem for any nation on earth is scarcity of resources. As we approach the 21st century, economic problems will have international dimension. In this day and age of global economy, markets are broadened by trade, movement of capital from developing countries, and formation of free trade zones. Economic problems in a global economy will not be confined to national boundaries. Simple economic tools will be used to explain the problems of scarcity, choice and trade off, and how a free market system resolves the problem of scarcity.

The main objective of this paper is to show how the economic system is linked to human conflict of a global scale. Handouts will be given so that the participants can use them in their classroom teaching to improve critical thinking. The education system as well as the market is a part of the bigger framework of the society. In this session a new way of thinking will be proposed. Participants will be challenged to think beyond national interest to establish peace and prosperity in the world in the 21st century.

**DAMER, T. EDWARD**

*Professor of Philosophy, Emory and Henry College*

**A Positive Approach to the Teaching of the Fallacies: A Simple Method for Distinguishing “Good” Arguments from “Bad” Ones**

G, ADV

This workshop will demonstrate how a basic understanding of the nature of a fallacy can provide a simple and effective means of evaluating the quality of an argument. A fallacy is defined by the workshop leader as a violation of one of the four criteria of a good argument. A handout of common fallacies (violations committed so frequently that they even have their own names) from the workshop leader’s *Attacking Faulty Reasoning* will be distributed to workshop participants. Sample arguments that deal with current social, business, and economic issues will be evaluated as a part of the workshop. Participants are encouraged to bring their own arguments (preferably written) for this purpose.

**DAMER, T. EDWARD**

*Professor of Philosophy, Emory and Henry College*

**How to Construct Effective Moral Arguments**

G, ADV

It is primarily moral issues that engage our most serious intellectual attention. Yet many critical thinking courses give little focus to the peculiar char-

**DAMER, T. EDWARD**

*Professor of Philosophy, Emory and Henry College*

**A Code of Conduct for a Critically Thinking Citizenry: A Proposed Method for Effective Resolution of Conflicts**

G, H CON

Much of the focus in the critical thinking movement has been on the construction and evaluation of arguments and on pedagogical techniques. This session, however, will focus upon the rules of intellectual behavior that a concerned citizen might be reasonably expected to follow in a healthy discussion of divisive issues. The suggested code of conduct can be construed as both normative and descriptive in character. In so far as a spirit of fair-mindedness demands of all participants in rational discussions a commitment to the same minimal standards of intellectual behavior, these rules clearly take on an ethical or normative dimension. However, the rules also come close to describing our actual behavior in those discussions which we regard as having been the most successful in resolving conflicts. Part of the workshop will be devoted to demonstrating the effectiveness of the method by attempting to “resolve” a social or ideological conflict found between workshop participants.

**DANIELS, LEROI**

*Professor of Social and Educational Studies, University of British Columbia*

**Operationalizing Critical Thinking: A Curriculum, Instruction, and Assessment Model (Project OPCRIT)**

ADV

The Ministry of Education for British Columbia intends to carry out a province-wide assessment of student abilities and dispositions vis-a-vis critical thinking. The Ministry has commissioned a group to, in the Ministry’s words: “Provide an ‘operational definition’, in plain language, of critical thinking that can be used across all curricula, and at all age levels in the public school system...”

A writing team is drafting a response to this request. In this session we will present and discuss the paper we have written outlining a model which we
believe can accomplish what the Ministry wants. The model is based on the following definition of critical thinking: critical thinking is 1) reflective thinking 2) aimed at making reasoned judgments 3) about what to believe or do. The model views critical thinking as what we do when faced with reflective challenges of different types and enunciates the reflective resources which people draw upon in critical thinking. The paper sketches the model and explains the major implications adopting the model would have for educators.

Dawson, Katy
Bilingual Teacher, George Mayne School

Five, Six, and Seven Year Olds: Powerful Thinkers Right from the Start!
ELEM, H CON, LANG, MATH, BILINGUAL

Change the atmosphere of the primary classroom (kindergarten–second grade) to one where learners tackle projects “too big” for them, learn to value their own problem-solving styles, learn to resolve conflicts and take responsibility for their own actions. Learn how to provoke thinking across the curriculum using everyday situations as problem-solving opportunities in math, in a language arts program that teaches pre-literates how to write by writing, and uses literature (in English and Spanish) to raise important issues: homelessness, gender equity, children and political action, and the human cost of technology replacing human labor. This is a participatory workshop on steps that can be taken to put building children’s autonomy at the center of the primary curriculum.

De Capite, Connie
Staff Development Program Specialist, Santa Ana Unified Schools

Critical Thinking for All Students
LANG, SOC STUD, SCI

In this workshop the audience will work through a unit of study which uses critical thinking strategies to help students master content and become more proficient in reading, writing and discussion while mastering content. This unit was originally prepared and used with both GATE and Chapter I at any grade level.

De la Roche, Elisa
Assistant Professor, Curriculum and Teaching, Montclair State College

Drama, Critical Thinking, and Social Issues
DRAMA, H CON, SOC STUD, G

Understanding from a global perspective requires imagination and empathy in addition to knowledge of information. Educational drama can provide an active environment to develop critical thinking on social issues which incorporates the affective and cognitive domains. Role play, simulation, and scene development will be featured in the workshop as a method of exploring contemporary sociopolitical concerns. The “Holistic” and “Exemplary” Stages of teaching and learning will be modeled, and active participation is an integral component. Come and enjoy the experience of dramatic improvisation!
tices. The workshop design uses experience-based learning and inquiry to build knowledge while supporting the process of change, as teachers transfer a reverence for thinking, giving and receiving feedback, and performance based assessments. Participants will have an opportunity to become familiar with the concepts and theoretical underpinnings of the Portfolio, as they experience constructivist teaching practices. After they have built an initial understanding of how these concepts contribute to the Portfolio process, they will begin the process of developing their own Portfolio. A status report from the pilot sites and research projects involving the Portfolio will be shared with the participants.

DITZHASY, HELEN E. R. 
Professor of Educational Leadership, Eastern Michigan University 

TUESDAY 1:30; STEV 3077

Who Eventually Pays? MID/HIGH, PSYCH, ECON

In this participatory workshop, attendees will, after a brief overview, write their reactions to seven questions, based on the first of six dilemmas which perennially confront middle, junior and senior high school administrations and staff. Using strands from psychology, philosophy, and Richard Paul's critical thinking and moral reasoning, participants will help to determine whether or not moral education can impact the economy of a local school, the district and the community.

After this introduction, one segment of a soon to be completed research study, which involved students from three southeastern Michigan senior high schools, will be shared. This research uses as references, the work of Kohlberg and his critics, work of the ethicists, work of some of the moral educators and works from critical thinking. Each of these fields of study has a piece, without which, one could not be so definite as to state that the world could be a better place, where money could be spent more wisely, if this particular small dilemma could be resolved.

DORMAN, WILLIAM A. 
Professor of Journalism/Government, CSU Sacramento 

SUNDAY 12:15; IVES 119

RALPH JOHNSON 
Professor of Philosophy, University of Windsor 

MEDIA, MID/HIGH, COLL

The concept of “media logic” implies that the mass media encourage a way of thinking about the world that is at odds with the rules and standards of other forms of logic. Dorman and Johnson will explore the way media logic may be at work, its consequences for the classroom, and the role critical thinking may have to play in helping students recognize and cope with its influence in their lives. The workshop will leave time for others to share their definitions, perspectives, and strategies.

DORMAN, WILLIAM A. 
Professor of Journalism/Government, CSU Sacramento 

TUESDAY 10:30; STEV 1002

In Galileo's Garden: Thinking Critically About a Changed and Changing World PEACE, POL, ECON

There ought to be little doubt that critical thinking is the competency for the 21st Century. But critical thinking for what? Yearning to once again be above other nations is one thing, while discovering ways to take our place among them is quite another. This presentation will focus on the dangers of an econocentric impulse to educational reform, and will suggest that the very first task for critical thinking - and perhaps its most important one - is not to help students become more productive workers but rather to explore the large value questions concerning global cooperation that loom before us. The presentation will consider the four books that serve as a common point of departure for this conference (by Paul, Thurow, Reich, and Hellbroner) together with Paul Kennedy's new work, Preparing for the Twenty First Century. I will make certain there is ample time for discussion.

DORMAN, WILLIAM A. 
Professor of Journalism/Government, CSU Sacramento 

TUESDAY 10:30; STEV 1002

Perceptions, Misperceptions, and Damned Nonsense: The News Media and World Affairs MEDIA, POL, COLL, MID/HIGH

The decisions that most of our students will make about how to view and meet the challenge for the U.S. posed by a new world order, to a considerable degree, will be based on perceptions gained through the news media. This presentation will examine how the American press covers global affairs and consider the forces that shape the news. Emphasis will be on developing in students a critical awareness of the power of representation and an understanding of how the news process can be affected by the subtle and not-so-subtle influences of nationalism, cultural bias, and flawed professional practice. I will describe some of the methods I use in the classroom to get at these issues. There will be plenty of time available for discussion.

DOWNS, JUDY R. 
Assistant Professor, English and Education, University of Tampa 

SUNDAY 3:15; ART 108

A Mini-Workshop in Critical and Creative Thinking K-12, COL, LANG

This participatory workshop will be particularly helpful for newcomers to the conference or beginners in the field of critical and creative thinking. An overview of critical and creative thinking concepts and strategies will be given, as well as helpful resources and ideas to explore. Emphasis will be placed on practical, useful applications of critical and creative thinking at a variety of levels. Participants will leave the session with a fuller understanding of the range of ideas they will encounter at the conference and in academic settings.
CONFERENCE ABSTRACTS

Eddy, MacGregor

Educational Consultant, "MacGregor Eddy Presents ..."

From Novice to Expert in the Era of the Information Overload

This workshop will explore how nurses develop thinking abilities along Benner’s five stages of skill acquisition. In continuing education and staff development, professional nurses move from novice, advanced-beginner, to competent then proficient and finally expert. We live in the age of information overload. The nurse must be able to transfer ideas to new contexts, assess apparent facts, and explore possible consequences. Nursing decisions are made under stressful conditions and require clear, accurate reasoning that is grounded in clinical experience. In this demonstration, complex patient care situations will be used to explore thinking ability in solving problems.

EDWARDS, JOHN

Associate Professor of Education, James Cook University

The Researcher and the Practitioner

The establishment of more enlightened relationships between professional groups in the community offers the potential for growth of all involved. Links between the research community, schools, and business have seldom been used for mutual benefit. This workshop will explore the relationships possible through the experiences of a researcher and a headmaster. As well as their particular relationship, the presenters will report on their experiences in interacting with the business world at both theoretical and practical levels. Workshop participants will be involved in generating creative new relational possibilities.

EDWARDS, JOHN

Associate Professor of Education, James Cook University

Action Thinking for Change

The creative management of change in schools, companies, and governments is a critical issue that lies ahead. This workshop will introduce a powerful new model of human action and change. The model has been used with great success in both educational and business settings. It has led to the development of action thinking approaches where students or workers learn through their own actions, through tapping into their own personal practical knowledge and their world views, and reflecting on their current practice. The thoughtful individual change that results is deeply rooted and can comfortably generate further growth.

ELLIS, CAROL M.

Assistant Professor of Writing and Literature, University of Redlands

Critical Thinking as Controversy

My presentation is a discussion of the following issues in critical thinking: What is critical thinking? Why should one want to think critically, when there are so many other ways to think, e.g., creative thinking? Why has critical thinking become such an esteemed way of thinking in academia? Is critical thinking a male-dominated way of thought? A gender determined linear form of thought? Does critical thinking express a political agenda? A closed system devoid of dance? A catchword for the frightened? What does thinking critically accomplish? I intend to involve the audience in active and opinionated responses.

ENRIGHT, JOHN

Professor of Psychology, John F. Kennedy University

Economology: Managing the Earth (and Us) with Wisdom

Attempts to manage the Earth (Eco-Nomos) without first understanding it (Eco-Logos) are failing, resulting in terrible stress to the Earth’s bio-systems. In my work and travel throughout the world, I have seen how our separative, fragmented thinking has gotten us into this state of danger. In this presentation I would like to lead the audience in an experiential as well as cognitive critical re-evaluation of some of the very basic — and sacred — concepts that have led us into this crisis: such concepts as Wealth, Free Trade, National and Personal Security, the GNP, and Science.

Why, you might ask, is a psychologist butting into economics? To be too close to a system is to be blind to its paradigms. ("What is this ‘Ocean?’ asked the students of the philosopher fish.) While “experts” are needed to study the details within a system, when the fundamental assumptions that support a system are in question, the experts are those who can think critically from a perspective outside the system. In this presentation, we will seek to do just that together.

EPSTEIN, VIRGINIA B.

Associate Professor of Education, Regis College of Regis University

Critical Reading and Popular Culture: Women as Heroes in Film

When examining women’s roles in popular films there seems to be little consideration of ethical issues, particularly the ethics of the exploitation of women for economic purposes. The recent emphasis in films on the pathological career woman intent upon brutal murder for the love of another woman’s man (the “Fatal Attraction” genre) can be juxtaposed with films in which women are cast as the hero: the ones who move the action rather than act in support of the male hero. In this workshop we will dialogue about the story possibilities in these films. For example, are there ethical positions available for women in these films? Are women still portrayed as crazy? Can they only behave as men? Such films as “Thelma & Louise”, “Aliens”, and “Fried Green Tomatoes” will be used to raise these and other questions about gender in our culture. Patterns of questions will be suggested to teach the reading of films and other media across grade levels and curricula for ethically responsible interpretations.
This session is for the purpose of networking and exchanging information on the production of journals and newsletters in the field of critical thinking. We will talk about the practical concerns of soliciting manuscripts and subscribers, keeping up with the news, publication and editing styles and an assortment of other issues relevant to editors of critical thinking periodicals. We will also consider the possibilities of various kinds of collaboration between different extant journals and newsletters. In addition, we welcome those who are interested in starting a new publication and need basic information and/or encouragement. Participants are asked to bring copies of their publication, ideas and questions.

FACIONE, NOREEN C.

MONDAY 8:45; STEV 3036
Regents Fellow Nurse Researcher, Physiological Nursing, University of California, San Francisco

CAROL A. SANCHEZ
Professor of Psychology, University of California, Riverside

PETER FACIONE
Dean, College of Arts and Sciences, Santa Clara University

Gender and Critical Thinking -- A Look at the Data

FEM, PSYCH, COLL, ADV

Although women and men might be equally capable of critical thinking and equally disposed toward using critical thinking, are there differences between the genders regarding specific critical thinking dispositions or abilities? This presentation will examine the results of three separate research studies using the California Critical Thinking Skills and Dispositions instruments to explore possible gender differences in critical thinking skills and dispositions in college students. The three studies address: 1) possible differences in critical thinking skills by gender, possible correlations with SAT verbal, SAT math, and college GPA; gain scores by gender after one course in critical thinking; 2) common profiles by gender on critical thinking dispositions, and 3) possible correlations between critical thinking skills and dispositions by gender. Participants in this presentation will interpret these new data and suggest their implications for educational policy and pedagogical strategies.

FACIONE, NOREEN C.

TUESDAY 8:45; STEV 2049
Regents Fellow Nurse Researcher, Physiological Nursing, University of California, San Francisco

CAROL A. SANCHEZ
Professor of Psychology, University of California, Riverside

Critical Thinking Research and the Health Professions

HEALTH, PSYCH, TEST, ADV

New research illuminates the strong theoretical connections between critical thinking skills and dispositions and successful practice in the health care professions. This presentation will outline several of these research findings: 1) descriptions of how critical thinking dispositions might impact professional practice; 2) an empirical study of the convergent validity between critical thinking dispositions and a number of key psychological indicators associated with mental health and divergent validity with personality disorder measures; 3) empirical data describing the most common critical thinking dispositions profiles; and 4) correlational studies relating critical thinking dispositions and critical thinking skills. These studies suggest fruitful avenues for future research regarding the relationship between critical thinking and successful job performance in the health professions. They also have important implications for curriculum development in programs designed to prepare health professionals.

FACIONE, PETER

SUNDAY 12:15; STEV 2049
Dean, College of Arts and Sciences, Santa Clara University

NOREEN C. FACIONE
Regents Fellow Nurse Researcher, Physiological Nursing, University of California, San Francisco

Assuring Critical Thinking in the Professional Nurse: A Response to NLN Criterion 20

HEALTH, TEST, COLL

The nursing profession is among the leaders in demanding critical thinking ability in its developing professionals. This interactive and collaborative presentation will employ critical thinking pedagogy to achieve its two outcomes: a) that the participants will encounter a robust, theory-based, critical thinking construct capable of guiding the integration of critical thinking skills and dispositions into the curriculum of nursing preparation, and b) that the participants will outline a multi-modal program assessment plan by which they can generate sophisticated and meaningful baseline and longitudinal data regarding the students' critical thinking development during their nursing education. The result of this session will be an outline on how to integrate critical thinking education and assessment into nursing curriculum that is consistent with the vision of the professional nurse and rigorous enough to support the development of the advanced nursing professional.

FACIONE, PETER

SUNDAY 3:15; DAR 137
Dean, College of Arts and Sciences, Santa Clara University

Classroom Critical Thinking Assessment -- The Basic Ways and Means

TEST, SOC STUD, COLL, MID/HIGH

This session describes the fundamentals of classroom level assessment of students' critical thinking skills and dispositions. Our chief focus here will be on grass-roots assessment projects which are designed and carried out by individual faculty and teachers. However, the basic ways and means of assessment described here have application at the larger scale levels of program and institutional assessment as well. All who are new to assessment are most welcome. We will start with the basics, like identifying a robust,
clear, and operational concept of critical thinking. Then we will identify and critique specific examples of classroom assessment strategies (such as projects, self-reports, performance observations, essay tests, and multiple-choice tests). We will examine a variety of commercial critical thinking assessment instruments such as the Watson-Glaser, Ennis-Weir, Cornell X, Cornell Z, California Critical Thinking Skills Test, and the California Critical Thinking Dispositions Inventory. And, we will have fun experimenting with novel classroom assessment strategies such as team testing.

FACIONE, PETER  
Dean, College of Arts and Sciences, Santa Clara University

Are New College Students Disposed to Think? LANG, COLL, TEST
Writing and communication teachers at the high school and college levels seek to develop student’s CT ability and dispositions. During freshman orientation for the 1992/93 entering college students at Santa Clara University students were surveyed. They include inquisitiveness, cognitive-maturity, analyticity, CT self-confidence, systematicity, truth-seeking, and open-mindedness. Using composite samples of student profiles, participants will be invited to help interpret these samples and to draw out the implications for writing and communication assignments and classroom activities at both the high school and college levels.

FACIONE, PETER  
Dean, College of Arts and Sciences, Santa Clara University

Teaching Critical Thinking Using TV Drama LANG, COLL, MEDIA, MID/HIGH
The development in students of those abilities and dispositions we associate with good critical thinking requires opportunities for guided practice using meaningful and engaging material. For good or for ill, perhaps nothing in popular culture captures the attention and interest of today’s learners as completely as does dramatic commercial television. Hence, the careful use of commercial TV materials to teach and reinforce critical thinking should advance the quality of education and cause of rationality in our democracy. This session is an on-site demonstration of the use of such media in the typical college classroom. The participants will be selected randomly from those attending the session. Although we will reflect from time to time on the methodological or theoretical dimensions of teaching critical thinking this way, the chief activity of this session will be to illustrate the use of a recently aired clip from a TV drama to teach critical thinking.

SANDRA PARKS  
Co-Director, The National Center for Teaching Thinking

Critical Thinking and Global Economics Within a Theological Dimension
For those who live in any industrial society, especially capitalist, the primary preoccupation must be the production, distribution, and consumption of goods and services if that society is to survive.

Robert Swartz  
Co-Director, The National Center for Teaching Thinking

Decision Making and the World Market-Place ECON, CONF THEME
The session will focus on a fragmented global economic system, the international agencies most responsible for this system, and the reforms in structure and practice which would be helpful in integrating the system. Fractiousness, agencies, and reform will be knit together by consideration of decision-making as a cognitive and social process. It is the contention in this presentation that it is in effective decision-making that world marketplace issues can be best addressed. The structure and process of decision-making can be studied and taught and then applied to extant institutions to promote integrative and collaborative economies. The aim will be to present specific and useful decision tools and to apply them to recommendations for education and the economy.

Fernandez-Balboa, Juan Miguel  
Associate Professor of Kinesiology, University of Northern Colorado

Educational Reform for Social Transformation and Environmental Renewal ENV, SOC STUD, CONF THEME
In this paper, I argue that schooling is quite irrelevant to our great environmental and social crises because education, far from being neutral, is affected by powerful economic and political forces with little interest in society and...
the environment. Nevertheless, we are at a point in history where the social problems and environmental conditions are reaching alarming proportions which threaten our existence. Hence, my argument is that educational reform must redirect its priorities toward solving and preventing further social and environmental decay. I propose alternative educational solutions related to the content, process, and orientation of schooling. Namely: a) emphasizing curricula centered around human subjects and environmental issues in order to develop social and ecological literacy and action; b) adopting critical pedagogy as a philosophy and praxis of education; and c) designing and implementing instructional programs intended to educate learners as active democratic citizens and social "transformative intellectuals."

FINOCCHIARO, MAURICE A. MONDAY 3:15; ART 108
Chairman and Distinguished Professor of Philosophy, University of Nevada, Las Vegas

Galileo and Critical Thinking COLL, SC, H CON, H RIGHTS

Galileo's is well known for his contributions to physics, astronomy, instrumentation, and methodology. Equally well known is his martyrdom in the struggle for freedom of inquiry, due to his persecution by the Inquisition; the "Galileo affair" is instructive partly because it brings us face to face with the importance, the difficulty, and the risks of being a critical thinker in the "strong sense." Less well known is the fact that Galileo was also a critical thinker in the sense of being an explicit practitioner of such micro-skills as argument analysis, evaluation, and construction. I am currently working on an elementary guide to the critical reading, analysis, and evaluation of Galileo's Dialogue on the Two Chief World Systems, his mature scientific synthesis which triggered the trial; I plan to use this session to lecture on the background of this project, give a progress report, and try to involve a general audience in that type of critical thinking consisting of the critical reading of a classic scientific text.

FISHEL, JUDY TUESDAY 10:30; DAR 122
Science Teacher, Bristol High School

Benchmarks in Critical Thinking: What Skills at What Age? The Comet Is Coming! SCI, MATH, K-12

Here is an opportunity to make a real difference. Project 2061 of AAAS has published the first Draft of their "Benchmarks for Science Literacy". One strand in this work includes Critical Thinking Skills and the age levels at which they should be mastered. These "Benchmarks" will be used in many schools across the United States to help develop new curricula in Science, Math, and Technology. We will compare their work to Richard Paul's Dimensions of Critical Thinking and share ideas about what skills children really can and should master at various ages. If you have used or plan to use critical thinking strategies K-12, please come and share in this effort. (Halley's Comet returns in the year 2061.)

FITZGERALD, DAVID WEDNESDAY 10:30; STEV 3030
Ph.D Research Student, The Open University

Integration of Reflective Thinking into the Curriculum COLL, PSYCH, BUS, TEST

This research evaluates an educational program taught separately to management studies and psychology degree students in their first year at university. The program deals with engaging the students in critically reflecting upon the course learning activities and epistemological constructs in their studies. The design, implementation and evaluation of the course are carried out by the researcher. In this paper I intend to comment upon emergent themes coming from this program based on reflections as a researcher and practitioner. The paper will comment upon and explore issues that promote or inhibit critical thinking for the student in the classroom. Secondly, it will look at the broader setting beyond the classroom and examine how institutional structures come to inhibit or promote the incorporation of reflective thinking into the curriculum. The paper will comment on the research findings followed by participatory exploration of the above two issues and from this a discussion of the implications for incorporating it into the curriculum.

FOLEY, JEAN ANN TUESDAY 10:30; NICH 173
Research Associate, School of Education, University of Tulsa

Teacher Ethos: A Veil of Perception That Precludes Critical Thinking STAFF DEV, ELEM, MATH/SCI

This paper contends that efforts to reform science education in elementary schools have failed because reformers ignore the teacher ethos that drives the teacher in the elementary science classroom. The argument is presented in three steps. First, the elements that build teacher perspective are described and suggestions are made on how teacher ethos may interfere with the teacher's ability to problem solve, analyze, and interpret science education reform initiatives. Next, the dichotomy of the scientific perspective that is rooted in critical thinking and the teacher ethos is discussed and illustrated by research conducted on a teacher enhancement program for elementary teachers for teachers who teach science. The argument concludes with an example of how the teacher ethos that precludes critical thinking has the power to reinterpret reform initiatives.

FORREST, BARBARA MONDAY 8:45; STEV 3077
Assistant Professor of Philosophy, Southeastern Louisiana University

Back to Basics: The Use of Newspapers and Other Print Media to Teach Analytical Reading, Writing, and Reasoning MEDIA, LANG, G

The workshop will be divided into three segments. The first will begin with a paper which provides a rationale for incorporating the use of newspapers and other print media into the teaching of critical thinking, and recommends combining E.D. Hirsch's emphasis on "accumulating shared sym-
bols and... information" with Richard Paul’s emphasis on teaching students “to think critically... about their use of language [and] information.” Next, the audience will participate in a “Hirschian Reading Exercise” which demonstrates the importance of information for intelligent reading. The second segment will be spent examining the critical thinking booklet composed of selections from the print media which I compiled for my university critical thinking classes. The audience will be taken through the criteria for choosing editorials, analyzing the arguments they contain, and grading students analyses. The third segment will be devoted to demonstrating a convenient procedure for critiquing editorial arguments once they are identified and reconstructed.

**Gambrill, Eileen**  
*Monday 1:30; DAR 112  
Professor, Social Welfare, University of California at Berkeley*  
**Behavioral Analysis: A Complement to Thinking Critically About Global Problems**  
Behavioral analysis involves the behavior of individuals. Drawing on what is known about how behavior is influenced by the environment (how it is “selected”) helps us think critically about global planning. Without this knowledge, recommendations about how to resolve problems may violate what we know about how behavior is influenced by the environment. Behavioral analysis involves the systematic exploration of variables that influence behavior within a scientific model of inquiry. This has yielded information about the disadvantages of relying on coercive methods (use of punishment to influence behavior) as well as a wide range of successful applications to outcomes of social concern including participation of citizens on community boards, energy use, and finding jobs. This workshop will introduce participants to this area of knowledge and describe the relationship of behavioral analysis to thinking critically about global planning. A bibliography of related readings will be provided and practice exercises will be used.

**Gaventa, Harry**  
*Tuesday 8:45; STEV 3036  
Associate Professor of Curriculum and Instruction, McNeese State University, Ryan Street*  
**Reconstruction of Classroom Climates: Operations in Skepticism and Scrutiny**  
In a workshop format the audience and the presenter will examine classroom climates that condition the roles of teachers and students, with particular attention to radical reduction of four principal obstructions to critical thinking. Analysis of vital control factors, symbolically represented in handouts for the audience, will be conducted through critical thinking processes in which group consensus and independent thought will be used as variables. Keys to the four major “road blocks” are: 1) The Amo Bellack study, *The Language in the Classroom*, 2) The bandwagon syndrome in school reform, 3) Convergence commitment, and 4) Evangelical zeal for products and performance, incidental attention to process. Role reversals for teachers and students and how such roles can impact on critical thinking experiences will be given special focus. Handouts, providing for periodic reaction by participants, will be distributed.

**Geiger, James**  
*Sunday 3:15; DAR 112  
Attorney-at-Law, Adjunct, Lynn University*  
**Toward a Philosophy of Critical Thinking**  
This paper suggests reconstructive surgery for the global village as it struggles to restructure its thinking for the changing realities of the twenty-first century. The problem is compounded by the “destruction” of traditional values and the “deconstruction” of modern values, but nothing has filled the resulting “value vacuum.” The proposal is a “general theory of value” that produces a radical reconstruction for other theories regarding the nature of value. It affirms the existence of standards, but reinterprets them in the context of a changing frame of reference. Absolute systems and dogmatic ideologies are destabilized, providing an opening for a new kind of thinking. Uniformity/non-uniformity provide an inclusive communications model which complements the changing frame of reference. Finally, the proposal is value-based. Acknowledging pluralism, it provides a prototype for intellectual standards which eliminates the specter of relativism.

**Gibson, Craig**  
*Monday 1:30; Nichols 304  
Head of Library User Education, Washington State University*  
**Critical Thinking in the Research Process**  
This workshop will illustrate the application of critical thinking principles to the library research process. Preliminary discussion by the presenter focuses on constraints against critical thinking in the electronic information environment as well as in the traditional “print environment.” Critical thinking principles are applied to a model of the research process in four stages: considering the nature of the information problem; developing search strategies; evaluating sources; and examining one’s own research processes. These critical thinking principles are developed by participants in discussion groups, using scenarios of typical student research problems.

**Gilbert, Robert N.**  
*Monday 12:15; STEV 3030  
Instructor of Social Sciences, Palatine High School*  
**Doing Survey Research in the Intro Social Science Course: Putting Science Back Into Social Science, an Example of Critical Thinking**  
In this participatory workshop participants will enable participants to put science back into social science. *Doing Survey Research* actively engages students in developing a social science hypothesis, a survey to test it, an
easy logical way to organize and analyze data, and an easy logical format for written presentation. This is a unit students do not forget: ten years later, students can recall their hypothesis! Doing Survey Research teaches students to 1) survey the background literature, 2) develop a social science hypothesis using the if (there is a cause), then (there is an effect) format, 3) develop a survey to test it, 4) administer the survey, 5) organize the data into tables using cross tabulation, a simple but logical format for organizing data, 6) analyze the tables in terms of cause and effect to determine the level of support for the hypothesis, and 7) write up the results: Abstract, Introduction, Method, Results, Discussion, References.

**GIULIANO, JACKIE A.**

**SUNDAY 12:15; ART 108**

*Adjunct Professor of Environmental Studies, Antioch University*

**The Introduction of Feminist Philosophy and Spirituality into the Classroom Through Environmental Studies**  
FEM, ENV, COLL, MATH/SCI

In this workshop we will examine the justification for and methods of remodeling a curriculum to include elements of thought, inter-disciplinarity, and social relevance. Using Environmental Studies as an example, it will be shown how a curriculum that focuses on science, technology, and other "linear" fields can be remodeled to include inter-disciplinarity and ties to feminist thought and spirituality in a social context. Participants will explore how they could remodel their own curriculum along the lines discussed, and share experiences in developing strategies for infusing feminist philosophies and spirituality into the classroom.

**GIULIANO, JACKIE A.**

**MONDAY 8:45; ART 108**

*Adjunct Professor of Environmental Studies, Antioch University*

**The Development of Social Responsibility and Environmental Awareness Through Techniques in Critical Teaching — A Community Involvement Approach**  
ENV, TEST, MATH/SCI, SOC STUD

This workshop will present an approach to student involvement that focuses on action-oriented projects that involve the student in current issues before the community. Participants in the session will be asked to develop an action-oriented project of their own, thus identifying with the process and excitement experienced by the student. Techniques will be shared to help the instructors to develop the framework for the course project and to help explore techniques for the implementation of this approach in the classroom. The discussion will include presentation of a variety of ways to develop intellectual standards, hold students accountable when traditional testing techniques are not used, and use the action-oriented project as a means to develop intellectual standards for thinking and self-assessment.
uate their experience in learning “foreign” concepts and using the Critical Thinking methodology.

In ARCDs, it is important to develop confidence and self-esteem in the volunteers because they are asked to perform in chaotic and stressful situations. There is limited time for training and a large amount of information must be presented. Using the questioning technique and group discussion, a mode of thinking is developed so the volunteers can act independently and knowledgeably with minimal supervision.

**GLOCK, Nancy C.**  
**Sunday 3:15; STEV 3072**  
Specialist in Transfer & General Education, California Community Colleges  
**Towards a More Powerful Model of Critical Thinking: Reclaiming Inter-Cultural Ways of Knowing**  
MUL-CULT, M CON, ADV

Embedded in human interaction, critical thinking is an extension of our caring for one another, useful primarily for a) building mutual understanding and often consensus and b) testing the merits of an emerging consensus against the risks and constraints of empirical reality. Neither victory in argumentation nor critique of practical judgment adequately encompasses all of these functions.

Albeit time-honored and fruitful, logic with its syllogisms and fallacies is but one of a number of structures we “lay over” the fluidity of discourse to uncover relationships and test their soundness and utility. Inter-culturalism suggests other such structures, allowing the methods and structures of visual, practical, feminine, tribal, and spiritual ways of knowing to inform this human discourse. A model of critical thinking that systematically incorporates these complementary structures is rendered thereby both more powerful and more fulfilling.

**GOTTESMAN, Les**  
**Sunday 12:15; NICH 204**  
Assistant Professor of English and Communications, Golden Gate University  
**Asking Dumb Questions**

Have you ever heard, or yourself said, “There’s no such thing as a dumb question”? Wrong! There are lots of dumb questions: they’re the one that have already been answered to everyone’s “satisfaction”. Rather than insisting our students ask the “right” questions (i.e., the ones that satisfy us), perhaps they should be asking more dumb ones. In this vein, I have some ideas and exercises to share.

**GOTTESMAN, Les**  
**Tuesday 1:30; CAR 68**  
Assistant Professor of English and Communications, Golden Gate University  
**Toon Logic**

Back by popular demand: cartoons that demonstrate everything you need to know to think critically, deductively, inductively, hypothetically, non-fal-laciously, morally, and even post-modernistically!

**GRANTHALL, Nancy**  
**Sunday 1:30; NICH 202**  
Assistant Professor of Psychology, Saybrook Institute  
**Uncovering the Connections Among Self-Esteem, Critical Thinking, Moral Behavior, and Educational Achievement, Part I**  
K-12, PSYCH

In part 1 of this two part workshop, theory and research in psychology, sociology, and philosophy are used to show the relationship among critical thinking, self-esteem, moral integrity and educational achievement. Moral integrity (defined as the congruence between one’s internalized beliefs about what is right and wrong and one’s actual behavior) is shown to be as important to self-esteem as the more commonly studied components of competence and achievement. Critical thinking is shown to be crucial for self-esteem because it largely determines the degree of our achievement in both the competence and moral domains of self-esteem; it allows autonomous, rational self-evaluation; and it is the mechanism through which individuals can change themselves, their lives, and thus their self-esteem. Understanding why and how critical thinking is an effective treatment intervention for low self-esteem will assist teachers in motivating their students to learn.
CONFERENCE ABSTRACTS

HALES, SUSAN  
Tuesday 3:15; SUMPR
Associate Professor of Psychology, Saybrook Institute
Uncovering the Connections Among Self-Esteem, Critical Thinking, Moral Behavior, and Educational Achievement, Part II
Part II focuses on the development of self-esteem by identifying the early childhood experiences and parental socialization practices associated with self-esteem, competence, moral behavior, and critical thinking skills. Several currently popular self-esteem enhancement strategies are critically examined in terms of whether they are helpful or harmful to the development of self-esteem. Ways to change the feelings of incompetence and unworthiness that develop within a dysfunctional family environment are described. Knowledge of the nature and dynamics of self-esteem covered in part I is necessary for understanding and successful application of the interventions covered in part II.

HALL, PETER  
Wednesday 8:45; STEV 3036
Manager, Pace Training
Traps and Tools G, BUS
When you choose to add critical thinking to your thinking process you introduce it into a mental environment created by a lifelong experience of using conventional or “coping” thinking. This long use has formed patterns operating below awareness threshold which serve as traps to effective critical thinking. This workshop, first through lecture/demo and then, primarily, through hands-on “Problem Solving”, using cut-outs, displays the nature of the traps and pitfalls. The student having experienced the traps can then be helped to generate the questions to ask (the Tools) to avoid the traps in the future. The simple physical/mental processes employed in this workshop can be used over a wide age range. The group activity and participative “game” nature of the “problem solving” result in a high level of commitment by most students.

HALL, RICHARD S., PH.D  
Sunday 12:15; STEV 3026
Manager of Research and Development, Dale Carnegie and Associates, Inc.
The Impact of Critical Thinking on Corporate Training BUS
Much of corporate training in the U.S. (and the world) is conducted at the didactic stage of teaching, using the university model that requires little more than passive learning from the trainees. This session will explore, in a workshop environment, current practice, identify some exceptions, and then generate solutions that may help participants better incorporate critical thinking precepts into their training and development programs.

HALUZA, HERMAN  
Sunday 1:30; STEV 3077
English Instructor, Ohlone College
Critical Thinking, the Narrative, and the Post-Modern Condition COLL, H
Many academicians have labeled our times as postmodern, an antithetical reaction to the so-called modernistic era. The purpose of this session will be to examine these concepts in order to come to a better understanding of critical thinking in this so-called postmodern world. More-so, how (what?) does it mean to think in this postmodern condition? Is meaning necessary for thinking? Do we need a narrative for a critical thinking base? Has the narrative erased itself? Through the reading of a paper on this subject and discussion thereafter, we will hopefully attempt to answer some of these questions. The relevance of all this will be to make us better teachers of critical thinking in a world where many of our students have forgotten the concept of time.

HANFORD, GEORGE H.  
Monday 8:45; STEV 3046
President Emeritus, The College Board
How to Save the World: Through Critical Thinking MUL-CULT, CONF THEME
This session, half didactic and half Socratic, will address the proposition that an education grounded in critical thinking will be needed by tomorrow’s adults in their search for solutions to the world’s problems...problems that are ecological, environmental, economic, cultural, and transnational. The first, lecture half will be used to argue that, because those problems are not going to be solved through ignorance and because critical thinking is essential to effective teaching and learning, education infused with critical thinking is today’s best rational hope for peace and progress on the planet. The second half of the session will be devoted to discussion of whether that assertion is a) reasonable, b) presumptuous, c) simplistic, d) insightful, or e) misguided. Come, join in the discussion, and make your own choices among the adjectives...or offer your own!

HARPER, GLEN  
Sunday 3:15; STEV 3028
Principal, C.O. Bastian High School
Come Think With Me: Assumptions, Backing Up to the Start H CON, K-12, BEG
The workshop is designed to help novice critical thinkers identify, assess, and utilize their logic processes. This is done by developing their awareness of assumptions in a logic syllogism and then applying the concept to real situations. Since assumptions dictate the outcome of the argument, participants will be guided in analyzing the foundations of some of the major problems in our world. Participants will work in small groups and together. Recognizing that thought requires time, the exercise is designed to expose participants to a method of introducing unbiased thinking skills to a large group in a specified time frame. It is not designed to be a complete exercise, but we will learn about our own biases, assumptions, and thought patterns.

HARPER, GLEN  
Monday 8:45; STEV 3028
Principal, C.O. Bastian High School
Come Think With Me: Dealing With Real Problems by Thinking H CON, K-12, ADV
This session is directed towards experienced teachers or facilitators as well as those participants who have attended the previous session entitled “Come
Think With Me: Assumptions, Backing Up to the Start*. After a brief review of philosophical shifts (10 Minutes), participants will be guided in analyzing the foundations to some of the major problems in our world. Participants will work in small groups and present their thoughts to the group so we can analyze assumptions, thoughts and arguments. We will look at our present position and defend an opposing viewpoint. Rather than talk about thinking, we will think together!

The exercise is designed to expose participants to a method of introducing unbiased thinking skills to an experienced group in a specified time frame. It is not designed to be a complete exercise, but we will learn about our own biases, assumptions, and thought patterns.

Hatcher, Donald
Director, Center for Critical Thinking, Baker University

Thinking Critically About Public Policy Issues CONFERENCE ABSTRACTS

Even with a global economy and interdependent multi-national corporations, it is the governments of individual nations that remain the ultimate power. It is individual governments, not multi-national corporations, that set the policies for corporate behavior and technological development, e.g., worker safety regulations, mandatory wage levels, and pollution standards, to name but a few.

If we assume that democratic governments are responsive to the demands of their citizenry, then concerned, well-educated citizens can have a positive impact on what policies their government adapt. Since any policy helps some, while harming others, questions of fairness and the ethics of specific public policies are always present. For citizens to evaluate proposed policies, not only do they need to understand the technological and economic issues involved, but they must understand how to evaluate the ethical ramifications of the proposals. To do this, knowledge of general ethical principles and their application to complicated issues is essential.

Hatcher, Donald
Director, Center for Critical Thinking, Baker University

Grading the Ennis-Weir Critical Thinking Essay Test TEST, G

Whether we like it or not, we live in a time when great emphasis is placed on outcomes assessments. Granting and accrediting agencies tell teachers that it is essential that those who claim to teach critical thinking be able to demonstrate the truth of their claims. If we define critical thinking so that it includes being able to read, understand, and evaluative arguments, and articulate and defend one’s position, then the Ennis-Weir Critical Thinking Essay Test is an excellent tool for assessing student critical thinking abilities. Unfortunately, because it is an essay test it is not easy to attain grader reliability without some formal training.

This workshop provides instruction and practice in grading the essay exam. For two years, graders at Baker University, including work-study students, have achieved inter-grader reliability of 89% as we use the test to evaluate our two-semester freshmen course that combines instruction in critical thinking and written composition with the study of primary texts.

Haynes, Jared
Tuesday 1:30; STEV 2065
Lecturer, English Department, University of California, Davis

Cultivating Critical Thinking in Classroom Discussions SC, MDD/MCH, COLL

In any classroom, students display a variety of levels of cognitive development and, therefore, different abilities to think critically. Such disparities can mean that some students participate more and get more out of a class discussion than other students, who thereby lose this opportunity for exercising and improving their critical faculties. Small-group discussions that precede full-class discussions can allow more students to participate, but the tasks given to these small groups must be constructed carefully to keep students thinking about the object of discussion and to ensure that several levels of cognitive development are challenged.

This participatory workshop will begin with participants collaborating in model small group discussions. The topic of discussion will focus on an element of the conference theme. The session will end with an examination of the theory underpinning this model of classroom discussion and with suggestions for adapting the model to different courses, class sizes, and topics.
HEASLIP, PENNY  
Instructor, University College of the Cariboo

**Shifting Paradigms in Education and Health Care Reform: A Nursing Perspective**  
**HEALTH, COLL, CURRICULUM, POL**

The realities of competing in a world economy have implications for the reform of national social programs such as health care. Government spending priorities for health and education impact societal views of how the nurse should be educated, what role the nurse should have in a "new" health care delivery system and how curriculum can be designed to meet these challenges given shrinking financial resources. This interactive session critically examines key stakeholders perspectives on health care delivery and the education of nurses. The presentation explores the paradigm shift that has resulted in the development of innovative, collaborative programs and the progress of educational reform in infusing critical thinking and emancipatory learning into nursing curricula. Discussions will focus on how educators can best prepare health practitioners for a restructured health care system through the development of critical thinking and reasoning abilities necessary for the complexities of health care delivery in the 21st Century and beyond.

HEASLIP, PENNY  
Instructor, University College of the Cariboo

**Critical Thinking and Intuition in Nursing Practice**  
**HEALTH, COLL, CURRICULUM, POL, VIDEO**

In this paper, we analyze how critical thinking and intuitive practice are related to expertise in nursing. We examine how intuitive practice when performed automatically, without care, vigilance, and criticism can result in prejudice and patterns of practice which are misinformed. We show that the student nurse develops intuitive, skillful performance in nursing by reasoning about nursing knowledge and applying reflective, critical thought, in practice situations; thereby gaining greater, and greater expertise in reasoning as a safe professional to ensure quality client care. The elements of thought necessary for sound reasoning in clinical practice are explored. Finally, we suggest educational strategies and tactics which promote the development of the intellectual capacities of student nurses as independent critical thinkers.

HEILBRONER, ROBERT  
Professor of Economics, New School for Social Research  
**Monday 10:30; EPT**

**Develop a First-Rate Economy and First-Rate Standard of Living, if Citizens Learn Merely Work-Related Skills and Cannot Think Critically**  
**G, CONF THEME**

This is the third of three sessions presented by Robert Heilbroner and Richard Paul that will focus on the social, political, and educational implications of impending global changes. Robert Heilbroner argues in 21st Century Capitalism that one of the most profound world social realities emerging is the "relentless, ubiquitous pressure for change", "the continuous remaking of the social environment", continual "creative destruction", and "revolution". The market forces underlying this dynamic change bring "negative side effects": large scale inequality, economic instability, unemployment or inflation, pollution, disease, over-cutting of forests, global warming, over-fishing, crime, and other social disorders. Assuming this continues, how can we use the mind's resources to counterbalance and minimize the damage that results? Heilbroner and Paul will focus on this issue from both historical and contemporary perspectives, exploring its implications in a variety of directions.

HEILBRONER, ROBERT  
Professor of Economics, New School for Social Research  
**Monday 10:30; EPT**

**Robert Reich's Vision of the New Global Economic Realities: Do We Need Workers Who Can Think Critically? How Broadly and Well Must Citizens Learn to Think?**  
**G, CONF THEME**

This is the second of three sessions presented by Robert Heilbroner and Richard Paul that will focus on the social, political, and educational implications of impending global changes. Robert Reich argues in *The Work of Nations* that as corporations become increasingly international, they increasingly move their capital to nations with the most highly skilled workers, the most "symbolic analysts", the most "critical thinkers". The strongest basis for national wealth and well-being is, therefore, the large scale development of citizens who can think for a living, the natural "magnet" attracting capital from around the world, leading, in turn, to more development of thinking abilities, and hence to increased capital and value. Capital, then, is increasingly "intelectual" rather than "material", "knowing" rather than "possessing". Richard Paul and Robert Heilbroner will analyze this issue, exploring implications in various directions.

HEILBRONER, ROBERT  
Professor of Economics, New School for Social Research  
**Monday 3:15; EPT**

**Lester Thurow's Vision of the New Global Economic Realities: Can We Develop a First-Rate Economy and First-Rate Standard of Living, if Citizens Learn Merely Work-Related Skills and Cannot Think Critically Within Alternative Points of View?**  
**G, CONF THEME**

This is the third of three sessions presented by Robert Heilbroner and Richard Paul that will focus on the social, political, and educational implications of
impending global changes. Lester Thurow argues in *Head to Head: The Coming Economic Battle Among Japan, Europe, and America* that all capitalistic economies today are either "individualistic" (everyone for himself) or "communitarian" (the well-being of the whole comes first). The U.S. and Great Britain are the former, Europe and Japan, the latter. Communitarian forms of capitalism, Thurow argues, are much better suited to the emergent world economy. For the U.S. to maintain a first-rate economy and standard of living, it must abandon its commitment to "individualistic" capitalism and undergo an intellectual paradigm shift. Unfortunately, Thurow does not explain how this shift is to be democratically effected, how Americans can be "persuaded" to abandon deeply ingrained thinking. Richard Paul and Robert Héllbroner will analyze this issue, exploring implications in a variety of directions.

**Henry, Raquel**
Vice-President for Student & Organizational Development, Kingwood College

**Nellie Thorogood**
Vice-Chancellor of Educational Affairs, North Harris Montgomery Community College District

**Rose Austin**
Assistant to Vice-Chancellor of Education, North Harris Montgomery Community College District

**Classroom, Curriculum, and Leadership Reforms: Developing Critical Thinkers in the Community College**

Improving students' thinking skills has been an objective of community college educators for years. This participatory workshop focuses on how classroom strategies, curriculum designing, and leadership can aid in this improvement. The presenters are administrators who teach, assist in design curriculum, and provide leadership. Strategies will be given for facilitating critical thinking skills in the classroom, curriculum, and in leadership. Discussion and questions from the audience are encouraged. The presentation will focus on applications of critical thinking in the planning, development, and implementation processes for student and community development of a multi-college community college system. Emphasis will be provided on the skills needed by leaders, values needed for leaders as continuous learners, and applications processes integrating critical thinking to be practiced for fulfilling student and community needs.

**Hirsch, Judi**
Resource Specialist, Oakland Public Schools

**The Dynamic Assessment of Learning Potential: Combining the Theories of Freire and Feuerstein**

An overwhelming proportion of our nation's students are not being taught to think at school. Furthermore, many are being tested, labeled, and tracked into underachievement. This is especially true of working class people and people of color, although our more affluent students are not being taught to think either; rather, they are being trained to perform on command. This workshop will present a revolutionary way of looking at students which enables them to become powerful learners. Theory will be presented as well as a case study. We will also discuss ways of enhancing cognitive skills by using mediated learning experiences. There will be ample time for questions.

**Hitchko, Barbara J.**
Director, C.A.R.E., (Children at Risk in Education)

**Dan Burritt**
Teacher, and Co-Director, C.A.R.E., (Children at Risk in Education)

**Teaching for the Future and Preparing Students for the Educational Demands of the 21st Century: Problems, Strategies, and Solutions**

This presentation will focus on problems with, and solutions and strategies for, teaching children to become active participants in their own learning as well as productive, socially responsible citizens. We will examine how to empower children to make responsible decisions by using the Thinking Skills Format and by looking at logical consequences of their own behavior. Children can't be forced to think and learn, they must be invited and motivated. As Richard Paul said in his opening remarks last year's Critical Thinking Conference, "We must reach the student's hearts as well as their minds."

We will demonstrate how creating a classroom environment that encourages creative critical thinking and responsible decision making will provide students with the coping skills and strategies necessary for academic success. Rather than concentrating on self-esteem, the heart of C.A.R.E. encourages student self-empowerment and self-actualization by guiding them in becoming responsible, cooperative and successful learners and citizens.

**Hoaglund, John**
Director, Center for Critical Thinking, Christopher Newport University

**Pre- and Post-Testing a College Critical Thinking Course**

Three-hundred and seventy one students completing critical thinking courses from Fall 1985 to Spring 1992 showed modest (7.3%) post-test gains, while a control group of 92 showed no gain (-1.5%). Characteristics of the students, pre and post-test, organizing principles of the course, and its role in the curriculum will be sketched. Sample teaching materials, exercises, test questions, and projects will be presented for working and comments by workshop participants.

**Hoyt, Dr. Nicki**
Director of Health Occupations, College of the Redwoods

**Critical Thinking Teaching Strategies in Nursing and Health Sciences**

This interactive session is designed to provide nursing and health science faculty with hands on experience in the selection and design of critical thinking teaching strategies. Educational reform through critical thinking praxis (theory in practice) is the focus of the session. A short video of
vignettes role modeling critical thinking praxis is presented. Actual classroom scenarios for both lecture and laboratory courses in nursing and health sciences are utilized for designing teaching techniques. Multi-culturalism, ethical decision making, and the development of critical thinking skills for health care and other social reform are explored in representative exemplars from community colleges across the state of California.

Hugo, Janna Lee  
Monday 10:30; STEV 3030  
Director of Education Dialogues, University of Phoenix, Colorado Campus  

Teaching to the Brain  
K-12  
Critical Thinking is an appropriate human expectation, for comparing, patternning, and categorizing are natural functions of the brain. For this to happen, students need to discuss, think, and reflect to reach a desired performance outcome. Then by “showing,” an assessment of their usable “knowing” is possible.

You can learn how to apply the vast knowledge now available on how the brain, our organ of learning, really operates. By working with the brain, a discuss/think/reflect/show learning formula can bring exciting, meaningful, higher order thinking into every classroom in all subject areas. When you leave this participatory workshop, you will have ready-to-use lesson plans.

Jamin, Francine Malder  
Monday 12:15; IVES 45  
Professor of English/ESL, Montgomery College  

A Small Band in a Circle of Light — Teaching Writing and Reasoning in a “Quality Circle”  
LANG, COLL, MUL/CULT, MID/HIGH  
This presentation describes and models an interactive technique of teaching writing. It establishes structured conversations in a circle which are an alternative to the standard collaborative groups and an analog to W. Edwards Deming’s “quality circles.” Through engaging in dialogues, students come to recognize that writing begins not with a set of grammar rules, an outline, or a topic sentence, but with an idea. In the “circle of light” ideas emerge, evolve, and ultimately are tested. In a supportive environment, students overcome some of their anxiety about hearing their own “voices” (aloud and on paper) and begin to assess their own thinking, as well as that of others, using standards of critical judgment.

Johns, Donald  
Monday 8:45; NICH 173  
Lecturer, English Department, University of California, Davis  

Literature, Empathy, and Critical Thinking  
LANG, COLL, MUL/CULT, MID/HIGH  
The rationale for this session rests on four ideas: 1) Empathy is an essential element in critical thinking. 2) The study of literature can promote greater empathy with people living in diverse circumstances. 3) Introductory courses should begin with carefully constructed activities appropriate to stu-

Johnston, Letitia M.  
Monday 12:15; STEV 3077  
Professor of Humanities, Rose State College  

Connie Cantrell  
Professor of Humanities, Rose State College  

Risk Taking and Real Issues: A Perspective of the Teacher as Learner  
CURRICULUM DEVELOPMENT  
This presentation will consider the theory underlying the use of current issues as a means of enabling the instructor to join students in analyzing students developmental levels, activities encouraging students to articulate and examine their responses to literature. 4) Specialized disciplinary knowledge such as critical theory and terminology, while important, should play a secondary role to the study and development of student response. We will closely examine a few short poems, synthesizing elements of Richard Paul’s Socratic discussion strategies with reader-response activities suggested by the work of Janet Emig, Peter Elbow, and Louise Rosenblatt. This will be a participatory workshop beginning with a brief presentation of the rationale followed by writing, small-group work, and general discussion.

Johnson, C. Lincoln  
Sunday 12:15; STEV 3030  
Associate Professor of Sociology, University of Notre Dame  

Religious Values and Critical Thinking: The Quest Dimension  
SOCIOl, MUL/CULT, H CON  
This workshop focuses on the dynamic relationship between critical thinking and concerns over beliefs, values, and commitment. The workshop draws upon insights from David Kolb (tolerance for ambiguity is a subset of learning styles); Max Weber, the classical sociological theorist (Science as a Vocation and The Social Psychology of World Religions); and the more recent work of Daniel Batson, a psychologist whose studies in religiosity and pro-social or helping behavior has been prevalent in contemporary research. The experiential portion of the workshop will focus on the instrument developed by Batson, who posits a Quest dimension of religiosity. Quest is an extension of Allport’s “Means”/”Ends” religious dimensions, and is viewed as the “mature” dimension of religious development. There is an affinity between the Quest dimension of religiosity and principles of critical thinking.

Johnson, Ralph H.  
Tuesday 8:45; STEV 3008  
Professor of Philosophy, University of Windsor  

Argumentation: A Pragmatic Approach  
THEOR  
Following the lead of some argumentation theorists and logicians who emphasized pragmatic aspects of argument, this paper proposes further steps in the pragmatization of argumentation. After explaining what I understand by a pragmatic approach to argumentation, I discuss the principal features that come to the fore in this approach. They are first, argumentation as teleological; second, argumentation as dialectical; third, and most important, argumentation as manifest rationality.

Johnston, Letitia M.  
Monday 12:15; STEV 3077  
Professor of Humanities, Rose State College  

Connie Cantrell  
Professor of Humanities, Rose State College  

Risk Taking and Real Issues: A Perspective of the Teacher as Learner  
CURRICULUM DEVELOPMENT  
This presentation will consider the theory underlying the use of current issues as a means of enabling the instructor to join students in analyzing
important multilogical issues. We encourage teachers to step outside their fields of expertise and join with their students in applying critical thinking strategies to analyzing real world issues. We will share our experiences in developing projects that use current multilogical issues in lesson redesign, course content redesign, innovative course development projects, and team teaching projects.

Seminar participants will be given outlines and suggestions for practical applications for the preparation, implementation, and assessment of program designs incorporating critical thinking instruction. These applications will be paralleled in theory with Richard Paul’s criteria for thinking and reasoning strategies. Participants will have an opportunity to examine a few selected current issues in order to experiment with creating applications suitable for their fields of interest.

**Keeley, Stuart M.**
*Professor of Psychology, Bowling Green University*

**What Can Psychotherapists Tell Us About How to Cope with Resistance to Critical Thinking**

Teachers embracing critical thinking as a classroom objective must face a major obstacle: student resistance to change. The typical learner feels the need for change, yet wishes to remain as is when faced with a learning approach that threatens his/her present attitudes and behavior. How can teachers overcome student resistance? The psychotherapy literature gives us some important insights, because therapists must address analogous kinds of resistance and have written extensively about efforts to do so.

This workshop illustrates how insights borrowed from the psychotherapy literature can help teachers overcome student resistance to critical thinking. Workshop participants will be asked to generate kinds of resistance they have encountered in their own classrooms. We will then share a list of ideas about how to overcome resistance, which is stimulated by investigating the psychotherapy literature on resistance. Then participants will be asked to share anti-resistance strategies that they have found to be helpful.

**Kelder, Richard**
*Curriculum Coordinator, S. U. N. Y. College at New Paltz*

**Teaching Critical Thinking and Argumentation from Global Perspectives**

My session will examine an alternative paradigm of argumentation based on teaching critical thinking for the purpose of minimizing conflict and building consensus in a changing world. Most formal theories of argumentation support the conventional belief in the individual’s ability to state a position in opposition to others or a given state of affairs. However, this methodology must be re-evaluated to allow for intentions, situations and contexts that support inter-dependencies unique to new organizational structures and systems as indicated by Thurow in *Head to Head*.

This session will offer a theoretical and practical analysis of this topic. In addition, it will examine the role of cultural differences, e.g., Japanese and American, in teaching critical thinking, and the function of argumentation in “high context” and “low context” cultures. Instructional models and assignments will be discussed.

**Kendall, Gail A.**
*Director of Chapter 1 Services, Agua Fria UHS/Rio Salado College*

**Diane Wheeler**
*Director of Special Education Services, Agua Fria Union High School District*

**Project Think: An Integrated Language Arts Approach to Critical Thinking**

Project Think is an integrated, language arts based program, which uses thematic units, combined with a critical thinking focus, to ensure that all students meet the demands of the 21st century. These demands include but are not limited to: making informed decisions, solving problems effectively, and becoming contributing democratic members of the global community. In this session, participants will discover the process of aligning a critical thinking hierarchy with thematic units, creating a process model for critical thinking and learning techniques that promote transfer.

**Kerwin, Ann**
*Philosopher-in-Residence, Department of Surgery, University of Arizona*

**Marlys H. Witte**
*Professor of Surgery, University of Arizona, College of Medicine*

**Charles L. Witte**
*Professor of Surgery, University of Arizona*

**“The Unanswered Question” Meets “The Ultimate Learning Center”**

The lament “a mind is a terrible thing to waste” is achingly apt today. As “knowledge factories” generate more information than learners can ingest, we “under-utilize” our ultimate learning centers: our musing, exploratory minds. In this participatory workshop, Marlys and Charles Witte M.D. and Ann Kerwin Ph.D., of the innovative Curriculum on Medical Ignorance at the University of Arizona College of Medicine, focus on the “unanswered question” — as motive, lure, and source of learning. Participants will wonder, ponder, question, and discover. Presenters have no pat answers to urgent questions about education in the U.S.; no “magic bullets” for national ills. Rather *The Unanswered Question* is a powerful, provocative catalyst for accessing the ultimate learning center. Participants will use their abundant, self-renewing power sources — their inquiring minds and unanswered questions — to produce needed answers, and deeper, richer questions.
Kim, John C. S.  
Professor of Philosophy, Rio Hondo College  
Creative Critical Approaches to Educational Reform  COLL, MID/HIGH, MULT-CULT, LANG

In 1989, Lamar Alexander, secretary of education under the Bush administration, laid down six objectives for U.S. Education Reform which he called "revolutionary," one of which states: "Every school will be free of drugs and violence and will offer a disciplined environment conducive to learning." By following these objectives, our children were to be number one in the world in both math and science by the year 2000. But we are continuously failing on both counts, and metal detectors used on students do not stop violence on the campuses or in the classrooms. There is no quick fix for educational failure. A fundamental reform is needed to reverse the trend. This requires a long term but determined and brave new approach to education. Below are my agenda for the reform: 1) Overhaul today's shallow and faulty educational goals which have been primarily for science and profiteering at the sacrifice of the study of humankind. 2) Incorporate moral training into the curricula. 3) Learn and adapt the educationally successfully systems of the Asian nations.

Klein, Donald R.  
Professor of Philosophy, Gavilan Community College  
Critical Thinking and the Committee Process  G, H CON, STAFF DEV

All of us spend much time working in committee structures. What is the level of productivity and satisfaction? This workshop will allow participants to look at the basic committee process, the infusion of critical thinking principles and components, some specific reasons for dysfunction, and some specific strategies for success. The workshop includes some formal presentation, questions, answers, and clarifications, full audience participation, and it concludes with an exercise which allows the participants to put the material to work.

Knott, Tara D.  
Director, Evaluation Resources, Inc.  
The Thoughtful Use of Distance Education Technology  TECHNOLOGY, C

Distance Education (DE) removes the constraints of time and place, giving students everywhere the potential to acquire needed knowledge from any place, at any time. These constraints, however, are trivial if the more serious problem of vestigial thinking about the use of DE remains. Current educators seem to believe that simply putting together a student and the technology — without any changes in curriculum or pedagogy — will result in learning. Such anachronistic thinking will constrain DE to underuse and un inventive uses, and may actually cause harm. DE technology per se, however, is not the cause of these concerns. The problem lies with educators' failure to critically consider students' present and future needs and resources and the role DE can play in reforming education. However, if educators are willing to abandon such paradigmatic thinking and begin to critically consider DE's potential in interactive workshops such as this, DE can offer a plethora of previously unimaginined educational experiences.

Koep, Monica M. C.  
Monday 8:45; NICH 204  
Teaching and Learning Facilitator, University of Namibia  
On the Need for Critical Thinking About Democracy in Namibia  MULT-CULT, H RIGHTS

At independence in 1990, Namibia emerged from a unique position of colonial apartheid which determined social, socioeconomic, economic, political and educational structures in very particular ways. As an emergent democracy in Africa, the country subscribes to an exemplary constitution and has introduced formal democratic structures and procedures. What needs to be established, nurtured and maintained is a culture of reason, democratic values and thinking that will underpin these structures. A multi-level and culturally sensitive infusion of critical, constructive and creative thinking concepts and strategies into all domains is required if Namibia is to develop optimally, deal with the legacy of the past, and face the challenges of the future.

Koshi, Annie K.  
Wednesday 10:30; NICH 173  
Associate Professor of E.S.L., The City College of New York  
Holistic Grammar Through Socratic Questioning  LANG

Followers of the acquisition/learning theory, postulated by Krashen, believe that explicit teaching of grammar is not helpful to second language learners. However, there are others, such as Celce-Murcia, who believe that formal classroom teaching of grammar has an important role in second language learning. As a result of this controversy, pedagogians are looking for the most effective methodology of teaching grammar to second language learners. Holistic teaching of grammar by exposing learners to critical reading of discourse level prose is a successful approach. Socratic questioning aimed at form-meaning analysis is a very useful technique in adopting this approach. It helps learners critically analyze the input, form and test hypotheses, and in the process, evolve themselves as critical thinkers and learners, taking the responsibility of their own learning of grammar.

This paper will examine the theoretical framework of holistic grammar and discuss how Socratic questioning helps learners "discover" and arrive at conclusions about the "rules" of grammar.

Lassek, Yun Ja  
Monday 3:15; DAR 139  
Managing Director, Greater Philadelphia Philosophy Consortium  
Teaching Environmental Ethics Through Various Critical Thinking Methods  ENV

Whether we believe in the Gaia hypothesis or the equilibrium of a self-sustaining ecosystem, or neither, ecological problems will remain as long as
human beings inhabit the earth. The well-being of future generations depends on how we educate the young to be conscious of environmental ethics today, and a liberal democratic society calls for a particular kind of education which will promote the young to think for themselves and make sound decisions according to their own understanding and critical judgments. After introducing two dialectical views of ecological theory, and after exploring the connection between environmental ethics and many methods of critical thinking, the workshop participants will engage in a sample mini-workshop based on an original environmental ethics text, *Mul Bang Ui*.

**Lazere, Donald**
Professor of English, Cal Poly State University

**Teaching the Political Conflicts in Writing Courses**

In the past few years the introduction of political controversies in college writing courses has itself become a source of controversy both within and outside the English profession. One reason for this controversy is that little basis has been established within the discipline of composition delineating either a critical thinking framework or practical and ethical guidelines for dealing with political controversies in the writing classroom. This workshop will apply critical thinking categories and dispositions to these problems, as well as generating units of study and assignments that can be integrated into the established structure of basic and advanced writing courses. The breadth of topics and pedagogical issues addressed will make the workshop of interest not only to teachers in English but in all other fields of the humanities and social sciences, in college and high schools.

**Lauglin, Richard L.**
Superintendent, Clatsop County Educational Service District

**An Educational Paradigm Shift**

Today's student is a global creature, not by conscious choice, but rather by mere existence in the world order. Today's teachers, parents — all citizens — must face the complexity of preparing this new student to compete and succeed, to think creatively and critically, and to solve problems effectively in all areas of education as well as in successful life experiences. It will require visioning, changing people, and changing past practices. The workshop will focus on administrative involvement in elements of change for early childhood education, early intervention, multi-phasic screening and administrative paradigms. It will include interactive demonstrations of the teaching of critical thinking skills in the classroom with research based activities integrated at all age levels and all curriculum areas.

**Lauglin, Janet**
Teacher, Consultant, Astoria School District

**Literature for Critical Thinking**

This repeat of a well-received workshop at the 1988 conference will demonstrate how literature courses can be organized around critical thinking topics and will apply the following criteria of critical thinking to the study of world literature at the college and high school levels.

- Connecting the abstract and concrete, the ideal and real.
- Connecting the personal and the impersonal.
- Connecting the past and the present.
- Understanding irony, ambiguity, multiple meanings and viewpoints.
- Transcending psychological blocks to critical thinking.
- Monologic and dialogic thinking in literature.
- Understanding ideological viewpoints in literature.

**Leshowitz, Barry**
Associate Professor of Psychology, Arizona State University

**How to Reduce Cognitive Bias and Promote Critical Thinking**

Rarely given explicit instruction on how to apply principles of reason in addressing everyday problematic situations, students often rely heavily on emotion-based thinking when making decisions. They also accept information at “face value,” indicating passive, non-questioning attitudes. Recognizing these deficiencies, the first author has developed an instructional intervention that is designed to promote critical analysis of evidence and insights into the distorting effects of personal bias. In this collaborative learning workshop, a problem based learning format is used to enable participants to discover for themselves their current ways of thinking in an effort to facilitate “reasoned knowing” and healthy skepticism. The first participatory exercise will examine the marketing of a “questionable” consumer product from the perspective of the company, consumer, and regulatory agency. A second problem will focus on the legal, ethical, and medical ramifications of distributing untested drugs for AIDS.
for all students. This presentation will explore research based instructional enhancements that "water-up" the curriculum and assist diverse learners such as limited English proficient (LEP) and mainstreamed special education students in activating, organizing, and reflecting about their thought processes. The specific classroom techniques presented are based on current research in cognitive psychology and include a cognitive literacy strategy, graphic organizers, and processes for activating and connecting prior knowledge.

LEWIS, RICHARD B.  
Monday 1:30; DAR 122  
Associate Professor, Civil Engineering, Louisiana Tech University

Critical Thinking in All Engineering Classrooms  
ENGINEERING, MATH/SCI, COLL

This session will concentrate on several critical thinking skills that have been incorporated into a typical Statics class in the engineering curriculum. Participants will identify with the "standard approach" used in the teaching of beam analysis; after a short critique, a remodeled lesson plan will be demonstrated and discussed to show how to wean the student away from the teacher and foster those skills necessary to survive in the engineering world of the 21st Century. Emphasis will be on critical reading, critical listening, critical writing, critical speaking, and Socratic questioning. Some techniques will be demonstrated, but only to show how the critical thinking skills can more easily be developed by the facilitator, and mastered and used by the student.

LINDEN, TED  
Monday 12:15; STEV 2083  
Consultant

Toward a New Generation of Educational Software to Teach Critical Thinking  
COMPUTER, MID/HIGH

This session evaluates the extent to which a new generation of educational software can teach critical thinking. Once software that encourages critical thinking becomes feasible, cost effective, and fun, it can be replicated easily and result in widespread improvement of thinking skills. The paper presented in this session describes how results of recent research in computer science and artificial intelligence can lead to dramatically new education software modules. Very flexible simulations can enable holistic learning experiences where students pursue goals, seek out the information they need to make decisions, evaluate the relevance of information, question their assumptions and inferences, and deal with conflicting viewpoints. The simulation should emphasize cooperative problem solving and require social and interpersonal skills as well as subject-specific knowledge. Discussion during this session will evaluate the extent to which the proposed properties of future education software are necessary and sufficient to help teach critical thinking.
Loase, John F.

Associate Professor of Mathematics, SUNY-Westchester Community College

Sugilation: Our Positive Influence Over Time: A Quantitative and Qualitative Analysis

The workshop will analyze sugfluence (significant, long-term positive influence) from the traditional academic perspectives of linguistics, education, psychology, and statistics. It will also feature a 30-minute video segment of a qualitative sugfluence session.

A discussion of the relationship between the quantitative and qualitative approach to sugfluence will complete the session.

Sugfluence was highlighted by the New York Times as one of the new concepts that emerged from Harvard University's 1984 International Conference on Thinking. According to Loase's emerging theories, sugfluence is a fundamental and widely neglected need of person. Sugfluence has applications to myriad domains such as education, counseling, politics, and most importantly to our individual lives.

Loofhouse, Lynn J., Ph.D

Assistant Professor of Communications, Wesley College

A Prescription for Building Critical Thinking Skills Through Persuasive Message Construction

This workshop has as its objective to build critical thinking skills, and employs the construction and communication of a persuasive message as the vehicle for accomplishing this goal. The workshop will begin with a diagnostic to help participants determine how they critically think through the persuasive process. Next, a presentation will be given about the Monroe Motivated Sequence, a learning tool to build critical thought into persuasion. Participants will then individually construct and present a persuasive message. Messages will be video taped and replayed to the group for critique and analysis of how critical thinking was employed. Key techniques for developing important parts of the message will be discussed and explained. Based on feedback, participants will then revise their messages to employ higher levels of critical thinking and to reflect their greater understanding of the process.

Loring, Ruth M.

Critical Thinking and Professional Development: An Approach Consistent with "Communitarian Capitalism"

Professional development which takes into account the implications of a 'communitarian capitalism' demands a structure which goes beyond traditional inservice workshops. In this approach to professional development,

Luckey, Sue Y.

Professor of Information Sciences, Morehead State University

Active Learning Strategies That Enhance Critical Thinking

To enhance critical thinking skills, college students must be actively involved in the learning process rather than passive recipients of lecture material. They must talk and write about what they are learning while relating it to past experiences and applying it to daily life. This dynamic participation in the learning process is called "active learning." Although college teachers generally see themselves as good lecturers, lecturing does not guarantee learning. Therefore, nineteen ways to alter the traditional lecture will be presented. These active learning strategies are designed to enhance student thinking and learning. Risks involved and barriers which prevent faculty from using an active learning approach will discussed.

Luckey, Jr., George M.

Professor of Philosophy; Director, Center for Critical Thinking, Morehead State University

Critical Thinking and Active Learning Across the Curriculum

The purpose of this presentation is to present a model for infusing critical thinking and active learning into the traditional content of any college course or public school classroom. The model consists of in-class activities and questions, and of outside assignments designed to accomplish two interrelated goals. 1) Student self-awareness and bonds of trust with the teacher and with class peers must be established. 2) Thinking skills and associated values and dispositions must be fostered throughout course content.

Specific examples of trust building and self-assessment strategies will be offered. Then, the presentation will focus on generic illustrations of questions, assignments, and activities related to: a) skills such as analysis, synthesis, and thinking about thinking; b) dispositions such as flexibility, persistence, and respect for opposing viewpoints; and c) values such as fairmindedness, intellectual honesty, and autonomy. Session participants will be invited to critique this workshop model.
Luckyhardt, Grant
Professor of Philosophy, Georgia State University

Criteria for Assessing Authorities

In this paper some 25 criteria for assessing the credibility of authorities are developed, explained, and discussed. They range from the intuitively obvious (first-hand information is better than second-hand, for example) to many that are a result of recent research in psychology having to do with observation and memory. A discussion of the list that is developed will follow, and a small number of test examples will be evaluated and discussed.

Lynch, Cindy L.
Assistant Coordinator, Higher Education, University of Denver

Reflective Judgment in the Business Classroom

This participatory workshop will allow participants a glimpse of the consultation occurring between reflective judgment researchers/educators and a small group of business faculty. The aim of the project is to help business faculty redesign coursework to more adequately encourage reflective thinking; it is part of a 3-year grant from the Fund for the Improvement of Post-Secondary Education (FIPSE). The project is based on the seven sequential stages of the reflective judgment model of cognitive development proposed by Patricia King and Karen Kitchener. Their work has suggested that the ability to solve ill-structured problems is strongly related to the development of increasingly complex assumptions about knowledge and how it is gained.

Mahara, M. Star
Instructor of Nursing, University College of the Cariboo

S. Dawn Patterson
Instructor of Nursing, University College of the Cariboo

Writing to Learn: The Use of Journals to Teach and Evaluate Thinking

Teaching and learning at the post-secondary level has traditionally focused on the acquisition rather than the understanding of course content. Educational efforts have seldom been directed towards teaching students to think and reason. Effective learning involves both the acquisition of new information or experience (content), and the individual’s personal discovery of the meaning of the experience (understanding). Writing is an essential means of acquiring knowledge, a process through which an understanding of the content under study is developed and not merely memorized or reported. By reflecting on written material, students have the potential to see things more clearly. This reflection can then lead to new meaning. Journaling is one way of gaining clarity and perspective, of discovering the relationships of the event to the self, that is, of making meaning from our experiences.

Marshall, James P.
Associate Professor of Sociology, University of Northern Colorado

Practicing Democracy in the Classroom Through the Application of Critical Pedagogy

Alternative educational practices will play a crucial role as they influence the face of the future, especially in democratic societies. As a counter to traditional pedagogies, numerous alternative pedagogies have emerged attempting to improve the inter-relationship between educational experiences and democratic participation in society. This session focuses on critical pedagogy as one such alternative. Specifically, this presentation will include: an overview of critical pedagogy, the application of critical pedagogy in the form of collaborative learning groups in the university classroom, and a critique of the application of critical pedagogy. Audiotapes and videotapes will be shared to demonstrate the application of critical pedagogy and invite dialogue. This session will be participatory. A paper will be disseminated.

Martinez, Dennis
Land Restorationist & Inter-Cultural Environmental Activist, American Indian Cultural Center

Traditional Indigenous Knowledge and Western Science: Cross-Cultural Perspectives on Environmental Knowledge

Current land practices (forestry, agriculture, etc.) in the West are based on certain philosophical assumptions about nature which are peculiarly Western. These hidden assumptions cannot be brought to light without an “outside” or cross-cultural perspective. Traditional Indigenous Knowledge (TIK) provides an analytical tool by which to critique Western scientific assumptions. TIK also may offer a complete logical alternative to science, as well as...
provide a model of land stewardship which can be adopted to present industrial society. A synthesis of ethics and Western science may resolve the current impasse between wilderness preservation and sustainable use.

**Matties, Dennis**  
Lecturer, Center for Teaching and Learning, Stanford University

**The New Economy, the New Pedagogy**

With the advent of a truly global economy and an onslaught of new technology, the college graduate may face four or five careers, with particular jobs lasting an average of only three or four years. What does this mean for today's students and for the old debate between careerism and intellectualism? What will provide our students with the best preparation for a meaningful and successful life in the new economic order: traditional pre-professional education? Traditional liberal education? Something new?

**McBride, Ron**  
Associate Professor of Kinesiology, Texas A&M University

**Preventing the Future Critical Thinker: Structuring the Middle School Learning Environment for Critical Thinking**  
**Glenda W. Beamon**

Assistant Professor, College of Education, Elon College

The purpose of this presentation is to discuss how the learning environment in today's middle school can be structured to prepare tomorrow's critical thinkers. Particular emphasis will be placed on how to make the classroom climate "safe" so that students will be predisposed to critical thinking. Cooperative learning, reciprocal teaching, and questioning are presented as viable teaching/learning strategies. An interdisciplinary approach to the topic is used to view critical thinking across the curriculum. This will be a participatory/demonstration presentation format.

**McCallum, Richard J.**  
Assistant Professor, University of Missouri

**Using Writing as a Method of Encouraging Critical Thinking**  
**Coll., Mid/HIgh, Lang**

Have you ever asked yourself: "How can I teach someone to make critical thinking a routine part of their life?"? Is it possible to encourage critical thinking to become a habit of the heart? After teaching introductory critical thinking classes for seven years, I became concerned with the small number of college students who would actually transfer their awareness into practice. And so I wondered, how can I help encourage students to begin applying critical thinking concepts, skills and attitudes within their daily life. This question prompted me to design a new course entitled: "Critical Thinking as a habit of the Heart". This will be a participatory workshop designed to share the content and format of this new course. I would like to establish a discussion forum which would permit me to share five different writing assignments and discuss the outcome of each.

**McConnell, Robert**  
Associate Professor of Geology, Mary Washington College

**Daniel C. Abel**

Assistant Professor of Biological Sciences, Mary Washington College

**Enhancing Critical Thinking Through Quantification of Population/Environment Issues**  
**Env., MATH/SCI, G**

Critical evaluation of environmental/population issues relies in large part on the ability to structure and carry out simple mathematical calculations with confidence involving, among other things, "exponential" growth. Moreover, to understand the impact of pollution on the ocean and atmosphere, students need a quantitative appreciation of the mass and volume of...
these bodies, as well as the ability to understand and accurately manipulate units in the metric system. To this end we will present a number of step-by-step illustrations using pocket calculators to quantify 1) the impact of air pollution on the atmosphere, 2) the potential impact of pollutants such as PCBs on the marine environment, 3) the impact of rising living standards on the global ecosystem, 4) the issue of global population growth and 5) the extent to which incremental, small rates of ecosystem degradation (i.e., species loss) produce major impacts over time.

**McLain-Midkiff, Michael**  
*Principal, Tracy Public Schools*

**Levels of Thoughtfulness in Fifth Grade History and Social Science Lessons: An Examination of Teacher Practice**  
*K-12, SOC STUD, TEST*

This session will consist of the sharing of a small scale, exploratory research effort in the area of educational thoughtfulness. The research was carried out with fifth grade students, but the model utilized is applicable K-12. The sharing will include an informal presentation of the paper, time for discussion, and a group activity utilizing the "Self-Concept as a Thinker " scale.

The practical model (Newmann, 1990) was utilized to  
(a) discriminate between more and less successful subjects in the establishment of classroom thoughtfulness, and  
(b) identify successful teacher practices related to classroom thoughtfulness. Specifically, five fifth grade teachers were observed teaching history and social science lessons. Ratings were made using Newmann's (1990) overall scale of classroom thoughtfulness. The subjects were then interviewed. Successful teacher practices and subjects in the establishment of classroom thoughtfulness were identified.

**Melchior, Timothy M.**  
*Principal, Memorial Jr. High School*

**Connecting Learning Through Thinking Dichotomies: Memorial's (Valley Stream, New York) Polar Conflicts**  
*STAFF DEV, K-12*

How can a school help students to make connections among their learning experiences? How can a school design such a program so that all of the adults in the school, including counselors, coaches and club advisors can participate in it? How can a school help students to become more abstract thinkers?

This participatory workshop will focus on an existing, practical program, which is based on the use of thinking dichotomies, that addresses these questions. Participants will learn how it works, how it can be locally adapted, and how it costs virtually nothing to implement. In addition, concrete illustrations from classroom lessons will be provided along with a holistic framework for connecting the dichotomies to thinking skills and study skills.

**Mena, Manuel**  
*Associate Professor, Human Resources Management, State University of New York, Oswego*

**Bridging Academia and Business: A Reality-Based Curriculum**  
*BUS*

The integration of elements from the work-place into a classroom setting is certainly not a new concept; but the manner in which they are operationalized invites new, innovative approaches to the teaching of courses. Three separate, yet interrelated, factors inherent in any given work-setting have been isolated and incorporated within a senior-level/capstone course in business policy and simulation. The factors being:  
1) Technology (e.g. distance communication/learning; electronic mail; etc.);  
2) Problem Solving (e.g., use of case analysis; etc.); and  
3) Team Building (e.g., students working as management "teams" in decision-making; intra-group peer evaluations; etc.). Additional "closure" with industry is pursued through creative classroom projects with real world scenarios provided by business professionals.

**Meyers, Chet**  
*Professor of Humanities, Metropolitan State University*

**Creating an Active Learning Classroom that Encourages Critical Thinking**  
*COLL, MID/HIGH, COMM, SOC*

The term “active learning” is much in the news today on college campuses. This workshop offers a positive definition of active thinking — instead of merely defining it in opposition to lecturing — and provides a practical framework as a guide to choosing sound teaching and learning strategies. We know that students learn to think critically by practicing thinking skills. This means creating meaningful activities in the classroom that engage students in their own learning. Yet the pressures teachers feel to “cover the content” seem to leave little time for activities that help students clarify their own thinking processes. Participants will work in small groups to develop or improve a small group exercise they can use with students in classes of any size that will clarify student thinking abilities.

**Missimer, Connie**  
*Author*

**Getting up to Snuff in Theorizing About Critical Thinking**  
*ADV, THEORY, MUL/CULT*

As theoretical endeavors go, from a historical perspective critical thinking is in its infancy, the term having been coined midway into this century. Thus it is not surprising that to date most claims about critical thinking have been descriptive, based on intuition and appeal to ancient authorities. But for critical thinking to epistemologically advance, it must approach as closely as possible the rigorous standards of theorizing in more developed fields:  
1) theorists need to specify the phenomenon of critical thinking in such a way that they can define their theories to “unliklification”;  
2) the theories need to be as simple as possible; and  
3) the theories should have empirical support.
offer a theory that defines critical thinking as that phenomenon which drives the growth of knowledge, and which posits that the mechanism of critical thinking is the weighing of alternative theories in light of their evidence. The first half of the session will be devoted to making this case, the second half to group discussion critiquing it in light of alternatives.

**Morse, Ogden**

*English Teacher, Joel Barlow High School*

**Points of View: The Application of Thinking Skills to Subject Matter**

Mid/High, Coll

Every subject matter teacher faces the same dilemma: too much material, too many skills, too little time. At the national level the debate between mastery of specific academic content and the development of intellectual and social habits leaves the classroom teacher wondering what the daily lessons should contain. What, in fact, is the curriculum: textbooks or skills?

This workshop is designed to suggest some practical methods by which teachers can integrate critical thinking skills with subject matter to produce a variety of student responses. Participants will be actively involved in the processes of a classroom as they work through a series of exercises, noting the methods employed and the cognitive skills required. There will be a handout containing excerpts from research, a theoretical learning model, a lesson plan, excerpts from student papers. And the group will view a videotape, the final project of a senior high school class.

**Morse, Ogden**

*English Teacher, Joel Barlow High School*

**Literature and Problem Solving: The Integration of Thinking Skills and Subject Matter**

Mid/High, Coll

The solving of problems is a major part of a student's academic life, but most students associate this skill with mathematics or the sciences. Although students reading works of fiction recognize that the characters struggle to find solutions to complex problems, they fail to recognize any application of the text and its problems to their own lives. How is it possible to get students to understand that classroom activities have real life applications?

The purpose of the workshop is to demonstrate how this connection can be made through the use of higher order reasoning, communication and collaborative skills, and student creativity. By using the text, students try to answer important questions: What is a problem? Is there a process which will help to solve problems? Is more than one solution possible?

During the workshop participants will engage in typical classroom activities that demonstrate the integration of many thinking and communication skills. There will be handouts and a demonstration video of a senior high school class.
CONFERENCE ABSTRACTS

and classroom support personnel receive weekly training in critical thinking, academic self-esteem, and technology. The program recognizes the challenges that students will face in the 21st century and is responding to these challenges by discarding existing paradigms and restructuring the focus and curriculum to meet the needs of global inter-dependence. Encouraged and supported by the administration, the program has been designed, developed, and implemented by teachers in the district. Presenters will explain the step-by-step process, discuss the formation of inter-disciplinary teams, and share strategies and techniques that participants can use to create their own meaningful critical thinking staff development program. In addition, this program satisfies the requirements of the North Central Outcome-Based Assessment Model.

NORMAN, OBED
Assistant Professor of Science Education, University of Georgia

Critical Thinking and the Education of Science Teachers: Building a Community of Meaning Makers SCI, MUL-CULT, G

This paper will explore the relevance of critical thinking to the education of teachers in general and science teachers in particular. The first twenty minutes will be a formal paper presentation. Arguing from the perspectives of epistemology and the philosophy of science, the presenter will argue that the infusion of critical thinking into the education of science teachers will help them develop habits of mind that will a) enable them to present science in a meaningful way to their students and b) at the same time sensititize them to some of the core issues related to schools and schooling in a democratic society. The question and answer session after the formal presentation will be followed by the participants breaking up into small discussion groups that will explore vignettes related to points a) and b) above. A report back by the various groups and a final free discussion will conclude the session.

NOSICH, GERALD
Professor of Philosophy, University of New Orleans


This session will provide a working, practical idea of what critical thinking is. The aim is not to provide a strict definition, but to describe it in a way that is usable — especially in the classroom — and to give a sense of how deep and robust the concept of critical thinking is.

Second, the session will make a case for how profoundly needed critical thinking is and — particularly when it is understood as the deep and robust notion it is — how profoundly lacking it is in education in general.

Finally, the session will provide some examples of how to teach for it and a basic model of how to rethink one's teaching to foster critical thinking at all educational levels. A question period will follow the presentation.

NOSICH, GERALD
Professor of Philosophy, University of New Orleans

Critical Thinking in the Disciplines: The "Logic of" a Discipline G, BEG

"Learning a discipline" is not at all equivalent to remembering a large body of specialized information or learning to use a particular vocabulary. Rather, though both information and vocabulary are important, learning a discipline is more accurately considered an ability to think within the discipline. To "learn biology," at whatever educational level, is to learn to "think biologically"; knowing sociology is knowing how to "think sociologically"; and so on.

What does thinking within a discipline consist of? It clearly has many aspects, but one of the most central is grasping "the logic of" the discipline. Getting hold of the logic of the discipline and learning to reason in terms of it is essential for our students.

An important aim of the workshop is to elucidate the concept of "the logic of a discipline." The workshop's primary aim, however, is for participants to work out an analysis of the logic of their own disciplines and to take some steps toward redesigning their courses so as to promote a grasp of the logic of the field on the part of their students.

NOSICH, GERALD
Professor of Philosophy, University of New Orleans

Some Nuts and Bolts of Critical Thinking: Interpreting What People Say G, BEG

In concentrating intently on making our teaching more effective, we sometimes lose sight of the fact that there are essential skills involved in critical thinking, skills which we must foster in our students. To think critically at all, it is necessary to get adept at thinking in terms of the basics, the central concepts or elements of good reasoning. One of the skills students have most trouble with is the ability to give a reasonable interpretation of what people say, one that is accurate and fairminded. In a very similar way, good thinking is built on being able to identify and evaluate assumptions — our own, or those of others.

The problem is getting students to see what to do in order to develop these skills. A person's assumption, after all, is not just anything I may wish to attribute to the person; an interpretation is not accurate just because it is what I believe the person means. How do I get better at using these skills? What can I do to be more accurate and fairminded? This session focuses on giving accurate and fairminded interpretations.

NOSICH, GERALD
Professor of Philosophy, University of New Orleans

Learning to Think Critically Within a Discipline G, BEG

Thinking critically within a discipline encompasses a number of overlapping abilities, dispositions, ways of acting, values and standards. Among these is
what may be called "the vision of the field." Each discipline has as part of it a certain vision, a way of seeing the world and of interpreting what is seen. Thus a sociologist will tend to look at an assemblage of people and see groups, cultural roles, and social forces at work; a non-sociologist may see only an assemblage of people. There is a very real sense in which practitioners of a field see different things from those seen by non-practitioners.

The workshop will begin with an overview of what is involved in learning to think critically within a discipline, but the bulk of the activity will be focused on two tasks: 1) working out the vision of the field as it applies to participants' own field and courses, and 2) working out the fundamental concepts that underlie the teaching of a discipline at an educational level. Each of these will be done with an eye on teaching.

**NOSICH, GERALD**  
Professor of Philosophy, University of New Orleans  

**Some Nuts and Bolts of Critical Thinking: Identifying People's Assumptions**  
G, BEC

In concentrating intently on making our teaching more effective, we sometimes lose sight of the fact that there are essential skills involved in critical thinking, skills which we must foster in our students. To think critically at all, it is necessary to get adept at thinking in terms of the basics, the central concepts or elements of good reasoning. One of the skills students have most trouble with is the ability to give a reasonable interpretation of what people say, one that is accurate and fairminded. In a very similar way, good thinking is built on being able to identify and evaluate assumptions — our own, or those of others.

The problem is getting students to see what to do in order to develop these skills. A person's assumption, after all, is not just anything I may wish to attribute to the person; an interpretation is not accurate just because it is what I believe the person means. How do I get better at using these skills? What can I do to be more accurate and fairminded? This session focuses on identifying assumptions in an accurate and fairminded way.

**NOWELL, LINDA**  
Assistant Director, Center for Creative and Critical Teaching, Texas Wesleyan University  

**Critical Talk: Developing Critical Thinking and Critical Consciousness**  
K-12, LANG, ECON

Robert Reich contends that the United States, as a member of a global community, is at a crossroads. Economically, our success in the emerging global economy depends on the critical thinking and creativity that our citizens, all our citizens, contribute to that economy. But even more important, these creative and critical citizens must also have, in the language of Paulo Freire, a "critical consciousness."
up similar studies in their own schools, what the findings of the study reveal, and how to design practical techniques that encourage students' improved critical thinking. Hands-on activities allow participants to experience different kinds of communication strategies. It is hoped that participants will leave the session with a practical base to begin looking critically at their own goals and expectations for that vast majority of students in the regular, "average" class.

Ognibene, Elaine R.  
Professor of English, Siena College

Stories About Schooling: Multi-Cultural Fictions that Challenge and Create  
MUL-CULT, COLL, FEM, MID/HIGH

I am proposing a paper that is interdisciplinary and multi-cultural in its research base and content, whose purpose is to promote a new way of thinking critically about moral and practical issues involved in teacher education and educational reform.

Contemporary literature often tells stories about female development within the world of diverse cultures. Examining works such as Mean Spirit (Hogan, 1990), The Bluest Eye (Morrison, 1970), Annie John (Kincaid, 1983), and The Lesson (Sambura, 1972), I will explain the role that schooling plays in the protagonist's story of moral growth and development. After critically analyzing that information in light of recent educational theory about learning as a social act, knowledge as a cultural artifact, and story as a central process in both teaching and learning, I plan to show how fictional stories can help us to raise pertinent questions about pedagogy, curriculum, and the process of learning in relation to gender, race, culture, and class in education.

Ognibene, Richard  
Professor of Educational Studies, Seton Hall University

Thinking Critically about the Total Quality Movement in Education  
STAFF  
DEV, K-12

This session will include three activities: 1) a paper discussing the implications of Total Quality Management (TQM) for K-12 education; 2) a discussion to clarify audience attitudes about this approach to educational reform; and 3) a focus group activity to elicit suggestions for educators who wish to explore or implement TQM in their schools.

The paper will briefly delineate the principles of TQM and discuss its spread from industry to healthcare and most recently to education. The author is concerned that there is almost no criticism of TQM as it has been applied in education and suggests several aspects of this approach which should be examined more carefully. The purpose of the discussion following the paper is to frame suggestions about a more thoughtful way in which the best components of TQM could be used without sacrificing educational aspirations that are higher than those ordinarily derived from a business perspective.

Otterbach, Renate  
Monday 3:15; IVES 45

Education Consultant, Region IX Educational Service Center

Ognibene, Elaine R.  
Monday 8:45; STEV 3072

Study strategies that can be used to accomplish the integration of cooperative, creative, and critical thinking skills without sacrificing content. The majority of the time in this session will be allocated to a simulation of these strategies using an inter-disciplinary unit. Modification to address specific subject areas will also be discussed.

Oxman, Wendy  
Monday 10:30; CAR 68

Director, Institute for Critical Thinking, Montclair State College

Many Faces of Critical Thinking  
G

Critical thinking in educational practice can legitimately take many diverse forms. In this presentation, the goals of teaching for critical thinking will be discussed in the context of the taxonomy of educational objectives. Examples of different approaches to teaching for critical thinking, such as a) problem solving, b) creativity, and c) reasoning with probabilities, and a framework for planning for academic tasks toward critical thinking as an educational goal, will be presented and discussed.

Oxman, Wendy  
Monday 3:15; DAR 122

Director, Institute for Critical Thinking, Montclair State College

Case Studies in Teaching for Critical Thinking  
MUL-CULT, G

This presentation will introduce participants to an approach to case study methodology, and share samples of case studies in teaching for critical thinking with a focus on social issues, collaboratively prepared by college and urban school faculty members.

Oxman, Wendy  
Tuesday 3:15; STEV 3026

Director, Institute for Critical Thinking, Montclair State College

The THORP Game  
MUL-CULT, G

Participants in this session will engage in this popular simulation game, designed for use with groups of teachers, prospective teachers, and students, to illustrate the purposes and outcomes of teaching for critical thinking for all students. A total of 40 participants may be accommodated.
PARKS, SANDRA  
Co-Director, The National Center for Teaching Thinking  
Using Graphic Organizers to Improve Thinking and Learning  
This presentation will demonstrate how the use of graphic organizers provides simple but powerful tools for achieving both thinking skills and content objectives in the K-12 classroom. A variety of graphic organizers used to organize information, guide student thinking, and evaluate learning will be distinguished and demonstrated. Samples of the graphic organizers used in the demonstrations, as well as lessons in which they are employed, will be provided to the participants.

PARNELL, SHANNAH  
Instructor of English and Rhetoric, University of Illinois at Urbana-Champaign  
Re-Reading Hawthorne's 'A': Ideologies and Developing Critical Awareness in the Classroom  
This workshop offers teachers of both secondary and college level literature courses a practical and dynamic approach to teaching literary texts and developing students' critical thinking skills at the same time. The first part of our presentation demonstrates how four interpretive strategies, each growing out of Marxist, feminist, deconstructive, or psychoanalytic theory, may be introduced to students. The second part of our presentation demonstrates methods by which such critical thinking skills as locating value conflicts and clarifying assumptions may be fostered. In this part of our workshop, we will propose at least ten specific methods for encouraging students to look at texts from new and varying perspectives and for stimulating non-teacher centered classroom debate. During the workshop, we will ask for participation in activities and will encourage questions.

PAUL, RICHARD W.  
Director, Center for Critical Thinking and Moral Critique  
How to Design Assignments and Activities (So That Students Learn How to Assess Their Own Performances)  
In this session Richard Paul will: 1) explain and demonstrate how to design assignments that enable students to assess themselves, 2) provide some sample assignments (with sample student self-assessments), and 3) provide some practice in the art of assignment design. The basic principles that underlie this session are 1) self-assessment is essential to critical thinking and 2) writing assignments that lead to student self-assessment is a practical art that can be learned. As we develop this art, we transform our instruction into problem-based learning, our students then progress continually from one task in reasoning to another, developing skills and insights and, last but not least, mastering content as they go.

PENDLETON, WILLIAM  
Assistant Superintendent of Instruction, Tulare Union High School District  
Instructional Design for the 21st Century: High School Classrooms That Nourish Critical Thinking for All Students  
In this workshop, Dr. Pendleton presents an instructional paradigm for the high school classroom of the 21st Century. He first predicts the physical, emotional, and learning characteristics of future students and then recom-
mends instructional practices that will maximize learning and foster critical thinking. The design is timeless, crosses all disciplines, and is supported by the educational philosophy of the reform movement in California. Participants will receive instruction, modeling, and practice in “close” or “active” reading, discuss and contrast the concept-driven curriculum versus the fact-centered curriculum, and experience cooperative and collaborative learning. Provocative issues will include the presenter’s beliefs that all students should be mainstreamed, and that students of all abilities are capable of critical thinking.

**PETE RSON, JOE L**
Faculty Coordinator, Critical Thinking Project, Minnesota Community Colleges

**MARY ASPNES**
Professor of Developmental Education, Lakewood Community College

**CONNIE STACK**
Instructor of Nursing and Public Health, Minnesota Community Colleges

**Thinking on All Four Burners: A Holistic Approach Which Recognizes Diversity in Good Thinking**

Based on the work of more than 200 faculty involved in the Minnesota Community College System’s project for critical thinking, this session will present a holistic model of critical thinking which includes: 1) thinking centered on facts, 2) thinking which draws on imagination, 3) thinking which emphasizes reasoning, and 4) thinking which focuses on values. Since each individual in the classroom (including the teacher) has developed some of these types of thinking at the expense of not developing others, this model provides instructors and students with a framework for valuing diversity in thinking while recognizing areas needing further development. After introducing the model, the major part of the session will be devoted to demonstrating three teaching strategies which push students (and teachers) to think in all four dimensions.

**PETE RSON, JOE L**
Faculty Coordinator, Critical Thinking Project, Minnesota Community Colleges

**CONNIE STACK**
Instructor of Nursing and Public Health, Minnesota Community Colleges

**MARY ASPNES**
Professor of Developmental Education, Lakewood Community College

**Strategies for Developing Critical Thinking Which Is Factual, Imaginative, and Value-Conscious as Well as Logical**

As important as the role played by logical reasoning in critical thinking is, it is matched by the importance of the roles played by three other kinds of thinking: clarity and fairness in gathering facts, imaginativeness in trying to put facts into alternative perspectives, and honesty in appraising the impact of the values involved in the issue in question. In this session we will demonstrate four different kinds of critical thinking assignments from four different disciplines, each aiming at developing one of the four thinking functions. We will conclude by presenting a model of critical thinking which both integrates all four modes of thinking and provides further rich implications for teaching and learning.

**PIERCE, GLORIA**
Associate Professor of Counseling, Human Development, and Educational Leadership, Montclair State College

**The Centrality of Critical Thinking in Educating for Diversity**

The fact of cultural diversity in the United States and the challenges it poses regarding issues of social justice and equity, economic development, and lifelong learning makes education for diversity perhaps the most pivotal and crucial undertaking of our educational systems today, not only in schools, colleges and universities, but also in the workplace.

This important effort cannot take place without developing the attitudes and skills of critical thinking: a spirit of inquiry, the willingness to engage in the dialogue of human conversation, to challenge assumptions and beliefs about others, and the interpersonal and problem-solving skills necessary for understanding, valuing and managing differences.

This presentation will examine the role of critical thinking in developing the attitudes and skills needed in order to make diversity a strategic advantage in creating an equitable, just, caring, and productive society.

The session will include a summary of the presenter’s paper followed by a structured exercise involving small group tasks and whole group discussion.

**PINTO, ROBERT C.**
Associate Professor of Philosophy, University of Windsor

**Can Learning Logic Help Students Improve Their Thinking?**

In their early stages, cognitive science and cognitive psychology drew many of their models of good thinking from the paradigms developed by traditional logic. That logic was designed to deal with information that is encoded linguistically. Important recent theoretical and empirical developments (especially connectionist or PDP accounts of cognitive processes) suggest, however, that the manipulation of propositional or linguistic content is a “surface” phenomenon and that much of the cognitive “action” takes place at pre-linguistic levels. If that is true, it has profound implications for questions about the role logic should play in teaching critical thinking. This presentation a) will assess the epistemological and pedagogical implications of these recent developments and b) will propose specific strategies for making judicious use of logical concepts in the present intellectual context—a context in which our understanding of the very nature of thinking is undergoing significant evolution.
The development of the learners' self-assessment skills is a key element in empowerment and is important to critical thinking as well. This session will present a reflective thinking model used for assisting learners in developing self-assessment skills as well as assessment criteria. Exploring ideas for self-assessment activities and strategies in the workplace and the classroom will take participants beyond the mechanics of self-assessment with a discussion of "Grade expectation".

POPE, RICHARD
Director, Gateway to Great Thinking

The Debating Process Instills Critical Thinking in Your Elementary School Students and Makes You Thinner, Sexier, and Attractive to Movie Stars! ELEM, BEG

Enjoy 90 minutes actively participating in the debating process. Learn how your elementary school students, from kindergarten through eighth grade, can research issues and persuasively present positions. Become energized as your students use such critical thinking terms as 'Clear, Precise, Significant, Relevant, Accurate, Deep, Fair, and Consistent.' When your students can prepare and evaluate their own arguments and constructively critique the arguments of others, they gain important skills and values needed for the opportunities and challenges of the 21st century.

POPE, RICHARD
Director, Gateway to Great Thinking

Elementary School Language Arts and Critical Thinking — The Process for Generating a Nation of Active Learners ELEM, LANG

Enjoy 90 minutes actively coordinating the Language Arts and Critical Thinking processes. Learn how your students can gain such an enthusiasm towards language arts that they hunger to read and write. See how such critical thinking terms as 'Clear, Precise, Significant, Relevant, Accurate, Deep, Fair, and Consistent' can energize all your language arts lessons. Learn how students can thrive in an atmosphere of positive interaction with the printed word, the spoken word, and critical thinking. Give your students the language arts skills and values to meet the opportunities and challenges of the 21st century.

PRITCHARD, FLORENCE FAY
Associate Vice President of Academic Affairs, Salisbury State University

Negotiating and Using Frames to Develop Specific Critical Thinking and Writing Skills LANG, G

This session demonstrates how English and language-arts teachers can teach critical thinking and writing simultaneously to students in grades 4-14. The session demonstrates how to transform specific skills such as explaining, categorizing, comparing and contrasting, evaluating, interpreting, justifying with reasons, applying principles and deriving propositions into frames for
critical thinking and writing. The session opens with a paper explaining frame negotiation and use, then summarizes the model underlying this approach to teaching critical thinking and writing. Next, participants learn how to construct writing assignments that help students create thinking-writing frames. This involves participants in identifying and defining specific thinking and writing skills, incorporating the skills in writing assignments, negotiating steps essential to carrying out the skills and transforming steps into question sets that generate substantive discourse, and that can be used in many other situations as fundamental thinking strategies.

QUINA, JAMES HENRY
Tuesday 12:15; NICH 173
Associate Professor of English Education, Wayne State University

Teaching Conflict Resolution Through Metaphor
LANG, H; CON, H; RIGHTS, SOC STUD
A participatory workshop based on the world hypotheses of Stephen C. Pepper and the teaching methodology of Georgi Lozanov. Participants will be given an overview of Pepper's pluralistic system and of Lozanov's methodology, followed by a reading of "The Story of the Great Rock," a metaphorical story containing embeds of Pepper's world hypotheses. The story will be read with music. Each tribe described in the story represents one of Pepper's four world views: formalism, mechanism, contextualism and organicism. Participants will draw their interpretations of the story, role play as tribal members, identify tribal beliefs, and share their world views with members of a different tribe. The task will be to discover ways of relating to difference other than polarization or domination. Pepper's own synthesis of a fifth world hypothesis, selectivism, will be examined as a model of conflict resolution.

RASKIN, JONAH
Tuesday 12:15; NICH 204
Chair, Communication Studies Department, Sonoma State University

Abbie Hoffman: Critical Thinker?
MEDIA, POL, SOC STUD, LANG
The paper will present a discussion of the critical ideas of Abbie Hoffman, and will focus on his most important book, Revolution for the Hell of It, which was published 25 years ago, in 1968. "Abbie Hoffman: Critical Thinker?" will examine Hoffman's ideas about cultural revolution, and will locate his thinking in the context of the social and political changes in the year 1968. It will explore his relationship to the media, his views on the power of myth, and his ideas about books and the culture of the book. Hoffman will be defined as a crucial American figure of the 1960s, and Revolution for the Hell of It will be analyzed as a quintessential post-modernist text.

REED, JEFFREY
Teacher, Windsor Middle School

CRITICAL THINKING AT FAYETTEVILLE STATE UNIVERSITY: AN INITIAL ASSESSMENT
COLL, TST
Critical Thinking has been taught at Fayetteville State University since the fall of 1989. What was the basis for instituting this course? How was it planned? What is the course like today? Is there evidence that the course is effective? This presentation reviews the history of the course and then checks the effectiveness of the course by analyzing pretest/post-test data from over 2000 students. The paper presented was co-authored by Dr. Akbar Aghajanian.
The Multiple Costs of "Defense:" Spending Money, Freedom, and Blood to Protect "Our" Vital Interests Around the Globe  

Military related spending comprises about three fourths of discretionary Federal spending, consuming approximately one half of Federal income tax revenues. Proponents claim that this bolsters our national economy, protects access to vital raw materials and energy sources, and defends freedom and democracy worldwide; opponents claim that it subverts the national economy in favor of a small power elite, precludes equitable use of raw materials and development of alternative energy, and defends totalitarianism and oligarchy worldwide. We will examine (critically, of course) these competing claims, with emphasis on the role of the press in shaping public opinion on these issues and the role of education in preparing people to make well considered decisions and influence public policy. We will also attempt to place U.S. military intervention in a context of global economic power struggles and to estimate the costs to society of "competitiveness" conceived in these terms.

HILARY LETTS  
Deputy Director, Successful Learning Institute

Turning Critical Thinking into an Adventure for All  

Process Learning is a humanistic and holistic method. It enables individuals or groups to discover successful strategies for learning and coping in their ever changing lives. Armed with these strategies, people of any age or ability feel empowered to take responsibility for their own learning. They begin to see learning as a stimulating and exciting adventure. Process Learning creates a safe environment where individuals are prepared to take risks, and recognize and delight in their new achievements. Process Learning can be used by any individual or group, in any situation; a large claim but true. In this workshop participants will be introduced to the theory and given the opportunity to see and experience it in practice. Every person i.e., managers, teachers, parents, students or employees need support to guide them when implementing an effective critical thinking program. Process Learning will keep them on the path of the best practice by reminding them of the theory and philosophy which created the practice.

ROBB, JEAN  
Director, Successful Learning Institute

Who's to Say What's Right and Wrong?  

Among the most interesting exercises in critical thinking are those that involve ethical issues. Unfortunately, many students regard such matters as purely relative and subjective, and as a result they are indisposed to conduct thoughtful inquiry, consider alternative views, and make careful judgments. In this interactive workshop, participants will be asked to read passages from Toni Morrison's novel, The Bluest Eye, after viewing a videotape featuring the author, and, through directed discussion involving critical thinking and written exercises, to discover the iconoclastic and convention-breaking properties of Morrison's prose. Morrison's intention is to subvert literary traditions, to "feminize" literature, to "break the back of words" in order to force readers from discomfort to a new celebration of language and literature.

ROSENBERG, ERNEST  
Director, PEMD Education Group

What Are the Most Relevant Science and Social Science Curricula for the Future?  

What are the issues that will most profoundly affect our student's lives and the lives of their children? About what do they need to think critically in their household and professional lives and in the voting booth? Together we will examine these questions and see if an answer is economics, environment, and demographics. If they are a valid answer, then it is strongly implied that our science and social science curricula need to be reorganized. Perhaps the earth, life, physical, and social sciences need to be taught within the context of economics, environment, and demographics, rather than mostly the other way around.

In addition, in order for our students to think critically in these areas, they need to have ready access to large amounts of relevant numerical data and a means for the non-numerically sophisticated students to effectively analyze and synthesize this data. Computer software (Macintosh) will be demonstrated which enables this and consequently provides tools with which to develop critical thinking skills.

RUDERMAN, RENEE  
Assistant Professor of English, Metropolitan State College of Denver

Reading the Spaces Between Words: A Critical Inquiry Into Toni Morrison's Use of Language in The Bluest Eye  

In this interactive workshop, participants will be asked to read passages from Toni Morrison's novel, The Bluest Eye, after viewing a videotape featuring the author, and, through directed discussion involving critical thinking and written exercises, to discover the iconoclastic and convention-breaking properties of Morrison's prose. Morrison's intention is to subvert literary traditions, to "feminize" literature, to "break the back of words" in order to force readers from discomfort to a new celebration of language and literature.

RUGGIERO, VINCENT RYAN  
Author and Consultant

Teaching Thinking Across the Curriculum  

Thinking instruction is too important to be confined to a single course or a single department; it should be emphasized across the curriculum. Achiev-
CONFERENCE ABSTRACTS

Ruggiero, Vincent Ryan
Author and Consultant
Critical Thinking and Total Quality Management  BUS, G, STAFF DEV
In little more than a decade the "quality movement" that made Japan a leader in the world market has become a leading reform initiative both in American business and in educational administration. What is not generally recognized is that TQM and the critical thinking movement have much in common. Both reject the pessimistic view of the human mind that has dominated American culture throughout this century. And both depend on the cultivation of careful observation and logical reasoning. This presentation will explore these common elements and present a TQM model that incorporates the insights and strategies of critical (and creative) thinking.

Sánchez, Adolfo
Associate Professor of Education, Cayey University College
Making Connections  K-12
Participants will involve themselves in the development of a concept teaching technique that allows a teacher to guide students in an in-depth study of any concept, be it concrete or abstract. This instructional technique requires looking at a concept from various points of view. After discussing the essence and main attributes of the concept, the group is guided in the making of as many connections as possible to other concepts and life experiences through the use of questioning. The technique is ideal for any subject content, especially if an interdisciplinary approach is sought.

Schelleda, Leah
Instructor of Humanities and Philosophy, College of Marin
Does Logic Teach Critical Thinking?  COLL, TEST, LANG, ADV
Ever since Aristotle, educators have believed that logic was not only the means of philosophical argumentation and proof, but the "method of same material to suggest how the situations portrayed might have been used to repair the bond through the use of what Satir called "leveling".

Schwartz, Judith
Director, Scarsdale Teachers Institute
Developing Reflective Practitioners: How Teacher Research Leads to Improved Critical Thinking and Classroom Instruction  K-12, STAFF DEV
Throughout their careers, teachers expand their teaching horizons by asking questions about what their students are learning and by devising ways to improve student performance. In this interactive session, participants will learn about classroom research programs designed to encourage teachers to investigate significant questions of teaching and learning. Participants will learn how the program functions, examine in some detail the research projects that have been developed, and assess the impact these programs have had on school culture and student learning. Participants will learn the impact teacher research has had on improving teachers' critical thinking abilities, assessment techniques and classroom management skills.

This program, one of many in a broad-based teacher led staff development organization, supports inquiry as central to the school and district. Also, participants will have an opportunity to analyze the staff development structures that develop and support high expectations for teachers and students.

Secco, Thomas
Professor of English and Philosophy, Triton College
The Formation of Knowledge and the Mission of Intelligence  ADV
The acquisition of knowledge is a form-giving activity. It is a process of structuration. What is the role of tradition and innovation in the formation of knowledge? What is the influence of language? What is the function of reason, of imagination, of conscious experience and of empathy? How does one incorporate the constraints of diversity both internationally and nationally within the discussion of how knowledge is formed? Finally, how does a human being form knowledge in the age of the information "explosion"? Can we remain "knowers" in a convention of "users"?

The presentation will be one in which my remarks will be heuristic, and I will actively seek the participation of the audience in order to engage in dialogue. I would like an audience of diverse background, for I would like the discussion informed not only by theory and structured observation but by practice and institutional considerations as well. I believe that this is one of the most crucial questions that confronts us as a species and a people.
choice" to teach critical thinking. (The State of California still defines critical thinking in terms of the language and content of a logic course.) Leah Shelleda decided to test this assumption by using Classroom Assessment Techniques (CATS) to evaluate what her community college students were actually learning in her logic courses. In this workshop, she will create a discussion of what critical thinking is, and present the results of her two-year study and the impact that the study has had on her teaching and her relationship with her students. She will then work with participants in the workshop to consider problem areas in their own classrooms (regardless of subject matter), and how to devise Classroom Assessment Techniques to evaluate, refine and modify their approach in the classroom.

Silverman, Janis L. Economics for Kids ECOn, K-12, SOC Stud Children today are facing a challenging international marketplace. To prepare them for these challenges, Janis Silverman has developed techniques for integrating economics into the existing social studies, science, math, and language arts curricula by taking students through the developing markets in history. Her workshop begins with a multi-media presentation, a journey through markets of the world, followed by a seminar including interactive discussion and workshop time. Participants will develop models and ideas using critical and creative thinking to develop creative enrichment experiences for children. Workshop participants are recommended to bring their social studies and language arts curricula and read Forums, Fairs, and Futures by Janis Silverman.

Skewes-Cox, Robin How to Think About War and Peace, Part I HCOn, Peace, G War: Definitions and examples. What is the problem? "There have always been wars." What are the "causes"? A highly critical look at one of these. Ethology. Biology. Psychology. Are we as individuals "warlike"? We are animals, animals are "aggressive", therefore we are aggressive. Konrad Lorenz's "On Aggression." Freud. If we are "peaceful" it is because we are "repressed". Other "causes": language barriers, nationalism, trade competition, cultural misunderstanding. Differences resulting in lack of "community". Defining "community": How much community is necessary to make us "peaceful"?

What is the context in which we look at the various facets of the problem "war"? War as an institution. The planning for and organization of war as a rational occupation. Sovereignty. The psychology of war. Belief in its inevitability. Reluctance to be optimists. The mistake that "realism" dictates pessimism. The last 50 years: A case for optimism and realism. Why not abolish the institution of war?
the Eastern traditions are viewed as consumed with meditation and spiritual introspection, and its ensuing third world poverty and underdeveloped economy. Yet even the casual observer of Asia, and in particular the Pacific Rim, should be aware of the inaccuracy of this stereotype given the strong presence of Japan, Korea, Hong Kong, Taiwan, and Singapore in world economics. Furthermore, in spite of the identification of materialism and economic liberalism associated with Western culture, its spiritual, intuitive, and artistic tendencies are central to its identity and strength. In this paper, I will make a departure from the usual East-West comparative approach and propose to analyze jointly the varied modalities of inquiry found in assorted intellectual traditions around the world. It will be the thesis of this study that all great traditions share common epistemic modalities in the quest for truth and understanding.

### Slade, Christina

**Monday 10:30; IVES 45**

**Senior Lecturer, Faculty of Communication, University of Canberra**

**Critical Thinking in Groups**

Our society requires not just competent critical and creative thinkers: it requires thinkers capable of teamwork. However, our paradigmatic images of thinkers are of isolated individuals. This paper both proposes an account of critical thinking as a group activity, and reports on a study of the teaching of critical thinking in groups at levels ranging from the elementary classroom to graduate school.

If critical thinking is essentially a group activity, then the teaching of critical thinking is essentially, not incidentally, through discourse. The study examines a range of classroom discussions dealing with a range of topics, including information science, communication and critical thinking skills themselves. The discourse of these activities is analyzed using techniques derived from systematic linguistics. The video presentation gives an example of such an analysis. The workshop session will be a discussion of a brief text, in which the structures of a critical discourse might be manifested.

### Smith, Katherine Z.

**Sunday 3:15; STEV 3046**

**Instructor of Psychology, Chapman University**

**Harriet Chamberlain**

**Educational Consultant, Thinking Possibilities**

**Global Peace Games: A Role-Play Using Lawrence Koffler’s Stages of Moral Development**

This is a participatory workshop to stimulate verbal wrestling about conflict resolution between countries. Players will be heads of state who will practice ethical stages of moral development. They will define world problems, role play solutions and analyze outcomes. Knowledge about the world is useful but not as important as the emotional ability to exercise intellectual virtues. And, players are asked to check their weapons at the door.

### Smith, Lisa

**Tuesday 3:15; IVES 35**

**Public Policy Consultant**

**Jeraldine C. Day**

**Project Director, Amador County Health Department**

**U.S. Tobacco in the World Market: A Global Economic and Social Dilemma**

The strength of the tobacco industry in the U.S. and its expansion into the world market poses a serious dilemma between an industry’s economic viability and the social consequences to the health and welfare of the society. Are our children and policy makers equipped with the skills necessary for thinking through the social and economic costs to nations as U.S. tobacco companies blanket the globe with cigarettes? Should our government regulate, subsidize, provide tax incentives and enhancements for an industry whose addictive product is both legal and lethal? Are the economic, ethical and human costs of global expansion of the tobacco industry worth the high performance stocks, jobs created by the industry, revenues received from taxes, and the sponsorship that the arts, sports, minority and youth groups receive? This workshop presents an important opportunity to: 1) apply critical thinking skills to this economic and social dilemma; 2) examine what our responsibilities are; and 3) begin deliberative dialogue toward creating a solution.

### Smith, R. Scott

**Wednesday 8:45; STEV 3072**

**Assistant Professor of Psychology, Utica College of Syracuse University**

**A Framework for Applying Critical Thinking to Inter-Cultural Encounters**

A critical thinking perspective will be essential to managing problems of cultural diversity, which is a central challenge to business and education in the 21st Century. This workshop will include the following: 1) Cultural constraints on models of critical thinking and their use; 2) How specific critical thinking strategies can be used to compensate for such constraints; 3) Introduce the concept of behavioral ecology as an analytic model and guide for constructive intercultural communication; and 4) Engaging the participants in an exercise which will require them to analyze scenarios and devise specific strategies and messages based on the preceding discussion. The purpose of this exercise will be to enable participants to enhance their ability to apply critical thinking strategies to solving problems in intercultural communication.

### Smock, David

**Tuesday 12:15; DAR 139**

**Chair of History and Politics, Charles Wright Academy**

**Thinking Critically About Nature: Using Critical Theory**

If one wants to explicate the relationship between human society and nature, one of the most lucrative intellectual traditions is that of Critical Theory (also known as the Frankfurt School). At the core of this philosophi-
cal tradition we find that a critical theory of nature is a sine qua non of a critical theory of society. Since the purpose of critical theory is to explore and propose a resolution to the dialectic of domination, a component of that project is to introduce the idea of a reconciliation with nature. This paper will introduce the thought of Theodor Adorno, Max Horkheimer, Herbert Marcuse, and Jurgen Habermas and their critique of modernity, enlightenment, and reason. In doing so, this paper will create a framework for critically analyzing the relationship between nature and society which can be used as a point of departure for educators of environmental and social issues.

Sparapani, Ervin

**Monday 1:30; STEV 2065**

*Associate Professor of Teacher Education, Saginaw Valley State University*

**The Thinking/Learning System: A Strategy for Independent Thinking and Learning**

This session will introduce participants to the Thinking/Learning System. Thinking/Learning System is an instructional plan appropriate for all educational levels (elementary through adult and university) that couples brain-compatible learning with selected levels of Bloom's taxonomy (knowledge, analysis, evaluation, application) and four reasoning strategies (information gathering, critical thinking, decision-making, creative thinking). Participants will be presented information about the system and its application in an open discussion format. Also, in small groups, participants will have the opportunity to analyze examples of the System as designed and used by teachers. Additionally, participants will have the opportunity to develop a model of the Thinking/Learning System for their own use.

Steedman, Carrol

**Monday 3:15; STEV 3026**

*Director of Continuing Education, University of Nevada, Las Vegas*

**Critical Thinking at the Work Site, in Developmental English Classes, and in Continuing Professional Education: Argument and the Case Study**

This presentation will focus on lesson design and instructional strategies for infusing direct instruction in critical and creative thinking into the content areas. This approach to teaching thinking can yield both improvements in the quality of student thinking and enhanced content learning. Lessons designed for this purpose from K–12 instruction will be demonstrated and analyzed. A framework for constructing such lessons will be provided. Emphasis will be put on how to employ effective questioning techniques, strategies that promote students' reflection on their thinking, and techniques for the transfer and internalization of specific thinking skills. Special strategies that enhance the effectiveness of such lessons, like
the use of graphic organizers and collaborative learning, will be demonstrated. Participants will be provided with samples of the lessons and materials used in the presentation.

**Swartz, Robert**  
Co-Director, The National Center for Teaching Thinking

**Assessing the Quality of Student Thinking: Techniques for Classroom Teachers**  
TEST, G

The recognition that there are alternatives to multiple choice testing in assessing how well students understand what they are learning as well as the thinking they engage in is a dominant theme in many new national and statewide testing programs. Assessment needs in the thinking classroom to diagnose and monitor the quality of student thinking can likewise be served by utilizing various alternative modes of assessment. This workshop will demonstrate how to construct a variety of such classroom level assessment tasks for students that reveal their thinking as they demonstrate their understanding of the content being taught. Included will be open-ended assessment items designed for both written and oral responses and performance tasks for students in which they apply and use what they are learning. Strategies for constructing scoring rubrics for such assessment tasks will be presented. Participants will be provided with samples of these two modes of assessment, along with model scoring rubrics.

**Taylor, William**  
Professor of Political Science, Oakton Community College

**Helping Students Acquire the Knowledge About Which We Want Them to Think Critically**  
COLL, MID/HIGH, SOC STUD

It's not uncommon for students to be able to learn quite well in one discipline but not in another. Often, such students have a limited set of learning strategies, strategies that happen to work in some disciplines but not in others. In this interactive workshop, participants will learn how to talk with students about learning strategies, and how to respond when students complain about their grades and say, "But I studied so hard, and I knew the material."

**Taylor, William**  
Professor of Political Science, Oakton Community College

**Leading Classroom Discussions to Promote Critical Thinking**  
COLL, MID/HIGH, SOC STUD

In order to develop critical thinking skills, students need to be able to practice those skills in the supportive environment of the classroom. Class discussion is one way to provide students with that opportunity. This workshop will begin with the participants engaging in a "class discussion." This will be followed by a consideration of strategies for leading successful discussions.

---

**Tominaga, Thomas**  
Associate Professor of Philosophy, University of Nevada, Las Vegas

**Agenda of the "Middle-Way" Logic of Buddhist Economics for Economic Realities and their Implications**  
ECON, CONF THEME, MUL-CULT

If there is a conceivable alternative to capitalist and materialist economics, concerned strong-sense critical thinkers should make explicit and evaluate some significant implications of realities related to our economic system such as rising unemployment, job-related violence and crime, lack of job satisfaction, and preoccupation with educating our students only for jobs at any cost. Given the apparent inability of capitalist and materialist economics to deal effectively with such realities, we may have to envision and consider an option suggested by the "Middle-Way" logic of Buddhist economics. Buddhist economics presents the following agenda: refine human character through disciplined work; eliminate egocenteredness, attachment to accumulation of wealth, and craving for endless wants; work together with other people in a common task so that everyone can have full employment with dignity and responsibility; and minimize the production and consumption of goods made from non-renewable resources.

---

**Tomlinson, Larry**  
Professor of Government, Philosophical and Regional Studies, Community College of Southern Nevada

**Critical Thinking and Cultural Bashing**  
POL, SOC STUD, MEDIA

In her book, *The March of Folly* (1984), historian Barbara W. Tuchman called the Japanese decision to attack Pearl Harbor December 7, 1941 a "strange miscalculation." The sneak attack, which Tuchman blames on cultural arrogance, provoked Hollywood to launch a vicious propaganda war against Japan. This propaganda war ended efforts in the U.S. to require propaganda analysis as a part of the high school curriculum. It also left a legacy of hate. More than fifty years after Pearl Harbor, political leaders on both sides were still using stereotypes to describe their economic rivals. In this session, we'll examine the logical fallacies, manipulation techniques, and mass psychology that prevent the world's two great capitalistic superpowers from achieving a truly rational global economy.
Educatiqn~ tilt~za~considering whether and how we generalize from them? This workshop has Instruction, California State University, of the model and how TEST, RENE they their students to do so. Elkins - College.

8:45; STEV 3046 COLL, PSYCH, SOCIO, HIGH

This participatory workshop session will be conducted in three roughly equivalent thirty minute parts. Part one will introduce participants to a model for creating a thinking community at the college level, focusing on teacher preparation students but applicable to other disciplines. The model is built on a three dimensional concept of community: roles, rules, and rewards. In part two, participants will work in "thinking" teams, each assuming a critical, complementary role in the process of problem solving. Team members will experience several techniques that have been developed to help college students learn to think in the context of working as a team: "rainbow thinking," "balancing dialogue and discussion," "progressive problem solving," and reflection. In part three, I will report on the utilization of the model in three courses: one sophomore level class, one junior level class, and one graduate class.

TROW, RUBY Tuesday 10:30; DAR 137
Professor of Food and Nutrition/Home Economics, California State Polytechnic University

Involving Students in Assessing Academic Performance TEST, C

This workshop focuses on student assessment and how to involve students in the evaluative process. Assessment targets and its purposes and benefits will be discussed. How to involve students in identifying criteria for various assignments, in the form of grading rubrics, and how to use the established criteria for student self-assessment, as well as teacher assessment, will be demonstrated in small groups. An analysis of the thinking skills used by students in this evaluative process will be analyzed.

TRUJILLO, JR, RENÉ Wednesday 8:45; STEV 3046
Assistant Professor of Philosophy, San Jose State University

The Debate Over Human Rights and Social Justice After the Spanish Discovery of the "New" World MUL-CULT, POL, H RIGHTS, LANG

This highly interactive workshop will critically assess the university curriculum on issues of human rights and social justice. We will concentrate on the central role which Spanish and Latin American materials can play in opening up the discourse in a manner which is attentive to the increasing diversity in student populations. Some suggestions will be explored in the area of African American sources and the literature of South Africa. Our goal will be to work on ways to utilize the range and richness of pluralistic sources that are relevant to our students. We will make sample references to how the economic realities of the XVI century "drove" the Spanish to their policies in the Americas. We will also relate this experience to the current economic forces shaping our educational environment. The XXI century is at our doorstep and to meet it successfully we must address our basic understanding of “humanity” and “justice” and how our commitments in these areas are intertwined with the social, political, and economic realities of our times.

TURNER, MARGARET N. Wednesday 8:45; DAR 137
Interim Chair of Education, Davis & Elkins College

Claudette Franklin
Associate Professor of Education, Davis & Elkins College

JUDITH B. SMITH
Assistant Professor of Education and Psychology, Davis & Elkins College

Restructuring and Reform of Teacher Education: A Liberal Arts College Perspective COL, EDUC

With the increased awareness of the interdependent problems of today's society, it has become apparent that the typical Teacher Education Model is no longer appropriate. As a result, Davis & Elkins College has developed a new Teacher Education Model of universal application using critical thinking as the underpinning. This model takes advantage of the liberal arts education already required at Davis & Elkins College. By using critical thinking techniques to teach teachers they will become well prepared themselves to think critically and to teach their students to do so.

This workshop/demonstration will show the process of the model and how course syllabi can be developed across disciplines and domains using critical thinking methods. The participants will actively work through this process.

UNRAU, NORMAN J. Tuesday 12:15; IVES 78
Assistant Professor, Division of Curriculum & Instruction, California State University, Los Angeles

Critical Thinking in the Narrative Mode: The Force of Stories LANG, SOC STUD, G

A vivid story can have far more persuasive power than the tightest of rational arguments. What is the essence of a narrative's appeal? This presentation and workshop will focus on thinking in what Jerome Bruner calls the "narrative mode", in contrast to the "paradigmatic mode", which is the discourse of science and formal logic. We will first define and illustrate the two modes of thought and then explore through examples the power of stories to persuade and to provide their own form of truth and "proof". Participants in the workshop will be asked to collaborate in teams and to contribute examples of stories that might influence what people will believe or do. We will then focus our inquiry on criteria that might be used to evaluate the persuasive appeal of stories and on considering whether and how we should attempt to inoculate ourselves against that appeal. What do or should we ask of stories before we generalize from them? This workshop has implications for understanding a range of transactions from everyday reasoning to qualitative or ethnographic research.
The Effect of Planned Teaching and Evaluation Strategies on Nursing Students’ Cognitive Growth and Critical Thinking: Pursuing Reform Within Nursing Education

This session is designed for nurse educators teaching at the college or university level. The results of an on-going study of the effect of planned teaching and evaluation strategies on the cognitive/intellectual growth and critical thinking of one university’s baccalaureate nursing students will be reported. In particular, the relationship between cognitive/intellectual development and critical thinking will be explored. After an opportunity to discuss the study reported, participants will work in small groups to design teaching and evaluation strategies relevant to their areas of teaching responsibility, discuss ways to implement such strategies in team-taught courses, and discuss ways to address the content or process dilemma that they experience. It is hoped that at the end of this session, participants will have reflected on the effects of traditional approaches to teaching nursing, considered the educational reforms needed in nursing, and created specific teaching and evaluation strategies they can use.

Information Access and Critical Thinking: Managing the Information Explosion

The ongoing explosion of knowledge and the “need to know” pressure felt by citizens throughout the world have combined to propel information literacy and information access to the top of most educational agendas. Yet, due to the global dimensions of a variety of issues and problems (e.g., economic, political, environmental, and educational), there is a need not only to know how to access information, but also how to critically filter accurate meanings from the mass of available information. This participant-centered workshop will present the program of Bibliographic Instruction utilized at Camden County Community College which includes the systematic incorporation of critical thinking strategies.

By the end of the session participants will have used elements and abilities associated with critical thinking to create a personal information access strategy. Subsequently, session participants will be shown how to assess the effectiveness of their strategy.

Moral Orientation and Critical Thinking

Following a 30-40 minute paper the remainder of this session will be given over to discussion of issues raised in the paper. The thesis to be presented is that training in critical thinking must be complimented by training in aesthetic sensitivity, and that both of these are guided by a person’s moral orientation. It is suggested that the dilemma of dogmatism vs. relativism can be overcome by recognizing that there is such a thing as objective morality, but that this cannot be formalized in any set code of behavior and conduct. The Socratic dialogue is put forward as an example of a technique which can lead to the possible recognition of objective morality.
over various viewpoints concerning multi-culturalism and critical thinking, and how we can construct a more inclusive educational agenda. Audience participation will be strongly encouraged.

**WEBSTER, YEHUDI O.**  
**Monday 8:45; IVES (WARREN)**  
Professor of Sociology, California State University, Los Angeles  
**Multi-Culturalism and Critical Thinking: Compatibility or Competition?**  
C, MULT-CULT

Multi-culturalism has been proposed as a solution to some educational and social problems. It promises to reduce stereotyping and prejudice, increase sensitivity to America's cultural diversity, and combat the legacies of racism and ethnocentrism which permeate education and society. Advocates of critical thinking make similar promises. I argue that a critical examination of the dominant conception of multi-culturalism would discover that it is incompatible with critical thinking and cannot deliver on its promises. To mention three incompatibilities: 1) Multi-culturalism downplays the role of reasoning in human behavior. 2) Cultures cannot be taught or cultivated in schools, but conceptions of culture used in anthropology can be analyzed, (this would not be called Multi-culturalism). 3) Multi-culturalism affirms relativism: each individual or group has its own "perspective"; all perspectives are relatively right. The alternative to multi-culturalism is to foster critical thinking about racial and cultural theories of society.

**WEBSTER, YEHUDI O.**  
**Monday 3:15; STEV 1002**  
Professor of Sociology, California State University, Los Angeles  
**Are There White and Black People? Reasoning About Racial Classification**  
C, SOC STUD, MULT-CULT

Description: Criticisms of racial classification have come from every discipline except philosophy. Yet racial classifications exhibit a multitude of logical flaws, as in the syllogism: "I have white skin. Therefore, I am a white." "People regard themselves as black. Therefore, race is a reality." "Only black people have been enslaved. Therefore, white people cannot appreciate the black experience." This presentation will outline the theoretical-educational source of these and other fallacies, and indicate how critical thinking skills must be integrated with courses on racial and ethnic relations. It will therefore also address hidden (realist and relativist) philosophical inputs in the training of teachers and social scientists.

**WEBSTER, YEHUDI O.**  
**Tuesday 10:30; IVES 76**  
Professor of Sociology, California State University, Los Angeles  
**On Becoming a (Better?) Critical Thinking Instructor: The Elements of Thought**  
C, VEDO

This presentation will address some processes of infusing critical thinking in the classroom setting, specifically, conveying the ramifications of the elements of thought — the foundation of critical thinking instruction and critical thinking as a competency. Beliefs and propositions are the end-product of an infinite series of related assumptions, points of view (theory, paradigm, world view), premises, and inferences; they have implications, policy and behavioral consequences. All these elements are integrated by reasoning, and critical thinking is the conscious grasping of these elements and subjecting them to intellectual standards. Thinking about the elements of thought requires a commitment to learning, to educability, and this commitment should be infused in every student, whether in the natural sciences, social sciences, or humanities. Grasping the elements of thought is a first step in intellectual adventures, in the construction of a critical thinking classroom, and in becoming a teacher in the Socratic sense.

**WEIL, DAN**  
**Monday 10:30; SUMPR**  
Inservice Specialist, Multi-Cultural Education, Research Assistant, Center for Critical Thinking  
**Critical Thinking, Critical Writing, and Literature-Based Whole Language Instruction**  
ELM

In early primary grades, too much stress is placed on developing skills outside the realm of thinking. Helping a young child learn the skills of sequencing, identifying the title of a book, recognizing how a book proceeds, and identifying characters and plot, should take place within the realm of thinking — not divorced from it. This session will focus on how we can use literature and language experience to develop a critical thinking language arts curriculum for early primary children.

**WEIL, DAN**  
**Monday 3:15; SUMPR**  
Inservice Specialist, Multi-Cultural Education, Research Assistant, Center for Critical Thinking  
**Reasoning Within Different Cultural Points of View: Using Language Instruction for Early Childhood Social Studies**  
ELM

Learning to see the commonalities in the struggle for human dignity between cultures and the logic of oppression that threatens that struggle, is essential for a true appreciation of diversity. This session will address how we can use literature-based whole language instruction with young children to stimulate thinking about diversity. The session will include a discussion of underlying principles and present a demonstration using children's literature.

**WEIL, DAN**  
**Tuesday 10:30; SUMPR**  
Inservice Specialist, Multi-Cultural Education, Research Assistant, Center for Critical Thinking  
**Critical Thinking and Elementary School Mathematics**  
ELM

Early primary school students' comments, such as, "I hate math!", or "Math is too hard!", derive their origins from inadequate mathematical instruction. Rather than focusing on thinking critically about mathematics, students
learn that mathematics is little more than rote memorization. This session will share critical thinking approaches to mathematics instruction for children in kindergarten, first, and second grades.

Weil, Dan Tuesday 1:30; IVES 76
Inservice Specialist, Multi-Cultural Education, Research Assistant, Center for Critical Thinking

Constructing a Critical Multi-Cultural Curriculum ELEM, VIDEO
The premise of this workshop is that education should be linked and interpreted not relative to the needs of the so-called Free-Market, but relative to the needs of the social democracy, personal freedom, equality, and human dignity. In the words of W.E.B. DuBois, "The object of education was not to make men (sic) carpenters, but to make carpenters men (sic)." Developing a multi-cultural curriculum based on reasoning rather than simply exposure, will be the focus of this workshop. A defensible approach to multi-cultural education that seeks to build personal and social character should address 1) educational equity, 2) the necessity of providing critical reasoning opportunities within multiple perspectives and points of view informed by social class, gender, culture, and race, and 3) historical and contemporary reality in an attempt to understand the common struggle for human dignity and the logic of oppression.

Weinstein, Lawrence Monday 10:30; STEV 3036
Director, Writing Center, Bentley College

Papers Can Wait: A Freshman Composition Course in Which Practice in Inquiry Comes First COLL, LAN
An experimental version of the freshman composition course at Bentley College is based on the premise that students' intelligence far exceeds the level of thought which their course papers normally reflect, and that significant improvement in the work of students would occur if a "moratorium on paper-writing" were imposed, during which students were to practice only pure (messy) inquiry, excluding all consideration of the needs and demands of the readers. To date, the results of the course — in which most of the traditional concerns of freshman composition (such as organization, transition, diction, grammar, and punctuation) are deferred to the second half — have been quite promising. This session will include a description of the course and a report of results to date, as well as one or two hands-on exercises drawn from the course.

Weinstein, Mark Monday 8:45; CAR 68
Associate Director, Institute for Critical Thinking, Montclair State College

Critical Thinking and the Goals of Science Education SCI, COLL, MCH
The traditional purpose of science education, especially at the post-secondary level, is to identify and train those few students with the natural ability and motivation to become science professionals. More recently, critical thinking, construed as the method to help students to "think as scientists do" has been included as a progressive agenda. We will argue that this is only progressive if the way scientists think is appropriate to the goals for which science should be taught. In this presentation, we will offer an expanded model for general science literacy that goes beyond both traditional and recent practices, and a model of critical thinking that supports it.

Weinstein, Mark Monday 12:15; STEV 1002
Associate Director, Institute for Critical Thinking, Montclair State College

Educating for Development: Critical Thinking Across the Disciplines ENV, ECON, H RIGHTS, STAFF DEV
If people of all classes are to play a central role in determining the future of the planet and its various sub-systems, an intelligent appreciation of the problems facing humankind and possible solution strategies must be increasingly available to all those whose knowledge of the world results from their participation in mass education. This requires a reconceptualization of the social role of education and a reconsideration of practices appropriate to mass education. We will examine the social and political basis for critical thinking and explore its component parts. A program of educational reform which includes the renewal of teacher education and an ongoing collaboration between schools and universities will be described.

Weinstein, Mark TUESDAY 10:30; CAR 68
Associate Director, Institute for Critical Thinking, Montclair State College

How to Get from Ought to Is: Post-Modern Epistemology and Social Justice H RIGHTS, THEORY
The recent critique of enlightenment rationalism evident in post-modernism has brought into question standard notions of objective and value free epistemology. In this paper, an attempt will be made to integrate perspectives of social justice into the standard account of epistemologically free epistemology. This integration will have significant consequences for education and particularly for recent models of critical thinking. We will argue that such an integration is both justifiable and needed if educational reform, in the interest of increasing access to political, social, and economic power, is to be possible.

Weinstein, Mark TUESDAY 3:15; STEV 1002
Associate Director, Institute for Critical Thinking, Montclair State College

Critical Thinking Across the College Curriculum: What Faculty Wants and Needs STAFF DEV, COLL
The disciplinary commitments of college faculty do not have a clear and compelling relation to typical arrays of general thinking skills or informal logic concepts. Thus, much of the available literature in critical thinking is not helpful to faculty who, nevertheless, accept the critical thinking ideal of autonomous, thoughtful, and reflective students. Faculty development at
Montclair State College has, however, pointed to a number of general issues that seem relevant to critical thinking across the disciplines. These include concern with the epistemological assumptions of the various fields, argumentation within the discipline, the construction of appropriate academic tasks, educational objectives within particular fields, issues of the canon, and the motivational aspects of learning that inhibit students' accepting critical thinking as an appropriate educational objective. We hope to suggest by this presentation, that critical thinking advocates should focus more on these sorts of concerns and less on the standard fare extrapolated from introductory logic courses.

**Wilcox, Mark A.**

**Tuesday 3:15; ART 108**

**Co-Founder of the Center for Whole Brain Thinking, BrainWorks**

**The Brain: A Model for the Effective Formation and Utilization of Teams**

PSYCH, HIGH, BUS

The vast majority of teaming being practiced in both schools and industry is artificial and ineffective; and that's the good news. In a recent survey ("Traits of a World-Class Work Force") of 250 major companies in the U.S., 75% of the respondents said that "Teaming" was a key to being world-class. This session will identify the keys for forming effective learning teams. Participants will understand the importance of thinking preferences and experience several "team" activities to demonstrate the points of the program.

**Wilcox, Mark A.**

**Wednesday 10:30; ART 108**

**Co-Founder of the Center for Whole Brain Thinking, BrainWorks**

**Did You Ever Have to Make Up Your Mind? Using Whole-Brain Thinking to Make Good Decisions**

BUS, HIGH, PSYCH

What are the three keys to making good decisions? Does your thinking get in the way of your creating or identifying great alternative choices? In this program, Mark will present answers to these questions, review the Six Steps to Decision Making, and then focus on developing skills for identifying great alternative solutions. He will discuss TLC, forced association, whole-brain storming, inverse thinking, and other techniques for ideating. Participants will be introduced to a technique for selecting the very best alternative.

**Wild, Jennifer**

**Tuesday 8:45; STEV 3026**

**Director of Development, NOVA Research Company**

**Action Science: The Skills Needed to Critically Reflect on Practice**

BUS, H COM, PSYCH, ADV

Action Science is a theory of Interpersonal and Organizational Intervention, and a methodology for data gathering and analysis. Developed by Chris Argyris and others over the past two decades, it is most useful as a technique for examination and reflection of incongruity between the values and beliefs that are espoused by an individual or organization and those actions/behaviors that actually occur. It is particularly effective when used as a skill for helping in the discovery of errors in reasoning by ourselves and others. This session will introduce the theory of Action Science, will provide a briefing and demonstration on the skill set that can be developed, and will address some potential individual or organizational applications of the theory in practice.

**Williams, Grady E., III**

**Sunday 3:15; DAR 139**

Professor of Biology and Environmental Science, Delta State University

**A Role-Playing Model for Introducing Critical Thinking and Creative Concept Structuring in Environmental Science**

ENW, SCI, G

This participatory workshop is for high school and college teachers who address environmental issues in their classes. The model is directly relevant to introductory environmental science courses and adaptable to any discipline which explores environmental and economic connections to public and social issues. My goal is to demonstrate how role-playing facilitates critical thinking in: 1) environmental concept structuring and 2) development of creative approaches to resolution of complex environmental problems. Participants will adopt roles of diverse interest groups in example issues. They will first identify major concerns and develop solutions relevant to assigned roles. After presentation of interest group results, participants will regroup to develop and present integrated, balanced solutions to the issues. The model forces students to develop a more informed, balanced, appropriate concept, which can be desirable in negotiating solutions to complex, multi-polar problems. Materials will be distributed to participants and observers.

**Williamson, Janet L.**

**Monday 10:30; STEV 3008**

Program Specialist, Greensboro Public Schools

**Portfolios: Monitoring Student Thinking**

K-12

This participatory workshop provides guidance in developing portfolios in classrooms in all disciplines and grade levels. Specific examples from Greensboro teachers and students demonstrate how portfolios have helped students to increase their responsibility, reflect upon and assess their own work, define and internalize specified criteria for evaluation, and demonstrate to themselves and others their growth over time. A series of activities and questions lead participants to make decisions about why and how to use portfolios in their classroom instruction.

**Willsken, Jane**

**Sunday 1:30; SUMPR**

Director of Research and Publications, Center for Critical Thinking and Moral Critique

**Critical Thinking and Parenting: Expanding Your Critical Thinking Community to Include Parents**

K-12, STAFF, DEV

We have all heard that the parent is the child's first teacher, and yet we have made few strides toward building parenting skills that support the child's critical thinking. Most parents have not heard of critical thinking, though some intuitively support it, but few appreciate its significance for...
their child's future. With parent support and education also comes the opportunity to bring parent pressure for more critical thinking curriculum and staff development in schools. How can we improve our parenting techniques and parent involvement at school and home so as to support the critical thinking of our children?

This session addresses this issue and focuses on four areas: 1) "How to do it," 2) "Practical Suggestions," 3) "Sample Materials for Parents Explaining Critical Thinking and its Role in Their Child's Future," and 4) "Parent Evenings" that enables parents to be a resource in their school community or business.

WILLSEN, JANE
Monday 8:45; SUMPR
Director of Research and Publications, Center for Critical Thinking and Moral Critique

Critical Thinking: The Magic Wand That Integrates Curriculum ELEM, MID, STAFF DEV

It is difficult to reach an integrated curriculum when texts are not thematically related, or when fourteen subjects are required to be taught in the elementary classroom. Advisory documents like the California State Frameworks are not much help in bridging from past practices and current materials to accomplishing an integrated curriculum.

Critical Thinking is a magic wand when it is conceived of in its comprehensive and substantial sense: we can identify intellectual standards for all assignments and learning; we can identify elements of thought and the abilities that derive from them, to be taught in every subject area; we can organize our curriculum and shop textbooks and materials for examples to teach these abilities in exciting and interesting ways. The curriculum then spins around a core of critical thinking standards, elements, and abilities. An overriding goal of developing students' intellectual traits of fairmindedness, perseverance, empathy and integrity are natural binding agents, as well. Strategies and materials will be provided in this interactive session.

WILLSEN, JANE
Monday 1:30; CAR 68
Director of Research and Publications, Center for Critical Thinking and Moral Critique

Teaching High School Students How to Assess Their Own Thinking HIGH, TEST, Beg

High School students are keen to assess and judge what they see and hear, what they recognize as inconsistencies in their world. They have some ideas about how to assess in some areas, such as whether their clothes are appropriate or whether their parents are acting fairly.

Yet, they have little if any conception of how to assess and judge their own thinking processes. They want to be taken seriously by adults, but they do not understand the importance of "reasoned judgment" nor how to acquire it. Without a grasp of the tools of intellectual standards and elements of thought, they have no criteria, no inner structure to use as they move toward a well-reasoned judgment, and they are not able to know when they are "hot" or "cold." They want to be empowered vis-a-vis adults, and this is a key step on the way.

This practical session provides a structure and materials for you to assist your high school students in understanding the characteristics of a well-reasoned belief or position and what it asks of us, as well as how to use intellectual standards to come to such a position.

WILLSEN, JANE
Tuesday 8:45; IVES 76
Director of Research and Publications, Center for Critical Thinking and Moral Critique

Critical Thinking: The Magic Wand That Integrates Curriculum ELEM, MID, STAFF DEV, VIDEO

It is difficult to reach an integrated curriculum when texts are not thematically related, or when fourteen subjects are required to be taught in the elementary classroom. Advisory documents like the California State Frameworks are not much help in bridging from past practices and current materials to accomplishing an integrated curriculum.

Critical Thinking is a magic wand when it is conceived of in its comprehensive and substantial sense: we can identify intellectual standards for all assignments and learning; we can identify elements of thought and the abilities that derive from them, to be taught in every subject area; we can organize our curriculum and shop textbooks and materials for examples to teach these abilities in exciting and interesting ways. The curriculum then spins around a core of critical thinking standards, elements, and abilities. An overriding goal of developing students' intellectual traits of fairmindedness, perseverance, empathy and integrity are natural binding agents, as well. Strategies and materials will be provided in this interactive session.

WILSON, SALLIE L.
Wednesday 10:30; STEV 3008
Education Consultant, California Department of Education

Year 2000: Creating a Culture of Thinkers G, ELEM, MATH

In year 2000 classroom a "culture of thinkers" are teachers that take serious the knowledge that children have when they enter school. In this approach, the teacher uses the knowledge of each child to make instructional decisions so that the child learns with understanding, learns how to solve problems, and make connections with out-of-school experiences and culture. In addition, the curriculum is reshaped to focus on complex meaningful problems, and the staff develops a new attitude toward the disadvantaged learner. This presentation examines the principles of cognitive approaches to creating a "culture of thinkers" by discussing intervention strategies that start with "what" all children know and provides explicit models of proficient thinking in areas that traditionally have been termed Critical Thinking or advanced skills. The presenter will distinguish the disadvantaged
learner in the context of conditions that contribute to under achievements, in math and other global tasks.

**Witte, Marlys H.**

*Monday 10:30; IVES 35*

Professor of Surgery, University of Arizona, College of Medicine

**Ann Kerwin**

Philosopher-in-Residence, Department of Surgery, University of Arizona

**Charles L. Witte**

Professor of Surgery, University of Arizona

*It Pays to Be Ignorant: The Costs and Value of Not-Knowing*  
K-12, COLL, HEALTH

In this participatory workshop, Marlys and Charles Witte M.D. and Ann Kerwin Ph.D., of the innovative Curriculum on Medical Ignorance at the University of Arizona College of Medicine, explore a rich, renewable, and under-exploited resource: our ignorance. Ignorance encompasses all the things we know we don't know (*known unknowns*); all the things we don't know we don't know (*unknown unknowns*); all the things we think we know but don't (*dogma, error, misconception*); all the things we don't know we know (*tacit knowing*); and all the things we will not to know (*denial, taboo, heresy*). While our ignorance can and does harm us, it is also the source of all learning, discovery, and creativity. We enrich ourselves as teachers, students, and discoverers when we learn to use our ignorance wisely (*ignorance-based management*). Those concerned to tap this vital resource will profit from this practical, stimulating venture through *terra incognita* to dividends unknown.

**Wragg, Dixon**

*Tuesday 3:15; STEV 3077*

Community Liaison Director, North Coast Treatment Center

**Critical Thinking and Social Responsibility: From the Classroom to the World**  
H RIGHTS, SOCIAL, POL, H CON

The primary theses of this workshop are: 1) The main explicit function of an educational system (educating) and its main tacit function (indoctrinating students with prevailing societal mores) are fundamentally in conflict. 2) Most educators are in denial of this, and are content to pass off indoctrination as education. 3) Strong sense critical thinking is therefore rare. 4) Strong sense critical thinking is essential for grappling with social problems and alleviating human suffering. 5) Therefore, educators have an urgent social responsibility to eschew indoctrination in favor of true education (with critical thinking), even when that's heretical and risky. Format: approximately 1/2 hour of explicating the basic concepts (with examples), then about 1 hour of spirited discussion. Join the fun!
conomic problem. Then a special story is told, a story of African origin, designed to both liberate and guide innovative thinking. Using clues derived from this story, each participant individually addresses the economic issue already discussed. Then they share their work on this problem in small groups; and finally each group reports its findings to the group as a whole. Because of the clues the story provides, several different approaches to the problem are likely to surface. Because the storytelling atmosphere helps to free the imagination, these approaches may be surprisingly innovative.

**Presenters' Addresses**

**Daniel C. Abel**  
Biological Sciences  
Mary Washington College  
1301 College Ave.  
Fredericksburg, VA 22401

**Peter Dow Adams**  
English Department  
Essex Community College  
Rossville Boulevard  
Baltimore, MD 21237

**Paul Ady**  
Department of English  
Assumption College  
500 Salisbury Street  
Worcester, MA 01615

**Priscilla Agnew**  
Philosophy Department  
Saddleback College  
28000 Marguerite Parkway  
Mission Viejo, CA 92692

**Patricia Allen**  
Massachusetts Bay Community College  
50 Oakland Street  
Wellesley Hills, MA 02181

**Charles Angeletti**  
History Department  
Metropolitan State College of Denver  
Box 27, P.O. Box 173362  
Denver, CO 80217-3362

**Douglas B. Aretz**  
Tech. Prep. Department  
Milwaukee Area Technical College  
700 West State Street  
Milwaukee, WI 53233

**Mary Aspnes**  
Developmental Education Department  
Lakewood Community College  
1909 Irving Ave. South  
Minneapolis, MN 55403

**Rose Austin**  
Education Department  
North Harris Montgomery Community College District  
250 N. Sam Houston Parkway East  
Houston, TX 77060-2004

**Susan M. Aubrey**  
School of Education  
Oakland University  
129 O'Dowd Hall (SEHS)  
Rochester, MI 48309

**Sharon Bailin**  
Faculty of Education  
Simon Fraser University  
Burnaby, BC V5A 1S6  
CANADA

**Paul J. Baker**  
Department of Educational Administration  
-Illinois State University  
331 DeGarmo Hall  
Normal, IL 61761-6901
<table>
<thead>
<tr>
<th>PRESENTERS' ADDRESSES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BONNIE BAKER THORNE</strong></td>
</tr>
<tr>
<td>Department of Library Science</td>
</tr>
<tr>
<td>Sam Houston State University</td>
</tr>
<tr>
<td>1700 Sam Houston Avenue</td>
</tr>
<tr>
<td>Huntsville, TX 77341</td>
</tr>
</tbody>
</table>

| **JOHN BARELL** |
| Department of Curriculum |
| Montclair State College |
| 214 Chapin Hall |
| Upper Montclair, NJ 07043 |

| **CYNTHIA A. BARNES** |
| Faculty Services |
| Community College of Aurora |
| 16000 E. Centre Tech Pkwy |
| Aurora, CO 80011-9036 |

| **GLENDA W. BEAMON** |
| College of Education |
| Elon College |
| 2226 Campus Box |
| Elon College, NC 27244-2020 |

| **JEANNE BECJOS** |
| Language Arts Department |
| Castle Park High School |
| 1395 Hilltop Drive |
| Chula Vista, CA 91911 |

| **PETER F. BELL** |
| New York State Council on Economic Education |
| S.U.N.Y., Purchase |
| 735 Anderson Hill Road |
| Purchase, NY 10577 |

| **NORMAN J. BETZ** |
| Department of English and Philosophy |
| Central Missouri State University |
| Warrensburg, MO 64093 |

| **KAY BLAIR** |
| Supplemental Instruction |
| University of Missouri |
| SASS Bldg., 5100 Rockhill Road |
| Kansas City, MO 64110-2499 |

| **CHARLES V. BLATZ** |
| Department of Philosophy |
| University of Toledo |
| 2801 W. Bancroft St. |
| Toledo, OH 43606 |

| **LORENZ BOEHM** |
| English Department |
| Oakton Community College |
| 1600 East Golf Road |
| Des Plaines, IL 60016 |

| **BRUCE BORAAS** |
| Minnesota High Tech Council |
| Box 8, Rl 1 |
| Sedan, MN 56380 |

| **BRADLEY BOWEN** |
| Philosophy Department |
| University of California at Santa Barbara |
| Santa Barbara, CA 93106 |

| **DARLENE BOYD** |
| Pre-College, Education and Community Program |
| University of California, Irvine |
| P.O. Box 6050 |
| Irvine, CA 92715 |

| **LYNDA N. BROWN** |
| Department of Nursing |
| University of Kentucky |
| 100 Airport Gardens Road Suite #10 |
| Hazard, KY 41701 |

| **M. NEIL BROWNE** |
| Economics Department |
| Bowling Green State University |
| Bowling Green, OH 43403 |

| **DAN BURRITT** |
| C.A.R.E., Children at Risk in Education |
| 510 3rd St. #7 |
| Eureka, CA 95501 |

| **HENRY N. BUSCHER** |
| Science Department |
| Monsignor Kelly High School |
| 5950 Kelly Drive |
| Beaumont, TX 77707 |

| **JOHN BYRD** |
| English Department |
| Seoul Foreign High School |
| 55 Yonhi-Dong |
| Seoul, 120-113 |
| KOREA |

| **HILDA CABANEL-EVANS** |
| Rio Hondo College |
| 3600 Workman Mill Rd. |
| Whittier, CA 90601-1699 |

| **DOMINICA K. CALLAGHAN** |
| School of Nursing and Allied Health |
| University of Guam |
| Health Science Bldg., UOG Station |
| Mangilao, Guam 96923 |

| **CONNIE CANTRELL** |
| Humanities Division |
| Rose State College |
| 6420 S.E. 15th Street |
| Midwest City, OK 73110 |

| **JOAN CARTER-WELLS** |
| Reading Program |
| Cal State University, Fullerton |
| 800 North State College |
| Fullerton, CA 92634 |

| **ROLAND CASE** |
| Department of Social and Educational Studies |
| University of British Columbia |
| Vancouver, BC V6T 1Z5 |
| CANADA |

| **JEANNETTE M. CATSOULIS** |
| Philosophy Department |
| University of Nevada, Las Vegas |
| 4505 S. Maryland Parkway |
| Las Vegas, NV 89154 |

| **KRISTAN CAVINA** |
| English and ESL Department |
| Fullerton College |
| 321 E. Chapman Avenue |
| Fullerton, CA 92634 |

| **JOHN CHAFFEE** |
| Creative & Critical Thinking Studies |
| LaGuardia College |
| 31-10 Thomson Avenue |
| Long Island City, NY 11101 |

| **HARRIET CHAMBERLAIN** |
| Thinking Possibilities |
| 1584 Scenic Ave. |
| Berkeley, CA 94708 |

| **Diane D. Cheatwood** |
| Faculty Development |
| Community College of Aurora |
| 16000 E. Centre Tech Pkwy |
| Aurora, CO 80011-9036 |

| **Patricia B. Cheyne** |
| Art Department |
| Colorado State University |
| Fort Collins, CO 80523 |

| **Lynn R. Chong** |
| Massachusetts Bay Community College |
| 50 Oakland Street |
| Wellesley Hills, MA 02181 |

| **Arthur Cohen** |
| Target Consultants International |
| P.O. Box 463 |
| Massapequa Park, NY 11762 |

| **George Collison** |
| Education Department |
| University of Massachusetts, Dartmouth |
| Wayne, MA 02747 |

| **Judith Collison** |
| Teacher Education |
| Marist College |
| Poughkeepsie, NY 12601 |

| **Lauren Coodeley** |
| Department of Psychology |
| Napa Valley College |
| 2277 Napa-Valley Hwy. |
| Napa, CA 94558 |

| **Jerrold Coombs** |
| Department of Social and Educational Studies |
| University of British Columbia |
| Vancouver, BC V6T 1Z5 |
| CANADA |

| **Lowell Cooper** |
| California School of Professional Psychology |
| 1005 Atlantic Ave. |
| Alameda, CA 94501 |
WEBSTER E. COTTON
Educational Foundations
California State University, Los Angeles
5151 State University Drive
Los Angeles, CA 90032

EDWARD D'ANGELO
Department of Philosophy
University of Bridgeport
Bridgeport, CT 06601

KIRK G. DADDOW
Director, Extended Learning
Ames High School
Ames, IA 50010

MEENAKSHI DALAL
Economics Department
Wayne State College
Wayne, NE 68787

T. EDWARD DAMER
Department of Philosophy
Emory and Henry College
Emory, VA 24327

LEROI DANIELS
Faculty of Education
University of British Columbia
2125 Main Mall
Vancouver, BC V6T 1Z4

KATY DAWSON
George Mayne School
5030 N. 1st St
Alviso, CA 95002

JERALDINE C. DAY
Amador County Health Department
3089 Sudbury Road
Cameron Park, CA 95682

CONNIE DE CAPITE
Santa Ana Unified Schools
601 W. Alpine St.
Santa Ana, CA 92707

ELISA DE LA ROCHE
Department of Curriculum and Teaching
Montclair State College
Chapin Hall
Upper Montclair, NJ 07043

CONSTANCE DEVREEAUX
Executive Director
Institute for Socratic Research
112 Harvard Ave. #128
Claremont, CA 91711

SANDRA DICKINSON
Department of Linguistics and Speech Communication
LaGuardia College
31-10 Thomson Ave.
Long Island City, NY 11101

MARY E. DIETZ
1267 Canyonside Ave.
San Ramon, CA 94583

HELEN E. R. DITZHAY
Department of Leadership & Counseling
Eastern Michigan University
34 Boone Hall
Ypsilanti, MI 48197

WILLIAM A. DORMAN
Journalism Department
CSU Sacramento
6000 Jay Street
Sacramento, CA 95821

JUDY R. DOWNS
Department of English
University of Tampa
401 W. Kennedy Ave., Box 97F
Tampa, FL 33606-1490

MACGREGOR EDDY
"MacGregor Eddy Presents..."
21 West Laurel Dr. 453A
Salinas, CA 93906-3434

JOHN EDWARDS
School of Education
James Cook University
3 Gilbert Crescent
Townsville, North Ward 481
AUSTRALIA

CAROL M. ELLIS
Department of Liberal Studies
University of Redlands
1200 E. Collon Ave. P.O. Box 3080
Redlands, CA 92373

JOHN ENRIGHT
Psychology
John F. Kennedy University
378 Via La Cambre
Greenbrae, CA 94904

VIRGINIA B. EPSTEIN
Department of Education
Regis College of Regis University
3333 Regis Boulevard
Denver, CO 80221-1099

ROBERT ESFORMES
Institute for Critical Thinking
Montclair State College
Upper Montclair, NJ 07043

NOREEN C. FACIONE
Department of Physiological Nursing
University of California, San Francisco
611 Y School of Nursing Building
San Francisco, CA 94145

PETER FACIONE
Dean's Office
Santa Clara University
School of Arts and Sciences
Santa Clara, CA 95053

JOHN R. FEARE
7915 Fox Hollow Pl.
Windsor, CA 95492-8646

MICHAEL FEER
Victim Offender Program
Cal State University, Dominguez Hills
Carson, CA 90747

KEVIN FELDMAN
Education Department
Sonoma State University
1801 East Cotati Avenue
Rohnert Park, CA 94928

JUAN MIGUEL FERNANDEZ-BALBOA
School of Kinesiology
University of Northern Colorado
Greeley, CO 80639

MARTYN H. FILBECK
Family Environmental Sciences Department
California State University, Northridge
18111 Nordhoff St
Northridge, CA 91330

MAURICE A. FINOCCHIARO
Department of Philosophy
University of Nevada, Las Vegas
Las Vegas, NV 89154-5028

JUDY FISHEL
Science Department
Bristol High School
199 Chestnut
Bristol, RI 02809

DAVID FITZGERALD
Institute of Educational Technology
The Open University
Walton Hall
Milton Keynes, MK7 6AA

JEAN ANN FOLEY
School of Education
University of Tulsa
600 South College
Tulsa, OK 74104

BARBARA FORREST
Department of History and Government
Southeastern Louisiana University
SLU 484 University Station
Hammond, LA 70402

CLAUDETTE FRANKLIN
Education Department
Davis and Elkins College
100 Campus Drive
Elkins, WV 26241-3996
JOANNE GAINEN
Director, Teaching and Learning Center
Santa Clara University
Santa Clara, CA 95053

EILEEN GAMBRILL
School of Social Welfare
University of California at Berkeley
120 Haviland Hall
Berkeley, CA 94720

ALBERT H. GARDNER
Human Development and Child Study
University of Maryland
3304 Benjamin Building
College Park, MD 20742

HARRY GAVENTA
Burton College of Education
McNeese State University, Ryan Street
Post Office Box # 92300
Lake Charles, LA 70609

JAMES GEIGER
Adjunct
Lynn University
2900 E. Oakland Pk. Blvd. Ste 200
 Ft. Lauderdale, FL 33306

CRAIG GIBSON
Library User Education
Washington State University
Holland Library 461
Pullman, WA 99164-5610

ROBERT N. GILBERT
Social Sciences Department
Palatine High School
1111 N. Kohlweg Road
Palatine, IL 60067

JACKIE A. GIULIANO
Enviromental Studies
Antioch University
3325 Primera Ave #1
Los Angeles, CA 90068

DAVID GLAUBINGER
American Red Cross, Bay Area
700 Fifth Avenue
Laffectas, CA 94901

NANCY C. GLOCK
Transfer & General Education
California Community Colleges
701 Dudley Way
Sacramento, CA 95818

LES GOTTESMAN
Department of English and Communications
Golden Gate University
536 Mission St.
San Francisco, CA 94105

BILL GRAVES
Philosophy Department
Sonoma State University
1801 E. Cotail Ave.
Rohnert Park, CA 94928

SUSAN HALE
Graduate School and Research Center
Saybrook Institute
1550 Sutter St.
San Francisco, CA 94109

PETER HALL
PACE Training
4569 Langara Avenue
Vancouver, BC V6R 1C9
CANADA

RICHARD S. HALL
Research and Development
Dale Carnegie and Associates Inc.
6000 Dale Carnegie Drive
Houston, TX 77036

HERMAN HALUZA
English Department
Ohlone College
43600 Mission Blvd.
Fremont, CA 94539

GEORGE H. HANFORD
The College Board
985 Memorial Drive Apt. 103
Cambridge, MA 02138

GLEN HARPER
Principal
C.O. Bakson High School
P.O. Box 188
Galiente, NY 89008

DONALD HATCHER
Center for Critical Thinking
Baker University
8th and Grove
Baldwin City, KS 66006

WILLIAM A. HAYES
Center for Creative and Critical Thinking
Delta State University
P.O. Box 3262
Cleveland, MS 38733

JARED HAYNES
Department of English
University of California, Davis
Campus Writing Center
Davis, CA 95616

PENNY HEASLIP
Nursing Department
University College of the Cariboo
Box 3010
Kamloops, BC V2C 5N3
CANADA

ROBERT HEILBRONER
Department of Economics
New School for Social Research
Graduate Faculty of Political and Social Science
65 Fifth Avenue
New York, NY 10003

RACHEL HENRY
Office of Student & Organizational Development
Kingwood College
20,000 Kingwood Drive
Kingwood, TX 77339

JUDI HIRSCH
Oakland Public Schools
1025 Second Avenue
Oakland, CA 94606

BARBARA J. HITCHCO
C.A.R.E., Children at Risk in Education
510 3rd St. #7
Eureka, CA 95501

JOHN HOAGLUND
Center for Critical Thinking
Christopher Newport University
Newport News, VA 23606

EVANGELINE HOGG
Region IX Education Service Center
301 Loop 11
Wichita Falls, TX 76305

NICKI HOYT
Health Occupations Department
College of the Redwoods
7351 Tompkins Hill Road
Eureka, CA 95503

JANNI LEE HUGO
3618 S. Narcissus Way
Denver, CO 80237

FRANCINE MALDER JAMIN
English Department
Montgomery College
Takoma Park Campus
Takoma Park, MD 20912

ANN JERABEK
Newton Gresham Library
Sam Houston State University
1700 Sam Houston Ave.
Huntsville, TX 77340

DONALD JOHNS
English Department
University of California, Davis
Davis, CA 95616

C. L INCOLN JOHNSON
Department of Sociology
University of Notre Dame
Notre Dame, IN 46556

RALPH H. JOHNSON
Department of Philosophy
University of Windsor
Windsor, ONT N9B 3P4
CANADA

LETITIA M. JOHNSTON
Humanities Division
Rose State College
6420 S.E. 15th Street
Midwest City, OK 73110

SANDRA A. JONES
Nursing Department
Aurora University
347 S. Gladstone
Aurora, IL 60506-4892
PRESENTERS' ADDRESSES

STUART M. KEELEY
Department of Psychology
Bowling Green University
Bowling Green, OH 43403

RICHARD KELDER
Humanities Department
S.U.N.Y. College at New Paltz
New Paltz, NY 12561

GAIL A. KENDALL
Agua Fria UHS/Rio Salado College
8723 West Elm Street
Phoenix, AZ 85037

ANN KERWIN
Department of Surgery, AHSC
University of Arizona
Tucson, AZ 85723

JOHN C. S. KIM
Department of Humanities
Rio Hondo College
3600 Workman Mill Rd.
Whittier, CA 90608

DONALD R. KLEIN
Philosophy Department
Gavilan Community College
5055 Santa Teresa Blvd
Gilroy, CA 95020

TARA D. KNOTT
Evaluation Resources, Inc.
3960 Knight Arnold Rd., Suite 105
Memphis, TN 38118

MONICA M. C. KOEPE
Bureau for Teaching Development
University of Namibia
13 Storch Street, Private Bag 13301
Windhoek, Namibia
SOUTH AFRICA

ANNIE K. KOSHI
Department of E.S.L.
The City College of New York
138 Street at Convent Avenue
New York, NY 10031

YUN JA LASSEK
Greater Philadelphia Philosophy Consortium
Lawrence Hall, Room 325
Rosenberg, PA 19010

JANET L. LAUGHLIN
Astoria School District
Route 1, Box 913 E
Astoria, OR 97103

RICHARD L. LAUGHLIN
Superintendent's Office
Clatsop County Educational Service District
Route 1, Box 913 E
Astoria, OR 97103

JUDITH D. LAWSON
Department of Educational Administration
Illinois State University
331 DeGarmo Hall
Normal, IL 61761

DONALD LAZERE
English Department
Cal Poly State University
San Luis Obispo, CA 93407

BARRY LESHOWITZ
Department of Psychology
Arizona State University
Tempe, AZ 85287-1104

HILARY LETTS
Deputy Director
Successful Learning Institute
36 Caldy Rd.
West Kirby, Merseyside L48 2HQ
ENGLAND

ANNE I. LEWIS
Education Department
Sonoma State University
1801 East Cotati Avenue
Rohnert Park, CA 94928

RICHARD B. LEWIS
Civil Engineering Department
Louisiana Tech University
Arizona Street
Ruston, LA 71272

TED LINDEN
2245 Tasso St.
Palo Alto, CA 94301

MATTHEW LIPMAN
Director
Institute for the Advancement of Philosophy for Children
Montclair State College
Upper Montclair, NJ 07043

LARRY LITECKY
President
Minneapolis Community College Faculty Association
Blair Arcade-165 Western Ave No.
St. Paul, MN 55102

JOHN F. LOASE
Mathematics Department
SUNY-Westchester Community College
Valhalla, NY 10595-1698

LYNN J. LÖFTHOUSE
Department of Speech Communications,
Wesley College
120 N. State Street
Dover, DE 19901

LUZ E. LOPEZ
Department of Education
Cayey University College
Cayey, Puerto Rico 00736

RUTH M. LORING
6707 Jameson Rd.
Amarillo, TX 79106

GEORGE M. LUCKEY, JR.
Department of Philosophy
Morehead State University
UPO 847
Morehead, KY 40351

SUE Y. LUCKEY
Information Sciences Department
Morehead State University
UPO 847
Morehead, KY 40351

GRANT LUCKHARDT
Department of Philosophy
Georgia State University
University Plaza
Atlanta, GA 30303

CINDY L. LYNN
School of Education
University of Denver
Ammi Hyde Building
Denver, CO 80208

M. STAR MAHARA
Nursing Programs
University College of Cariboo
900 McGill Rd.
Kamloops, BC V2C 5N3
CANADA

WILLIAM K. MAREK
Department of Psychology
FCI-Dublin
5701 8th St., Camp Parks
Dublin, CA 94566

JAMES P. MARSHALL
Department of Sociology
University of Northern Colorado
Greeley, CO 80639

LINDA MARTIN
Communication Studies Department
California State University, Sacramento
6000 J Street
Sacramento, CA 95819

DENNIS MARTINEZ
American Indian Cultural Center
2122 Pacific Highway
Talent, OR 97540

DENNIS MATTHIES
Center for Teaching and Learning
Stanford University
110 Sweet Hall
Stanford, CA 94305-3087

MARLYS MAYFIELD
English Department
Vista College
2020 Milvia
Berkeley, CA 94704

RON McBRIDE
Department of Kinesiology
Texas A&M University
College Station, TX 77843
RICHARD J. McCallum  
University of Missouri  
810 Clark Hall  
Columbia, MO 65211

ROBERT McCONNELL  
Department of Geology  
Mary Washington College  
1301 College Avenue  
Fredericksburg, VA 22401-5358

KEVIN McCORMACK  
Student Affairs  
World University of America (Ojai)  
107 N. Ventura St.  
Ojai, CA 93023

MICHAEL McLAIN-MIDKIFF  
Principal  
Tracy Public Schools  
315 E. Eleventh St.  
Tracy, CA 95376

TIMOTHY M. Melchior  
Principal  
Memorial Jr. High School  
Fletcher Ave.  
Valley Stream, NY 11582

MANUEL Mena  
School of Business  
SUNY, Oswego  
Oswego, NY 13126

CHET MEYERS  
Humanities and Teaching Development  
Metropolitan State University  
730 Hennepin Ave. S.  
Minneapolis, MN 55403

CONNIE MISSIMER  
4836 NE 40th Street  
Seattle, WA 98105

Miriam K. Mlynarski  
Library  
Camden County Community College  
Little Gloucester Road  
Blackwood, NJ 08012

Ogdens Morse  
English Department  
Joel Barlow High School  
100 Black Rock Turnpike  
Redding, CT 06896

William G. Munn  
Center for Politics and Policy  
170 E. 10th Street  
Claremont, CA 91711

Debra M. Murphy  
Business Administration Department  
Saint Michael's College  
Minooski Park  
Colchester, VT 05439

Josephine Naehrbass  
Agua Fria Union High School District  
530 E. Kiley Rd.  
Avondale, AZ 85323

Obed Norman  
Science Education Department  
University of Georgia  
212 Aderhold Hall  
Athens, GA 30602-7126

Gerald Nosich  
Department of Philosophy  
University of New Orleans  
New Orleans, LA 70148

Linda Nowell  
School of Education  
Texas Wesleyan University  
1201 Wesleyan St.  
Fort Worth, TX 76105-1536

Willia L. Nwa  
Secondary Education  
Canton City Schools  
2800 13th Street, SW  
Canton, OH 44710

John O'Brien  
School of Education  
James Cook University of North Queensland  
Townsville, N. Queensland 4811  
AUSTRALIA

Virginia O'Keefe  
Communication Department  
George Mason University  
Fairfax, VA 22030

Elaine R. Ognibene  
Department of English  
Siena College  
515 Loudon Road  
Loudonville, NY 12211

Richard Ognibene  
Educational Studies Department  
Seton Hall University  
400 S. Orange Ave.  
So. Orange, NJ 07079

Renate Otterbach  
Region IX Educational Service Center  
301 Loop 11  
Wichita Falls, TX 76305

Wendy Oxman  
Institute for Critical Thinking  
Montclair State College  
Upper Montclair, NJ 07043

Sandra Parks  
Co-Director  
The National Center for Teaching Thinking  
Post Office Box 334  
Newton Center, MA 02159

Shannah Parnell  
Department of English  
University of Illinois at Urbana-Champaign  
608 South Wright Street  
Urbana, IL 61801

S. Dawn Patterson  
Nursing Programs  
University College of the Caribbean  
900 McGill Rd.  
Kamloops, BC V2C-5N3  
CANADA

Richard W. Paul  
Center for Critical Thinking and Moral Critique  
Sonoma State University  
1801 E. Cotati Avenue  
Rohnert Park, CA 94929-3609

William Pendleton  
Assistant Superintendent of Instruction  
Tulare Union High School District  
426 North Blackstone  
Tulare, CA 93274

Joel Peterson  
Critical Thinking Project  
Minnesota Community Colleges  
121 Lincoln St.  
Mankato, MN 56001

Gloria Pierce  
Department of Counseling, Human Development, and Educational Leadership  
Montclair State College  
Upper Montclair, NJ 07043

Robert C. Pinto  
Philosophy Department  
University of Windsor  
401 Sunset Ave  
Windsor, ON N9B 3P4  
CANADA

Melvin Poage  
President  
Materials & Technology for Education  
3095 S. Trenton Street  
Denver, CO 80231

Jim Pollard  
Spokane Falls Community College  
15318 Little Spokane  
Spokane, WA 99208

Richard Pope  
Gateway to Great Thinking  
3622 Copley Ave.  
San Jose, CA 95132

Florence Fay Prichard  
Office of Academic Affairs  
Salisbury State University  
1101 Camden Avenue  
Salisbury, MD 21801

James Henry Quina  
Department of English  
Wayne State University  
5425 Gullen Mall  
Detroit, MI 48202
PRESENTERS' ADDRESSES

JONAH RASKIN
Communication Studies Department
Sonoma State University
1801 E Cotati Avenue
Rohnert Park, CA 94928

JEFFREY REED
Social Science/Language Arts Department
Windsor Middle School
7650 Bell Road
Windsor, CA 95492

K. HELMUT REICH
Department of Education
University of Fribourg
Rte. des Fougerés
Fribourg, CH-1700
SWITZERLAND

DOMINGA L. REYES
President's Office
World University of America (Ojai)
107 N. Ventura St.
Ojai, CA 93023

GREGORY RICH
Humanities Department
Fayetteville State University
Fayetteville, NC 28301

EDWARD RIPPY
Educational Psychology
California State University at Hayward
Hayward, CA 94612

JEAN ROBB
Director
Successful Learning Institute
36 Caldy Rd.
West Kirby, Merseyside L48 2HQ
ENGLAND

ERNEST ROSENBERG
PENM Education Group
35000 Highway 128
Cloverdale, CA 95425

RENEE RUDERMAN
English Department
Metropolitan State College of Denver
Campus Box 32, P.O. Box 173362
Denver, CO 80127-3362

VINCENT RYAN RUGGIERO
P.O. Box 1155
Dunedin, Fl. 34697

ADOLFO SANCHEZ
Department of Education
Caye University College
Box 1074
Caye, Puerto Rico 00736

CAROL A. SANCHEZ
Department of Psychology
University of California, Riverside
Riverside, CA 92515

SHERRON SARGENT
School of Nursing
Kent State University
Kent, OH 44242

THOMAS J. SCHEFF
Department of Sociology
University of California, Santa Barbara
Santa Barbara, CA 93106

LIANNE K. SCHNEIDER
Department of Theology
Monsignor Kelly High School
5950 Kelly Drive
Beaumont, TX 77707

SCOTT SCHOEPPE
Windsor Middle School
7650 Bell Road
Windsor, CA 95492

JUDITH SCHWARTZ
Scarsdale Teachers Institute
Brewster Rd.
Scarsdale, NY 10583

THOMAS SECCO
English Department
Tronit College
2000 Fifth Ave.
River Grove, IL 60171

LEAH SHELLEDA
Humanities and Philosophy Department
College of Marin
Kentfield, CA 94904

VINCENT RYAN RUGGIERO
P.O. Box 1155
Dunedin, Fl. 34697

PRESENTERS' ADDRESSES

JANIS L. SILVERMAN
Lincolnshire-Prairie View S.D. 103
Sprague School
2425 Riverwoods Rd.
Lincolnshire, IL 60069

BENNIT SKEWES-COX
Academy of World Studies
2806 Van Ness Ave.
San Francisco, CA 94109

ROBIN SKEWES-COX
Academy of World Studies
2806 Van Ness Ave.
San Francisco, CA 94109

KIM SKOOG
Division of Humanistic Studies
University of Guam
P.O. Box 5032, UOG Station
Mangilao, Guam 96923

CHRISTINA SLADE
Communication Department
University of Canberra
P.O. Box 1
Belconnen, ACT 2616
AUSTRALIA

JUDITH B. SMITH
Education and Psychology Departments
Davis and Elkins College
100 Campus Drive
Elkins, WV 26241-3996

KATHERINE Z. SMITH
Psychology Department
Chapman University
1740 Walnut St.
Berkeley, CA 94709

LISA SMITH
1329 Shattuck Ave.
Berkeley, CA 94709

R. SCOTT SMITH
Department of Psychology
Utica College of Syracuse University
1600 Burnstone Rd.
Utica, NY 13502

DAVID SMOCK
History and Politics Department
Charles Wright Academy
7723 Chambers Creek Rd.
Tacoma, WA 98467

ERVIN SPARAPANI
Teacher Education
Saginaw Valley State University
Brown Hall-Room 222
University Center, MI 48710

CONNIE STACK
Coordinator, Writing Across the Curriculum
Minnesota Community Colleges
550 Cedar St.
St. Paul, MN 55101

J. THEODORE STANLEY
The Habitat Restoration Group
6001 Butler Lane, Suite 1
Scotts Valley, CA 95066

CARROLL STEEDMAN
Division of Continuing Education
University of Nevada, Las Vegas
4505 Maryland Pkwy.
Las Vegas, NV 89114

MARK R. STONER
Department of Communication Studies
Cal State University, Sacramento
6000 J Street
Sacramento, CA 95819-6070

CANDACE JESSIE STOUT
Department of Art Education
Buffalo State University College
109 Bishop Hall, 1300 Elmwood Ave.
Buffalo, NY 14222-1095

ROBERT SWARTZ
Co-Director
The National Center for Teaching Thinking
P.O. Box 334
Newton Center, MA 02159

WILLIAM TAYLOR
Political Science Department
Oakton Community College
1600 East Golf Road
Des Plaines, I1. 60016
NELLIE THOROGOOD  
Educational Affairs Department  
North Harris Montgomery Community College District  
250 N. Sam Houston Parkway East  
Houston, TX 77060-2004

THOMAS TOMINAGA  
Department of Philosophy  
University of Nevada, Las Vegas  
4505 S. Maryland Parkway  
Las Vegas, NV 89154-5028

LARRY TOLMISON  
Philsophical and Regional Studies  
Community College of Southern Nevada  
3200 E. Cheyenne Avenue  
N. Las Vegas, NV 89030

FRAN TOOMEY  
Education Department  
St. Michael's College  
Winooski Park  
Colchester, VT 05439

FREDERIC M. TORRS  
Massachusetts Bay Community College  
19 Flagg St.  
Framingham, MA 01701

RUBY TROW  
Home Economics Department  
California State Polytechnic University  
3801 West. Temple Boulevard  
Pomona, CA 91768

RENE TRUJILLO, JR  
Philosophy Department  
San Jose State University  
One Washington Square  
San Jose, CA 95192-0096

MARGARET N. TURNER  
Education Department  
Davis and Elkins College  
100 Campus Drive  
Elkins, WV 26241-3996

NORMAN J. UNRAU  
School of Education  
California State University, Los Angeles  
5151 State University Drive  
Los Angeles, CA 90032-8142

THERESA M. VALIGA  
Nursing Department  
Villanova University  
College of Nursing  
Villanova, PA 19085-1690

BOB VAN ZANT  
Assistant Principal  
Central Union High School  
1001 Brighton Avenue  
El Centro, CA 92243

SEBASTIAN J. VASTA  
English Department  
Cameron County Community College  
Little Gloucester Road  
Blackwood, NJ 08012

BURLTON VOORHEES  
Department of Mathematics  
Athabasca University  
Box 10000  
Athabasca, ALB T0G 2R0  
CANADA

DON WAXMAN  
Waxman Landscaping Environmental Consulting and Service  
2805 Eastman Lane  
Petaluma, CA 94952

YEHUDI O. WEBSTER  
Department of Sociology  
California State University, Los Angeles  
Los Angeles, CA 90032

DAN WEIL  
Center for Critical Thinking  
Sonoma State University  
1801 East Cotati Avenue  
Rohnert Park, CA 94929-3609

LAWRENCE WEINSTEIN  
Writing Center  
Bentley College  
Waltham, MA 02154

MARLENE WEINSTEIN  
Institute for Critical Thinking  
Montclair State College  
Upper Montclair, NJ 07043

DIANE WHEELER  
Agua Fria Union High School District  
530 E. Riley Rd.  
Avondale, AZ 85323

MARK A. WILCOX  
Center for Whole Brain Thinking  
BrainWorks  
Route 7 Box 148  
Hendersonville, NC 28739

JENNIFER WILD  
Director of Development  
NOVA Research Company  
4600 East-West Highway, Suite 700  
Bethesda, MD 20814

GRADY E. WILLIAMS III  
Department of Biological Science  
Delta State University  
P.O. Box 3362  
Cleveland, MS 38733

JANET L. WILLIAMSON  
Reasoning & Writing Project  
Greensboro Public Schools  
712 N. Eugene Street  
Greensboro, NC 27317

JANE WILLSEN  
Center for Critical Thinking and Moral Critique  
Sonoma State University  
1801 E. Cotati Avenue  
Rohnert Park, CA 94929-3609

SALLIE L. WILSON  
California Department of Education  
Post Office Box 146  
Sacramento, CA 95812

CHARLES L. WITTE  
Department of Surgery, AHSC  
University of Arizona  
Tucson, AZ 85724

Marilys H. Witte  
Department of Surgery, AHSC  
University of Arizona, College of Medicine  
Tucson, AZ 85724
**The National Council for Excellence in Critical Thinking**

With a solid core membership of 700 leading educators as a foundation, the National Council for Excellence in Critical Thinking (NCECT) is working hard to expand its outreach and impact. The strategy is twofold: to staff research-reporting committees with bona-fide experts in 75 domains and to establish regional and state centers for critical thinking.

The goal is for each committee to update yearly the state of research in 75 categories with respect to critical thinking. These annual reports will serve to inform interested educators and public citizens of what we presently know about the nature of standards for the assessment of critical thinking in each.

The hopes of the National Council leadership are ambitious, no less than the establishment of NCECT representatives in every school district, college, and university. "Only with wide outreach can the message of the National Council transform classrooms at all educational levels," says Richard Paul, NCECT chair.

Unless educators come to understand the importance of intellectual criteria, they will not make the basic changes in teaching and assessment fundamental to sound educational reform. You can learn more about the NCECT by attending the informational meeting on Monday at 8:00 pm held in the Student Union Multi-Purpose room. There are also informational meetings held around the country. Contact any of the affiliated Centers (see next page) for a brochure and information on locations and dates for the meetings.
Preparing for a Rapidly Changing World

The Center for Critical Thinking and Moral Critique
Sonoma State University
1801 East Cotati
Rohnert Park, CA 94928

The Foundation for Critical Thinking
A Non-Profit Educational Foundation
4655 Sonoma Mountain Road
Santa Rosa, CA 95404
(800) 833-3645

The National Council for Excellence in Critical Thinking
(707) 546-0629