

The Seventh International Conference on

# Critical Thinking and Educational Reform



Sonoma State University



**Henry Steel Commager**

Dean of American Historians, addressing the First International Conference  
on Critical Thinking and Educational Reform

Proceedings  
of

The Ninth Annual & Seventh  
International Conference on

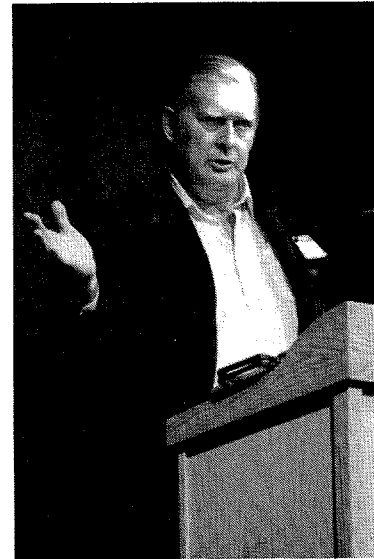
**Critical Thinking  
and  
Educational Reform**

August 6-9, 1989

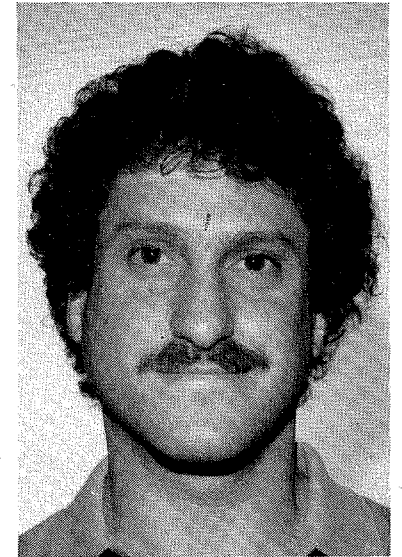
Under the Auspices  
of the

Center for Critical Thinking and Moral Critique  
and  
Sonoma State University

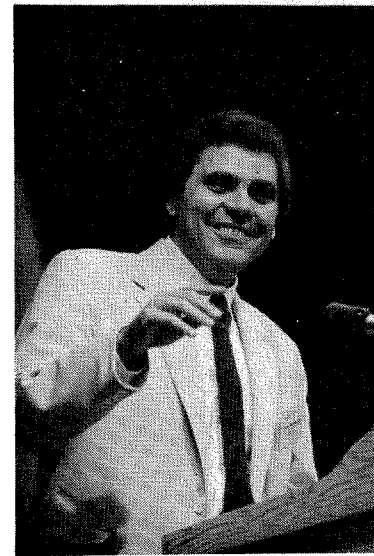
**From Previous Conferences:**



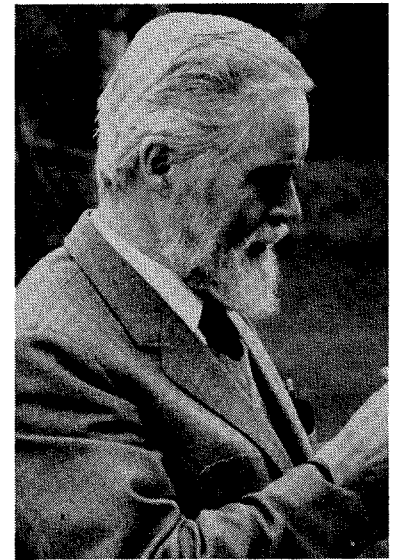
**Michael Scriven**



**Harvey Siegel**



**Neil Postman**



**Will Robinson**

## TABLE OF CONTENTS



**Richard W. Paul**

Director, Center for Critical Thinking and Moral Critique

	<b>Page</b>
Introduction .....	1
History of the Conference.....	7
The Organization of the Conference.....	9
Conference Theme.....	10
Map/Abbreviations .....	15
Schedule .....	17
Presenters and Abstracts .....	46
Panels.....	149
Special Interest Groups.....	158
Videotape Resources.....	159
National Council for Excellence in Critical Thinking Instruction.....	162
Center Description. ....	164

## **Introduction**

### **Critical Thinking: What, Why, and How**

#### **The Logically Illogical Animal**

Ironically, humans are not simply the only "logical" animal, they are also the only "illogical" animal. They are the only animal that uses meanings--ideas, concepts, analogies, metaphors, models, theories, and explanations--to make sense of things, to understand, predict, and control things. They are also the only animal that uses meanings to negate, contradict, and deceive itself, to misconceive, distort, and stereotype, to become dogmatic, prejudiced and narrowminded. Humans are the only animal whose thinking can be characterized in terms like clear, precise, accurate, relevant, consistent, profound, and fair; they are also the only animal whose thinking is often imprecise, vague, inaccurate, irrelevant, superficial, trivial, and biased.

Critical thinking makes sense in the light of this paradoxical dichotomy. Humans ought not simply trust their instincts. They ought not believe unquestioningly what spontaneously occurs to them. They ought not accept as true everything taught as true. They ought not assume their experience is unbiased. They need to form, they are not born with, intellectually sound standards for belief, for truth, for validity. They need to cultivate habits and traits which integrate these standards into their lives.

This logical-illogical dichotomy of human nature has implications for human learning. One can learn by means of the rational capacities of the human mind or through its irrational propensities. There are profound reasons for cultivating the capacity of the human mind to discipline and direct its thought through commitment to intellectual standards. Unfortunately much academic learning is of a lower order: undisciplined, associative, and inert. Much of it is an obstacle rather than an aid to education. Much of it is a block to genuine understanding.

What students often learn well--that school is a place to repeat back what the teacher or textbook said--blocks the student from thinking seriously about what he or she is learning. Though there are circumstances in everyday life where lower order rote learning is sufficient, those circumstances are diminishing rapidly. At the same time the damage done by multiple forms of prejudice and narrowmindedness--academic, social, personal, professional, religious, racial, national, and ideological--continues to mount. The irony is that higher order learning can be cultivated in almost any academic setting. By focusing on the rational capacities of students' minds, by designing instruction so that students explicitly grasp the sense, the logicalness, of what they are learning, we can make all additional learning easier for them.

Higher order learning multiplies comprehension and insight; lower order rote memorization multiplies misunderstanding and prejudice. Higher order learning stimulates and empowers, lower order discourages and limits the learner. Though very little instruction deliberately aims at lower order learning, most issues in it. "Good" students have developed techniques for short term rote memorization; "poor" students have none. But few students have a grasp of what it is to think analytically through the content of a subject, few use critical thinking as a tool for acquiring knowledge.

Didactic lectures and extensive coverage of content combine with student passivity to perpetuate the lower order thinking and learning students have come to associate with school. When students do not actively think their way to conclusions, when they do not discuss their thinking with other students or the professor, when they do not entertain a variety of points of view, do not analyze concepts, theories, or explanations from their own point of view, do not actively question the meaning and implications of what they are learning, do not compare what they are learning to what they have experienced, do not tackle non-routine problems, do not examine assumptions or gather evidence, they do not achieve higher order learning. They end their schooling with a host of fragmentary opinions, rigidly understood procedures, and undisciplined beliefs. They gain little knowledge or insight. They are at best trained, not educated, not critical thinkers or persons. As a result, their value and adaptability, their capacity to learn on the job and in their personal and civic lives, is severely limited. What is more, their ability to mature intellectually and morally, their capacity and motivation to learn, is stunted.

Recognition of the economic implications of the pervasiveness of lower order learning is illustrated in an open letter which was drafted by the president of Stanford University, Donald Kennedy, co-signed by 36 other college leaders from across the USA and sent to 3,000 college and university presidents (Sept. 18, 1987). It warned of "a national emergency ... rooted ... in the revolution of expectations about what our schools must accomplish:

It simply will not do for our schools to produce a small elite to power our scientific establishment and a larger cadre of workers with basic skills to do routine work. Millions of people around the world now have these same basic skills and are willing to work twice as long for as little as one-tenth our basic wages. To maintain and enhance our quality of life, we must develop a leading-edge economy based on workers who can think for a living. If skills are equal, in the long run wages will be too. This means we have to educate a vast mass of people capable of thinking critically, creatively, and imaginatively.

Lauren Resnick, in a recent National Research Council document, put it this way (Resnick, 1987):

The question of whether schools can do a better job of teaching American children "higher order skills" is very much in the air. It arises in Congressional hearings, where calls are heard for school graduates better able to take on work that requires responsibility and judgment. It is reflected in public concern that changing employment demands are not being met, students' preparation for college is less than satisfactory, and general problem-solving abilities remain low.

Recognition of the social, political and moral implications of lower order learning is growing with the recognition that both developed and underdeveloped nations face complex problems that cannot be solved except with significant intellectual growth on the part of large masses of people. Such growth presupposes increased reflective and critical thinking about deep-seated problems of environmental damage, human relations, over-population, rising expectations, diminishing resources, global competition, personal goals, and ideological conflict.

This problem of lower order learning will not be solved outside of school, for the lay person is increasingly bombarded with diverse contradictory explanations and prescriptions. Lacking experience with complex thinking, unused to critical thinking, the ordinary person retreats in the face of complexity to simplistic traditional pictures of the world. The growing mass media feed this demand for simple-minded answers. If schools and colleges do not cultivate a shift from rote memorization to critical thinking, there is little possibility that the shift will significantly occur outside of school.

To effect this shift, teachers and professors must consider a new concept of knowledge, learning, and literacy, one more in tune with the modern world, one that links the acquisition of knowledge with dialogical and dialectical thinking, with the development of minds at home with complexity and ambiguity, able to adjust their thinking to accelerating changes, minds not fixated on present beliefs, not easily manipulated or taken in by propaganda. The theoretical foundation for this need and the appropriate way to meet it is now accumulating a solid research base. Its academic implementation is merely beginning; its full development around the world is probably 10 to 25 years in the future.

### **Knowledge as Thinking**

We often talk of knowledge as if it could be divorced from thinking, as if it could be gathered up by one person and given to another in the form of a collection of sentences to remember. When we talk in this way we forget that knowledge is by its very nature dependent on thought. Knowledge is produced by thought, analyzed by thought, comprehended by thought, organized, evaluated,

maintained, and transformed by thought. Knowledge exists, properly speaking, only in minds that have comprehended and justified it through thought. And when we say think we mean think critically. Knowledge is not to be confused with belief nor with symbolic representation of belief. Humans are quite capable of believing things that are false or things to be true without knowing them to be so. A book contains knowledge only in a derivative sense, only because minds can thoughtfully read it and through that process gain knowledge. We often forget this and design instruction as if recall were equivalent to knowledge.

We need to remember that all knowledge exists in and through critical thought. All the disciplines--Mathematics, Physics, Chemistry, Biology, Geography, Sociology, Anthropology, History, Philosophy, and so on--are modes of thinking. We know mathematics not to the extent that we can recite mathematical formulas but only to the extent that we can think mathematically. We know science not to the extent that we can recall sentences from our science textbooks but only to the extent that we can think scientifically. We understand Sociology only to the extent that we can think sociologically, History only to the extent that we can think historically, and Philosophy only to the extent that we can think philosophically.

When we teach Mathematics, Physics, Chemistry, Biology, Geography, Sociology, Anthropology, History, Philosophy, and so on in such a way that students pass courses without thinking their way into the knowledge that these subjects make possible, students leave those courses without any more knowledge than they had when they entered them. When we sacrifice thought to gain coverage we sacrifice knowledge at the same time. The issue is not shall we sacrifice knowledge to spend time on thought, but shall we continue to sacrifice both knowledge and thought for the mere appearance of learning, for mislearning, for fragmentary learning, for transitory learning, for inert, confused learning?

### **Lower Order Learning**

There are a variety of forms of lower order learning in the schools. We can understand the forms by understanding the relative lack of logic informing them. Paradigmatically, lower order learning is learning by sheer association or rote. Hence students come to think of history class, for example, as a place where you hear names and dates and places; where you try to remember them and state them on tests. Math comes to be thought of as numbers, symbols, and formulas, mysterious things you mechanically manipulate as the teacher told you to get the right answer. Literature is often thought of as uninteresting stories to remember along with what the teacher said is important about them.

We can improve student performance only by improving their thinking. We can improve their thinking only by creating opportunities and incentives for them to think. We can provide them with opportunities and incentives to think only if those who teach are given time to thoughtfully redesign their instruction. We can create time to thoughtfully redesign instruction only if we ease the compulsion to cover huge amounts of subject matter. We can reduce the obsession to cover huge amounts of subject matter only if the curriculum is restructured to focus on basic concepts, understandings, and abilities. We can restructure the curriculum to focus on basic concepts, understandings, and abilities only if faculty understand why such a focus is essential to the kind of higher order learning that engenders rational and responsible citizens, workers, and persons, people for whom adaptability is a way of life.

In education the whole is greater than the sum of the parts. We need to forge connections that shape the parts to form a coherent educational whole. To achieve this there is nothing more important than a clear conception of education embedded in curriculum, inservice, and instruction. No significant reform of education can take place unless we face up to the didactic lower order conception of education that informs daily practice. Present instruction as structured implies an equation between parroting information and acquiring knowledge. Faculty at every level of education often feel compelled to cover information even though they know their students do not significantly understand and will soon forget it. Behind this practice is a network of uncritically held assumptions that need to be made explicit and refuted, namely:

- 1) that students will learn **how** to think if only they know **what** to think,
- 2) that knowledge can be given directly to students without their having to think it through for themselves,
- 3) that to become educated is to store up content analogous to a data bank,
- 4) that quiet classes with little student talk are typically reflective of students learning,
- 5) that students can gain significant knowledge without seeking or valuing it,
- 6) that material should be presented from the point of view of the authority, the one who knows,
- 7) that superficial learning can later be deepened,
- 8) that coverage is more important than depth,
- 9) that students who can correctly answer questions, provide definitions, and apply formulae demonstrate substantial understanding, and
- 10) that students learn best by working alone in silence.

One who understands and values education as higher order learning holds a very different set of assumptions, namely:

- 1) that students can learn **what** to think only as they learn **how** to think,
- 2) that knowledge is acquired only through thinking,
- 3) that educated persons are those who have learned how to gather, analyze, synthesize, apply, and assess information for themselves,
- 4) that classes with much student talk, focused on live issues, is a better sign of learning than quiet classes, focused on a passive acceptance of what the instructor says,
- 5) that students gain significant knowledge only by valuing it,
- 6) that information should be presented so as to be understandable from the point of view of the learner, and this requires that it be related to the learner's experiences,
- 7) that superficial learning is often mislearning that stands as an obstacle to deeper understanding,
- 8) that depth is more important than coverage,
- 9) that students can often provide correct answer, repeat definitions, and apply formulas while yet not understanding those answers, definitions, or formulas, and
- 10) that students learn best by working together with other students, with a good deal of experience in mutually supportive debate and empathic exchange of ideas.

These contrasting beliefs about education, knowledge, teaching, and learning have contrasting implications as to how textbooks should be written, how instruction should be carried out, and how students should go about learning. If the first set of statements collectively define a didactic conception of education, the second define a critical conception of education. If the first set encourage lower order learning, the second encourage higher order. A paradigm shift is needed to bring higher order thinking a classroom reality. The sessions of the Ninth Annual and Seventh International Conference on Critical Thinking and Educational Reform are focused on making this shift a reality.

## HISTORY OF THE CONFERENCE

The 1989 Conference on Critical Thinking and Educational Reform reflects the development implicit in the eight annual conferences which 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 was linked to broadly-based ethical concerns and not simply on more narrowly defined academic and technical needs. We began 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 thinkers capable of the most profound and self-critical thought was an excellent foundation to build upon. But 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.

The conferences that followed the first have been expanded progressively, therefore, to include more emphasis on the 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 modelling instruction.

There have been two central problems that 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. And many K-12 teachers, in turn, have little sympathy for any theory that cannot immediately be so translated. Indeed, there is still alive in educational circles today the syndrome that H.L. Mencken so vividly caricatured:

The aim seems to be to reduce the whole teaching process to a sort of automatic reaction, to discover some master formula that will not only take the place of competence and resourcefulness in the teacher but that will also create an artificial receptivity in the child. Teaching becomes a thing in itself, separable from and superior to the thing taught. Its mastery is a special business, a sort of transcendental high jumping. A teacher well grounded in it can teach anything to any child, just as a sound dentist can pull any tooth out of any jaw. (Baltimore Sun, 1923)

In 1986, 280,000 California eighth-grade students took a history-social science test in which 40% of the questions addressed critical thinking skills. The California State Department of Education has developed a continuum of critical thinking skills for the 3<sup>rd</sup>, 6<sup>th</sup>, 8<sup>th</sup>, 10<sup>th</sup>, and 12<sup>th</sup> grades. A number of other states, including New York, Connecticut, Pennsylvania, South Carolina, Utah, Wisconsin, and Alaska are mandating critical thinking instruction in one form or another. The College Board has already pointed out that the ability to reason and think critically is a fundamental and necessary component of all other basic academic competencies. And, just recently, the American Federation of Teachers has published a national position paper on critical thinking.

The Center for Critical Thinking and Moral Critique has been working closely with the California State Department of Education, the College Board, numerous school districts, the Association for Supervision and Curriculum Development, the National Education Association, and the American Federation of Teachers to facilitate implementation of the highest standards of critical thinking instruction from kindergarten through the university.

It is important to recognize that we are still very much in the beginning stages of educational reform based on critical thinking instruction. There is every reason to think that the need for an annual conference in critical thinking will continue indefinitely. 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," the growing threat of nuclear holocaust — all argue for the pressing need of fair-minded critical thinking skills.

## ORGANIZATION OF THE CONFERENCE

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 diverse 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 skills. We assume, then, 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 two ways: 1) by classifying all presentations with a label that indicates possible special interest concerns (e.g. G, E, JH, HS, K-12, CC, U, etc...), and 2) by setting up an early meeting time on Tuesday morning (7:35 - 8:35) for groups to organize themselves into networks. (See page 158 for more information on these special interest meetings.) Virtually all sessions have been scheduled for 1<sup>1</sup>/<sub>2</sub> hours to maximize opportunities for questions and discussion.

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 so that the kinds of extended exchanges which are often not feasible in question and answer sessions might be facilitated.

## CONFERENCE THEME: Beyond the Superficial: Long-Term Strategies for Infusing Critical Thinking Across the Curriculum

The conference theme has been selected to give participants a central concept by means of which they can understand the basic relationships between all of the various presentations. The field of critical thinking research and instruction approaches is rich and diverse, but there are common core concepts and insights which can be used to organize that diversity and render it coherent.

There is no question, for example, that there is a body of intellectual skills presupposed in critical thinking, skills which have broad application across the full range of human thought and action. Whenever humans act or think, they conceptualize or give meanings to their action and thought. These meanings or conceptualizations may be more or less clear (hence the importance of skills of clarification). These meanings organize and give expression to "information," which may be more or less accurate, well-justified, and complete (hence the importance of skills for the gathering, processing and assessing of information). They are based upon beliefs, some of which we take for granted (hence the importance of skills for locating and assessing assumptions). They build toward or entail consequences and implications (hence the importance of skills for pinning down and assessing consequences and implications). Finally, human action and thought is based upon and creates meanings within some perspective, point of view, or world view (hence the importance of skills which locate the perspective or point of view within which a given action or line of thought is developed).

But critical thinking is not just about intellectual skills, for intellectual skills can be used in a variety of ways, some of which are inconsistent with the foundational values of critical thinking: love of truth, fair-mindedness, and a concern to apply the same rigorous standards of evidence and proof to our own thinking — especially that which serves our vested interest — as we do to others. It is easy, of course, to be "critical" when we are hostile to persons or belief systems, very difficult when we are strongly predisposed to favor persons or belief systems. Our egocentric or sociocentric biases may act as blinders to narrow our critical thinking to what are fundamentally self-serving uses of it. This problem was identified in ancient Greece by Socrates and Plato as the problem of *sophistry*. We know it in the modern world as the problem of demagoguery, propaganda, closed-mindedness and self-deception. This, of course, is not simply a matter of stupidity or of conscious evil.

What it does mean is that critical thinking skills can be used to defeat the ends of critical thinking. Or, less extreme, a person may not yet have learned how to organize and use his or her critical

thinking skills with the same degree of consistency within domains where there is emotional blockage. All of the above points highlight the need to emphasize the affective dimension of critical thinking, the dimension of values, commitments, and traits of mind. This does not mean, by the way, that we need to condition or indoctrinate students in an affective way, for the critical spirit can be nurtured only while actually practicing critical thinking in some (cognitive) way. One cannot develop one's fair-mindedness, for example, without actually thinking fair-mindedly. One cannot develop one's intellectual independence, without actually thinking independently. This is true of all the essential critical thinking traits, values, or dispositions. The crucial need is to develop instruction in such a way that, for example, fairminded and independent thinking are required by the very nature of what is done. Examples of assignments and practices that foster the critical spirit and demonstrate how to infuse critical thinking into subject matter instruction, can be found in the Handbooks on Critical Thinking, K-3, 4-6, 6-9, and High School which have been published by the Center.

If we are to educate students so that they develop the abilities and traits of a fairminded critical person, we must redesign schooling at all levels. To move beyond the superficial we must take the long view and work for change over five to ten year periods. The basic habits that underlie teaching are as deep seated as they are for any other human behavior. The compulsion to teach didactically is formidable. Only by patience, perseverance, and commitment can we achieve foundational change, and only foundational change will make a significant difference.

### Infusing Critical Thinking Into Subject Matter Instruction, K-12

The Center staff advocates a lesson plan remodelling approach to infusion of critical thinking into subject matter instruction. This approach is built into critical thinking handbooks for teachers. The basic idea behind lesson plan remodelling for critical thinking is simple. When remodelling lessons, the teacher critiques a lesson plan using certain strategies and principles and formulates a new lesson plan based on that critical process.

Lesson plan remodelling can become a powerful tool in critical thinking staff development. It is action-oriented and puts emphasis on close examination and critical assessment of what is being introduced into the classroom on a day-to-day basis. It makes the infusion of critical thinking more manageable by paring it down to the critique of particular lesson plans and to the progressive infusion of particular critical thinking principles. Lesson plan remodelling also is developmental in that, over time, teachers can remodel more and more lesson-plans, and what has been

remodelled can be re-remodelled. It can provide a means of cooperative learning for teachers

Results of this process can be collected and shared so teachers can learn from and be encouraged by what other teachers do. Dissemination of plausible remodels also provides recognition for motivated teachers. Furthermore, lesson plan remodelling forges a unity between staff development, curriculum development, and student development. Lesson plan remodelling helps avoid recipe solutions to critical thinking instruction, and integrates cognitive and affective goals into the curriculum.

Lesson plan remodelling is a long-term solution that transforms teaching incrementally as teachers develop and mature in their critical thinking insights and skills.

If teachers can develop the art of critiquing lesson plans they use and learn how to use that critique as the basis for remodelling the lesson plans, they will progressively (a) refine and develop their own critical thinking skills and insights, (b) reshape the actual or living curriculum, and (c) develop their teaching skills.

### **Infusing Critical Thinking Into Subject Matter Instruction at Colleges and Universities**

Instruction at the college and university level is not typically built upon "lesson plans" so much as on course syllabi. All departments and professors play a role in planning how to structure their curriculum and teaching.

The Center staff makes the following recommendations:

1. **That a general statement of educational goals as they relate to critical thinking and basic intellectual skills be formulated and included in the catalog as well as a faculty handbook.** This statement might, for example, read as follows:

#### **Becoming an Educated Independent Thinker**

All students are expected to take responsibility for their own learning. This means that students are expected to learn the art of independent study and develop sound intellectual and occupational habits and skills. All work turned in should reflect care, thoroughness, and precision, should reveal command of the processes of critical reading, writing, speaking, and listening, and should demonstrate independent critical thinking. Students should not approach their classes as so many unconnected fields, each with a mass of information to be blindly memorized, but rather as organized systems for thinking clearly, accurately, and precisely about interconnected domains of human life and experience. In science classes, students should learn to think

scientifically, in math classes to think mathematically, in history classes to think historically, and so on, in such a way that if later called upon to respond to an issue in one of these domains, students will know how to begin to interpret and analyze it, to seek and organize information appropriate to it, to reason well concerning it, and to devise a clear and reasonable way to go about finding an appropriate answer or solution with respect to it. To develop into disciplined and independent critical thinkers and learners, all students should be actively involved in their own learning, looking to find in each of their classes the most basic ideas, principles, and meanings that underlie the field and to use these as a basis for analyzing, synthesizing, and assessing all of the remaining information or content covered. Students should recognize that fundamental concepts and processes must be mastered before one can successfully understand a given domain of knowledge and that it is better to learn what is basic to a field deeply and well then to rush on to half-learn and so mis-learn what is less basic. Classes will be structured so as to emphasize in-depth learning of fundamentals as a foundation for more advanced learning. Fundamental concepts and principles will continually be used as organizers for more advanced understandings.

**That for each area of study a statement of the ideal student be formulated.** This statement should help the students grasp in general terms what is expected of him or her as well as what some of the more basic "payoffs" are of studying in that area. As part of this statement, the general critical thinking skills list should be reformulated with the subject area in mind. The history department, for example, might formulate their goals vis-a-vis critical thinking in something like the following way:

#### **Learning to Think Historically**

All of the history courses have the goal of helping students to learn how to think historically in a critical and insightful manner. This includes learning how to identify historical viewpoints, to gather and organize historical information, to distinguish basic historical facts from historical interpretations, and to recognize historical relationships and patterns as well as the relevance of historical insight to the understanding of current events and problems.

3. **That elements of these subject area statements also be incorporated into the college catalog as well as into a student orientation brochure to help students see the common objectives and skills that underlie all fields of study.**

4. **That course descriptions and syllabi make clear how particular courses tie into these general objectives rather than simply specify the particular specialized content of the course. This will help the student make connections between courses within a**

subject area as well as between subject areas. Rather than seeing only the specializations available, the student will grasp common elements, common goals, and common means to achieve them. For example, here is how an individual instructor, teaching American History, might follow up on the departmental goal statement for his particular course:

### **American History**

The fundamental aim of the study of American history will be to aid students in thinking critically, insightfully, and knowledgeably about the American historical past, focusing on the basic issues upon which historians organize and base their research and the development of their divergent viewpoints. Students will learn how to write an historical essay in which they defend an historical interpretation based on organized, analytic historical reasoning, reflecting their careful reading of professional historians.

5 **That the students be informed early in the course as to how the course is being designed not only to foster subject matter mastery but also critical competencies and intellectual traits.**

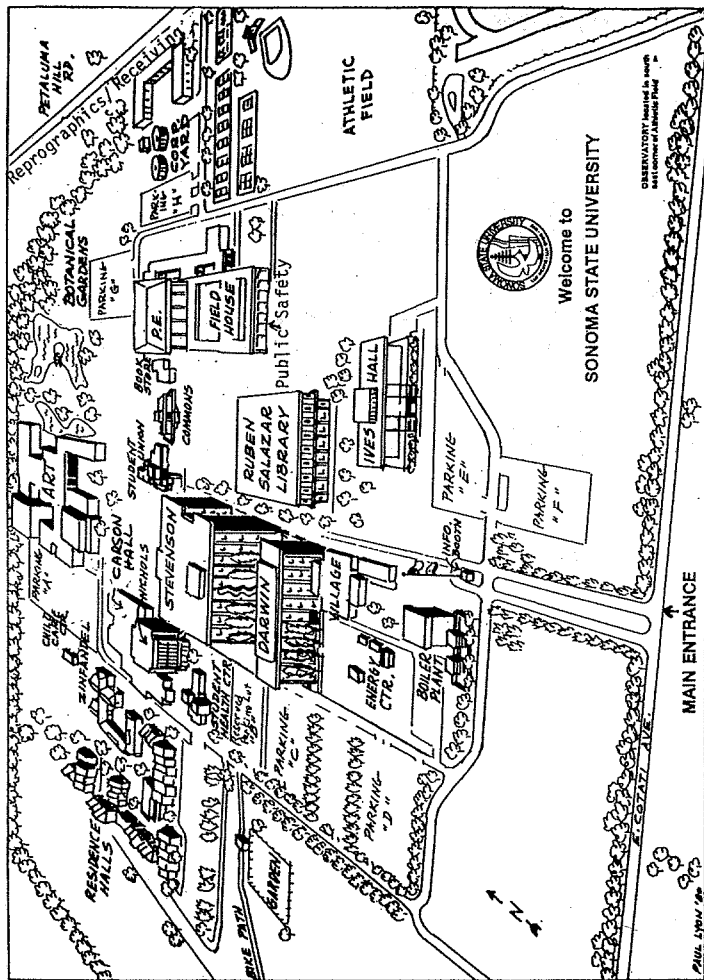
6 **That a general critical thinking course be developed that can serve as a "core" course for all students and focus on interdisciplinary issues and general critical thinking skills.** The faculty should have input into what is covered in the course and should follow up and build upon it in each specialized subject domain.

7 **That a campus-wide critical thinking committee be formed to help facilitate on-going faculty development in the area of critical thinking,** including locating resource materials, disseminating classroom teaching techniques, organizing follow-up seminars from time to time, and arranging for conference participation that facilitates development in this area.

8 **That a faculty critical thinking handbook be developed with submissions from many of the faculty leaders in the area of critical thinking skills.** Faculty should be identified who have developed teaching and grading strategies that can be the basis for a shift of emphasis in instruction from a lecture-based, memory-based mode of instruction to one which more actively engages students in their learning and "forces" them to think their way through course material.

## Map/Abbreviations

- STEV = Stevenson Hall  
 DAR = Darwin Hall  
 CH = Carson Hall  
 NICH = Nichols Hall  
 SU: MP = Student Union  
 Multi-Purpose Room
- G = General  
 E = Elementary  
 JH = Junior High  
 HS = High School  
 K-12 = Kindergarten-Grade 12  
 CC = Community College  
 U = University



## SUNDAY, AUGUST 6

8:00 - 9:00 REGISTRATION

9:00 - 10:15

WELCOMING ADDRESS

Richard Paul

*Beyond the Superficial: Long-Term Strategies for Infusing Critical Thinking Across the Curriculum*  
 Commencement Area

10:30 - 12:00

Art Costa

*What Human Beings Do When They Behave Intelligently and How They Can Become More So*  
 STEV 1002 G, K-12

John Barell

*Empowering Teachers and Students Toward Critical Thinking: K-12*  
 DAR 108 K-12

Jane Astredo

*A Primary Teacher's Use of Richard Paul's Teaching Strategies for Remodelling Lesson Plans*  
 SU: MP E

Frances Moore Lappé

*Education as Dialogue: Rediscovering America's Values*  
 CH 68 G, K-12, CC, U

Donald Lazere

*Literature and Critical Thinking*  
 STEV 3008 G, HS, U

Vincent Ryan Ruggiero

*Teaching Thinking Across the Curriculum*  
 STEV 2049 G, JH HS, CC, U

Thomas Jackson

*What a Good Philosophical Discussion Is and How I Can Have One With My Students*  
 ART 108 2-12

Jerry Cederblom

*Critical Thinking and Active Learning Across the Curriculum*  
 STEV 3072 CC, U

Perry Weddle

*A Streamlined Critical Thinking Essay Strategy*  
 DAR 139 HS, CC, U

(Sunday, August 6,  
10:30-12:00, Cont.)

Connie DeCapite  
*Critical Thinking Through Thematic Units*  
STEV 3046 5-12

Wendy Oxman  
*Academic Tasks and the Development of Critical  
Thinking Dispositions*  
DAR 112 G

G. Sidney Lester  
*Critical Thinking: A Metalanguage Approach*  
DAR 122 HS, CC, U

William F. Burke  
*Quarks, Quirks, and Quacks: The Use of  
Pseudoscience in Teaching Scientific Method and  
Critical Thinking*  
DAR 143 G, HS, CC, U

Jack Kirschenbaum, JoAnn Brannock, Mike Holden,  
Fred Peters  
*The Critical Thinking Index: A Tool For Spicing Up  
Your Course With Critical Thinking Activities*  
CH 20 G

Kathleen Tyner  
*Strategies for Media Literacy: From Rhetoric to  
Action*  
STEV 3026 G

Dennis Rohatyn  
*Forced to Think: Critical Thinking and the Thought  
Police*  
STEV 3038 G, U

Joanne Kurfiss  
*In Search of the Ethical Voice: Connection and  
Criticism in Teaching, Learning, and Intellectual  
Development*  
STEV 3040 U

James Herrick  
*Argumentation as Foundational to the  
Communication Curriculum*  
STEV 3049 CC, U

(Sunday, August 6,  
10:30-12:00, Cont.)

Charlotte Danielson  
*Helping Teachers Help Students to Think: A Staff  
Development Model*  
NICH 173 JH, HS

Dennis Matthies  
*Questions: The Tools for Critical Thinking*  
NICH 204 G

Connie Missimer  
*A Theory That Critical Thinking is the Heart of the  
Intellectual Life*  
STEV 3028 U

Rao J. Tatikonda  
*Infusing Critical and Creative Thinking Into  
Operations Management Courses*  
STEV 3076 CC, U

Noreen Miller  
*Infusing Critical Thinking Into a Sophomore  
Interdisciplinary Core Curriculum*  
NICH 166 HS

12:00 - 1:30 LUNCH

1:30 - 3:00 Richard W. Paul  
*Building for Success: Developing a Comprehensive  
Plan for School Wide or District Wide Reform*  
STEV 1002 K-12, CC

Chet Meyers  
*Creating Practical Critical Thinking Assignments in  
All Disciplines*  
DAR 108 G, HS, CC, U

Peter Kneeder, Lucille Gonzales, Sallie Wilson  
*California's Approach to Statewide Implementation  
of Critical Thinking Skills*  
SU: MP G, K-12

Kim DeVaney, Janet Williamson  
*Developing a Critical Thinking Program: The  
Greensboro Plan*  
CH 68 K-12

(Sunday, August 6,  
1:30-3:00, Cont.)

Vincent Ryan Ruggiero  
*Making Sense of Educational Reform*  
STEV 3008 G

Jane Astredo  
*A Primary Teacher's Use of Richard Paul's Teaching  
Strategies for Remodelling Lesson Plans*  
STEV 2049 E

Jan Talbot  
*Beyond the Bubble: Reconceptualizing Assessment*  
ART 108 K-12

Rodger Halstead  
*Teacher Questioning; Student Thinking*  
STEV 3072 HS

John Chaffee  
*Practical Strategies for Teaching Critical Thinking  
in the Disciplines*  
DAR 139 CC, U

Shirley Denton Laurie  
*What Keeps the Fire Going? The Organizational  
Power, Transitions and Demands of Cooperative  
Learning and Critical Thinking*  
STEV 3046 G

Deborah Tonella  
*A Walk in Their Shoes: Teaching Students How to  
See Other Points of View*  
DAR 112 JH, HS

Rosemarie Bezerra-Nader  
*Making Math a H.O.T. (Higher Order Thinking)  
Subject*  
DAR 143 Grades 4-9

Alma Tetrault  
*Facilitating Thinking Dispositions in Children*  
CH 20 K-6

Phyllis Berger  
*Instructional Strategies to Stimulate Critical  
Thinking*  
STEV 3026 HS, CC, U

(Sunday, August 6,  
1:30-3:00, Cont.)

Rosemary Hornak, Reginald Shiflett  
*Critical Thinking and General Education for Juniors  
and Seniors*  
STEV 3038 CC, U

Mary Elizabeth Bezanson  
*Speaking and Critical Thinking: An Exploration of  
the Supreme Court*  
STEV 3040 U

Jean Saindon  
*Using Communication Skills in Teaching Argument  
and Critical Reasoning*  
STEV 3049 HS, CC, U

David Porter  
*Teaching Styles and Critical Thinking: Using  
Student Critiques as a Measure of Success*  
NICH 173 G

Jeanette McClelland Catsoulis  
*Critical Viewing: A Practical Method of Analyzing  
Television Arguments*  
NICH 204 G

William Dorman  
*Propaganda, Mass Media, and Critical Thinking*  
STEV 3028 G

Harvey Lape  
*Critical Thinking and Macroeconomics*  
STEV 3076 CC, U

John R. Feare  
*Beyond the Weak and the Strong*  
NICH 166 G, CC, U

3:15- 4:45

David N. Perkins  
*Candide in Education Land: Confronting School  
Realities Toward More Mindful Education*  
STEV 1002 G

Matthew Lipman  
*Critical Thinking In Concept and Application*  
DAR 108 G

(Sunday, August 6,  
3:15-4:45, Cont.)

Nicholas M. Michelli, Wendy Oxman, Mark Weinstein  
*The Pre-Service Preparation of Teachers for Critical Thinking: Evolution of the Montclair State College Model*

SU: MP G, E, HS, U

Alec Fisher  
*Designing and Evaluation Tests of Critical Thinking*  
CH 68 G

Beau Fly Jones  
*Relating the Thinking Skills Movement to America's Future*  
STEV 3008 G

Patricia F. Cohen  
*Teaching for Thinking*  
STEV 2049 E

Robert Swartz  
*Infusing Teaching for Critical and Creative Thinking into Standard Subject Area Instruction*  
ART 108 K-12

Donald Lazere  
*Is a Little Critical Thinking a Dangerous Thing?*  
STEV 3072 G, HS, U

Lorenz Boehm, William Taylor  
*From Ashes to Seeds: Critical Literacy and the Teaching of Possibility — An Overview of the Oakton College Critical Literacy Project*  
DAR 139 CC, U

Edward T. Damer  
*A Code of Conduct for Critical Thinkers*  
STEV 3046 G

William Newell  
*Critical Thinking And Interdisciplinarity*  
DAR 112 U

Stanley Pogrow  
*Developing Thinking Skills in At-Risk Students That Enhance Learning (Grades 4-8)*  
DAR 122 4-8

(Sunday, August 6,  
3:15-4:45, Cont.)

Ellen O'Connor  
*Critical Thinking Practices For Conversation*  
DAR 143 G

Dean S. Dorn, Charles Van Patten  
*Two Models for Teaching Critical Thinking About Social Problems and Controversial Issues*  
CH 20 HS, CC, U

Vivian Rosenberg  
*Modifying Traditional Writing Instruction: Strategies to Facilitate Critical Thinking*  
STEV 3026 CC, U

Judi Hirsch, Ann Kerwin  
*Taking Care of Ourselves*  
STEV 3040 G

Mark Battersby  
*The Basics*  
STEV 3049 G, CC, U

Gus Bagakis  
*Taking Critical Thinking Seriously: Overcoming Oppression and Building Alliances — A NEW BRIDGES Model*  
NICH 173 HS, CC, U

Pertti Yli-Luoma  
*Predictors of Critical Thinking Abilities: A Cross-National Multivariate Study*  
NICH 204 G

Dennis Matthies  
*Thinking As an Exothermic Process*  
STEV 3028 CC, U

Everett Traverso  
*Extended Arguments and the General Education Student*  
STEV 3076 CC, U

Peter Blewett  
*Bacon's Candelabrum: Banishing Sir Francis Bacon's "Idols of the Mind" From the Classroom Through Dialogical Collaborative Learning*  
NICH 166 CC, U

8:00 - 11:00

SOCIAL HOURS

**MONDAY, AUGUST 7**

8:45- 10:15

- Richard Paul  
*Richard Paul's Bag of Tricks: Practical Strategies and Tactics For Getting Students Involved in Their Learning*  
STEV 1002 G
- Rexford Brown  
*Critical Thinking and the Basic Skills Compromise in Urban Education*  
DAR 108 K-12
- Donald Hatcher, Earl Kirk, Karen Horvath, Lucy Price, George Wiley  
*Critical Thinking and the Liberal Arts*  
SU: MP CC,U
- Alec Fisher  
*Critical Thinking in the United Kingdom: A Progress Report*  
CH 68 G
- Nolan A. Armstrong, Don D. Bunt, Robert Lang, Marilyn Bunt, Michael Harkins, Carmen L. Armstrong  
*A Variety of Strategies for Developing and Assessing Critical Thinking*  
STEV 3008 G
- Nicholas M. Michelli  
*Preparing Pre-Service Teachers for Critical Thinking: A National Update*  
STEV 2049 G, E, HS, U
- George Collison  
*Project Zoo and Grizzly: Two New High Quality Computer Simulations*  
ART 108 G
- John Chaffee  
*Critical Literacy and Critical Thinking: Partners in Education*  
STEV 3072 CC, U
- Lorenz Boehm, William Taylor  
*From Ashes to Seeds: Critical Literacy and The Teaching of Possibility — An Overview of the Oakton College Critical Literacy Project*  
DAR 139 CC,U

**(Monday, August 7,  
8:45-10:15, Cont.)**

- Vincent Ryan Ruggiero  
*Teaching Ethics Across The Curriculum: A Critical Thinking Approach*  
STEV 3046 G, JH HS, CC, U
- Joe Edwards  
*Strategies for Implementing Critical Thinking Skills With the New California History-Social Science Framework*  
DAR 112 JH, HS
- Stanley Pogrow  
*Developing Thinking Skills in At-Risk Students That Enhance Learning (grades 4-8)*  
DAR 122 4-8
- Dennis Rohatyn  
*Einstein as a Critical Thinker*  
DAR 143 G,U
- Lauren Coodley  
*Teaching Critical Thinking About Education — Why We Must Do It*  
CH 20 HS, CC, U
- Vivian Rosenberg  
*Cultivating Emotional Intelligence: Strategies to Facilitate Critical Thinking*  
STEV 3026 G, HS, CC, U
- Jack Furlong  
*Using Cognitive Tools to Teach Moral Reasoning In Middle School and High School*  
STEV 3038 JH, HS, CC
- Judy Bank, Judi Hirsch, Audrey Shabbas  
*Using Critical Thinking in Conflict Resolution: The Case of the Israeli-Palestinian Conflict*  
STEV 3040 HS
- William Dorman  
*Propaganda, Mass Media, and Critical Thinking*  
STEV 3049 G
- Perry Weddle  
*"Action" Arguments*  
NICH 173 HS, CC, U

(Monday, August 7,  
8:45-10:15, Cont.)

Judy Eby  
*Instructional Strategies to Develop Critical and  
Creative Thinking*  
NICH 204 G, CC, U

Ann Kerwin, Marlys Witte  
*Ignorance: Thinking Beyond the Surface*  
STEV 3028 G

10:30 - 12:00

John Barell, David Perkins  
*Reflective Supervision for Critical Thinking*  
STEV 1002 K-12

Mark Weinstein  
*Critical Thinking Across the Disciplines*  
DAR 108 CC, U

Laurence Aronstein, Brendan Desilets, Robert  
Swartz  
*Interactive Workshop: Empowering Teachers by  
Infusing Critical and Creative Thinking into the  
Curriculum (Part A: Infusion)*  
SU: MP G, K-12

Rodger Halstead  
*Teacher Questioning; Student Thinking*  
CH 68 HS

Matthew Lipman  
*From Thinking to Judgement*  
STEV 3008 G

Sandra Black  
*Teaching Analytical and Critical Thinking: An  
Inservice Training Program*  
STEV 2049 K-12

Karen Jensen  
*Critical Thinking in School Management — A  
Teacher's Perspective*  
ART 108 G, HS

(Monday, August 7,  
10:30-12:00, Cont.)

Ralph Johnson  
*A Slice of the Whole Enchilada*  
STEV 3072 G, U

S. Lee Winocur  
*IMPACT*  
DAR 139 K-CC

Cynthia Barnes  
*Teaching for Thinking: A Cooperative Learning  
Approach*  
STEV 3046 HS, CC, U

Bev Hamilton  
*Using Four T's to Reform the Three R's*  
DAR 112 G, K-12, CC, U

Charles Wiederhold  
*Quality Questions to Promote Critical Thinking*  
DAR 143 G

Wyn Bray, Rosemary Clark  
*The Oxfordshire Skills Programme*  
CH 20 K-12, G

Thomas Feehan  
*Teaching Critical Thinking in Colleges Through  
Small Classes and Seminars*  
STEV 3026 CC, U

Margaret E. McCabe, Jacqueline Rhoades  
*Teaching Higher Level Thinking Skills Through  
Cooperative Learning*  
STEV 3038 K-12, G

Paul Van Diest  
*Critical Thinking in the Middle and High School  
English Classroom: Results-Oriented Frustration,  
Just like the Old Days, Only Better, Or: The Chicken  
and the Egg*  
STEV 3040 JH, HS

William Richard Brown  
*Critical Thinking Versus Ideology in Freshman-  
English Essay Readers: The Case of "Politics and  
the English Language"*  
STEV 3049 G, HS, CC, U

**(Monday, August 7,  
10:30-12:00, Cont.)**

Charlotte Goodman  
*Critical Thinking in the College Composition  
Classroom: Reading, Writing, and Re-Reading*  
NICH 173 HS, CC

Dean S. Dorn, Charles Van Patten  
*Two Models for Teaching Critical Thinking About  
Social Problems and Controversial Issues*  
NICH 204 HS, CC, U

Connie Missimer  
*Is "Stereotype" the Twentieth Century Equivalent of  
"Heresy?"*  
STEV 3076 G

Adrian Frana, Ann Kerwin  
*Thinking About Nothing . . .*  
NICH 166 G, HS

12:00 - 1:30 LUNCH

1:30 - 3:00 Alan Schoenfeld  
*On Mathematics, Sense-making, and Critical  
Thinking*  
STEV 1002 G

Vincent Ryan Ruggiero  
*Critical Thinking and the Concept of "Truth"*  
DAR 108 G

Cheri Bishop, Janet Epstein, Frank Fletcher, Martin  
Johnson, Donald R. Klein, Richard Paul,  
*Critical Thinking Across the Campus: A Report on  
the Gavilan College Staff Development Program*  
SU: MP G, CC

Thomas Jackson  
*What a Good Philosophical Discussion Is and How I  
Can Have One With My Students*  
CH 68 2-12

Matthew Lipman  
*Critical Thinking in Concept and Application*  
STEV 3008 G

**(Monday, August 7,  
1:30-3:00, Cont.)**

Margot Soven, William Sullivan  
*"Exploring Writing as a Resource for Dialectical  
Thinking"*  
STEV 2049 CC, U

Zachary Seech  
*Personalizing the Logic Course and Critical  
Thinking Instruction*  
ART 108 G

Jack Furlong  
*Using Cognitive Tools to Teach Moral Reasoning In  
Middle School and High School*  
STEV 3072 JH, HS, CC

Shari Tishman  
*Thinking Strategies and the Readiness Factor*  
DAR 139 G, K-12

Edward T. Damer  
*Constructing Moral Arguments*  
STEV 3046 G

Jerry Cederblom  
*Critical Thinking and Active Learning Across the  
Curriculum*  
DAR 112 U, CC

Rosemarie Bezerra-Nader  
*Everyday Propaganda and the High Risk Connection*  
DAR 143 G, JH, HS, CC

Morris Lamb  
*Assessing Thinking Skills Outcomes In Daily  
Classroom Instruction*  
STEV 3026 K-12

John Barell  
*Empowering Teachers and Students Toward Critical  
Thinking*  
STEV 3038 K-12

Louise Bronson, Steve Wallace  
*Teaching Critical Thinking: Humanities and  
Psychology Models*  
STEV 3040 CC, U

(Monday, August 7,  
1:30-3:00, Cont.)

Doug Minkler  
*Activist Art*  
STEV 3049 G

Cheryl G. Fedje, Deb Knippel, Bobbie Reed  
*Talking in New Ways: Insights from a Practical Reasoning Experience*  
NICH 173 G, CC, U

John Edwards  
*How Children Think in Classrooms*  
STEV 3028 JH, HS

Ellen O'Connor  
*The Practices of Critical Thinking: Experiential Learning Exercises for College and Graduate-Level Instruction*  
STEV 3095 CC, U

Diann Musial, Barrie J. Barrett  
*Knowledge Through Moments: A Teaching for Thinking Model*  
NICH 166 G, HS, CC, U,

3:15- 4:45

David N. Perkins  
*Candide in Educationland: Confronting School Realities Toward More Mindful Education*  
STEV 1002 G

Matthew Lipman, Nicholas Michelli, Wendy Oxman, Gregory Waters, Mark Weinstein  
*Critical Thinking and Faculty Development*  
SU: MP CC, U

Alan Schoenfeld  
*On Mathematics, Sense-Making, and Critical Thinking*  
CH 68 G

Robert Kully, Richard Paul  
*Critical Thinking in the California State University General Education Program: Goals, Content, Success, and Failures*  
STEV 3008 G, CC, U

(Monday, August 7,  
3:15-4:45, Cont.)

Beau Fly Jones  
*Relating the Thinking Skills Movement to America's Future*  
STEV 2049 G

Winthrop Holder  
*Rethinking the Socratic Approach: A Philosophical Analysis*  
ART 108 HS, CC

Geoffrey Sea  
*Radiation and Response: Critical Thinking about the Atom*  
STEV 3072 G

Chet Meyers  
*Creating Practical Critical Thinking Assignments in All Disciplines*  
DAR 139 G, HS, CC, U

Judi Hirsch  
*Assessing Learning Potential in "At-Risk" Students (Part B)*  
STEV 3046 G

Rexford Brown  
*Critical Thinking and the Basic Skills Compromise in Urban Education*  
DAR 112 K-12

Barbara Z. Presseisen  
*Teaching Thinking and the Restructuring of Schools*  
DAR 122 G

Karen Jensen  
*Critical Thinking in School Management — A Teacher's Perspective*  
CH 20 G, HS, teachers & administration

Jean Saindon  
*Interpersonal Skills as a Basis for Critical Reasoning: Inquiry & Dispute, Part I*  
STEV 3026 HS, CC, U

George Luckey  
*The Context of Critical Thinking: Values and Attitudes*  
STEV 3038 HS, CC, U

(Monday, August 7,  
3:15-4:45, Cont.)

Donald L. Hatcher  
*The Ethics of Critical Thinking*  
STEV 3040 G

Nedim C. Buyukmihci  
*Use of Nonhuman Animals in Teaching and  
Research: No Need for Holocaust*  
NICH 173

G. Sidney Lester  
*A Metalanguage Approach*  
NICH 204 HS, CC, U

Rita Manning  
*The Role of Reason in Moral Education*  
STEV 3028 G

John R. Feare  
*Critical Thinking and a Theological Dimension*  
NICH 166 G, CC, U

5:30 - 8:00 BANQUET  
Dining Commons

8:00 - 11:00 SOCIAL HOURS

## TUESDAY, AUGUST 8

7:35 - 8:35 SPECIAL INTEREST GROUPS

Elementary (K-6)	SU: MP
Middle School (7-8)	SU: MP
High School (9-12)	SU: MP
Critical Thinking Staff Development	CH 68
Community College	STEV 3008
Four-Year College and University	STEV 2049
Critical Thinking in Literature and Language Arts	STEV 3072
Critical Thinking and Psychology	STEV 3046
Critical Thinking in the Arts	ART 108
Critical Thinking in Science and Math	CH 20
Critical Thinking Assessment	STEV 3026
Critical Thinking for the Slow or Disadvantaged Learner	STEV 3038
Learning and Tutorial Centers	STEV 3040
Feminist Education	STEV 3049
Critical Pedagogy	N 173
Critical Thinking and Computer Programs	N 204
Informal Logic and Reasoning Studies	STEV 3028
Critical Thinking Staff Development and Inservice	STEV 3076
Critical Thinking and Cooperative Learning	STEV 3095
Critical Thinking and Religious Education	CH 10
Critical Thinking and Communication Studies	NICH 166
Critical Thinking and Preservice Education	STEV 3030
Starting Critical Thinking Newsletters	STEV 3077
Critical Thinking for Pre-School Children	NICH 320

8:45 - 10:15 George H. Hanford  
*How to Teach Critical Thinking in High School —  
And Why*  
STEV 1002 HS

Robert Swartz  
*Assessing the Quality of Student Thinking:  
Techniques for Classroom Teachers*  
SU: MP G, K-12

Fred M. Newmann  
*Staff Development for Higher Order Thinking: A  
Synthesis of Practical Wisdom*  
CH 68 G, HS

Vivian M. Rosenberg  
*Modifying Traditional Writing Instruction:  
Strategies to Facilitate Critical Thinking*  
STEV 3008 CC, U

(Tuesday, August 8,  
8:45-10:15, Cont.)

Bruce King  
*Becoming Critical about Teaching through  
Generative Themes*  
STEV 2049 G

Noreen Miller  
*A Socratic Interdisciplinary Seminar for High  
School Gifted Students*  
ART 108 HS, CC

Glenda Ward Beamon  
*Making Classrooms "Safe" for Thinking*  
STEV 3072 G, K-12, CC, U

Craig Walton  
*Critical Thinking and the Art of Judgement*  
DAR 139 G

Judi Hirsch  
*Remediating Cognitive Deficiencies in "At-Risk"  
Students (Part II)*  
STEV 3046 G

William H. Newell  
*Critical Thinking and Interdisciplinarity*  
DAR 112 G, U

Barbara Z. Presseisen  
*Teaching Thinking and the Restructuring of Schools*  
DAR 122 G

Carol Gontang  
*Potatoes, Goldfish, and How I Learned to Remodel a  
Cookbook Lab*  
DAR 143 JH, HS

Michael O'Loughlin  
*Educating for Possibility and Empowerment: An  
Introduction to Critical Pedagogy*  
CH 20 G

Donald Lazere  
*Thinking Critically About Capitalism*  
STEV 3026 G, HS, U

Dennis Rohatyn  
*Einstein as a Critical thinker*  
STEV 3038 G, U

(Tuesday, August 8,  
8:45-10:15, Cont.)

Les Kishler  
*High School Course in Critical Thinking and  
Independent Studies*  
STEV 3040 HS

Doug Minkler  
*Activist Art*  
STEV 3049 G

Charles Angeletti  
*Problems and Prospects of Teaching Critical  
Thinking Within a Capitalistic Structure*  
NICH 173 G

Connie Missimer  
*A Theory That Critical Thinking is the Heart of the  
Intellectual Life*  
STEV 3028 U

10:30 - 12:00

Richard Paul, David Perkins  
*Intelligence and Good Thinking*  
STEV 1002 G

Sandra Brod, Patricia Tuck  
*Tying It All Together — Children's Literature, Critical  
Thinking, Writing, and Cooperative Learning*  
DAR 108 K-12

John Hoaglund, Sandra Bryan, Lea Pellett, Larry  
Sacks  
*Critical Thinking Across the College Curriculum*  
SU: MP CC, U

Fred M. Newmann  
*Higher Order Thinking in High School Social  
Studies: Indicators of Classroom Thoughtfulness  
and Factors that Affect Departmental Differences*  
CH 68 G, HS

Margot Soven, William Sullivan  
*Exploratory Writing as Resource for Dialectical  
Thinking*  
STEV 3008 CC, U

Carolyn Sweers  
*Helping Students Examine Their Lives: How to Elicit  
and Analyze Experimental Information*  
STEV 2049 G

(Tuesday, August 8,  
10:30-12:00, Cont.)

John Chaffee  
*Critical and Creative Problem-Solving*  
ART 108 G

Roberta Ahlquist  
*Critical Pedagogy: Diverse Voices in Multicultural Classrooms*  
STEV 3072 G, K-12

Paul E. Ady  
*Using Schema Theory in Teaching the Explication of Poetry: Case Studies from the Critical Thinking Program at Assumption College*  
STEV 3046 HS, CC, U

Shari Tishman  
*Connections: A New Look at Subject Matter Instruction and Thinking Skills*  
DAR 112 G, K-12

Thomas Jackson  
*Philosophy for Children and the Infusion of Critical Thinking Across Content Areas*  
DAR 122 2-6

Marek Zelazkiewicz, Iain Boal, Ferenc Miszlivetz, Bronek Miszlivetz  
*International Perspectives on Social Conditions for Critical Thinking (Part I)*  
DAR 143 G

Ralph H. Johnson  
*Acceptability is Not Enough: A Critique of Hamblin*  
STEV 3026 G, U

Joel Rudinow  
*Whittling Away at Education*  
STEV 3038 G, HS

Sherman Dickman  
*Critical Thinking and Personal Wellness*  
STEV 3040 G, HS, CC, U

Henry Nardone  
*Applying Critical Thinking to Issues in Business and Society: Some Common Fallacies in Business Ethics*  
STEV 3049 G, CC, U

(Tuesday, August 8,  
10:30-12:00, Cont.)

Connie DeCapite  
*Using Critical Thinking with Chapter I, At Risk, and Bilingual Students*  
NICH 173 3-HS

Priscilla Agnew  
*Sex, Death, and Advertising: A Challenge for Critical Thinking*  
NICH 204 G

Deborah Tonella  
*A Walk in Their Shoes: Teaching Students How to See Other Points of View*  
STEV 3028 JH, HS teachers

Kathleen Tyner  
*Strategies for Media Literacy: From Rhetoric to Action*  
NICH 166 G

12:00 - 1:30 LUNCH

1:30 - 3:00 Vincent Ryan Ruggiero  
*Ha! Ha! I'm Thinking*  
STEV 1002 G

Kenneth Adamson, Jennifer Adrian, Randy Pitstick, Rick Scott, Roxane Wilkinson  
*Student Perspectives on Critical Thinking*  
SU: MP G

Laurence Aronstein, Brendan Desilets, Robert Swartz  
*Interactive Workshop: Empowering Teachers by Infusing Critical and Creative Thinking into the Curriculum (Part B: Peer Coaching)*  
CH 68 G, K-12

Kim V. DeVaney, Janet Williamson  
*Developing a Critical Thinking Program: The Greensboro Plan*  
STEV 3008 K-12

John Barell  
*Opening the American Mind: Critical Inquiry in Higher Education*  
STEV 2049 G

(Tuesday, August 8,  
1:30-300, Cont.)

Bonnie Szumski  
*Using Debate as a Critical Thinking Tool*  
ART 108 6-12

Mark Battersby  
*The Psychology of Irrationality and Its Implications  
for Critical Thinking*  
STEV 3072 G

Ellen O'Connor  
*Moods and Critical Thinking*  
DAR 139 G

Ogden Morse  
*Higher Order Thinking Skills and Literature in  
Subject Matter Classrooms*  
STEV 3046 HS, CC, U

Judith Collison  
*Philosophy for Children as Transfer Activity*  
DAR 112 K-12

Leslie David Gottesman  
*Decisions — Intuitive and by the Numbers*  
DAR 122 G

Marek Zelazkiewicz, Iain Boal, Ferenc Miszlivetz,  
Broniek Misztal,  
*Domestic Adversaries of Critical Thinking and  
Strategies to Minimize Their Impact (Part II)*  
DAR 143 G

Greg Sarris  
*Story in the Classroom: Crossing the Vexed Chasms  
from Personal Narrative to Critical Discourse in the  
Culturally Diverse Classroom*  
CH 20 HS, CC, U

Mark Battersby  
*MacCritic: A Computer Program for the Practice of  
Basic Critical Thinking Skills*  
STEV 3026 HS, CC, U

T. Edward Damer  
*What the Fallacies Can Teach Us About Good  
Arguments*  
STEV 3038 G

(Tuesday, August 8,  
1:30-300, Cont.)

Shirley Denton Laurie  
*Long Term Vitality: Critical Thinking as Whole Brain  
Cooperative Learning in the Classroom*  
STEV 3040 G

Paul Van Diest  
*Critical Thinking in the Middle and High School  
English Classroom: Results-Oriented Frustration,  
Just Like the Old Days, Only Better*  
OR: *The Chicken and the egg*  
STEV 3049 JH, HS

James Herrick  
*Critical Thinking Across the Communication  
Curriculum*  
NICH 173 CC, U

Rita Manning  
*The Role of Reason in Moral Education*  
NICH 204 G

3:15- 4:45

Richard Paul  
*How to Teach for the Intellectual Virtues*  
STEV 1002 G

Sharon Bailin, Donald Hatcher, Ralph Johnson  
*Achieving Extraordinary Ends*  
DAR 108 G, CC, U

Joel Rudinow, Perry Weddle, Robert Kully, Ray  
Geigle  
*Intersegmental Transfer and Standardization of  
Critical Thinking Course in California*  
SU: MP CC, U

Donald Lazere, Catherine Milton, Robert Choate  
*Community Service, Civic Responsibility, and  
Critical Thinking*  
CH 68 CC, U

Noreen Miller  
*Infusing Critical Thinking Into a Sophomore  
Interdisciplinary Core Curriculum*  
STEV 3008 HS

(Tuesday, August 8,  
3:15-4:45, Cont.)

Jim Pollard  
*Infusing Critical Thinking Across the Community*  
College Curriculum  
STEV 2049 HS, CC, U

Vivian M. Rosenberg  
*Cultivating Emotional Intelligence: Strategies to*  
*Facilitate Critical Thinking*  
ART 108 G, HS, CC, U

Michael O'Loughlin, Roberta Ahlquist  
*Genuinely Liberatory Teaching: The Challenges in*  
*Practising What We Preach*  
STEV 3072 G

Margaret A. Hyde  
*A Telecourse in Critical Thinking*  
DAR 139 CC, U, Grad

Connie Missimer  
*Critical Thinking About the Nature of Evidence*  
STEV 3046 G, HS, CC, U

Gary R. Gruber  
*A Nation of Fast Answers*  
DAR 112 G, 3-12, CC, U

Robert R. Phillips  
*Aggression in Man and Animals — The*  
*Interdisciplinary Courses and Critical Thinking*  
DAR 122 CC, U

Marek Zelazkiewicz, Marek Bielecki, Stephen Ducat,  
Emily Stoper Nan Chico, Lloyd Nebris  
*Domestic Allies of Critical Thinking and Strategies*  
*to Maximize Their Support*  
(Part III)  
DAR 143 G

Zachary Seech  
*Philosophical Chairs: A Format for Classroom*  
*Discussion*  
CH 20 JH, HS, CC, U

James B. Baxter  
*Information Reference Testing: Guiding*  
*Metacognition to Promote Self-Seeking Learning*  
*Behavior Through Formative Evaluation*  
STEV 3026 Grades 3-12, CC, U

(Tuesday, August 8,  
3:15-4:45, Cont.)

Holibert E. Phillips  
*Critical Thinking: Mining the Narrative*  
STEV 3040 G, CC, U

Marlys Witte, Ann Kerwin, James Tyler, Andrea Witte  
*A Syllabus for a Curriculum on Medical and Other*  
*Ignorance: Probing the Depths of the Unknown and*  
*Chaos*  
NICH 173 G

Robert J. Velk  
*Hot Cognition: Teaching Critical Thinking to Busy,*  
*Experienced (Often Cynical) Adults — Analyzing Ill-*  
*Defined Problems*  
STEV 3028 G, CC, U

8:00 - 11:00

SOCIAL HOURS

**WEDNESDAY, AUGUST 9**

8:45 - 10:15

Carol Tavriss  
*Thinking Critically About Close Relations*  
 STEV 1002 G

Connie DeCapite  
*Using Critical Thinking With Chapter I, At Risk, and Bilingual Students*  
 SU: MP G

Ted M. Kraus  
*Critical Thinking Via Critiques on Performing Arts Workshop*  
 STEV 3008 CC, U

Mary E. Evans, James L. Tursi  
*Bridging the Gap Between Theory and "How Do I Translate This to My Classroom?"*  
 STEV 2049 E, JH, HS

Carolyn Sweers  
*Effective Use of the Dialogue Process in a Classroom Setting*  
 ART 108 G

James O'Conner  
*Teachers Using Critical Thinking Strategies in Their Classrooms — It's Happening!*  
 STEV 3072 G, K-12

Charles Wiederhold, George Olive  
*Designing and Managing A Comprehensive K-12 Staff Development Program in Critical Thinking*  
 DAR 139 G, K-12

George Collison  
*Making Life Easier for Writers of Critical Thinking Testing Materials: A New Computer Program for Generating Tests, LXR.TEST*  
 STEV 3046 G

Glenda Ward Beamon  
*Classroom Climate and Teacher Questioning Strategies: Fostering, Stimulating, and Sustaining Student Thinking*  
 DAR 112 G, K-12, CC, U

Alan Haskvitz  
*Applied Critical Thinking: An Inside Look at the Nation's Most Honored Social Science Program*  
 DAR 122 E, JH, HS

**(Wednesday, August 9,  
8:45-10:15, Cont.)**

Rex Dalzell  
*"Only Dogs on Leads Permitted in This Park:" A Practical Approach to the Development of the Critical Thinking Skills of Beginning Teachers*  
 STEV 3026 G

Jean Saindon  
*Structuring the Critical Reasoning Classroom for Cooperative Learning*  
 STEV 3038 HS, CC, U

Les Kishler  
*High School Course in Critical Thinking and Independent Studies*  
 STEV 3040 HS

James B. Freeman  
*Critical Thinking: Argument Diagramming*  
 NICH 173 G

Robert J. Velk  
*Hot Cognition: The Problem With the Word Problem*  
 STEV 3028 G, CC, U

10:30 - 12:00

Craig Walton  
*Critical Thinking and the NAEP Illiteracy Studies*  
 STEV 1002 G

John K. Wilson  
*Critical Thinking Transference Across the Disciplines*  
 STEV 3008 CC, U

Roberta Ahlquist  
*Critical Pedagogy: Diverse Voices in Multicultural Classrooms*  
 ART 108 G, K-12

Ogden Morse  
*Literature and Problem Solving: The Integration of Thinking Skills and Subject Matter*  
 STEV 3072 HS, CC, U

Judith Collison  
*Modeling Critical Thinking Testing*  
 STEV 3046 G

(Wednesday, August 9,  
10:30-12:00, Cont.)

Dennis W. Grebner, Julio Bermudez  
*Teaching Design Through Visual Thinking*  
DAR 112 G

Yehudi O. Webster  
*Are There Black and White People? Reasoning  
About Racial Classification*  
DAR 143 G, K-12, CC, U

Ralph H. Johnson  
*New Wine in Old Wineskins?*  
STEV 3026 G, U

Jean Saindon  
*Interpersonal Skills as a Basis for Critical  
Reasoning: Inquiry & Dispute (Part II)*  
STEV 3038 HS, CC, U

Norman Dahl  
*Rational Belief and the Teaching of Ethics*  
STEV 3049 CC, U

David Porter, Richard Hughes  
*The Interdisciplinary Education at the Academy  
(IDEA) Program; Creating Opportunities for  
Academic Excellence*  
NICH 173 G

Robert J. Velk  
*Hot Cognition: The Use and Abuse of Knowledge  
and Experience — The Components of an Intensive  
Seminar/Workshop used to Upgrade the Critical  
Thinking Skills of Experienced Adults*  
STEV 3028 G, CC, U

12:00 - 1:30 LUNCH

1:30 - 3:00 Sharon Bailin  
*The Myths of Creativity*  
STEV 1002 G

Muriel Rada, Jeff Koneck  
*Critical Thinking Projects: Community Education*  
STEV 3008 G

(Wednesday, August 9,  
1:30-3:00, Cont.)

Carolyn Sweers  
*Helping Students Examine Their Lives: How to Elicit  
and Analyze Experimental Information*  
ART 108 G

Barbara Thayer-Bacon  
*Children Should Be Heard: Developing an Open-  
Minded Foundation in the Early Years*  
STEV 3072 G, E

Harold Hayes  
*The Nature of Dynamic Barriers in Critical Thinking  
Processes*  
STEV 3046 G

John Edwards  
*The Infusion of CoRT Thinking Skills Through the  
Curriculum*  
STEV 3040 G

Craig Walton  
*Critical Thinking and the Art of Judgement*  
NICH 173 G

Joseph B. Gittler  
*Critical Thinking on Problems of Racial and Ethnic  
Conflict: Towards a Cognitive and Educational  
Resolution*  
NICH 204 G, CC, U

3:15- 4:45

WRAP-UP SESSION  
SU: MP

**Ady, Paul E.**  
Assistant Professor  
Department of English  
Assumption College  
500 Salisbury St.  
Worcester, MA 01609

**Using Schema Theory in  
Teaching the Explication  
of Poetry: Case Studies  
from the Critical Thinking  
Program at Assumption  
College**

After providing background information on the critical thinking program under development at Assumption College, the session leader will present his own contribution to a set of separate case studies on explanation attempted this spring by members of the Anthropology, Biology, Physics, Sociology, and English departments. In this instance (English), Ady will demonstrate how he used schema theory in an introductory literature class in part designed to improve students' ability to read and explain semantically difficult poetry. Among the questions addressed by the session: What constitutes a satisfying explanation in this instance? To what extent, if at all, does the process of generating a satisfying explication of a poem resemble the processes of generating a satisfying explanation in the other disciplines mentioned above? Includes participatory workshop.

Audience: HS, CC, U

(Tuesday 10:30-12:00 STEV 3046)

**Agnew, Priscilla**  
Professor  
Department of Philosophy  
Saddleback Community College  
28000 Marguerite Parkway  
Mission Viejo, CA 92677

**Sex, Death and  
Advertising: A Challenge  
for Critical Thinking**

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. If we are to move beyond the superficial in our critical evaluation of advertisements, we must become aware of these messages. This presentation will include a slide show which will demonstrate the presence of these messages, and we will discuss some techniques for discerning these messages. We will work on some philosophical problems which arise and shall see that, before we can do critical thinking in the strong sense, we must increase our awareness of this material.

Audience: G

(Tuesday 10:30-12:00 NICH 204)

**Ahlquist, Roberta**  
Associate Professor  
Department of Education  
San Jose State University  
One Washington Square  
San Jose, CA 95192-0074

**Critical Pedagogy: Diverse  
Voices In Multicultural  
Classrooms**

Critical pedagogy is a process of teaching which attempts to free both student and teacher from traditional restrictions of the dominant culture and the hidden curriculum of schooling. Social problems, the reasons for their existence, and solutions to them are the goals of emancipatory or critical pedagogy. Diverse voice refers to the voices of students from multicultural backgrounds. This session will discuss ways in which teachers can promote the voices of all students. "To be voiceless is to be powerless." (Giroux) Elementary and secondary teachers will critique methods for promoting voice in the classroom. Bring your best experiences, successes, failures, and constraints you would like to overcome, and we will share these in a dialogical work session.

Audience: G, K-12

(Tuesday 10:30-12:00 STEV 3072)  
(Wednesday 10:30-12:00 ART 108)

**Angeletti, Charles**  
Professor  
Department of History  
Metropolitan State College  
Denver, CO 80204

**Problems and Prospects of  
Teaching Critical  
Thinking Within a  
Capitalistic Structure**

The education that students receive in this country (U.S.) from K through college does little or nothing to prepare them for the stark realities of American capitalism. In fact, many critical thinking efforts in America are part and parcel of the capitalistic ethos as presented by the media, in textbooks, and in most educational settings. Exceptions notwithstanding, strategies and skills must be devised by educators in order to teach students (and others) to move beyond the comfortable mythologies associated with American (U.S.) version of schooling, economic order and political participation. Critical thinking pedagogy as a revolutionary tool must be taught to ensure human survival and ethical decision-making.

This presentation will consist of a 30-minute "formal" presentation with discussion and questions to follow. The presenter is experientially oriented and shall endeavor to create a seminar session which will allow those in attendance to be pro-actively involved in the issues and concerns described.

Audience: G

(Tuesday 8:45-10:15 NICH 173)

**Aronstein, Laurence**

*Principal*  
John Glen Middle School  
Bedford, MA 01730

**Co-Presenter****Desilets, Brendan**

*Teacher*  
John Glenn Middle School

**Co-Presenter****Swartz, Robert**

*Professor*  
Department of Philosophy  
University of Massachusetts

**PART A: Infusion**

This two-part presentation will concentrate on both the process of developing critical thinking lessons infused into the subject areas and the lessons that are the products. An interactive, audience-participation simulation demonstrating the infusing of a thinking skill will take place. The principles of a good infusion lesson will be inductively developed.

**PART B: Peer Coaching**

Using the do's and don'ts of teaching behaviors that promote good thinking, the presenters will teach an infusion lesson. Peer coaching techniques will be demonstrated as a way a school can support teacher-generated work. The guidelines utilized by groups of teachers who use peer coaching as a vehicle for such lesson development will be discussed.

Audience: K-12, G

Part A (Monday	10:30-12:00	SU: MP)
Part B (Tuesday	1:30-3:00	CH 68)

**Astredo, Jane M.**

*Teacher, Second Grade*  
Abraham Lincoln Elementary  
School  
15324 S. California Avenue  
Paramount, CA 90723

This session will include a brief introduction of a primary teacher's experiences in stressing critical thinking activities at the K-3 level. There will be hands-on, practical critical thinking activities for young children. Time will be provided for discussion of how these activities can help students with C.A.P. and other standardized tests now being proposed by the state.

Audience: E

(Sunday	10:30-12:00	SU: MP)
(Sunday	1:30-3:00	STEV 2049)

**Interactive Workshop:  
Empowering Teachers by  
Infusing Critical and  
Creative Thinking Into the  
Curriculum****Bagakis, Gus**

*Professor*  
Department of Philosophy  
San Francisco State University  
1600 Holloway Avenue  
San Francisco, CA 94132

**Taking Critical Thinking  
Seriously: Overcoming  
Oppression and Building  
Alliances — a NEW  
BRIDGES Model.**

The presenter will propose and defend a definition of critical thinking that recognizes the fundamental role of social oppression. The workshop is based on a model developed by NEW BRIDGES, a youth camp designed to assist young people with issues of racism, sexism, homophobia, ageism, classism, etc. The participants will engage in a process designed to demonstrate the powerful effects our early social conditioning has had on our thoughts and actions. After the process we will gather into small groups to discuss our reactions. We will conclude with a group discussion on the pedagogical implications of an explicit connection between critical thinking and social oppression. The workshop leader will share his experience in teaching in the public schools as well as the university.

Audience: HS, CC, U,

(Sunday 3:15-4:45 NICH 173)

**Ballin, Sharon**

*Professor*  
Department of Educational  
Administration and Foundations  
Faculty of Education  
University of Manitoba  
Winnipeg, Manitoba  
Canada R3T 2N2

**The Myths of Creativity**

This presentation will involve a critical examination of some of the currently popular notions of what creativity is and how it can be developed. In particular, I will argue that there are serious problems both with the notion that there is a distinct creative process of thought which is different from ordinary logical thought and with the notion that it is meaningful to speak of persons as being creative independent of their production of valuable products. The alternative view which will be proposed connects creativity with skills and rules, with critical inquiry, and with significant achievement.

Audience: G

(Wednesday 1:30-3:00 STEV 1002)

**Bank, Judy**  
*Reading Specialist*  
Department of Language Arts  
Los Medanos Community College  
2700 E. Leland Road  
Pittsburg, CA 94565

**Co-Presenter**  
**Hirsch, Judi**

**Co-Presenter**  
**Shabbas, Audrey**  
*Educational Director, NAJDA*  
11400 Shattuck Ave., Suite. 2  
Berkeley, CA 94709

This workshop presents a model for using a critical thinking approach on a current issue. We have chosen the Israeli-Palestinian conflict because it is rife with prejudices, ignorance and misconceptions. It is also topical. We will focus on three components of the critical thinking process: *critical reading, evaluating textbooks, and evaluating the media for bias.* Participants (and their students) will be able to apply what they have learned each time they read a book, listen to the radio, or watch TV.

Audience: HS teachers

(Monday 8:45-10:15 STEV 3040)

**Barell, John**  
*Coordinator, ASCD Network on Teaching Thinking*  
Montclair State College  
204 Chapin Hall  
Upper Montclair, NJ 07043

**Empowering Teachers and Students Toward Critical Thinking: K-12**

This session will introduce participants to a program that focuses upon empowering students, teachers and administrators with strategies for improving performance, achievement, and the quality of life in schools. Based upon research on staff development, the nature of thinking, and strategic planning for success, this program fosters more self-direction and independent thinking through goal-setting, infusion of problem solving/critical inquiry throughout the curriculum, and written reflection upon our own thinking processes. Participants will practice these programmatic elements.

Audience: K-12

(Sunday 10:30-12:00 DAR 108)  
(Monday 1:30-3:00 STEV 3038)

**Using Critical Thinking in Conflict Resolution: The Case of the Israeli-Palestinian Conflict**

**Barell, John**

**Opening The American Mind: Critical Inquiry in Higher Education**

This is a seminar designed to share results of research with faculty at one college about the nature of thinking in various disciplines. The research project and this seminar will focus upon the nature of thinking, thinking in separate disciplines and strategies to foster more critical inquiry in our disciplines. Participants will reflect upon these concerns in their own disciplines and suggest strategies to effect staff development opportunities in higher education.

Audience: G

(Tuesday 1:30-3:00 STEV 2049)

**Barell, John**

**Reflective Supervision for Critical Thinking**

**Co-Presenter**  
**Perkins, David**

How do we empower teachers at all levels to become more reflective, observant of their own teaching behavior, and critical in the strong sense? David Perkins and John Barell will model a process of teaching and post-observational conferencing/coaching that focuses upon achieving the goals of self-empowerment based upon research in achievement motivation, staff development, and the nature of the thinking process itself.

Audience: K-12

(Monday 10:30-12:00 STEV 1002)

**Barnes, Cynthia A.**  
*Director*  
Integrated Thinking Skills Project  
Community College of Aurora  
791 Chambers Road  
Aurora, CO 80011

**Teaching for Thinking: A Cooperative Learning Approach**

This session is based on the Integrated Thinking Skills Project at the Community College of Aurora. It has involved training faculty to infuse the teaching of critical thinking into their coursework. We also offer a course called Applied Thinking Strategies for students. More than three-fourths of the students enrolled in these courses have said the thinking skills they have learned have helped them learn course content and have also empowered them in their personal lives and on the job.

The CCA thinking skills project has evolved from a preoccupation with *what to teach* to a realization that teaching for thinking really

(Barnes, Cynthia A., cont.)

means *how* we teach what we teach. Hence, many of the faculty involved in our project use cooperative learning techniques and a variety of interactive strategies designed to get students to "cover the material." As one of our faculty members so astutely said, "My students need to take this course. I've taken it already — dozens of times."

Come explore the why, what, and how of teaching for thinking through small-group interaction and discussion. As much as anything, teaching for thinking requires that students, rather than faculty, "cover the material." Join in discovering how this can happen, practice using selected thinking strategies, and discuss how you might adapt these strategies to your coursework.  
Audience: HS, CC, U

(Monday 10:30-12:00 STEV 3046)

### **Battersby, Mark**

### **The Basics**

*Professor*  
Department of Philosophy  
Capilano College  
2055 Purcell Way.  
North Vancouver, B.C. V7J 3H5

Mastering basic reasoning skills is not all there is to being a critical thinker, but the basic rules, skills, and strategies for reasoning are what empower the critical thinker and support a questioning attitude. Merely encouraging a questioning attitude will not provide students with the tools and confidence for autonomous assessment and decision making and may result in a defensive, and even anti-intellectual skepticism.

This session is an attempt to produce a prioritized, illustrated, and relatively brief list of basic reasoning skills, the acquisition of which should enable a student to deal confidently and competently with any discipline. Numerous examples of kinds of skills and methodology I have developed after teaching critical thinking at the college level for ten years will be provided. I have made the list prioritized so that it can serve as a guide to instructors attempting to introduce a limited amount of critical thinking instruction into their courses— but wishing to assure that at least the fundamental skills are taught.  
Audience: G, CC, U

(Sunday 3:15-4:45 STEV 3049)

### **Battersby, Mark**

### **MacCritic: A Computer Program for the Practice of Basic Critical Thinking Skills**

A large part of teaching critical thinking involves teaching the basic skills of analyzing and criticizing an argument. The best way to teach these skills is by providing other students with abundant practice and feedback. But the amount of practice and feedback a student gets is limited by the teacher's workload, and even in the best of situations, the feedback occurs days after the student's work has been done. In order to assure that my students get sufficient practice and immediate feedback at the basic skill-building level of the course, I have developed a CAI program that provides this, first in the MSDOS format and now on the Macintosh. The program offers students practice on the typical brief argumentative passages that are used at the basic level in critical thinking courses. The new program, "MacCritic," allows for more student interaction and more feedback than the previous program. Students can practice outlining the passage in the analytic part of the program, thereby eliminating the need for tree diagrams. Extensive oral explanations are provided which free the screen for text and provide for more informal advice.

This seminar will involve a demonstration of the program and some reflection on the other possibilities of using computers in critical thinking instruction.  
Audience: HS, CC, U

(Tuesday 1:30-3:00 STEV 3026)

### **Battersby, Mark**

### **The Psychology of Irrationality and Its Implications for Critical Thinking**

The proponents of critical thinking use basically two theories to explain the origins of the irrationality and guide instructional efforts: 1. people are suffering from a lack of fundamental reasoning skills (and so must be taught these skills), and/or, 2. people are prevented from being rational by various affective psychological factors such as fear of authority, egocentrism, or ethnocentrism (and so must be made psychologically aware and encouraged to change their psychic investments). Recent work in cognitive psychology suggests that there is another possible explanation for human irrationality: we are just naturally inept at certain crucial reasoning tasks.

The work of Kahneman and Tversky, in particular, seems to show that this cognitive incapacity is the basis for all sorts of fallacious reasoning, from false generalizations and stereotyping to misconceived confidence and misperceived risk assessment. As teachers of critical thinking, we spend a great deal of time trying to

(Battersby, Mark, cont.)

teach our students to base their beliefs (and their confidence in them) on the evidence that is available to them. The work of Kahneman and Tversky document just how hard it may be to cure people of their natural inclinations to err in these areas. Nonetheless, I think their work can serve as a guide to help students to avoid these "natural" errors. The results of this research can help pinpoint the locus of many forms of irrationality and can serve as a guide to our instructional efforts in the same way that previous theories have.

In this talk I will present a brief summary of some of the relevant work in cognitive psychology and discuss what I take its implications to be for the teaching of critical thinking.

Audience: G

(Tuesday 1:30-3:00 STEV 3072)

**Baxter, James B.**

*Formative Evaluation Specialist*  
Martin Luther King Jr.  
Elementary School  
10831 Bismarck Avenue  
Northridge, CA 91326

**Information Reference  
Testing: Guiding  
Metacognition to Promote  
Self-seeking Learning  
Behavior Through  
Formative Evaluation**

Critical thinking can be encouraged, learning can be enhanced, and self-esteem can be developed if assessment instruments measure both the reliability of a student's response and the confidence the student has in that response. Utilizing Information Referenced Testing (IRT) procedures, teachers can develop formative evaluation assessment programs that provide detailed and accurate prescriptions (individual educational plans) that reflect how well a student uses the information he or she possess and can help students to purge their misformed information (misinformation). Such affirmative assessment procedures can help students develop a more positive self-image and help teachers and students develop a healthy classroom environment where learning and critical thinking flourishes. Implications for teacher development will also be discussed. This session will be part lecture and part workshop with participants exploring IRT concepts and procedures with hands-on experiences.

Audience: Grades 3-12, CC, U

(Tuesday 3:15-4:45 STEV 3026)

**Beamon, Glenda Ward**

*Teacher,*  
*Academically Gifted, K-12*  
Burlington City Schools  
1712 Vaughn Road  
Burlington, NC 27125

**Classroom Climate and  
Teacher Questioning  
Strategies: Fostering,  
Stimulating, and  
Sustaining Student  
Thinking**

Modern cognitive development theory focuses on the dynamics of the individual's capacity to think and learn, as well as on the conditions that enhance this learning. A classroom climate where ideas are freely exchanged and openly accepted, where interaction is frequent and widespread, and where thinking is not only expected but valued is a "safe" thinking climate. Within this supportive climate, the teacher's ability to direct questions to students' individual cognitive levels, to ask clarifying and follow-up questions that probe and challenge, and to foster a questioning aptitude is critical to stimulating and sustaining student thinking.

This participatory workshop presents research that will acquaint educators with current cognitive instruction and learning theory, with ways to create a thinking and learning-compatible classroom climate, and with techniques for developing questioning strategies that challenge student thinking and optimize individual cognitive growth.

Audience: G, K-12, CC; U

(Wednesday 8:45-10:15 DAR 112)

**Beamon, Glenda Ward**

**Making Classrooms "Safe"  
for Thinking**

Are your classrooms "safe" for thinking? Modern cognitive development theory focuses on the dynamics of the individual's capacity to think and learn and on the conditions that enhance this learning. A classroom climate where ideas are freely exchanged and openly accepted, where interaction is frequent and widespread, and where thinking is not only expected but valued is a "safe" thinking climate. Within this supportive climate, the teacher's ability to direct questions to students' individual cognitive levels, to ask clarifying and follow-up questions that probe and challenge, and to foster a questioning attitude is critical to stimulating and sustaining student thinking. This participatory workshop presents research that will acquaint educators with current cognitive instruction and learning theory; with ways to create a thinking and learning-compatible classroom climate; and with techniques for developing questioning strategies that challenge student thinking and optimize individual cognitive growth.

Audience: K-12, CC, U, G

(Tuesday 8:45-10:15 STEV 3072)

**Berger, Phyllis**

Professor  
Department of Philosophy  
University of San Francisco  
San Francisco, CA 94117

Popular culture provides a rich source of material for students of critical thinking. Its use promotes immediate student interest and active involvement in the critical thinking process by cultivating an awareness of everyday obstacles to independent and objective inquiry.

The first part of this workshop will explore ways in which the electronic and print media hinder the development of reasoning skills. The second part, using examples from popular culture, will focus on specific instructional methods and practical strategies to increase student participation and learning. This session is intended especially for those instructors who are introducing critical thinking to high school and college students. Slides will be shown and handouts distributed.

Audience: HS, CC, U

(Sunday 1:30-3:00 STEV 3026)

**Bezanson, Mary Elizabeth**

Assistant Professor  
Department of Speech  
Communication  
University of Minnesota, Morris  
Morris, MN 56267

**Speaking and Critical Thinking: An Exploration of the Supreme Court**

Many see writing as the primary process through which students develop critical thinking skills. However, speaking also functions as a way that humans come to know and understand the world. This presentation explores the use of speaking as a method of teaching critical thinking skills as demonstrated in "Inquiry: Values in a Changing World", a required course of all University of Minnesota, Morris first year students. Specifically, this session will examine how Supreme Court decisions, which are a part of the Inquiry Course content and which are formed through oral arguments, can be used to demonstrate habits of critical thinking through speaking.

Audience: CC, U

(Sunday 1:30-3:00 STEV 3040)

**Bezerra-Nader, Rosemarie**

Lecturer, California State  
University, Fresno &  
Teacher, Edison-Computech  
School, Fresno  
Home Address:  
7645 N. DeWolf  
Clovis, CA 93612

**Making Math A H.O.T. (Higher Order Thinking) Subject**

Participants will be shown how they can maximize math achievement by restructuring lessons and teaching strategies so

**Instructional Strategies to Stimulate Critical Thinking**

(Bezerra-Nader, Rosemarie, cont.)

that emphasis is placed on thinking skills, not computation or conditioned learning. Since these strategies reinforce other academic disciplines within a math setting, students realize that math is used in all disciplines. Empirical data will be shown which illustrates that students who have experienced these techniques have scored higher on achievement tests (including the California Assessment Program, CAPS, or CAS). This achievement has been consistent over a period of several years. Specific lessons and resources will be shared. (These strategies have also been used in developmental classes at the junior college level.) Included in this presentation is a classroom management system which uses a business model that helps students to think concretely in terms of responsibility and accountability for their actions.

Audience: Grades 4-9

(Sunday 1:30-3:00 DAR 143)

**Bezerra-Nader, Rosemarie****Everyday Propaganda and the High Risk Connection**

Participants will become aware of how everyday propaganda promotes high-risk characteristics in young people. Participants will learn to identify techniques of propaganda which transmit subtle and overt messages that prompt people to respond without thinking. In this workshop-type seminar, slides taken of advertisements from common magazines will be shown and analyzed. Slides of a seventh and eighth grade propaganda project will also be shown. Participants will then work in small groups and analyze ads and statements which use the types of propaganda presented. Emphasis will be placed on the premises that propaganda is everywhere and can be good or bad, depending on how it is used and on the critical thinking abilities of people who respond to it.

Audience: G, JH, HS, CC

(Monday 1:30-3:00 DAR 143)

**Black, Sandra**

Consultant  
Cognitive Skills Development  
Associates  
P.O. Box 468  
St. Augustine, FL 32085

**Teaching Analytical and Critical Thinking: An Inservice Training Program**

This session summarizes the content of an inservice training series on analysis skills and critical thinking instruction. Examples of direct instruction lessons, as well as instructional methods utilizing analysis and critical thinking clarifying commonly held definitions of these skills, will be given. This theory-into-practice session combines direct instruction techniques of Black and Beyer with instructional methods recommended by Hilda Taba and Richard Paul.

Audience: K-12

(Monday 10:30-12:00 STEV 2049)

**Blewett, Peter**

*Associate Professor*  
Department of History  
University of Alaska, Anchorage  
3211 Providence Drive  
Anchorage, Alaska 99508

**Bacon's Candelabrum:  
Banishing Sir Francis  
Bacon's "Idols of the Mind"  
From the Classroom  
Through Dialogical  
Collaborative Learning**

Three-and-a-half centuries ago, Sir Francis Bacon identified four impediments to clear thinking: imperfect sense perception, individual bias, conventional wisdom, and received doctrine. These "Idols of the Mind" are as real today as they were in 1620. This presentation examines contemporary "idols" of post secondary education and a dialogical, collaborative approach to learning which can help us disenthral ourselves and our students from the spell of Bacon's Idols. A video of classroom experience with open discussion of strengths and weaknesses of the method will conclude the presentation.

Audience: CC, U

(Sunday 3:15-4:45 NICH 166)

**Boehm, Lorenz**

*Coordinator, Critical Literacy  
Project*  
Department of English  
Oakton Community College  
1600 East Golf Road  
DesPlaines, IL 60016

**From Ashes to Seeds:  
Critical Literacy and the  
Teaching of Possibility—  
An Overview of the Oakton  
College Critical Literacy  
Project.**

**Co-Presenter****Taylor, William**

*Professor*  
Department of Political Science  
Oakton Community College

The primary focus of the Critical Literacy Project at Oakton Community College is a year-long, professional development seminar designed to help faculty members redesign their courses and rethink their teaching strategies so that, in addition to their regular course content, critical thinking and methods for learning are also taught and learned. Participants explore and then apply aspects of critical literacy, including collaboration, question-asking, problem solving, and critical writing, reading, listening, and thinking. In this session we will describe the structure, methods, and materials of the seminar, and will share sample assignments, designed by participants from a variety of disciplines.

Audience: CC, U

(Sunday 3:15-4:45 DAR 139)

(Monday 8:45-10:15 DAR 139)

**Bray, Wyn**

*Co-Director, The Oxfordshire  
Skills Programme*  
Education Unit  
Wheatley Centre  
Littleworth Road  
Wheatley, Oxford  
OX9 1PH England

**The Oxfordshire Skills  
Programme**

**Co-Presenter****Clark, Rosemary**

*Education Unit*  
Wheatley Centre

Students need to think effectively in order to learn effectively. Effective thinking is, however, often taken for granted. The Oxfordshire Skills Programme seeks to enable schools to formulate a strategy across the curriculum that will help students desire and acquire the skills of good thinking.

The Programme integrates the approaches of cognitive psychology and philosophy and is concerned with the promotion of appropriate teaching and learning styles and with the development of suitable materials. It is a Local Authority project involved with many local schools of all grades, as well as with special schools and colleges and with schools in other parts of the United Kingdom.

The Oxfordshire Skills Programme has, undoubtedly, a significant contribution to make to discussion and planning regarding the new British National Curriculum.

This workshop will explore the Oxfordshire Skills Programme experience!

Audience: K-12, CC, U, G

(Monday 8:45-10:15 CH 20)

**Brod, Sandra**

*Educational Consultant*  
650 Alvarado Road  
Berkeley, CA 94705

**Tying It All Together —  
Children's Literature,  
Critical Thinking, Writing,  
and Cooperative Learning**

**Co-Presenter****Tuck, Patricia**

*Educational Consultant*  
10971 Saddlery Road  
Santa Ana, CA 92705

This workshop emphasizes the thinking aspect of literacy. Teachers will be introduced to the theory and the relationship between critical thinking, writing, cooperative learning, and children's literature. Theoretical presentations will include an overview of Dr. Richard Paul's critical thinking strategies, a summary of the relationship of cooperative learning to critical thinking, and a review of eight writing genres. Teachers will then meet in small groups to develop their own critical thinking questions, writing assignments, and cooperative learning activities

(Brod, Sandra, cont.)

based on selected chapters from children's literature. Handouts and examples of other materials will be shared.

Audience: K-12

(Tuesday 10:30-12:00 DAR 108)

**Bronson, Louise**

*Instructor*  
Department of Psychology  
Pima Community College, 8202  
East Poinciana Drive  
Tucson, AZ 85730

**Teaching Critical Thinking: Humanities and Psychology Models**

**Co-Presenter  
Wallace, Steve**

*Director,*  
Center for Instructional  
Excellence  
Pima Community College

Critical thinking has recently come to attention as an essential skill closely related to student success in a world of rapidly changing course content. In this presentation, critical thinking will be defined, related teaching/learning materials will be reviewed, and teaching techniques will be introduced. A variety of models employed in the teaching of humanities and psychology will also be introduced.

Audience: K-12

(Monday 1:30-3:00 STEV 3040)

**Brown, Rexford**

*Director*  
Policy and the Higher Literacies  
Project  
Education Commission of the  
States  
1860 Lincoln Street, Suite 300  
Denver, CO 80295

**Critical Thinking and the Basic Skills Compromise in Urban Education**

As urban school districts wrestled with equity issues in the 1960's and 70's, they settled on "basic skills" outcomes as the measures by which they would assess equality of opportunity. A vast technology of curriculum, instruction, assessment, and special interventions grew up around basic skills, and certain philosophical and psychological assumptions that undergird basic skills become institutionalized. Today, that technology and those assumptions represent formidable barriers to the spread of critical and creative thinking opportunities for many poor and minority students in urban districts.

Dr. Brown will share findings from his case studies of four urban districts and suggest ways of cutting the Gordian Knot of basic skills to free up more possibilities for thoughtfulness in classrooms, schools, and districts.

Audience: K-12

(Monday 8:45-10:45 DAR 108)  
(Monday 3:15-4:45 DAR 112)

**Brown, William  
Richard**

*Associate Professor*  
Department of English  
Quinnipiac College  
Mount Carmel Avenue  
Hamden, CT 06518

**Critical Thinking Versus Ideology in Freshman-English Essay Readers: The Case of "Politics and the English Language"**

In this paper I maintain that the three most often reprinted "classic" essays discourage critical thinking by the way they are anthologized. Swift's "A Modest Proposal" presents no evidence that English Landlords are responsible for the sufferings of Ireland. The published statement to which King's "Letter from Birmingham Jail" is a reply is seldom reprinted. A theory of language that is rejected by most linguists is presented in Orwell's "Politics and the English Language" as if it were uncontroversial common sense, and the editors of anthologies do not make the existence of the contrary theories known to students. Teachers should insist that opposing points of view be acknowledged in anthologies they adopt.

Audience: CC, U

(Monday 10:30-12:00 STEV 3049)

**Burke, William F.**

*Instructor*  
Department of General Science  
University of Hawaii at Manoa  
2450 Campus Road, Dean 2  
Honolulu, HI 96822

**Quarks, Quirks and Quacks: The Use of Pseudoscience in Teaching Scientific Method and Critical Thinking**

Many educators would agree that one of the general goals of our educational system is to produce a critically thinking populace. One of the goals of science education, in addition to teaching the content of scientific knowledge, should be to acquaint the student with the nature of science (i.e., the philosophical assumptions and methodological approaches employed in generating a scientific paradigm). The analysis of possible pseudosciences (areas of study which couch their work in a seemingly scientific framework but which violate some accepted precepts of scientific inquiry) provides an inherently interesting means to teach toward a scientifically literate and critically thinking citizenry. Through the critical examination of areas such as astrology, parapsychology, UFOlogy, biorhythms, cryptozoology and others, one can assess both the veracity of the information and claims as well as the alleged scientific nature of the topics. This lecture will discuss how a course could be designed to address these issues at the high school and college level — topics to examine, sources of information, exercises, etc.

Audience: HS, CC, U, G

(Sunday 10:30-12:00 DAR 143)

**Buyukmihci, Nedim C.**

*President, Association of  
Veterinarians for Animals Rights  
& Professor*

Department of Surgery  
School of Veterinary Medicine  
University of California, Davis  
Davis, CA 95616

The use of nonhuman animals in teaching and research has traditionally been associated with what can legitimately be termed a holocaust from the nonhuman animals' point of view. These animals are systematically used against their will, are often subjected to the most painful of situations, and are then killed. Such actions taken against humans in the name of education or science would not be tolerated. This issue will be discussed with respect to the moral status of nonhuman animals as well as the practical considerations of the use of these animals in education and scientific progress.

Audience: G

(Monday 3:15-4:45 NICH 204)

**Catsoulis, Jeanette  
McClelland**

*Instructor*  
Department of Philosophy  
University of Nevada  
4505 S. Maryland Parkway  
Las Vegas, NV 89154

This presentation will outline a method of dealing critically with televised arguments and so-called "discussion programs." It will focus on helping students to evaluate and analyze these programs by identifying the major sins against good argumentation which are regularly committed whenever an important issue is being discussed, such as the "straw man" arguments, "shifting ground," and other informal fallacies.

Audience: G

(Sunday 1:30-3:00 NICH 204)

**Cederblom, Jerry**

*Associate Professor*  
Department of Philosophy  
University of Nebraska at Omaha  
Omaha, NE 68182

If we want critical thinking instruction to help students become active learners, we must teach skills they can apply to the lectures and textbooks they encounter in the courses they typically take. This involves teaching a wider array of skills than the analysis and criticism of arguments. Much of what students hear and read will be reports of observation, classification of information, or illustration of claims by means of examples. Within this context, there will be occasional generalization based on observation, explanation by appeal to a theory, or argument to support a claim. Students must be able to make these distinctions and to use the

**Use of Nonhuman Animals  
in Teaching and Research:  
No Need for Holocaust****Critical Viewing: A  
Practical Method of  
Analyzing Television  
Arguments****Critical Thinking and  
Active Learning Across the  
Curriculum**

*(Cederblom, Jerry, cont.)*

appropriate critical techniques when they encounter generalizations, arguments, and theories. In a workshop format, we shall look at examples of classroom materials and at the different skills students would need to approach these materials actively and critically.

Audience: U, CC

(Sunday 10:30-12:00 STEV 3072)  
(Monday 1:30-3:00 DAR 112)

**Chaffee, John**

*Director,*  
Creative and Critical Thinking  
Studies  
LaGuardia Community College  
31-10 Thomson Avenue  
Long Island City, NY 11101

**Practical Strategies for  
Teaching Critical  
Thinking in the  
Disciplines**

This session will explore an established program which teaches and reinforces fundamental thinking skills and critical attitudes across the curriculum. This NEH-funded program involves an interdisciplinary course in critical thinking in which over 800 students enroll annually, as well as a professional development initiative consisting of faculty training and curriculum redesign. In addition to reviewing the content and pedagogy of the Critical Thinking course, the workshop will emphasize key practical strategies for fostering critical thinking and problem solving abilities in the disciplines. Participants will examine and engage in a variety of sample activities drawn from diverse disciplines which illustrate these strategies.

Audience: CC, U

(Sunday 1:30-3:00 DAR 139)

**Chaffee, John****Critical Literacy and  
Critical Thinking:  
Partners in Education**

The development of sophisticated thinking abilities is closely tied to the development of complex language abilities— and vice versa. This workshop will review an NEH-funded program in which students enrolled in a critical thinking course linked to writing, reading, and oral communication courses have consistently demonstrated gains in language skills and thinking abilities. Participants will engage in a variety of activities which illustrate the integration of critical thinking with critical writing, reading, speaking and listening.

Audience: CC, U

(Monday 8:45-10:15 STEV 3072)

**Chaffee, John**

**Critical and Creative  
Problem-Solving**

Solving 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 small groups, participants will work through a sequence of problems that will allow them to critically reflect on and discuss the learning process. They will also explore ways of incorporating problem solving approaches into the courses that they teach.

Audience: G

(Tuesday 10:30-12:00 ART 108)

**Cohen, Patricia F.**

Member, Board of Trustees  
Huntington Beach City School  
School District  
Home Address:  
20451 Craimer Lane, Box 71  
Huntington Beach, CA 92648

**Teaching for Thinking**

The Huntington Beach City School District is committed to a pre-kindergarten through eighth grade curriculum which is aligned with the developmental stages of children. The "Teaching For Thinking Program" provides the framework for instruction which teaches the prerequisite thinking skills needed to learn academic content. Research shows that learning to read, write, and do math involves reasoning. Children need direct instruction in these thinking skills and need to practice these skills. The mission of the Huntington Beach City School District is, "To Teach Children to Think Critically and Apply What They Learn to Their Work and Personal Lives." I will share many of the foundational thinking skills needed to earn academic content. In addition, I will demonstrate learning activities which I have successfully used with children to teach for thinking. The audience will participate in a number of the thinking skill activities. This session is for parents and educators of pre-K through eighth grade children.

Audience: G, E, JH  
(Sunday

3:15-4:45 STEV 2049)

**Collison, George**

Computer Coordinator  
Holyoke Public Schools  
500 Beech Street  
Holyoke, MA 01040

**Making Life Easier for  
Writers of Critical  
Thinking Testing  
Materials: A New  
Computer Program for  
Generating Tests,  
LXR.TEST**

LXR.TEST is a new program on the Macintosh that permits educators to enter, edit, and print out multiple copies of tests with scrambled questions and alternatives. Questions may be of any format: multiple choice, true/false, essay, or free format. Types may be mixed on any test. Unlike any other program, graphics can

(Collison, George, cont.)

be freely mixed with either the questions or the answers. Multiple questions can be linked to paragraphs or diagrams, as in reading comprehension or mathematics exams. LXR.TEST will maintain a question bank of 999 questions per folder; multiple folders are allowed. In test generation mode the user simply selects the items desired from the question bank and orders the tests to be printed, with multiple copies with scrambled questions, if desired. LXR.TEST is a godsend to anyone wishing to bring order to the process of creating, editing, reviewing, and printing critical thinking testing materials in any subject area.

Audience: G

(Wednesday 8:45-10:15 STEV 3046)

**Collison, George**

**Project Zoo and Grizzly:  
Two New High Quality  
Computer Simulations**

National Geographic's *Project Zoo* and Audubon Society's *Grizzly* are exciting new packages that combine computer technology with high interest video tapes and quality printed media. Using information gained from the text or videos, students actively apply their knowledge to solving open-ended problems in the computer simulations. In *Project Zoo*, students plan and build a zoo, complete with visitor facilities, parking, food vendors, and animal enclosures. In *Grizzly*, the students track a radio tagged bear to map out its range and observe its habits. In another segments students must determine what to do with a problem grizzly and also investigate the circumstances around a poached bear. Methods to extend the use of these simulations as aids to critical thinking in the elementary and middle school science classroom will be discussed.

Audience: E, JH, G

(Monday 8:45-10:15 ART 108)

**Collison, Judith**

Educational Consultant  
525 East Pleasant Street  
Amherst, MA 01002

**Modeling Critical  
Thinking Testing**

Numerous models are available for organizing instructional content in such a way that skills of reasoning are taught and fostered. If these models are used, instruction as well as evaluation must be defined by their structure. I will use two different models to illustrate how to construct test questions and tests to parallel the structure of the model and to reveal understanding of the content. The models to be used are: 1) a four-part, general model developed by me for curricular organization, and 2) *Reading and Thinking: A New Framework for Comprehension*, providing a more specific format and taxonomy developed by Robert Swartz and colleagues, for the Massachusetts Department of Education. Model tests will be constructed in

65

(Collison, Judith, cont.)

mathematics and in reading, using the LXR computer software designed for generating tests. Professor Swartz will be present to answer questions relating to his taxonomy.

Audience: G

(Wednesday 10:30-12:00 STEV 3046)

**Collison, Judith**

### **Philosophy for Children as Transfer Activity**

One of the most important aims of any critical instruction is the transfer of thinking skills to content that is not specifically designed to teach those skills. It is difficult to generate meaningful philosophical discussions of reading materials without some understanding of the issues raised. Matthew Lipman's philosophical novels can act as springboard for discussion of philosophical issues contained in children's literature. The benefits of this approach are twofold. Transfer of the reasoning skills of the Philosophy for Children materials becomes possible through application in the reading or language arts curriculum. Also, teachers are provided with a rich source of philosophical ideas, and models of discussions of these ideas, which they can use to deepen understanding of the literature they are teaching.

Audience: K-12

(Tuesday 1:30-3:00 DAR 112)

**Coodley, Lauren**

Department of Psychology  
Napa Valley College  
Napa, CA 94558

### **Teaching Critical Thinking About Education— Why We Must Do It**

The urgency of developing critical thinking skills in college students raises serious questions about the fairness and validity of standardized testing. Critiques of education have shown us how students no longer seek knowledge for its own sake, but only for its use in test situations. Furthermore, standardized testing separates and stigmatizes students.

I have been experimenting with alternatives to testing for 13 years in my community college classrooms. I have used a variety of methodologies, including debates, group study, spontaneous writing, and letters to text authors. Subjecting education itself to critical analysis is an important tool of student improvement. Analyzing the flawed techniques in their own experience and studying the history of the grade system has stimulated much intellectual growth. I will share handouts and techniques in these areas.

Audience: HS, CC, U

(Monday 8:45-10:15 CH 20)

**Costa, Art**

Author/Past President, ASCD  
Department of Education  
California State University,  
Sacramento  
6000 J Street  
Sacramento, CA 95819-2694

### **What Human Beings Do When They Behave Intelligently and How They Can Become More So**

What Behaviors are indicative of the efficient, effective problem solver? Just what do human beings do when they behave intelligently? Research in effective thinking and intelligent behavior indicates that there are some identifiable characteristics of effective thinkers. These are not necessarily scientists, artists, mathematicians, or the wealthy who demonstrate these behaviors. These characteristics have been identified in successful mechanics, teachers, entrepreneurs, sales people, parents — people in all walks of life.

In this presentation a dozen observable characteristics of intelligent behavior will be described. This list is not meant to be complete. As we think and study more about intelligent behavior we will discover additional indicators of growth in students' thinking abilities.

Audience: G, K-12

(Sunday 10:30-12:00 STEV1002)

**Dahl, Norman**

Professor  
Department of Philosophy  
University of Minnesota  
355 Ford Hall  
Minneapolis, MN 55455

### **Rational Belief And The Teaching Of Ethics**

Student's expectations of ethics classes are determined in part by the model of rational belief that they bring with them. Many bring with them a plausible but defective model, according to which to be rational is to be able to support whatever one believes with reasons. I shall argue briefly for an alternative model, according to which to be rational is to be willing to subject whatever one believes to criticism. I shall explore the implications this model has for the teaching of ethics, including how to get started in an ethics class (what an appropriate methodology is for doing ethics); the importance of critical thinking for doing ethics; the best way to develop students' abilities to do critical thinking in an ethics class; how best to deal with ethical relativism, and how to forestall the conclusion that, since problems arise for every approach to ethics that has been discussed in class, there is no point in trying to come to rational conclusions about moral matters. The amount of discussion in the session will determine how many of these topics will be covered.

Audience: CC, U

(Wednesday 10:30-12:00 STEV 3049)

**Dalzell, Rex**

*Vice Principal*  
Palmerston North Teachers  
College  
Centennial Drive  
Palmerston North  
New Zealand

**"Only Dogs On Leads  
Permitted In This Park":  
A Practical Approach to  
the Development of the  
Critical Thinking Skills of  
Beginning Teachers."**

In this session the focus will be on improving the critical thinking skills of beginning teachers. Some general claims will be made concerning the limitations of current attempts to teach critical thinking skills, and then one practical approach to the development of the critical thinking skills of beginning teachers will be described and comments invited.

Audience: G

(Wednesday 8:45-10:15 STEV 3026)

**Damer, T. Edward**

*Professor/Author*  
Department of Philosophy  
Emory & Henry College  
Emory, Virginia 24327

**A Code of Conduct for  
Critical Thinkers**

Much of the focus in the critical thinking movement has been on the construction and evaluation of arguments and on pedagogical techniques. This presentation, however, will focus upon the rules of behavior that critical thinkers might be reasonably expected to follow in a dialogical context. The presenter proposes a code of conduct for those who engage in such rational discussion. Both the ethical and the logical dimensions of these rules will be explored.

Audience: G

(Sunday 3:15-4:45 STEV 3046)

**Damer, T. Edward**

**Constructing Moral  
Arguments**

Most of us have found that it is primarily moral issues that engage our attention and deserve our critical energies. Yet many critical thinking courses give little focus to the peculiar character of moral concepts and the part that play in the force of arguments designed to persuade us toward moral commitment or action. This workshop will focus upon the important task of formulating clear moral premises. Without such premises many of our arguments not only violate the criteria of good arguments but, more importantly, fail to convince others.

Audience: G

(Monday 1:30-3:00 STEV 3046)

**Damer, T. Edward**

**What the Fallacies Can  
Teach Us About Good  
Arguments**

This session will demonstrate how a knowledge of the fallacies commonly found in arguments can inform and guide us toward the construction of good arguments. A fallacy is defined by the workshop leader as a violation of one of the three criteria of a good argument. Special attention will be given to the process of identifying such errors and of finding effective ways of turning poor arguments into better ones. A handout of common fallacies from the workshop leader's *Attacking Faulty Reasoning* will be distributed to workshop participants.

Audience: G

(Tuesday 1:30-3:00 STEV 3038)

**Danielson, Charlotte**

*Curriculum Specialist*  
Educational Testing Service  
Rosedale Rd.  
Princeton, NJ 08541

**Helping Teachers Help  
Students to Think: A Staff  
Development Model**

Since January, 1989, Educational Testing Service in Princeton, New Jersey, has been pilot-testing a professional development course designed to help teachers of students in grades 7-12 to infuse critical thinking skills into each of the disciplines. It includes elements of curriculum (which skills fit and enhance each of the disciplines?), instruction (which particular instructional strategies are helpful?), and assessment (how can teachers know if students are becoming more proficient thinkers?). The course uses a workshop format, with teachers from a mix of disciplines actively participating in thinking activities and translating these to their own subjects. The program as a whole consists of two courses: a teacher course and an instructor course. The program allows a district to develop a cadre of trainers in this area for further inservice within the district.

Audience: JH, HS,

(Sunday 10:30-12:00 NICH 173)

**DeCapite, Connie**

*Demonstration and Mentor  
Teacher*  
Center for Critical Thinking and  
Philosophy for Children  
Carr Intermediate School  
2120 West Edinger Street  
Santa Ana, CA 92704

**Critical Thinking Through  
Thematic Units**

This workshop explores how to develop a thematic unit through which central concepts are developed, expanded, clarified, reinforced, and connected as you move through a variety of studies and genres of literature. This allows for in-depth, holistic, interdisciplinary study through which critical thinking can flourish. This approach is compatible with the California State

(DeCapite, Connie, cont.)

Model Curriculum Standards. A sample one semester thematic unit integrating language arts, social studies, and science adaptable for grades 5 through high school, will be presented.  
Audience: 5-12

(Sunday 10:30-12:00 STEV 3046)

**DeCapite, Connie**

**Using Critical Thinking  
With Chapter I, At Risk,  
and Bilingual Students**

This workshop will focus on two specific components. Initially, the presenter will discuss the benefits of using critical thinking skills to help low achieving or ESL students develop language, reading, and writing proficiency. The second part of the workshop will focus on how to develop and implement a language arts program consisting of activities utilizing critical thinking strategies and interdisciplinary materials. Teachers will receive units of study which were originally designed for use with Chapter I middle school students. However, the strategies and content are universal in nature, so these units could be modified to serve any student.  
Audience: Grades 3-HS

(Tuesday 10:30-12:00 NICH 173)  
(Wednesday 8:45-10:15 SU: MP)

**Denton Laurie, Shirley**

Consultant  
643 Riverside Drive  
Palm Beach Gardens, FL 33410

**What Keeps the Fire Going?  
The Organizational Power,  
Transitions and Demands  
of Cooperative Learning  
and Critical Thinking**

What makes or breaks our chances for long term successful implementation? If we use Critical Thinking and Cooperative learning as isolated techniques, they become appendages to education and not long lived. This session examines school and classroom issues of implementing Critical Thinking and Cooperative Learning as elegant paradigm shifts that last. What organizational attitudes and actions will transform and facilitate commitment to learning? We will briefly review and reflect on relevant research and experiences. The mutually beneficial links between Critical Thinking and Cooperative Learning will be identified. A whole brain organizational approach to influencing success will be presented, and participants will analyze and interact in order to better identify strategies for success "back home."

Audience: G

(Sunday 1:30-3:00 STEV 3046)

**Denton Laurie, Shirley**

**Long Term Vitality:  
Critical Thinking as Whole  
Brain Cooperative  
Learning in the Classroom**

A common goal of critical thinking centers on empowering the students' intellectual development and personal commitment to learning. Often times though, the teacher's role in teacher-led-discussions and activities actually works against this goal. Using Cooperative Learning emphasizes the norms of metacognition and student responsibility, increases self-confidence and risk-taking and enhances motivation and perseverance. After a brief look at relevant research and reports, we will participate, then analyze and reflect on a series of cooperative activities. Each administrator or practitioner will leave with the experiences and facts necessary to provide a solid rationale for integrating these two powerful approaches to education in the classroom.  
Audience: G

(Tuesday 1:30-3:00 STEV 3040)

**DeVaney, Kim V.**

Facilitator  
Reasoning and Writing Project  
Greensboro Public Schools  
712 N. Eugene Street  
Greensboro, NC 27402

**Developing a Critical  
Thinking Program: The  
Greensboro Plan**

**Co-Presenter  
Williamson, Janet**

Facilitator  
Reasoning and Writing Project  
Greensboro Public Schools

This participatory workshop will consider how a school system can plan and implement a critical thinking program. Using our experiences, we shall try to be specific and practical in discussing 1) the development of long and short range goals and plans, 2) structuring workshops and other learning experiences for teachers, 3) follow-up, including peer collaboration, demonstration teaching, observations, and evaluation, 4) some major difficulties and ways to attack them, 5) impact in the classroom — what changes you can begin to see in teachers and students.

Audience: K-12

(Sunday 1:30-3:00 CH 68)  
(Tuesday 1:30-3:00 STEV 3008)

**Dickman, Sherman**

*Professor Emeritus*  
University of Utah  
Home Address:  
1560 Indian Hills Dr.  
Salt Lake City, UT 84108

This workshop will examine the statements: "Wellness requires that each person becomes responsible for his/her own health." Three aspects will be discussed. First, we examine the role of knowledge in decision making on health questions. How does one decide between differing, sometimes contradictory sources of information? On what basis can trust be established? What is a fact? What is evidence? Should one demand certainty in making wellness decisions? If not, the idea of "degrees of proof" may be useful in evaluating conclusions. Second, we will explore the importance of becoming aware of assumptions, not only in public discussions and arguments, but also in one's personal perceptions and reasonings. 3. Finally, the degree of objectivity with which judgments are expressed will also be discussed in its relation to wellness. The presentation will encourage exchange of ideas on teaching this type of subject matter to high school and college students.

Audience: G, HS, CC, U

(Tuesday 10:30-12:00 STEV 3040)

**Dorman, William**

*Professor*  
Department of Journalism  
California State University,  
Sacramento  
6000 J Street  
Sacramento, CA 95821

**Propaganda, Mass Media,  
and Critical Thinking**

What is propaganda? How does it work? What role do the mass media play in making it possible? Most important, does critical thinking offer educators the first new approach to teaching about how to cope with propaganda in years? I'll offer some tentative answers to these questions and examine in some detail how the bright promise of the so-called Age of Information has been all but overwhelmed by manipulation in the form of political, social, and commercial propaganda, and how critical thinking strategies have a crucial role to play in the restoration of public discourse. The session format will leave time for audience discussion, particularly of classroom techniques that encourage habits of "defensive" media use.

Audience: G

(Sunday 1:30-3:00 STEV 3028)  
(Monday 8:45-10:15 STEV 3049)

**Critical Thinking and  
Personal Wellness****Dorn, Dean S.**

*Professor*  
Department of Sociology  
California State University,  
Sacramento  
6000 J Street  
Sacramento, CA 95819

**Co-Presenter  
Van Patten, Charles**

*Instructor Philosophy*  
Consumnes River College  
8401 Center Parkway  
Sacramento, Ca 95823

Social Problems and controversial issues provide a rich content for use in teaching critical thinking. In this session, we will provide a detailed explanation of two models which have been successfully used to teach critical thinking using this content. Both models encourage student acquisition of critical thinking skills and dispositions. One model has students read simple and complex statements about social problems, critically analyze these statements following a five-step thinking framework, and then write an essay summarizing the critical thinking process. In this model, students do homework assignments throughout the term to prepare for class discussion. The second model has students locate eight research sources in the library on a specific controversial issue, construct and then extend pro/con trees or maps identifying the best possible reasons expressed in propositional form, supporting and refuting each position, come to a personal (but critically supported) decision on the issue, and then write a brief position paper defending the position taken. With this model, students work over a period of time on the assignment which is due late in the term. Many handouts will be distributed explaining each model and showing how to use them.

Audience: HS, CC, U

(Sunday 3:15-4:45 CH 20)  
(Monday 10:30-12:00 NICH 204)

**Eby, Judy**

*Professor/Author*  
School of Education  
De Paul University  
2323 N. Seminary Ave.  
Chicago, IL 60614

**Instructional Strategies to  
Develop Critical and  
Creative Thinking**

A new graduate level course with the same title as this presentation has been recently developed and co-taught by three professors at De Paul University. In this course teachers define and grow to understand the nature of critical and creative thinking and develop a repertoire of instructional strategies to use in their classrooms. This session will include a description of the process used in developing the course and present several of the learning

**Two Models for Teaching  
Critical Thinking About  
Social Problems and  
Controversial Issues**

(Eby, Judy, cont.)

activities included in the course. The format of this presentation is activity-oriented and highly interactive. You will participate in role-playing, problem solving, and simulation. Copies of the course syllabus, bibliography, and other resources will be distributed.

Audience: G

(Monday 8:45-10:15 NICH 204)

**Edwards, Joe**

Department of Social Science  
McKinleyville High School  
1300 Murray Road  
McKinleyville, CA 95521

**Strategies for  
Implementing Critical  
Thinking Skills with the  
New California History-  
Social Science Framework**

In this workshop I will share specific ideas and offer as a blueprint ways to implement the history-social science framework with the scope limited to the Critical Thinking curriculum strand of the framework. I envision this workshop to be about 1/3 participatory. The first 2/3 will be the specific recommendations and strategies, with handouts of pertinent information, and the last 1/3 will be discussion/critique of how the implementation plan for the critical thinking component can be modified. What emerges will be the method I will use for the school district I work in and should be of use to classroom teachers and others responsible for implementing the framework in their own settings.

Audience: JH, HS,

(Monday 8:45-10:15 DAR 112)

**Edwards, John**

Senior Lecturer  
Department of Pedagogics  
James Cook University  
Townsville 4811  
Australia

**How Children Think in  
Classrooms**

This paper describes in detail the in-class thinking of a group of high school biology students. The data were gathered using the stimulated recall technique. They reveal serious problems with traditional classroom practices and highlight promising alternative practices. Similar data have been gathered in traditional elementary school classrooms and classrooms where students are being taught thinking skills directly. Comparative analyses will provide the basis for discussion during the session of the effects of the direct teaching of thinking skills on students' in-class thinking.

Audience: G

(Monday 1:30-3:00 STEV3028)

**Edwards, John**

**The Infusion of CoRT  
Thinking Skills Through  
the Curriculum**

A series of studies over the last eleven years has revealed the powerful positive effects on students of exposure to the CoRT-1 thinking skills program. This has involved only seven and one half to eight hours direct instruction with no attempt to infuse the thinking skills through the curriculum. The most recent study involved Forty-five hours of direct instruction together with infusion through the total school curriculum. The results of this study will be set against the context of the earlier studies. Materials and techniques for infusing CoRT thinking skills through the curriculum will be demonstrated.

Audience: G

(Wednesday 1:30-3:00 STEV 3040)

**Evans, Mary E.**

Elementary Teacher  
College Community Schools  
401 76th Ave. SW  
Cedar Rapids, Iowa 52404

**Bridging the Gap Between  
Theory and "How Do I  
Translate This to My  
Classroom?"**

**Co-Presenter**

**Tursi, James L.**

High School Teacher  
Department of Social Studies  
College Community Schools

This is a look at applying thinking skills directly into the elementary and secondary classrooms. Classroom teachers come to the point where they would like to start translating the theory into hands-on ideas for their own classrooms. It's hard to know where to start. What works? Where to jump in? This inservice is designed to help the classroom teacher take a thinking skill from a theoretical basis to direct application in their content area. Specific examples of how to implement the thinking skill of analysis will be demonstrated.

Audience: E, JH, HS

(Wednesday 8:45-10:15 STEV 2049)

**Feare, John R.**

*Counselor*  
Grossmont College  
8800 Grossmont College Drive  
El Cajon, CA 92020

**Beyond the Weak and the Strong**

As the focus of the critical thinking movement shifts from theory to praxis, at least two conceptual and definitional questions remain. The first is whether or not the promotion of critical thinking is facilitated by continuing to speak of two kinds or senses of critical thinking (weak and strong), and the second is whether or not critical thinking is trivialized, as community colleges certify that their "college-level" courses require critical thinking, by calling every activity that involves any kind of thought (such as working out strategy to best an opponent in a sport) a critical thinking activity. The argument will be presented that we should agree that critical thinking *by definition* includes certain cognitive, affective, and ethical components, and will identify which characteristics (e.g., Robert Ennis' "Dispositions and Abilities" and Richard Paul's "Intellectual Virtues") are, at a minimum, included. Within this holistic approach critical thinking is a very special, rich mosaic of interdependent attributes.

The presentation will include a description of how one community college, Grossmont, evolved from having (in 1980) no formal mention of critical thinking in its curriculum to (by 1989) the adoption of a comprehensive definition as a campus-wide referent, and to the establishment of a very modest Center for the Cultivation of Critical Thinking. Ample time will be allowed for discussion.

Audience: G, CC, U

(Sunday 1:30-3:00 NICH 166)

**Feare, John R.****Critical Thinking and a Theological Dimension**

Are critical thinking and spirituality compatible? The argument will be presented, based on the work of sociologist Peter Berger and Ernest Becker, that not only are critical thinking and spirituality compatible, but that "full individuality may be liberated only by a full critical education within a community that lives in and through the most intense religious concern" (Becker). In any case, such "absolutely serious" questions should be raised at all levels of the educational system. Ample time will be allowed for discussion.

Audience: G, CC, U

(Monday 3:15-4:45 NICH 166)

**Fedje, Cheryl G.**

*Associate Professor*  
School of Home Economics  
University of Wisconsin-Stevens Point  
Stevens Point, WI 54481

**Talking in New Ways:  
Insights from a Practical Reasoning Experience****Co-Presenter****Knippel, Deb**

*Graduate Student*  
School of Home Economics  
University of Wisconsin-Stevens Point

**Co-Presenter****Reed, Bobbie**

*Undergraduate Student*  
School of Home Economics  
University of Wisconsin-Stevens Point

Experiences with practical reasoning can give us new insights into our thoughts and actions as students, professionals, and family members. A teacher educator and two students — one graduate and one undergraduate — will describe their feelings and reactions to exploring practical reasoning as an intellectual skill. Because this involved learning to talk and think in new ways, an example of the serious conversation that evolved over time will be demonstrated. Emphasis will be placed on the contradictions and inconsistencies that were noticed in others and themselves as they talked about everyday experiences and interacted with peers, co-workers, and family members. Participants will examine the similarities and differences between this conversation and other conversations they have heard.

Audience: G, CC, U

(Monday 1:30-3:00 NICH 173)

**Feehan, Thomas**

*Professor*  
Department of Philosophy  
College of the Holy Cross  
Worcester, MA 01610-2395

**Teaching Critical Thinking in Colleges Through Small Classes and Seminars**

When teaching critical thinking across the curriculum on the college level is practically impossible, there are some viable alternative courses open to us. This presentation describes several such Non-McPeckian courses.

Options include small-group freshman courses, seminars for freshman only, and seminars for seniors only. I intend to share some ideas of this kind of situation as well as my experience teaching such classes. They all involve very active meetings, run through Socratic questioning, dependent almost entirely on active

(Feehan, Thomas, cont)

student participation through discussions or presenting prepared arguments and defense before their group. There will also be detailed syllabi, bibliographies and various other source materials available to all.

Audience: CC, U

(Monday 10:30-12:00 STEV 3026)

**Fisher, Alec**

*Project Leader: Critical Thinking  
Test Development*

University of Cambridge Local  
Examinations Syndicate

1 Hills Road  
Cambridge  
CB1 2EU  
United Kingdom

**Designing and Evaluating  
Tests of Critical Thinking**

If we aim to teach students to be better critical thinkers we need tests of critical thinking abilities which enable us to tell whether our reaching strategies have any effect — or how much effect they have. If we do not submit our efforts to such empirical validation we fall short of our own standards as critical thinkers. On the other hand, it is not easy to find or devise *good* tests.

In this session we shall consider some well-known tests of critical thinking skills, and we shall use them to explain how to evaluate such tests. If time permits we shall consider the Watson-Glaser *Critical Thinking Appraisal*, the Cornell Tests (both Level X and Level Z), and Morris and King's *Test on Appraising Observations*. But we shall certainly consider as our key example Richard Paul's *Test of Fairmindedness*, which is in the process of being designed and validated.

Audience: G

(Sunday 3:15-4:45 CH 68)

**Fisher, Alec**

**Critical Thinking in the  
United Kingdom: A  
Progress Report**

Since I last reported on critical thinking in the UK (two years ago) there has been considerable progress. The first British conference on critical thinking has taken place, and others are planned. Experiments in teaching thinking skills are being initiated, and publications in the field are growing rapidly. I shall report these developments, noting especially the different perspectives they bring to the growth of the critical thinking movement.

Audience: G

(Monday 8:45-10:15 CH 68)

**Freeman, James B.**

*Professor/Author*  
Department of Philosophy  
Hunter College of The City  
University of New York  
695 Park Avenue  
New York, NY 10021

**Argument Diagramming**

Many recent texts have incorporated a way of displaying the structure of arguments through so-called tree or circle-and-arrow diagrams. The purpose of diagramming is to display perspicuously what supports what, or what is claimed to support what, in an argument. The utility of this is obvious. How can we cogently criticize or evaluate an argument unless we perceive what supports what? This unit of the critical thinking course will present argument diagramming as developed in my text *Thinking Logically: Basic concepts for Reasoning*. We shall examine the four basic argument structures: convergent, serial, divergent, and linked. We shall see how these structures may be motivated by very straightforward questions which could easily arise in concrete situations where two people are deliberating some issue. We shall also consider some structural notions developed by Stephen Toulmin in *The Uses of Argument*, which I have incorporated in the diagramming technique of *Thinking Logically*. Again, these notions can be motivated by questions arising in an argumentative discussion. These questions are related not just to displaying argument structure but to critically assessing the logical cogency of arguments. We shall apply this diagramming procedure to display the structure of various sample arguments and to consider what critical questions could be asked of their cogency.

Audience: G

(Wednesday 8:45-10:15 NICH 173)

**Furlong, Jack**

*Director, Maryland Center for  
Thinking Studies*  
Coppin State College  
2500 West North Avenue  
Baltimore, MD 21216

**Using Cognitive Tools to  
Teach Moral Reasoning In  
Middle School and High  
School**

This participatory workshop will feature a way of teaching reasoning about moral issues developed in a National Endowment for the Humanities-funded project entitled *The Coppin-Hopkins Humanities Program in the Baltimore City Schools*. The Program, a collaboration among Coppin State College, The Johns Hopkins University, and the city schools' Office of English, trains teachers and improves the curriculum by adding Curriculum Guides on selected classic texts. (Our first three-year project takes Plato's *Republic* as the text for consideration.) The teacher-training phase involves intensive reading of classic text and training in teaching students how to formulate and reason about a moral issue as it is raised in the text. The workshop will focus on the nature and use of a "cognitive tool" we use to help students create, extend, and improve their reasoning about a particular issue.

Audience: JH, HS, CC

(Monday 8:45-10:15 STEV 3038)  
(Monday 1:30-3:00 STEV 3072)

**Frana, Adrian***Teacher,*

Department of English  
 Rich Township High School  
 Sauk Trail at Westwood  
 Park Forest, IL 60466

**Thinking About Nothing...****Co-Presenter****Kerwin, Ann**

According to cognitive psychologists, we human beings are biased toward positive information; consequently, we neglect or underestimate the importance of certain negatives — among them: absent events, empty intervals, disconfirming instances, negative evidence — which are essential for thinking and learning effectively. At the same time, many of us grapple daily with concerns others dismiss as nothing. Astronomers, for example, study black holes and currently divide the world into “stuff” and “non-stuff.” Counselors are sensitive to *lacks* of communication, intimacy, support, or self-esteem. Social critics look at the *absence* of minorities, women, workers, and others in history. Educators battle apathy, absenteeism, illiteracy, and lack of resources. We all know of silences that speak volumes.

In this participatory workshop designed for educators at all levels, Dr. Kerwin will explore some “pregnant nothings” central to learning, discovery, critical and creative thinking; and Mr. Frana will share results of curricular experiments in “nothing” which promote critical and creative inquiry in high school education.

Audience: G

(Monday 10:30-12:00 NICH 166)

**Gittler, Joseph B.***Professor*

Department of Sociology  
 George Mason University  
 4400 University Dr.  
 Fairfax, VA 22030

**Critical Thinking on  
 Problems of Racial and  
 Ethnic Conflict: Towards a  
 Cognitive and Educational  
 Resolution**

It is the contention of this paper that contemporary societies are more compatible with cultural and ethnic pluralism than with cultural assimilation and amalgamation. However, cultural pluralism, it is argued, has not provided an integrative design for the diversity of group life. An alternative theory, humanocentrism, is then proposed and described. Humanocentrism is defined as the tendency for humans to know, feel, and act together around common values and symbols while simultaneously identifying themselves with, and remaining part of sets of different symbols and values. Specific illustrations are given for incorporating the humanocentric concept in educational curricula. Illustrations are garnered cross-culturally from religion, family life, politics, urbanism, and economic institutions. The implications of the humanocentric concept for education in multi-racial and

*(Gittler, Joseph, cont.)*

multi-ethnic societies are delineated throughout the paper. This presentation will consist of the reading of a paper followed by discussion.

Audience: G, CC, U

(Wednesday 1:30-3:00 NICH 204)

**Gontang, Carol***Mentor Teacher*

Mountain View High School  
 3535 Truman Avenue  
 Mountain View, CA 94040

**Potatoes, Goldfish, and  
 How I learned to Remodel a  
 Cookbook Lab**

Since the “scientific method” clearly incorporates a large number of critical thinking strategies, it is disturbing that typical lab books literally avoid a good deal of this thinking by their cookbook format and “see, I told you so” presentation. In this participatory workshop we will look at examples of experiments that avoid this approach and discuss ways to develop truly investigative labs from ideas in standard lab books. We will also discuss techniques of “teacher talk” and questioning that help students develop a thoughtful approach to lab work. Workshop participants will work together in groups to brainstorm a resource list of ideas for this kind of lab in addition to the ones I provide. I will collate the list and send it to participants after the conference.

Audience: JH, HS

(Tuesday 8:45-10:15 DAR 143)

**Goodman, Charlotte***Professor*

Department of English  
 Skidmore College  
 Saratoga Springs, NY 12866

**Critical Thinking in the  
 College Composition  
 Classroom: Reading,  
 Writing, and Re-Reading**

Critical Thinking skills are essential when interpreting literary texts. However, as both reader-response and feminist literary critics have observed, the student's initial reading of a literary text is shaped — and sometimes distorted — by his or her own prior cultural assumptions and biases. This is particularly true when the work in question deals with sex and other sensitive gender issues.

Using a contemporary short story about coming of age to illustrate problems of interpretation, I will discuss how and why students often have ignored important cues in this story because of their own stereotypical responses to issues dealt with in this text. We will then consider strategies that can empower students to become more astute readers of and writers about complex literary works.

Audience: HS, CC

(Monday 10:30-12:00 NICH 173)

**Gottesman, Leslie David**

*Instructor*  
College of Humanities and  
Social Sciences  
Golden Gate University  
536 Mission St.  
San Francisco, CA 94105

**Decisions — Intuitive and  
by the Numbers**

Critical thinking classes shy away from decision theory — perhaps "decision theory" conjures cynical images of public relations flacks in the Oval Office, Dr. Stangeloves in the Pentagon, Wall Street insiders playing dirty Monopoly with your retirement fund, or mainframe expert systems whose nested "if-then" loops transmogrify human concerns. But students and teachers face decisions every day, casual or crucial. When it's us and the odds...well, how do we figure them? And what do our own hearbeats tell us? And how do we listen?

In my critical thinking classes, we make trivial decisions (choosing between Kellogg's Corn Flakes and Post Toasties) and tough ones (career decisions) with simple tools (T-charts, decision trees, matrices, weighted scales) and a few principles of probability. We explore intuition, and build self-confidence to recognize and use it. In this workshop I'll show how we do it.  
Audience: G

(Tuesday 1:30-3:00 DAR 122)

**Grebner, Dennis W.**

*Professor*  
School of Architecture &  
Landscape Architecture  
University of Minnesota

**Teaching Design Through  
Visual Thinking**

**Co-Presenter  
Bermudez, Julio**

*Instructor*  
School of Architecture &  
Landscape Architecture  
University of Minnesota  
89 Church Street SE  
Minneapolis, MN 55455

Design as creative problem solving involves ways of thinking which make it extremely difficult to teach, particularly with coherence and consistency. This paper outlines some of the methods and techniques which we have developed and used with success in our "Beginning Design" course. We will discuss as part of design or the "Idea Generating and Development Process," interactive visual image manipulation (i.e., pure-contour sketching, rip and tear models), open-ended problem definition and solving, cycled analysis, supportive criticism (i.e., instructor, peer, auto), alternatives processing, and drawing as a language. Cognitive  
(Grebner, Dennis, cont.)

(Grebner, Dennis, cont.)

learning concepts will be linked to these methods and issues to clarify the theoretical basis for their usefulness. Design will be discussed as a higher level thinking activity founded in visual literacy and the employment of this knowledge.

Finally, critical thinking and its relation to visual thinking will be presented in the context of the design process.

Audience: G

(Wednesday 10:30-12:00 DAR 112)

**Gruber, Gary R.**

*Author/Consultant to California  
Schools*  
P.O. Box 657  
Mill Valley, CA 94942

**A Nation of Fast Answers**

The very mechanism that tries to assess performance and progress of our nation's students, standardized tests, seems to be the cause for creating a genre of uninspired "shoot from the hip" students and teachers. In some striking studies it was discovered that multitudes of students at all levels rush into fast answers without thinking critically. As time goes on they get further and further away from the process the experts use to solve problems. Experts do not primarily concern themselves with just getting an answer, they seek to extract or "discover" something interesting in a problem which they have faith will lead them eventually to an answer. This educational "virus" of rushing into fast answers is getting worse as reflected also by national SAT scores. However, there is a process of diagnosis and instruction that can be effectively used to overcome the problem, and create "process" and critical thinkers instead of "shoot from the hip" rote and uninspired students.

Audience: G, 3-12, CC, U,

(Tuesday 3:15-4:45 DAR 112)

**Halstead, Rodger**

*Chair,*  
Department of Social Studies  
Homestead High School  
21370 Homestead Road  
Cupertino, CA 95014

**Teacher Questioning;  
Student Thinking**

I will teach a lesson on critical thinking. The participants will be the students as well as the observers of this lesson. At the end of the lesson, the participants will evaluate what happened during the lesson and how the lesson successfully or unsuccessfully accomplished critical thinking.

Audience: HS

(Sunday 1:30-3:00 STEV 3072)  
(Monday 10:30-12:00 CH 68)

**Hamilton, Bev**

5 Shelburne Place  
San Mateo, Ca 94402

This session will demonstrate how the Teacher can use Technology as a Tool in leading students to Transfer thinking skills they practice and in developing the ability to Research, Reason and Relate. It will focus on the use of data bases, word processing, and telecommunications. It will include:

- Examples showing how use of electronic data bases as an instructional tool can lead students to raise and pursue questions, find evidence, explore implications and consequences, and refine generalizations.

- Demonstrations of how word processing can be used differently in each step of the writing process to help students clarify ideas and therefore communicate more effectively.

- Samples of some uses of telecommunication to clarify ideas, issues and problems, motivate students to examine assumptions, recognize contradictions, and transfer ideas to new contexts.

The purpose is to demonstrate how these and other technologies offer teachers the opportunity to remodel lessons and empower students to think critically.

Audience: K-12, G

(Monday 10:30-12:00 DAR 112)

**Hanford, George H.**

*President Emeritus*  
The College Board  
Home Address:  
22 Central Avenue  
Demarest, NJ 07627

**How to Teach Critical  
Thinking in High School —  
And Why**

Critical thinking is at the heart of what students ought to know and be able to do when they enter college or the work force in the United States. This session will present the rationale for the assertion that critical thinking is central to the learning process, and will explore suggestions for how the reasoning components of critical thinking can be infused across the secondary school curriculum. Among these, suggestions are some from the College Board's *EQuality* project. Experienced infusers are invited to come and share the lessons they've learned. Would-be infusers are invited to come, to ask the hard questions, and to share in the excitement of an infusion that is critical (sic) to the continued success of American education.

Audience: HS

(Tuesday 8:45-10:15 STEV 1002)

**Using Four T's to Reform  
the Three R's**

**Haskvitz, Alan**

*Mentor Teacher,*  
Department of Social Studies  
Suzanne Middle School  
525 Suzanne Road  
Walnut, CA 91789

**Applied Critical Thinking:  
An Inside Look at the  
Nation's Most Honored  
Social Science Program**

A hands-on, applied form of critical thinking technique that has lead to CAP increases from the 22nd to the 94th percentile. It has provided students with the opportunity to solve real life problems and actually change society. This program has twice been selected the best in California, has won the Perryman Award for being the best in Los Angeles County, and has received the National Council for the Social Sciences exemplary award. It applies critical thinking techniques to product orientation curriculum formats and the State has featured it in its monography on slow learners.

Audience: E, JH, HS

(Wednesday 8:45-10:15 DAR 122)

**Hatcher, Donald L.**

*Professor*  
Center for Critical Thinking at  
Baker University  
Baldwin, KS 66006

**The Ethics of Teaching  
Critical Thinking**

In this session we will discuss ethical questions surrounding teaching students to think critically. Are teachers who ask that students critically evaluate their beliefs and believe only what they have good reasons to believe violating students' rights to believe? Or conversely, is it the case that all persons have a duty to evaluate critically their beliefs? If so, perhaps *all* teachers have a duty to teach students to think critically.

Audience: G

(Monday 3:15-4:45 STEV 3040)

**Hayes, Harold**

*Professor*  
Department of Developmental  
Studies  
Walters State Community College  
Morristown, TN 37814

**The Nature of Dynamic  
Barriers in Critical  
Thinking Processes**

Heuristic processes are fundamental to critical thinking and contain several modes of thought that may be used in critical thinking. Although most people do not use these processes effectively, they can master them with training. However, the training process may generate levels of anxiety that make this a difficult experience for many people. It is, therefore, very important that educators involved in teaching these processes understand the nature of this anxiety, know where it will appear, anticipate it, and take precautionary measures to mitigate negative effects which may be just as harmful to a student's academic and intellectual progress as not knowing how to use heuristic processes in the first place.

(Hayes, Harold, cont.)

This presentation will map (handouts) the location of these barriers and demonstrate hands-on strategies for achieving positive outcomes in this type of training. The presentation is participatory and will appeal to teachers of all levels.

Audience: G  
(Wednesday 1:30-3:00 STEV 3046)

**Herrick, James**

Assistant Professor  
Department of Communication  
Hope College  
Holland, MI 49423

**Argumentation as  
Foundational to the  
Communication  
Curriculum**

Despite current, wide-ranging interest in the teaching of reasoning skills, those charged with structuring undergraduate communication curricula are often uncertain about the place of argumentation in their programs, and how the content of such a course can be structured so as to satisfy recent calls for teaching critical thinking. This presentation suggests critical thinking topics, skills, and assignments for introductory and advanced argumentation courses taught in departments of communication. It also explores ways in which the critical thinking skills acquired in argumentation provide a foundation for courses in public speaking, group communication, rhetorical criticism, and media production.

Audience: C, U  
(Sunday 10:30-12:00 STEV 3049)

**Herrick, James**

**Critical Thinking Across  
the Communication  
Curriculum**

It is not always feasible for departments of communication to devote a course to teaching critical thinking skills. However, it is still possible to make critical thinking an integral part of the communication curriculum. This presentation and discussion explores approaches and assignments which enhance teaching critical thinking in public speaking, small group communication, organizational communication, rhetorical criticism, and communication theory. Time will be allowed for discussing how critical thinking might be integrated into other communication courses. An effort is made to integrate the recommendations of the recent Conference on an Essential Undergraduate Communication Curriculum.

Audience: CC, U  
(Tuesday 1:30-3:00 NICH 173)

**Hirsch, Judi**

Resource Specialist, Oakland  
Public Schools  
Home Address:  
114 Echo Ave.  
Oakland, CA 94611

**Taking Care of Ourselves**

**Co-Presenter  
Kerwin, Ann**

In a conference such as this one, devoted largely to the teaching of critical thinking, we need to consider several obvious yet neglected points: (1) that *people teach critical thinking* and (2) that "how they are" affects how they think, teach, and relate. This general discussion, facilitated by Judi Hirsch and Ann Kerwin, will explore collaboratively critical and creative approaches to "taking care of ourselves," an endeavor central to critical thinking education in the long term.

Audience: G

(Sunday 3:15-4:45 STEV 3038)

**Hirsch, Judi**

**Part I: Assessing Learning  
Potential in "At-Risk"  
Students**

**Part II: Remediating  
Cognitive Deficiencies in  
"At-Risk" Students**

Measurable and permanent gains can be made by assessing the learning potential — as manifested by cognitive modifiability — of low achieving students, and then remediating their deficiencies by teaching them high-level cognitive skills. These skills can then be used as a basis for developing more basic skills in reading, writing, and math. The effects of this type of cognitive intervention can be maintained over time and generalized to include other areas of life. This is a two-part workshop. Attendance at the first part, while not required, would be helpful in understanding the second part.

Audience: G

Part I (Monday 3:15-4:45 STEV 3046)  
Part II (Tuesday 8:45-10:15 STEV 3046)

**Holder, Winthrop**

Teacher  
Sarah J. Hale High School  
345 Dean Street  
Brooklyn, NY 11217

**Rethinking the Socratic  
Approach: A  
Philosophical Analysis**

It is always much easier to talk about developing critical thinking skills among students than it is to demonstrate the process. This presentation attempts the latter; as such, it will be an engagement in applied critical thinking. We will discuss strategies to enhance students' critical inquiry. Undergirding this approach is the utilization of the Socratic approach — the constant use of

(Holder, Winthrop, cont.)

imaginative questions to push students towards self discovery. Different question types and students' writings in *Crossing Swords* (a journal wherein they debate critical social issues) will be analyzed. We will also explore the dialectic between continuous student critiques and increased interest and participation in social studies. This approach, which encourages students to constantly challenge even their own views, not only enlivens social studies but also forces students to acknowledge the validity of contradictory viewpoints. Strategies for introducing and exploring different phases of course contents by using students' writings will be discussed. Thus, by extending critique beyond the verbal plane, even quiet/reticent students begin to actively participate in dialogue by articulating their thoughts in writing.

Audience: HS, CC

(Monday 3:15-4:45 ART 108)

**Hornak, Rosemary**

Associate Professor  
Department of Psychology  
Meredith College  
3800 Hillsborough Street  
Raleigh, NC 27607-5298

**Critical Thinking and  
General Education for  
Juniors and Seniors**

**Co-Presenter**

**Shiflett, Reginald**

Professor  
Department of Chemistry and  
Physical Sciences  
Meredith College

Students typically complete the majority of their general education courses during their first two years. During the junior-senior years, students often tend to focus on courses in one or two disciplines resulting in a narrowed perspective. Furthermore, some students have learned to "beat the system" and may direct their learning toward test-taking or fulfilling requirements for a particular grade. Based on our three years experience, we will present guidelines for a capstone general education course which used the Bronowski text *The Ascent of Man*. The course includes instruction in critical thinking and integrates prior general education courses both with each other and with the student's major discipline. Critical thinking abilities and dispositions are addressed through direct instruction in logical reasoning, problem solving, the scientific method, creativity, and decision making. Students apply their critical thinking and communication skills by working in small groups to devise and implement "small wins" on problems facing contemporary society. We will discuss the course history, requirements, resource materials, critical thinking instructional techniques, projects, and the results of student evaluations.

Audience: U, CC

(Sunday 1:30-3:00 STEV 3038)

**Hyde, Margaret A.**

Professor  
Department of English  
Evergreen Valley College  
3095 Yerba Buena Road  
San Jose, CA 95135

**A Telecourse in Critical  
Thinking**

This interdisciplinary telecourse consists of seventeen 30 minute video lessons, a student study guide for the lessons with instructor's manual, and an interactive textbook with instructor's handbook by John Chaffee. Developed for the Bay Area Television Consortium, "Critical Thinking" is a basic course in developing and refining thinking skills which focuses on the process by which students may develop the fundamental thinking, reasoning, and language abilities they need for academic success in a developmentally sequenced way. The course engages students in the active process of thinking, and provides context by relating critical thinking abilities to students' own lives. In this session, a 24 minute video summary of the lessons will be presented, along with sample study guide lessons, and an overview of research, rationale, development, field testing, and potential applications. Time will also be made available for questions and answers.

Audience: CC, U, Grad

(Tuesday 3:15-4:45 DAR 139)

**Jackson, Thomas**

Director, *Philosophy In the  
Schools Project*  
Department of Philosophy  
University of Hawaii  
Honolulu, HI 96822

**What a Good Philosophical  
Discussion Is and How I  
Can Have One with my  
Students (Grades 2-12)**

In this session participants will first be introduced to "G.D.C." (General Discussion Criteria — a set of seven criteria used to evaluate a discussion regardless of content area), and WRAITEC, an acronym for seven key elements that characterize a good philosophical discussion. Participants will then engage in a philosophical discussion on the topic "What makes you you?" This discussion will then be evaluated using "G.D.C." and WRAITEC.

Audience: 2-12

(Sunday 10:30-12:00 ART 108)  
(Monday 1:30-3:00 CH 68)

**Jackson, Thomas**

**Philosophy for Children  
and the Infusion of Critical  
Thinking Across Content  
Areas**

This presentation will begin with a hands on experience with one of the novels used in the Philosophy for Children program. The notions of a "philosophical cycle" will then be introduced and how the elements of this cycle provide the framework for infusion of key thinking skills such as questioning, reason giving, clarification,

(Jackson, Thomas, cont.)

assumption finding, and the detection of implications, into specific content areas as well as the use of these skills beyond the classroom. Participants will learn about such things as "Q-Q's, IDUS, SPLAT, POPAAT, OMT," and other strategies to help facilitate the infusion process  
Audience: 2-6

(Tuesday 10:30-12:00 DAR 122)

**Jensen, Karen**

*Teacher*  
Department of Foreign Language  
Bellevue High School  
601 108th SE  
Bellevue, WA 98004

**Critical Thinking in  
School Management — A  
Teacher's Perspective**

A school can use critical thinking in many areas besides the classroom. With the growing popularity of site-based management and the democratization of decision making, critical thinking skills and training are invaluable. In this session I will discuss my own experience as a member of a high-school building-based decision-making body and will outline the use of critical thinking skills in that context. I will also discuss the critical thinking lessons I developed for the Bellevue School Board. Audience members with experience or interest in these areas are welcome to add their insights as well.

Audience: G, HS, teachers & administration

(Monday 10:30-12:00 ART 108)  
(August 7 3:15-4:45 CH 20)

**Johnson, Ralph H.**

*Professor*  
Department of Philosophy  
University of Windsor  
Windsor, Ontario N9B 3P4  
Canada

**A Slice of the Whole  
Enchilada**

Last year at this conference, I presented an outline of a theory of reasoning. In this year's update, I will present for discussion and criticism some results of this year's research. For example, I shall attempt to state more clearly just what the theory of reasoning is. In this effort, I shall refer to Finocchiaro's article, "Informal Logic and the Theory of Reasoning." For another example, it has become clear that research on thinking and reasoning, particularly psychological research, is guided by a set of assumptions about reasoning which need to be identified and subjected to scrutiny. For another example, I shall argue that disagreements about how to understand or define critical thinking (Ennis, Paul, McPeck, Siegel, Lipman) can best be understood as disagreements about some aspect of the theory of reasoning.

Audience: G, U

(Monday 10:30-12:00 STEV 3072)

**Johnson, Ralph H.**

**Acceptability is Not  
Enough: A Critique of  
Hamblin**

In chapter 6 of *Fallacies*, C.L. Hamblin developed a position on standards for argumentation which has since been influential. He argued there that truth was not an appropriate requirement and proposed instead the dialectical requirement of acceptability as a criterion for arguments. In this paper, I will review Hamblin's arguments — indicating where I believe they are weak. I shall also argue that the criterion of acceptability is not an appropriate requirement to impose on argumentation.  
Audience: G, U

(Tuesday 10:30-12:00 STEV 3026)

**Johnson, Ralph H.**

**New Wine in Old  
Wineskins?**

There is some room for debate about what the appropriate norms, standards, and criteria for arguments are. The story told by formal, deductive logic is that the appropriate standards are validity and truth; but these run into problems. The story told by many informal logicians (Johnson and Blair, Govier, Damer, Freeman) is that the appropriate standards are relevance, sufficiency, and acceptability. This story is better, but in particular the acceptability requirement runs into trouble (as indicated in the previous session) This account moreover has the defect that it ignores qualities of argument that many of us prize highly but which do not appear in the account.

Rather than put new wine into old wineskins, we would be better off at this point opting for dustbin empiricism: i.e., deciding by looking at what we take to be strong arguments just what the qualities we are looking for in arguments are.

In this paper, I will make some concrete proposals to remedy the defects.

Audience: G, U

(Wednesday 10:30-12:00 STEV 3026)

**Jones, Beau Fly**

*Program Director*  
North Central Regional  
Educational Laboratory  
295 Emroy Street  
Elmhurst, IL 60126

**Relating the Thinking  
Skills Movement to  
America's Future**

Part 1 of this session will identify a series of paradigm shifts that will drastically alter schooling in the 21st century: (1) major trends in the economy and our population; (2) changes in the way we conceptualize information; (3) cutting edge models of intelligence, instruction, assessment, staff development, and instructional leadership, and (4) the uses of technology. Part 2 of

(Jones, Beau Fly, cont.)

the session will discuss the thinking skills that teachers, administrators, and students will need to prepare for these changes with a special emphasis on the meaning of critical thinking in this context.

Audience: G

(Sunday 3:15-4:45 STEV 3008)  
(Monday 3:15-4:45 STEV 2049)

**Kerwin, Ann**

Lecturer  
Humanities Program, TKE 201  
University of Arizona  
Tucson, AZ 85721

**Ignorance: Thinking  
Beyond the Surface**

**Co-Presenter**

**Witte, Marlys**

Professor  
College of Medicine  
Department of Surgery  
University of Arizona  
Tucson, AZ 85723

"Superficial: of or relating to a surface; lying on, not penetrating below, or affecting only the surface; concerned only with the obvious or apparent; presenting only an appearance without substance or significance; *syn*, SUPERFICIAL, SHALLOW, CURSORY, UNCRITICAL, *shared meaning element*: lacking in depth, solidity, and comprehensiveness." *Webster's New Collegiate Dictionary*

Socrates, a pioneering critical thinker, embraced ignorance and scorned superficiality. He was, according to the Delphic oracle, the wisest of men. The intelligentsia of Athens gloried in their knowledge; however, failing to perceive their nescience, they were less wise than Socrates who knew that he was ignorant. Both wise and ignorant, Socrates inquired continually: at length, in depth, and (he claimed) for the benefit of his fellow citizens. This participatory session designed for educators at all levels will approach learning as a dynamic relation between unknowners and the unknown. It will engage critical thinkers in planning curriculum and pedagogy which move beyond superficial knowledge to stimulate, profound and searching thought, creativity, and discovery.

Audience: G

(Monday 8:45-10:15 STEV 3028)

**King, Bruce**

Teacher/Doctoral Student  
Curriculum and Teacher  
Education  
School of Education  
Stanford University  
Stanford, CA 94305

**Becoming Critical About  
Teaching Through  
Generative Themes**

How critical are we as teachers about our own beliefs and practices? How often are our beliefs about teaching not reflected in our practice? How can we promote analytic, critical thinking in our students unless we explore the problematic and often contradictory nature of our work? Generative themes are issues which arise out of the concerns, interests, and lives of a group, be they workshop participants or students. In this participatory workshop I will model how generative themes can be used in the classroom to do what Ira Shor refers to as "extraordinary re-experiencing the ordinary," through a dialogical questioning of our often uncritical beliefs and assumptions about teaching. The last part of the workshop will be reserved for small group work by subject area and grade level, in order to explore how generative themes can be brought into discipline-specific instruction.

Audience: G

(Tuesday 8:45-10:15 STEV 2049)

**Kirschenbaum, Jack**

Professor  
Division of Social Science  
Fullerton College  
Fullerton, CA 92634

**The Critical Thinking  
Index: A Tool For Spicing  
Up Your Course With  
Critical Thinking  
Activities**

**Co-Presenter**

**Brannock, JoAnn**

Professor  
Division of Social Science  
Fullerton College

**Co-Presenter**

**Holden, Mike**

Professor  
Division of Social Science  
Fullerton College

**Co-Presenter**

**Peters, Fred**

Professor  
Division of Social Science  
Fullerton College

We believe that, as instructors, we must constantly monitor and be aware of the level of critical thinking at which we are presenting our lesson and the level at which students are responding. Educational objectives and lesson plans can be greatly enhanced by specifically designating thinking goals and intentionally structuring cognitive encounters and experiences for our students. To facilitate this process we propose a hierarchical model of thinking, The Critical Thinking Index (CTI). The CTI arranges thinking on a twelve-stage continuum from passive reactive

Kirschenbaum, Jack, cont.)

(thinking through reflective analytic to creative generative and strong sense critical thinking. Each level of the hierarchy is considered to be a stage in cognitive development. If mastery of a level is inadequate, then functioning at higher levels may be impaired. Participants will recognize the model as a synthesis of the works of Piaget, Vigotsky, Benjamin Bloom, Robert Ennis, and Richard Paul.

In a workshop session we will demonstrate the applications of the CTI with a variety of techniques that can be used to "spice up" class activities and infuse critical thinking exercises across the curriculum. A package of student exercises developed for social science courses will be used to familiarize participants with the model and its classroom applications.

Audience: G  
(Sunday 10:30-12:00 CH 20)

### Kishler, Les

Teacher  
Saratoga High School  
20300 Herriman Avenue  
Saratoga, CA 95070

"The only thing that kept the class from becoming unbearable was when we didn't have class and I could sleep in."  
"I've done a lot of research on this program and compared it with programs of similar intent at other schools. And from that alone I have decided that this is an important and worthwhile course."

The forgoing were written by students in a suburb of Silicon Valley describing a course called Extended Learning Program. This course has been offered several times in the past few years. The presentation will include an exercise in holistic thinking using the 1962 Cuban Missile Crisis. The units on clear thinking, independent studies, and student-led seminars on controversial topics will also be described.

Audience: HS

(Tuesday 8:45-10:15 STEV 3040)  
(Wednesday 8:45-10:15 STEV 3040)

### High School Course in Critical Thinking and Independent Studies

### Kneedler, Peter

Education Consultant  
Office of School Improvement —  
Sixth Floor  
California State Department of  
Education  
PO Box 944272  
Sacramento, CA 94244-2720

### Co-Presenter

### Gonzales, Lucille

Education Consultant  
Office of School Improvement  
California State Department of  
Education

### Co-Presenter

### Wilson, Sallie

Education Consultant  
Office of School Improvement  
California State Department of  
Education

Talking about critical thinking and saying it is important only goes so far! How do you get principals and teachers to incorporate the critical thinking skills into their *regular* instructional programs on a *day-to-day* basis? In this session attendees will learn about California's two-pronged approach to classroom implementation of critical thinking skills: (1) A statewide assessment program that tests 300,000 students at a grade level and emphasizes the critical thinking skills and (2) An on-site peer review process called the Program Quality Review. Both processes include the language arts, mathematics, science, and history-social science.

Attendees will learn how the critical thinking skills are tested in California's statewide school/pupil assessment and how the Program Quality Review process trains educators to visit schools in teams and compare Quality Criteria to ongoing programs. Schools are left with Action Plans for program improvements.

Attendees will receive handouts that describe the Quality Criteria and test specifications related to the critical thinking skills.  
Audience: State and county administrators and planners, school and district teachers and administrators.  
Audience: K-12, G

(Sunday 1:30-3:00 SU: MP)

### Kraus, Ted M.

Consultant  
"Critical Writing & Thinking  
Seminars"  
395 Alexander St. #12  
Rochester, NY 14607

### Critical Thinking Via Critiques on Performing Arts Workshop

Discussion and workshop on how college teachers can lead humanities students to apply critical thinking techniques to sensible understanding of local performing arts events. The first

section of this mini-session (based on intensive week-end or full-week workshops) will discuss the principles and practices of Critical Thinking as they are related to the performing arts, plus how these ideas are related to the teaching of writing critiques on the performing arts. The second section will present a production (live or video) of a short classic play. The discussion before and after the drama production will consider specific critical thinking techniques applied to viewing a performing arts experience. The third section will consider specific methods to start thinking and writing about performing arts events. The fourth section will be a brief supervised "Writing Lab." The final section will allow the sharing of written and oral first drafts by participants and the presenter. The aim of the workshop is to enforce the use of Critical Thinking in every day life and to introduce the joys and satisfactions of life-long enjoyment of the performing arts.

Audience: CC, U

(Wednesday 8:45-10:15 STEV 3008)

**Kully, Robert D.**

*Professor*  
Department of Communication  
Studies  
California State University,  
Los Angeles, Ca 90032

**Critical Thinking in The  
California State  
University General  
Education Program: Goals,  
Content, Success, and  
Failures**

**Co-Presenter  
Paul, Richard W.**

Critical thinking has had a long history in Western thought and to a limited extent has been taught and studied in postsecondary institutions for over fifty years. However, many educators believe that it was the huge 19-campus California State University's decision to create a system wide general education critical thinking requirement that was the stimulus for the current movement that is establishing critical thinking as a major academic area of study. Because of the impact that the requirement has had on the rapidly growing interest in critical thinking, this paper will examine the general education requirement by responding to the following questions: What is the requirement and what academic goals were to be met by the requirement? What were to be the content and the focus of courses that would meet the requirement? What knowledge, skills, and critical tools were students expected to have after completing the course in critical thinking? How is the requirement being met by campuses in the CSU as well as in some of the California community colleges? In what ways has the requirement lost its purpose, unity, and direction? And why has serious consideration been given to deleting or compromising the requirement in the proposed general education transfer curriculum developed by faculty representing the University of California, the CSU, and the community colleges? The paper will raise some concerns about proposals to "teach critical thinking across the curriculum" and will argue the case for teaching critical thinking in separate and

distinct courses with the opportunity to apply the knowledge and critical tools to real issues and problems. The final section will explore some suggestions for the future study and teaching of critical thinking that are not only in compliance with the intent of the system's general education requirement, but also that should be part of any course in critical thinking.

Richard W. Paul in his response will disagree with absolutely everything that has been presented and in so doing attempt to teach the presenter of the paper something about critical thinking, although Paul will consider the task hopeless.

Audience: G, ÇC, U

(Monday 3:15-4:45 STEV 3008)

**Kurfiss, Joanne**

*Director*  
Teaching and Learning Center  
Santa Clara University  
Santa Clara, CA 95053

**In Search of The Ethical  
Voice: Connection and  
Criticism in Teaching,  
Learning, and Intellectual  
Development**

When we reduce critical thinking to a set of analytical skills, we risk overlooking the complementary intellectual process of empathy (or "connected knowing") which researchers have found to be a significant factor in the intellectual and ethical development of many women and some men. "Connected teaching" enables a class to become a community in which critical thinking can flourish without anxiety or hostile competitiveness. In this session we will consider the role of connected knowing in the development of college students and other adults. Participants will be invited to consider ways in which their courses, curricula, and pedagogy can encourage intellectual and ethical development by integrating both critical and connected ways of knowing.

Audience: U

(Sunday 10:30-12:00 STEV 3040)

**Lamb, Morris L.**

Associate Professor  
Department of Curriculum and  
Instruction  
Southern Illinois University  
Carbondale, IL 62901

**Assessing Thinking Skills  
Outcomes in Daily  
Classroom Instruction**

When programs for the evaluation of the thinking skills have been discussed they have frequently focused on assessment models developed for national, state, or district level needs. Much more attention needs to be given to helping the teacher evaluate the development of the thinking skills in classroom instruction on a day-by-day basis. The purpose of this session is to examine a model for evaluating students' performance related to the development of the thinking skills in daily classroom instruction. Specific examples of the application of the model will be given. This session will use a lecture/discussion/small group work format. Handouts will be given and discussion will be encouraged.  
Audience: K-12

(Monday 1:30-3:00 STEV 3026)

**Lape, Harvey**

Professor  
Department of Philosophy  
Cabrini College  
King of Prussia Road  
Radnor, PA 19087

**Critical Thinking and  
Macroeconomics**

What happens when economics teachers get the spirit and want to be more deliberate in the development of critical thinking skills in their courses? They turn for help to the faculty already responsible for teaching critical thinking skills, namely, the philosophy faculty. Despite good will and commitment unanticipated problems and difficulties arose when this happened at Cabrini College. As the philosophy faculty became involved, we found our success in helping colleagues teach students to think more critically in a content area was limited by (1) unrealistic expectations, (2) divergent goals, and (3) insufficient background knowledge of students in the content area.

In spite of the lack of success in incorporating critical thinking skills into the content area, we do not believe that those in the content areas must have realistic expectations for themselves and their students if they are to be successful.

Audience: CC, U  
(Sunday 1:30-3:00 STEV 3076)

**Lappé, Frances Moore**

Author  
& Cofounder, Institute for Food  
and Development Policy  
145 Ninth Street  
San Francisco, CA 94103

**Education as Dialogue:  
Rediscovering America's  
Values**

Planetary crisis calls upon us to radically rethink what and how we teach. The curriculum is no longer a set of answers but a series of questions. My emphasis is on the role of dialogue in critical thinking. My new book, *Rediscovering America's Values*, is written as a dialogue — in which there is no "winner." In dialogue, the method and message are inseparable. Conceiving education as an open-ended dialogue about our society's foundational values allows us to examine inherited assumptions (and the sound bites that pass for political discourse today!) — assumptions that so constrict our imaginations in devising solutions. Moreover, we gain confidence in asking the biggest questions, those for which there are no easy rights and wrongs. We learn by doing that answers aren't all there for us simply to absorb. This means the discovery that there are no experts up there "taking care of business" for us: It's up to us! In this process, the classroom becomes an environment for honing the concepts and practices of active citizenship — citizenship understood as meaningful power to shape one's life and society with others, according to one's deepest values. Our understanding of power and self-interest becomes more complex. Only in this way can education become a force for the profound democratic awakening needed if we are to meet the challenges of the 21st century.  
Audience: G, K-12, CC, U

(Sunday 10:30-12:00 CH 68)

**Lazere, Donald**

**Is a Little Critical  
Thinking a Dangerous  
Thing?**

This will be a "group therapy" session where we will compare all of our notes on the problems we encounter in the classroom with novice critical thinkers misunderstanding and misapplying critical thinking principles — e.g., over-eagerness in fallacy-hunting and inability to distinguish between sources committing fallacies in critical thinking and those critically analyzing fallacies

Audience: G, HS, U

(Sunday 3:15-4:45 STEV 3072)

**Lazere, Donald**

**Thinking Critically About  
Capitalism**

In a capitalistic society, we get so saturated in the sociocentric assumptions of capitalism as an economic system that it becomes extremely difficult for all of us (and particularly for teachers and students) to gain a detached, critical perspective on the subject. This workshop will survey some of the blocks to critical thinking in the gospel of "free enterprise" and will suggest methods of addressing those blocks in English and other courses, at the college and high school levels.

Audience: G, HS, U  
(Tuesday 8:45-10:15 STEV 3026)

**Lazere, Donald**

**Literature and Critical  
Thinking**

As critical thinking has become a popular trend in education, nearly every academic discipline has come forward to claim that it has been teaching critical thinking all along. In this workshop, Donald Lazere will defend that claim for literature, making the case that, perhaps more than any other discipline, literature and literary criticism contain the potential for fostering the kinds of reasoning and mental dispositions that comprise strong-sense critical thinking.

Audience: G, HS, U  
(Sunday 10:30-12:00 STEV 3008)

**Lester, Sid**

*Associate Professor*  
School of Education  
San Jose State University  
1 Washington Square  
San Jose, CA 95192

**Critical Thinking: A  
Metalanguage Approach**

This approach is based on the use of a Metalanguage glossary which is used as a tool by students learning to do critical thinking. The session will involve both the utilization of classroom exercises and a discussion of the rationale for a Metalanguage Approach in the teaching of critical thinking. The Metalanguage Approach is based on the awareness that many critical thinking errors are made simply because individuals fail to adequately understand the meaning of such terms as: truth, fact, theory, hypothesis, objective, subjective, empirical, logical, etc. The Metalanguage glossary not only defines these terms, but also provides examples of how they are frequently mis-used. The Metalanguage Approach is also based on the linguist's thesis that thought is language dependent.

Audience: HS, CC, U  
(Sunday 10:30-12:00 DAR 122)  
(Monday 3:15-4:45 NICH 204)

**Lipman, Matthew**

*Director,*  
Institute for the  
Advancement of Philosophy for  
Children  
Montclair State College  
Upper Montclair, NJ 07043

**From Thinking to  
Judgment**

Thinking is a form of behavior that may or may not be performed skillfully. (Thinking without skill is not necessarily without value.) When skilled, it can be considered a craft, and it can perhaps best be learned through cognitive apprenticeship. The primary purpose of critical thinking is to prepare people to make good judgments. But judging involves a sense of proportion, a feeling for what is appropriate, an ability to extrapolate, a grasp of relationships, patterns and structure, a reliance upon cognitive schemata, and facility in the application of criteria. For Aristotle, one arrives at judgment through deliberation in search of the equitable, while for Kant it involves rule-guided creativity. In either case, judgment is seen not as craft but as art. As such, it is a fitting objective for education that aims to encourage students to think for themselves.

Audience: G  
(Monday 10:30-12:00 STEV 3008)

**Lipman, Matthew**

**Critical Thinking In  
Concept and Application**

In order to have a sense of direction in the practice of teaching for critical thinking, one needs a clear conception of what such thinking involves. But one then requires an understanding of how the definition applies to the practice. Without the definition, the practice is blind, and without the practice the definition is empty (to coin a phrase). This will be a workshop aimed at getting participants to recognize the critical thinking in their academic practice.

Audience: G  
(Sunday 3:15-4:45 DAR 108)  
(Monday 1:30-3:00 STEV 3008)

**Luckey, George**

*Professor/Coordinator of Faculty  
Development*  
Department of Philosophy  
Morehead State University  
Morehead, KY 40351

**The Context of Critical  
Thinking: Values and  
Attitudes**

A fully developed thinker employs dozens of abilities and skills which are prerequisites for success in any field. Students who do

(Luckey, George , cont.)

not develop them drop out and will be ineligible for many positions in business and industry in the 1990's.

Since good thinking can be put to bad uses, students must develop values and attitudes necessary for thinking in a fairminded way. This interactive presentation will consider strategies for helping students recognize the value of thinking for oneself and of being constructively self-critical. Attitudes to be covered include curiosity, flexibility, persistence, and the disposition to respect other viewpoints.

Audience: HS, CC, U

(Monday 3:15-4:45 STEV 3038)

**Manning, Rita**

*Professor*  
Department of Philosophy  
San Jose State University  
1 Washington Square  
San Jose, CA 95192-0096

**The Role of Reason in Moral Education**

Moral reasoning has been traditionally conceived as the application of a moral principle or principles to the relevant case yielding a judgment about what should be done. This model has been criticized from a number of directions. Virtue theorists have argued that this model misconceives the domain of moral reflection as including only actions. They have also argued that virtuous persons do not use this model even when their attention is directed to deciding what to do in a particular case. Feminist critics have argued that this model does not reflect the moral reasoning that is typically used by women and girls. Finally, proponents of a care model have argued that this model is both agent and action centered and hence ignores the importance of relationships in moral reflection. In this seminar, we will explore the implications of these criticisms for moral education.

Audience: G

(Monday 3:15-4:45 STEV 3028)  
(Tuesday 1:30-3:00 NICH 204)

**Matthies, Dennis**

*Resident Fellow,*  
Otero Cottage Wilbur Hall  
Stanford University  
Stanford, CA 94305-7048

**Questions: The Tools for Critical Thinking**

"I don't know enough to ask a question." Once we understand a handful of basic types of questions and the natural order for asking these questions, it becomes as easy for us to inquire about the ozone layer, the trade deficit, and the First Amendment as it is

(Matthies, Dennis, cont)

to inquire about shoes, ships, or cabbages. The primordial sin of educators: to give the answer before the student knows how to ask the question.

Audience: G

(Sunday 10:30-12:00 NICH 204)

**Matthies, Dennis**

**Thinking as an Exothermic Process**

"Intellectual energy:" the willingness to think carefully and energetically, even though the exam has been taken, the grade has been assigned, and the pressure is off. How can this be nurtured? How is the development of intellectual energy related to the development of the capacity to think critically?

Audience: CC, U

(Sunday 3:15-4:45 STEV 3028)

**McCabe, Margaret**

*Educational Consultant*  
P.O. Box 1599  
Willits, CA 95490

**Teaching Higher Level Thinking Skills Through Cooperative Learning**

**Co-Presenter**

**Rhoades, Jacqueline**

*Resource Specialist*  
Fontana Unified School District  
10930 Terra Vista Parkway #15  
Rancho Cucamonga, CA 91750

Teaching thinking skills across the curriculum — an impossible task? No. In fact, if we are to teach our students how to really think, we cannot isolate thinking from the rest of the student's day. Our students need to have the opportunity to think about their thinking process and to share their thoughts with others, thereby gaining new ideas about how to think. Simple Cooperation techniques (a model of Cooperative Learning) inherently support the development of thinking skills in any curriculum area. These activities can be structured in ways to purposefully develop higher level thinking skills. This program draws upon Michenbaum's and Feuerstein's work as well as the presenter's experiences to provide teachers with practical, easy-to-use ideas and activities to use in their classrooms right away. Participants will discover how easy it is to include higher level thinking experiences in their lessons by practicing the processes during the session.

Audience: G

(Monday 10:30-12:00 STEV 3038)

**Meyers, Chet**

*Coordinator*  
 Faculty Development  
 Department of Humanities  
 Metropolitan State University  
 Hennepin Center for the Arts  
 528 Hennepin Ave. S.  
 Minneapolis, MN 55403

Creating and assessing (grading) critical thinking assignments can be time consuming, but can also be fun, and need not be burdensome. The starting point for good assignments is clarity of specific teaching objectives. We will briefly consider a creative process of visualization as a means of clarifying critical thinking objectives and then focus on a variety of practical assignments including: using media — television, newspapers, cartoons, advertisements, etc.; creating short problem-solving exercises, simulations and case studies; and developing practical outside-class assignments. Models will also be suggested for facilitating giving students evaluation and feedback. *Please* bring along copies of your own assignments to share with the group so we can learn from each other.

Audience: G, U, CC, HS

(Sunday	1:30-3:00	DAR 108)
(Monday	3:15-4:45	DAR 139)

**Michelli, Nicholas**

*Dean*  
 School of Professional Studies  
 Montclair State College  
 Upper Montclair, NJ 07043

**Co-Presenter****Ozman, Wendy**

*Director*  
 Institute for Critical Thinking  
 Montclair State College  
 Upper Montclair, NJ 07043

**Co-Presenter****Weinstein, Mark**

*Associate Director*  
 Institute for Critical Thinking  
 Montclair State College

For the past two years the School of Professional Studies at Montclair State College, with support from the Institute for Critical Thinking, has begun the implementation of a model for including critical thinking in the pre-service preparation of teachers. The program focuses on the preparation of secondary teachers, K-12 specialists, and N/K teachers. This session reports on the revision of the undergraduate program including the introduction of a course in teaching for critical thinking, efforts to incorporate

### Creating Practical Critical Thinking Assignments in All Disciplines

(Michelli, Nicholas, cont.)

elements of the national reform reports, and the identification and training of public school personnel to work with prospective teachers. Plans for the institutionalization of the program and broader infusion of critical thinking in the curriculum will be discussed.

Audience: E, HS, U, G  
 (Sunday 3:15-4:45 SU: MP)

**Michelli, Nicholas**

### Preparing Pre-Service Teachers For Critical Thinking: A National Update

Teacher education programs must be renewed to include a focus on critical thinking if our long range goal is to develop reflective, capable teachers and, through them, thoughtful students. This session includes a discussion of the national momentum within teacher education organizations and institutions toward critical thinking, including a recent AACTE resolution, the formation of a study group in critical thinking, and presentations at ATE and AACTE conferences. Alternative models for including critical thinking within the teacher education curriculum, its place on the knowledge base of beginning teachers, implications for accreditation, and model programs will be reviewed and discussed. Participants will be invited to discuss their own efforts to introduce critical thinking in teacher education programs. Emphasis will be on interaction and discussion.

Audience: E, HS, U, G  
 (Monday 8:45-10:15 STEV 2049)

**Miller, Noreen**

*Gifted and Talented Resource Liaison*  
 Adams County School District  
 No. 12  
 10290 N. Huron Street  
 Northglenn, CO 80221

Dare we challenge our best students with discussions about problems facing planet earth? Based upon the characteristics of inter-personal intelligence, gifted students need training in moral and ethical education. Using Socratic discussion and critical thinking strategies, I will lead a participatory seminar on a world issue such as global warming. This seminar demonstrates a successful pattern developed at Horizon Senior High School as an enrichment technique appropriate to an interdisciplinary curriculum. In addition, I will offer a tentative sequence for teaching critical thinking strategies based upon my staff development experience.

Audience: HS, CC

(Tuesday 8:45-10:15 ART 108)

### A Socratic Interdisciplinary Seminar For High School Gifted Students

**Miller, Noreen**

**Infusing Critical Thinking  
Into a Sophomore  
Interdisciplinary Core  
Curriculum**

The sophomore core curriculum at Horizon High School in Denver, Colorado, emphasizes the best in interdisciplinary design. Using broad based themes as a point of departure, the planning team of teachers integrated critical thinking into a three period core as a major thinking strand. However, one year later, the mix of English, Social Studies, Science/Technology, and Art with critical thinking and problem solving leads to difficulty for students who are not used to thinking independently and exercising fairmindedness. In this session, I will share the themes and demonstrate how critical thinking is infused into the various lessons for a long term change.

Audience: HS

(Sunday	10:30-12:00	NICH 166)
(Tuesday	3:15-4:45	STEV 3008)

**Minkler, Doug**

**Activist Art**

*Lecturer*  
*Department of Arts and Design*  
University of California, Davis  
Home Address:  
1816 Addison Street  
Berkeley, CA 94703

To me, "beyond superficial" implies critical thinking in an activist way. As an art instructor in the California university system, I am convinced that teaching critical thinking is not necessarily a threat to the status quo. Actually, it is part of academia's tradition of employing armchair social critics.

Come hear how my students and I use critical thinking in an activist sense. I will describe my experience with a censored State Capital show, student loyalty oaths, altering billboards and tobacco trading cards.

Come discuss your meaningful projects and let us brainstorm on how we can increase their political power.

Audience: G

(Monday	1:30-3:00	STEV 3049)
(Tuesday	8:45-10:15	STEV 3049)

**Missimer, Connie**

*Author/ Consultant*  
4836 NE 40th Street  
Seattle, WA 98105

**A Theory That Critical  
Thinking Is the Heart of  
the Intellectual Life**

If one conceives of critical thinking as the consideration of alternative theories on a subject in light of their evidence, a picture emerges of the dynamism and historical centrality of critical thinking. Critical thinking has driven intellectual progress on all fronts, not through the assessment of theories in isolation, but through a dialogical comparison of available theories in light of their evidence. The assumption here is that rather than the Cartesian foundationalist epistemological model, a fallibilist model of the sort proposed by Peirce and Popper more closely approximates the evolutionary path that various disciplines, and even their methodologies, have taken. Thus, critical thinking is quintessentially historical and social. A piece of critical thinking is good in a particular historical time to the extent that it links itself to a socially-wrought fabric of pre-existing theory; the piece of critical thinking is even better if it provides a new theoretical thread which others add to until in time it becomes a contrasting fabric within the larger weave of critical thought.

Audience: U

(Sunday	10:30-12:00	STEV 3028)
(Tuesday	8:45-10:15	STEV 3028)

**Missimer, Connie**

**Is "Stereotype" the  
Twentieth Century  
Equivalent of "Heresy?"**

For some time the concept "stereotype" as applied to another person's thinking has bothered me, as has the notion that we should teach students to "identify stereotypes," generalizations which we consider untrue. The problem with labeling certain ideas with a perjorative term is that it may shut down the desire to critically think through these ideas which we dislike or find uncomfortable, much as the term "heretical" worked its effect on people in past centuries. And while conversing with another, to accuse her of stereotyping would seem to be a form of verbal strong-arming to get her to shut up, truncating the further give and take essential to critical thinking. Or is "stereotype" quite different from "heresy"? Are there times when in thought or modulated word "Well, that's just a stereotype" is the better course?

Audience: G

(Monday	10:30-12:00	STEV 3076)
---------	-------------	------------

Little discussed but crucial to critical thinking is an appreciation of the type of evidence we're offered. Does an argument or theory rest on results of experiment/control, or on a correlation, on a speculative argument, on a single observation, or some combination of these four? There is a place for each of these types of evidence; there are times when each of these is misplaced. Most students need to learn what type of evidence to expect for a good theory on a given topic. First, I will make a brief (speculative) argument about these four types of evidence and their respective strengths, then invite seminar participants to break into small groups and discuss the type(s) of evidence offered in several theories suitable for classroom use. The ensuing discussion will be two-fold: 1) what type(s) of evidence does this theory offer? 2) Might another type of evidence be offered to strengthen it?

Audience: G, HS, CC, U

(Tuesday 3:15-4:45 STEV 3049)

**Morse, Ogden**

*Chair*  
Department of English  
Joel Barlow High School  
Redding, CT 06896

**Higher Order Thinking  
Skills and Literature in  
Subject Matter Classrooms**

Every subject matter teacher faces the same dilemma: too much material, too many skills, too little time. 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, and excerpts from student papers. The group will view a videotape, the final project of a senior high school class.

Audience: HS, CC, U

(Tuesday 1:30-3:00 STEV 3046)

**Morse, Ogden****Literature and Problem  
Solving: The Integration  
of Thinking Skills and  
Subject Matter**

Students reading works of fiction recognize that the characters struggle to find solutions to complex problems. But students fail to recognize any application of the text and its problems to their own lives. The purpose of this workshop is to demonstrate how a specific literary work can be used to teach the application of

higher order reasoning to problems by using the text, communication and collaborative skills, and students' creativity. What is a problem? Is there a process which will help to solve problems? Do the problems seen in literature still exist today? During the workshops participants will become members of a class working with these questions, and will engage in typical classroom activities that demonstrate the integration of many thinking and communication skills. There will be handouts containing a model lesson plan, sample worksheets, and examples of student work. There will also be a demonstration video of a culminating activity from a senior high school class.

Audience: HS, CC, U

(Wednesday 10:30-12:00 STEV 3072)

**Musial, Diann**

*Assistant Professor*  
Department of Leadership and  
Educational Policy Studies  
Northern Illinois University  
DeKalb, IL 60115

**Knowledge Through  
Moments: A Teaching for  
Thinking Model****Co-Presenter****Barrett, Barrie J.**

*Manager of Training*  
Frame Technology  
2911 Zanker Road  
San Jose, CA 95134

This participatory workshop describes through thinking activities how knowledge is designed through the use of cognitive-sensory relationships called moments. Rooted in recent ethnographic research on thinking frames (completed by the presenters), it presents a model of thinking which is immediately applicable to classroom instruction. Participants are given the opportunity to develop thinking activities based on the model.

Audience: HS, CC, U, G

(Monday 1:30-3:00 NICH 166)

**Nardone, Henry**

*Professor,*  
Department of Philosophy  
King's College,  
Wilkes-Barre, PA 18711

**Applying Critical  
Thinking to Issues in  
Business and Society:  
Some Common Fallacies  
in Business Ethics**

Discussions of the nature of the modern business corporation and its relationship to society, the institutions of law and ethics reveal some common misconceptions and fallacies that I would like to explore and expose in my presentation. One of these is what Richard DeGeorge (*Business Ethics*, 1986) calls the "Myth of

Amoral Business." This is the view that the business enterprise has its own set of rules, that its primary purpose and goal is determined for it by the bottom line, what the investors expect, namely profits. The conclusion one is supposed to draw is not that business is immoral but that it is amoral: business is outside of the realm of ethics. Connected to this view is a related fallacy, one based on a false analogy, defended in a well-known and influential essay "Is Business Bluffing Ethical" by Albert Carr (*Harvard Business Review*, 1968). Carr sees business as a game, and as such having its own set of rules on analogy with what occurs in playing poker — bluffing is not wrong in poker, likewise concealment of pertinent facts in negotiations, misrepresentation on a resume, deceptive packaging and the like, are not really wrong in business; it's part of the game of doing business. What Carr is defending is a kind of ethical relativism: business has its own set of rules and should be evaluated only by its own standards.

A third fallacy I would like to explore is related to the moral status of the modern corporation and the moral responsibility of corporation itself as well as its members, the board of directors, managers, and employees. John Ladd ("Morality and the Ideal of Rationality in Formal Organizations" *The Monist*, 1970) claims that corporations are not persons. Since they follow impersonal structures and thus cannot be held morally accountable whereas Peter French ("The Corporation as a Moral Person," *American Philosophical Quarterly*, 1979) argues that personhood is essentially identifiable with having intentions, and since corporations can have intentions (as revealed by their organizational goals and objectives) they can be held responsible morally for their actions. Some accuse French of committing the fallacy of composition (or Ryle's "category mistake"). Finally, I would like to discuss what I like to call the Milton Friedman fallacy, which is the idea that in a perfectly competitive free market, as long as corporations follow the rules, the pursuit of profit will by itself ensure that members of society are served in the most socially beneficial ways. This argument conceals a number of questionable assumptions one of which is that it is enough for business people merely to obey the law and that business persons need not worry about drawing distinctions between law and ethics or understand the proper relationship between law and ethics.

Audience: CC, U, G

(Tuesday 10:30-12:00 STEV 3049)

**Newell, William H.**

Professor  
School of Interdisciplinary  
Studies  
Miami University,  
Oxford, OH 45056

**Critical Thinking And  
Interdisciplinarity**

There appear to be substantial similarities between "strong-sense critical thinking" (as defined by Richard Paul) and interdisciplinarity (or "integrative studies" as we are coming to call it within the Association for Integrative Studies). These commonalities appear not only in the definitions, but in the mindset of the instructor, their implicit values, and their desired educational outcomes as well. In fact, what few differences there are appear to be a matter of emphasis: interdisciplinarity is more concerned with the end-product — a more holistic perspective; and strong sense critical thinking is more concerned with the process — how one arrives at that perspective. One goal of my presentation is to examine more precisely the similarities and differences between these two approaches.

In light of the similarities and the contrasting emphases between strong sense critical thinking and interdisciplinarity, it quickly becomes apparent that these two approaches are highly complementary. Practitioners of these two approaches, I would suspect, have a lot to learn from each other. My second goal is to explore through dialogue with the people attending this session ways in which we could usefully expand communication between members of our two associations.

Audience: G, U

(Sunday 3:15-4:45 DAR 112)  
(Tuesday 8:45-10:15 DAR 112)

**Newmann, Fred M.**

Director  
National Center on Effective  
Secondary Schools,  
University of Wisconsin  
1025 W. Johnson St.  
Madison, WI 53706

**Staff Development for  
Higher Order Thinking: A  
Synthesis of Practical  
Wisdom**

Based on extended interviews of staff developers experienced in helping high school teachers promote higher order thinking, the characteristics of high quality, long-term programs will be described. Special attention will be given to the problems of integrating outside expertise with inside ownership and of designing staff developments to facilitate both individual and institutional change.

Audience: G, HS

(Tuesday 8:45-10:15 CH 68)

Newmann, Fred M.

**Higher Order Thinking in  
High School Social  
Studies: Indicators of  
Classroom Thoughtfulness  
and Factors that Affect  
Departmental Differences.**

A progress report from a long-term research project that asks, "To what extent is it possible to promote higher order thinking in high school social studies, and how do we explain the success of those departments which achieve the highest levels?" The project has developed several new indicators of classroom thoughtfulness. Based on observations of almost 400 lessons in twelve high schools, findings will be presented on (a) frequencies and correlations among the indicators; (b) the extent to which classroom thoughtfulness depends upon characteristics of students (e.g., age, ability, ethnicity), differences among schools or departments, and differences among teachers; and (c) the factors that contribute to departmental success.

Audience: G, HS

(Tuesday 10:30-12:00 CH 68)

**O'Connor, Ellen**

Lecturer

Department of Business  
Golden State University

Home Address:  
510 Panchita Way  
Los Altos, CA 94022

**Moods And Critical  
Thinking**

This seminar will deal with the subtle yet pervasive phenomenon of mood: mainly that of the teacher and the student but also that of the school, the institution, and the community.

Critical thinking demands a particular mood: one of openness, wonder, and inquiry. Counterproductive tendencies then include the teacher's self-positioning as an "expert" and the model of learning as accumulation of knowledge and facts.

Yet some of these tendencies constitute the traditional view of the classroom experience and of learning. The challenge becomes how to develop a mood which is appropriate to the teaching of critical thinking, immersed in the traditional pedagogy as we are.

The presenter will offer some practices she has adopted in her teaching to foster moods of wonder and inquiry which are so vital to critical thinking. Then she will open the forum for a general discussion from which other suggestions may emerge.

Audience: G

(Tuesday 1:30-3:00 DAR 139)

O'Connor, Ellen

**Critical Thinking  
Practices For  
Conversation**

This session will relate critical thinking practices from writing and reading to conversation and interaction. It offers exercises for use inside or outside of class to develop students' and teachers' effectiveness as communicators. The exercises have been used at the college and graduate levels with positive results.

The seminar will present typical "difficult" communication scenarios and will demonstrate how standard practices of critical thinking can help. These situations include evaluating performance, listening to evaluations (particularly "negative" ones), resolving conflicts, negotiating, selling/persuading, assigning tasks, and dealing with emotion-laden statements. There will be ample time for discussion.

Participants will leave with specific exercises and approaches for applying critical thinking skills to such conversations.

Audience: G

(Sunday 3:15-4:45 DAR 143)

**O'Connor, Ellen**

**The Practices Of Critical  
Thinking: Experiential  
Learning Exercises For  
College And Graduate-  
Level Instruction**

This workshop presents three experiential exercises and discusses their use and value. This is a followup to last year's session. Structural learning exercises give students a chance to observe, assess, and strengthen their thinking. The methodology presupposes that critical thinking is best taught as a skill; and the classroom serves as a lab to develop this skill.

*"In-Basket" Exercise:* students receive a packet which contains memoranda, messages, notes, and correspondence. Background is provided. Students identify problems, set priorities, and plan action.

*Problem-Solving Scenario:* students read about a product development problem. The exercise forces students to see they can only tackle the problem by sharing information. They must look beyond the symptoms to define the fundamental problem.

(O'Connor, Ellen, cont.)

*Case Study:* students write a case study of a personal or professional problem. They frequently identify assumptions and missing information which they couldn't observe before writing the case.

Emphasis will be placed on how to use and conduct the exercises so that teachers can readily and confidently use them in class.  
Audience: CC, U (Graduate and Undergraduate)

(Monday 1:30-3:00 STEV 3095)

**O'Connor, James**

*Assistant Professor*  
Department of Teacher Education  
California State University

9001 Stockdale Highway  
Bakersfield, CA 93311

**Teachers Using Critical Thinking Strategies in Their Classrooms. It's Happening!**

This session will review the results of a research study which analyzed teachers' thoughts for the presence of critical thinking strategies. Ten master teachers from the Peoples' Republic of China served as subjects for this study. The subjects were asked to think aloud while solving six different classroom management and discipline problems. Verbal protocols were constructed and analyzed for the presence of critical thinking strategies according to Paul's taxonomy.

A second study examined the results of classroom action research focusing upon improving of critical thinking and problem solving skills. Seventeen teachers ranging from grades 1-12 designed their own classroom-based experiments and projects which focused upon improving thinking skills with their students. These teachers used Paul's taxonomy of critical thinking strategies as a focus for developing their research projects. Videotapes and audiotapes of the teachers research summaries will be shared with session's participants.  
Audience: G, K-12

(Wednesday 8:45-10:15 STEV 3072)

**O'Loughlin, Michael**

*Assistant Professor*  
Department of Curriculum and Teaching  
208 Mason Hall  
Hofstra University  
Hempstead, NY 11550

**Genuinely Liberatory Teaching: The Challenges in Practising What We Preach**

**Co-Presenter  
Ahlquist, Roberta**

This session is intended for teachers (at *any* level) who are already engaged in forms of dialogical teaching or critical pedagogy. The session will take the form of a dialogue in which participants will pose problems about their practise of pedagogy for the group to address. It would be very helpful if some participants came to the session with problems already identified. Among the problems that we frequently wrestle with, for example, are the following: What are effective ground rules for facilitating voice? To what extent must subject matter spring from lived experience, and to what extent can a teacher introduce or impose reading and writing requirements? Accepting that education is not value free, should a teacher reveal her or his values to students? At what point? In doing so, how can a teacher avoid either being impositional or having students reproduce his or her values for the purpose of meeting course requirements? How best can a teacher handle the kind of resistance and pain students exhibit when challenged to become critical about their own lived and taken-for-granted experience? Copies of papers describing our approach to critical pedagogy and a starter bibliography will be distributed, and we will have some of the books and articles that have been most influential in our own thinking available for examination. Participants will be invited to share the names of articles and books that have been most influential in their own teaching. We will compile a master bibliography which will be mailed later to all participants.  
Audience: G

(Tuesday 3:15-4:45 STEV 3072)

**O'Loughlin, Michael**

**Educating for Possibility and Empowerment: An Introduction to Critical Pedagogy**

Critical pedagogy is often described in literature in language which serves to obfuscate rather than clarify methodology. In this session I will begin with a brief presentation outlining my own understanding of the main tenets of critical pedagogy. I will

(O'Loughlin, Michael, cont)

discuss the central role of student voice, the use of dialogical teaching to promote critical consciousness, and long-term goals of addressing issues of social empowerment and praxis. The remainder of the session will take the form of a dialogue in which participants explore ways of conceptualizing their own teaching (at *any* level) in a critical and liberatory manner. Copies of a paper describing my approach to critical pedagogy and a starter bibliography will be distributed, and I will have some of the books and articles that have been most influential in my own thinking available for examination.

Audience: G

(Tuesday 8:45-10:15 CH 20)

**Oxman, Wendy**

*Director*  
Institute for Critical Thinking  
Montclair State College  
Upper Montclair, NJ 07043

**Academic Tasks and the  
Development of Critical  
Thinking Dispositions**

Students experience schooling in terms of required academic tasks (Doyle, 1983), which are embedded within the social as well as the intellectual environments of classrooms. Teachers' and students' perceptions of the nature of schooling and of knowledge, their understanding of the classroom events represented by the academic tasks, and their own self-perceptions mediate the effects of these tasks on student achievement. Academic tasks requiring critical thinking run counter to the expected memory or routine activities that characterize most academic tasks in schools. Such new tasks demand not only different kinds of intellectual efforts, but depend on the establishment of new conceptions of schooling and of school knowledge, as well as new norms and patterns of social interaction for the classroom community, which must be "negotiated." Critical thinking dispositions, regarded as motivation to succeed on critical thinking tasks, can be developed in the context of these negotiations. What conceptions underlie motivation to succeed on these tasks? What are these motives, or dispositions, and how can their development be fostered? These questions will be addressed through a preliminary presentation and interactive discussion.

Audience: G

(Sunday 10:30-12:00 DAR 112)

**Paul, Richard**

*Director*  
Center for Critical Thinking and  
Moral Critique  
Sonoma State University  
Rohnert Park, CA 94928

**Intelligence and Good  
Thinking**

**Co-Presenter  
Perkins, David**

In the last twenty years a new debate has arisen around the question of the relationship of intelligence to good thinking. Perkins and Paul will review this debate and discuss their respective interpretations of the implications of the debate for the design of teaching and learning. Ample time will be left for interactive discussion with members of the audience.

Audience: G

(Tuesday 10:30-12:00 STEV 1002)

**Paul, Richard**

**Building for Success:  
Developing a  
Comprehensive Plan for  
School-Wide or District-  
Wide Reform**

A well-conceived plan for infusing critical thinking into the curriculum should have the following characteristics: 1) it should not compromise depth and quality for attractiveness, 2) it should allow for individual variations between teachers at different stages of their development as critical thinkers, 3) it should provide incentives to teachers, 4) it should combine a variety of staff development strategies, 5) it should be based on a broad philosophical grasp of the nature of education, integrated into a realistic pedagogy, and 6) it should be long-term, providing for evolution over an extended period of time. In this session Richard Paul will elaborate on these characteristics. Ample time will be allowed for discussion.

Audience: K-12, CC

(Sunday 1:30-3:00 STEV 1002)

**Paul, Richard**

**Richard Paul's Bag of Tricks: Practical Strategies & Tactics for Getting Students Involved in Their Learning**

Over the years, Richard Paul has developed a host of techniques for getting his students involved in their own learning. In this session he will share them and invite additional contributions from the audience.

Audience: G  
(Monday 8:45-10:45 STEV 1002)

**Paul, Richard**

**How to Teach for the Intellectual Virtues**

Some of the least recognized dimensions of critical thinking are the intellectual virtues: intellectual courage, intellectual humility, intellectual perseverance, and intellectual integrity. These traits are necessary to fairminded thought. In this session Richard Paul will clarify these crucial traits and explain how they can be cultivated in the classroom. Ample time will be provided for discussion.

Audience: G  
(Tuesday 3:15-4:45 STEV 1002)

**Perkins, David N.**

*Co-Director of Project Zero/  
Chair of Interactive Technology  
in Education  
Harvard University  
Graduate School of Education  
13 Appian Way  
Cambridge, MA 02138*

**Candide in EducationLand: Confronting School Realities Toward More Mindful Education**

We want wide-scale lasting innovations toward education more concerned with understanding and critical and creative thinking. So we envision ways it might happen, and try them out. But usually these ways don't take hold and propagate nearly as well as we would like. Maybe we are Candides in educationland, not facing up to certain of the realities and not finding the genuine leverage within those realities. This presentation begins by reviewing some hurdles impeding educational change. While several of the hurdles are familiar, several are less so. We explore how to turn these hurdles into "ramps" lifting toward better education. Some examples are discussed of efforts to design for more mindful education, taking advantage of school realities rather than working against them.

Audience: G  
(Sunday 3:15-4:45 STEV 1002)  
(Monday 3:15-4:45 STEV 1002)

**Phillips, Hollibert**

*Associate Professor  
Department of Philosophy  
Whitman College  
Walla Walla, WA 99362*

**Critical Thinking: Mining the Narrative**

All thinking is always about something or other. That is to say, there is always something thought about. That something may be simple or complex. And that something may be systematically thought of — explored, examined, assessed, etc. — with the aid of formal or informal logical devices and strategies, or some combination of them. But while clarity of logical representation of what is thought is a non-trivial matter, its value is often lost in sterile and unimaginative pedagogy. This lecture, didactic in nature, conceives critical thinking as, what I call, "mining a narrative." The method implicit in this characterization is, among other things, attentive to substantive detail and logical relationships understood as features of some unifying, often *implicit*, story or narrative. The term 'narrative' is intended to go well beyond storytelling ordinarily understood.

Audience: G, CC, U.

(Tuesday 3:15-4:45 STEV 3040)

**Phillips, Robert**

*Professor  
Department of Biology  
SUNY at Oneonta  
Oneonta, NY 13820*

**Aggression in Man and Animals — the Interdisciplinary Course and Critical Thinking**

During this session, we will examine the interdisciplinary course as an appropriate vehicle for the development of critical thinking skills. Having been involved in such a course entitled, "Aggression in Man and Animals," for 10 years, I have learned much about both the advantages and pitfalls of this approach. Aggression is a uniquely appropriate topic for a critical thinking approach because it has been studied by scholars from several quite different areas, and because it is a universal human "problem." We work on teaching students to 1) ask "better" questions; 2) identify the types of information necessary to answer those questions in an accurate, realistic, and complete manner; 3) interpret this data, forming a family of alternative explanations; 4) derive the most reasonable conclusions from the information; and 5) understand the weaknesses and limitations inherent in any specific method of acquiring knowledge. Class exercises, discussion topics, and the roles of outside speakers will be discussed.

Audience: CC, U

(Tuesday 3:15-4:45 DAR 122)

**Pogrow, Stanley**

Associate Professor  
College of Education  
University of Arizona  
Tucson, AZ 85721

**Developing Thinking Skills That Enhance Learning in At-Risk Students (Grades 4-8)**

This session will present findings from the Higher Order Thinking Skills (HOTS) project at the University of Arizona. This program has successfully replaced remedial activities in Chapter I programs with specially-designed thinking activities. Results show large increases in thinking and verbalizing, and even greater increases in standardized test scores than comparison groups. The techniques developed especially for providing thinking skills to Chapter I and Learning Disabled students will be discussed with particular emphasis on:

- a) curriculum development and teacher training techniques
- b) general thinking within thinking-in-content

Audience: 4-8

(Sunday	3:15-4:45	DAR 122)
(Monday	8:45-10:15	DAR 122)

**Pollard, Jim**

Instructor, Police Science  
Department of Administration of  
Justice

Spokane Community College  
N. 1801 Greene Street  
Spokane, WA 99207

**Infusing Critical Thinking Across the Community College Curriculum**

With funding support from the Carnegie Corporation and the John D. and Catherine T. MacArthur Foundation, Community Colleges of Spokane has been planning a long-term project to infuse critical thinking across the curriculum. This workshop will share the development plan created by a 25-member faculty task force for this two-college, one-institute district. Task force work dealt with implications for teaching methodology, curriculum revision, faculty development, assessment and evaluation, articulation with secondary schools and universities, and funding support. The task force also grappled with issues of securing faculty, administration, staff, and student support for the organizational change such a project will necessitate. The workshop will consist of a presentation followed by participant questions and discussions.

Audience: HS, CC, U

(Tuesday	3:15-4:45	STEV 2049)
----------	-----------	------------

**Porter, David**

Associate Professor  
Department of Behavioral Science  
and Leadership  
United States Air Force Academy  
USAF/DFBL  
Colorado Springs, CO 80840-5701

**Teaching Styles and Critical Thinking: Using Student Critiques as a Measure of Success**

Is there a "best" teaching style in terms of developing critical thinking skills in our students? This paper first suggests a multiple-channel educational model that served as a basis for development of an end-of-course student critique. Through factor analysis, teachers were identified by style: didactic, heuristic, and philetic. Educational factors (teacher, classmates, textbooks, projects/papers, and tests) were rated as to their contribution to students' critical thinking, personal enjoyment, and subject knowledge. The results of several semester's surveys show an interesting relationship between teaching styles and students' satisfaction and performance. Results suggest a move away from didactic teaching methods, as well as an increase in collaborative learning exercises, and an increase in the amount of critical thinking development students experience. Presentation of material including the survey will be informal, with time for discussion.

Audience: G

(Sunday	1:30-3:00	NICH 173)
---------	-----------	-----------

**Porter, David**

**Co-Presenter  
Hughes, Richard**

Department Head and Professor  
Behavioral Sciences and  
Leadership  
U. S. Air Force Academy  
DFBL  
USAF Academy  
Colorado, 80840-5701

**The Inter-Disciplinary Education at the Academy (IDEA) Program; Creating Opportunities for Academic Excellence**

Each year the Air Force Academy selects over 1000 of the top high school graduates; four years later over 80% of them graduate to serve as officers in the Air Force. Two years ago, a formal program (IDEA) began which linked different courses together through single sections of students. Students enrolled in a particular section of one course (e.g., Physics) were also enrolled together in another course (e.g., Psychology). Instructors often attended the alternate course with their students. Classroom activities and grading systems which facilitated positive interactions were

(Porter, David, cont.)

developed and tested. Over 40 pairings have been tried. About 80% of these were seen to be "very successful" by both students and faculty members. Measures of both student satisfaction and performance also provided strong support. This presentation would be informal with time for discussion.

Audience: G

(Wednesday 10:30-12:00 NICH 173)

**Presselsen, Barbara Z.**

Director, National Networking  
Research for Better Schools  
444 N. Third Street  
Philadelphia, PA 19123

**Teaching Thinking and  
the Restructuring of  
Schools**

Are the two movements — an emphasis on teaching thinking and the need to restructure American education — necessarily separate activities? The current educational scene is analyzed in terms of what really is needed to reformulate the vision of American schooling. The analysis will take into consideration: What are the influences that have sparked the current movement to teach critical thinking and higher order thinking processes? How do these concerns relate to the call to restructure education so that other outcomes are met — such as participatory management, the revamping of curriculum and instruction, the expansion of school-based decision making, revised assessment — and different practices institutionalized? The presentation will review various national efforts associated with both movements and examine the successes and difficulties in each, as well as suggest some strategies for a unified pursuit.

Audience: G

(Monday 3:15-4:45 DAR 122)  
(Tuesday 8:45-10:15 DAR 122)

**Rada, Muriel**

Professor  
Adopt-a-School Office  
Metropolitan Community College  
P.O. Box 3777  
Omaha, NE 68103

**Co-Presenter**

**Koneck, Jeff**

Professor/Coordinator  
Adopt-a-School Office  
Metropolitan Community College

**Critical Thinking  
Projects: Community  
Education**

Effective teaching and learning require dialogue, and according to Freire, a dialogue happens only when the participants have profound love, humility, faith, mutual trust, hope, and the ability to think critically. Please come and help us create new projects for new and established educational partnership programs. Metropolitan Community College, Miller Park Elementary, Bryan Jr. High and Flanagan High School are educational partners in our community. Faculty, staff and students plan writing partnerships, drug education activities, computer literacy projects, reading activities, and other arts presentations. The College received a F.I.P.S.E. Grant to continue the partnership program which has been one of the most exciting educational experiences that students and faculty have had for a long time. We would like to share ideas with you and ask you to participate with us in creating new partnership ideas that emphasize critical thinking techniques and strategies. Your ideas and your commitment make you perfect planning partners! Your ideas may involve your own institutions and/or ours. Please join us; there will be a brief, informative presentation, small group discussion/brainstorming, and collection and presentation of all project ideas.

Audience: G

(Wednesday 1:30-3:00 STEV 3008)

**Rohatyn, Dennis**

*Professor*  
 Department of Philosophy  
 University of San Diego  
 Alcalá Park  
 San Diego, CA 92110

**Einstein as a Critical Thinker**

Albert Einstein is synonymous with genius: a model of reason and of profound thought. Yet we worship Einstein more often than we study him. What made Einstein able and willing to challenge scientific orthodoxy? How did he overcome his own attachment to classical physics? Was he a critical thinker at all times, or only in professional matters? What can we learn by following his example and from analyzing his work? We examine Einstein's career from 1896 to 1935, in hopes of finding clues and discovering answers to all these questions. If "Einstein" is to be more than just a symbol, we must use his ideas and insights to achieve breakthroughs of our own.

Audience: G, U

(Monday	8:45-10:15	DAR 143)
(Tuesday	8:45-10:15	STEV 3038)

**Rohatyn, Dennis****Forced to Think: Critical Thinking and the Thought Police**

Some folks don't want to think. Why should we force them? Isn't ignorance bliss? Isn't making them think only going to make them unhappy? Isn't forcing someone to think just like forcing them to be free? Isn't it impossible as well as undesirable to compel others to be rational? What right do we have to wake people up from their dogmatic slumbers? What entitles us to ruin (or change) their lives? Wouldn't we resent such coercion if it were done to us? (Why) is it justified to teach and preach critical thinking when (at best) we make a few people either miserable or as enlightened as we imagine we are? In short, didn't Socrates

(Rohatyn, Dennis, cont.)

deserve what he got from the Athenians? If we think for ourselves, why do we insist on doing it for (and to) others? Isn't critical thinking a form of mind control? Shouldn't we leave others alone and just worry about our own rationality? Or should we stop worrying altogether?

Audience: G, U

(Sunday 10:30-12:00 STEV 3038)

**Rosenberg, Vivian**

*Associate Professor*  
 Department of Humanities-  
 Communication  
 Drexel University  
 Philadelphia, PA 19104

**Modifying Traditional Writing Instruction: Strategies to Facilitate Critical Thinking**

Although impressive changes have been made in composition pedagogy in the last few years, too many English instructors still follow — or are expected to follow — traditional strategies which undermine "strong sense" critical thinking. This presentation will review four problem areas: 1) Paper Topics; 2) The Research Paper; 3) The Tone of Student Papers; 4) The Use of Literary Language. This workshop should be of interest to composition instructors and other teachers who routinely assign papers as part of their course requirements. We will consider possible ways of modifying traditional instruction strategies to foster "strong sense" critical thinking. Material for classroom use will be distributed.

Audience: CC, U

(Sunday	3:15-4:45	STEV 3026)
(Tuesday	8:45-10:15	STEV 3008)

**Rosenberg, Vivian****Cultivating Emotional Intelligence: Strategies to Facilitate Critical Thinking**

This workshop is based on the assumption that emotional intelligence is an important part of "strong sense" critical thinking. Because human beings are not machines, we must recognize the inevitable interlacing of ideas and feelings at every level of experience. Participants in this workshop will have the opportunity to try out materials designed to improve psychological insight and facilitate the development of empathy skills. These materials can be used at all levels and are particularly useful for courses in history, literature, psychology, social work, education, business, nursing, and medicine.

Audience: G, HS, CC, U

(Monday	8:45-10:15	STEV 3026)
(Tuesday	3:15-4:45	ART 108)

**Rudinow, Joel**

Professor / Research Associate  
Center for Critical Thinking and  
Moral Critique  
Sonoma State University  
Rohnert Park, CA 94928

**Whittling Away at  
Education**

This year magazine entrepreneur Chris Whittle of Whittle Communications launched *Channel One*, a widely publicized pilot venture billed as a "new kind of partnership between business and education" to deliver "a package of technology that finally gives schools the tools to take advantage of the broad variety of educational programming available to them today"—and at the same time "bring teen-age students a world of news and information in a format specifically designed for them." But what may appear to be an innovative service to students and schools has nevertheless come under fire as an opportunistic act of commercial exploitation. The venture is to be funded by offering sponsors "generally deemed appropriate for teen-age audiences" two minutes of advertising time out of each twelve minute program. In this session we will view a *Channel One* program and examine the issues surrounding this "innovation."

Audience: G, HS

(Tuesday 10:30-12:00 STEV 3038)

**Ruggiero, Vincent Ryan**

Author/Consultant  
RD 4  
Box 544  
Oneonta, NY 13820

**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. This presentation will outline an approach for doing so, an approach that combines creative thinking and critical thinking and is applicable to both problem solving and issue analysis. Among the topics covered will be instructional objectives, teaching methods and materials, obstacles to students' cognitive development, and assessment.

Audience: G, JH, HS, CC, U

(Sunday 10:30-12:00 STEV 2049)

**Ruggiero, Vincent Ryan****Teaching Ethics Across the  
Curriculum: A Critical  
Thinking Approach**

Many groups have urged that ethics be taught from Kindergarten through graduate school. Unfortunately, most remain vague on HOW it should be taught. Neither "values clarification" nor lecturing students about ethics develops sensitivity to issues and judgment skills. The most effective approach is to guide students to think critically about ethical issues in the specific subject area.

(Ruggiero, Vincent Ryan, cont.)

This presentation will cover teaching objectives, criteria for ethical judgment, methods and materials, and assessment.

Audience: K-12, CC, U, G

(Monday 8:45-10:15 STEV 3046)

**Ruggiero, Vincent Ryan****Making Sense of  
Educational Reform**

The decade of the 1980's has produced an impressive yet often confusing assortment of proposals for reforming American education. Among the contributors have been The U.S. Department of Education, The Carnegie Forum on Education, The Holmes Group, and The Education Commission of the States, as well as such individual authors as Ernest Boyer, Allan Bloom, Mortimer Adler, and E. D. Hirsch. This presentation will identify several powerful obstacles to educational reform unacknowledged in the major proposals, and will explain why the teaching of thinking offers the only real hope for overcoming these obstacles.

Audience: G

(Sunday 1:30-3:00 STEV 3008)

**Ruggiero, Vincent Ryan****"Ha! Ha! I'm Thinking"**

Researchers have long noted that creative thinkers tend to have a well-developed sense of humor. Sadly, recent studies document that most classrooms are humorless places. This presentation will illustrate, with a generous helping of cartoons and jokes, how the habits of mind used to generate (and appreciate) humor can help students think more creatively and more critically. Giggling and chuckling will be permitted during this presentation, but guffawing will be prohibited.

Audience: G

(Tuesday 1:30-3:00 STEV 1002)

**Ruggiero, Vincent Ryan****Critical Thinking and the  
Concept of "Truth"**

This session will demonstrate strategies for teaching critical thinking and provide an opportunity for exercising critical thinking. Thought-provoking exercises will focus discussion on these questions, among others: Is truth a completely subjective matter, created by each individual to his or her specifications, or is it objective? Is it more reasonable to regard truth as relative or absolute? (Is there perhaps, a third view that is more reasonable than either of these?) How do our answers to these questions affect our conceptions of knowledge, opinion, morality, and CRITICAL THINKING?

Audience: G

(Monday 1:30-3:00 DAR 108)

**Saindon, Jean***Professor*

Departments of Modes of Reasoning, Natural Science, and Social Science

Atkinson College,

York University

4700 Keele Street

Downsview, Ontario M3J 1P3

Canada

In teaching critical reasoning, and particularly argument, we often focus on the logical and textual skills and ignore the interpersonal skills required to implement these skills. This participatory workshop shows how various interpersonal skills, including various communication skills, can be used as a framework for and supplement to the more traditional "logical" skills in the teaching of critical reasoning.

Audience: HS, CC, U

(Sunday

1:30-3:00

STEV 3049)

**Saindon, Jean**

**Interpersonal Skills as a Basis for Critical Reasoning: Inquiry & Dispute, Parts I and II**

Critical thinking is often carried out in an interpersonal context, either in the process of inquiry with another person or in the context of a controversy. Often, we teach our students the "logical" skills required. This workshop argues and then illustrates that these are not enough if we want our students to be critical in a "strong sense.". In addition to such skills as logical analysis, conceptual clarification, and problem-solving, we also need to teach them how to use a variety of interpersonal skills while thinking critically. This workshop first identifies some of the basic interpersonal skills and then demonstrates ways in which critical thinking skills can be structured into a classroom situation so as to develop interpersonal skills and critical reasoning skills simultaneously. The first section focuses on inquiry methods. The second focuses on controversy methods.

Audience: HS, CC, U

Part I (Monday 3:15-4:45

STEV 3026)

Part II (Wednesday

10:30-12:00

STEV 3038)

**Saindon, Jean**

**Structuring the Critical Reasoning Classroom for Cooperative Learning**

Often the university and community college classroom is structured, whether intentionally or not, to encourage individualist learning or competition between students. Even critical reasoning classes often have this format. This workshop starts from the premise that there are alternative ways in which a classroom can be structured so as to encourage cooperation within a critical reasoning environment. It also starts from, and will defend, the premise that cooperative learning is an essential, and under-used, ingredient of strong sense critical reasoning. The workshop will outline the basic principles of cooperative learning. Participants will then examine ways in which they can structure courses and projects using these principles.

Audience: HS, CC, U

(Wednesday

8:45-10:15

STEV 3038)

**Sarris, Greg***Professor*

Department of English

University of California, Los

Angeles

405 Hilgard Avenue

Los Angeles, CA 90024-1530

**Story in the Classroom: Crossing the Vexed Chasms From Personal Narrative to Critical Discourse in the Culturally Diverse Classroom**

Much has been said lately about the disaffected and alienated student. Many scholars have pointed to the power and potential of students' subjective responses as readers, writers, and, of course, critical thinkers. But how do we engage students whose backgrounds are culturally diverse in classroom activities so that we not only empower students to use their personal and cultural experiences as thinkers, but also enable these same students to do so in a manner that allows them to scrutinize their experiences? Storytelling in the classroom can work to achieve two goals simultaneously: students can express their experiences, say their reactions to a text, and then discover how those experiences might inform, and be informed by, other experiences. I will give three examples of how I have used storytelling in different classroom settings to foster critical discourse. Then, everyone present will have the opportunity to participate in a storytelling exercise.

Audience: HS, CC, U

(Tuesday 1:30-3:00

CH 20)

**Schoenfeld, Alan**

*Professor*  
School of Education  
University of California, Berkeley  
Berkeley, CA 94720

Mathematics is often taught as a formal discipline, divorced from reality and from common sense. In this talk I shall argue that mathematics is a form of common sense, and that the proper use of mathematical thinking is entirely consonant with the ideas of "critical thinking." The talk will present evidence of non-sense making in mathematics, trace the roots of such unfortunate behavior to instruction in school, and then examine some alternatives — alternative forms of instruction that focus on the intelligent use of mathematical notions to make sense of the world around us.

Audience: G

(Monday 1:30-3:00 STEV 1002)  
(Monday 3:15-4:45 CH 68)

**Sea, Geoffrey**

*Director, IN VIVO: RADIATION RESPONSE*  
1505 Jackson St., Apt. 106  
Oakland, CA 94612

**On Mathematics, Sense-Making, and Critical Thinking****Radiation And Response: Critical Thinking About the Atom**

In response to complex and chronic crisis, the nuclear industry has sponsored new "expert" programs including various schools of hazard analysis, risk assessment, and opinion engineering. These "schools" have come to dominate or define entire academic disciplines and departments. Meanwhile, overwhelmed by the complexities of nuclear technics, resistance to and within the industry has been caught in the dilemma of choosing between the cooptation of counter-expertise and the capitulation of uncritical rejectionism. In this session we will unknot the nuclear crisis, sort out the strands of reasoned resistance, and weave a coherent strategy for critical thinking and vital action on nuclear issues. Further, what is the appropriate critical response to industry-sponsored programism in schools and universities? Our general approach will be to treat the nuclear crisis (with emphasis on the low-level radiation controversy) as a case study for developing vital and democratic responses to complex scientific and technical challenges.

Audience: G

(Monday 3:15-4:45 STEV 3072)

**Seech, Zachary**

*Professor/Author*  
Department of Philosophy  
Palomar Community College  
San Marcos, CA 92069-1487

**Philosophical Chairs: A Format for Classroom Discussion**

Philosophical Chairs encourages and develops critical thinking skills as students work together on the discovery and analysis of evidence on a specific issue. The rules of participation invite open-mindedness and constant reevaluation of a position in the light of new evidence.

Audience: JH, HS, CC, U

(Tuesday 3:15-4:45 CH 20)

**Seech Zachary****Personalizing the Logic Course and Critical Thinking Instruction**

Courses in thinking skills may fail to motivate students because the materials that seem to the instructor so obviously relevant, such as current social and political issues, are not of interest to all students. By encouraging students to focus on their own "points of logical vulnerability" we can assure that the skills to be acquired are met in a meaningful context. The "stress-test" of thinking skills, after all, comes when the student cares-so much about the subject matter that she/he is tempted to weigh evidence unfairly. If class practice and testing centers on something "close to home" for each student, then it is likely to be meaningful and instructive.

Audience: G

(Monday 1:30-3:00 ART 108)

**Soven, Margot**

*Director, Writing Project*  
Department of English  
La Salle University  
Philadelphia, PA 19141

**Exploratory Writing as Resource for Dialectical Thinking****Co-Presenter****Sullivan, William**

*Professor*  
Department of Philosophy  
La Salle University  
Philadelphia, PA 19141

In our presentation we will argue for the value of exploratory non-deductive, dialectical modes of thinking and writing for the purpose of enhancing intellectual initiation to the disciplines. We will explain how students are typically introduced to the intellectual life of the university and explain how exploratory discourse can contribute to this process, and finally present examples of exploratory writing assignments in different

(Soven, Margot, cont.)

disciplines. We will describe how James Kinneavy's exploratory scheme, which relies on dialectical modes of thinking, motivates students to challenge theories and raise questions. The presentation will consist of brief remarks followed by a participatory workshop.

Audience: CC, U

(Monday 1:30-3:00 STEV 2049)  
(Tuesday 10:30-12:00 STEV 3008)

**Swartz, Robert**

*Founder*  
Critical Thinking and Creative  
Thinking Program  
University of Massachusetts  
Boston, MA 02125

**Infusing Teaching for  
Critical and Creative  
Thinking into Standard  
Subject Area Instruction**

In this presentation, a number of K-12 lessons designed to infuse teaching for important critical thinking skills into standard subject area instruction will be demonstrated. Each of these lessons involves restructuring the way regular curriculum materials are used so that both traditional content and good thinking can be learned together. The structure of these lessons will be explicated, concentrating on how they are designed to maximize chances that students will incorporate the ways of thinking taught, into their thinking habits inside and outside of school. The framework of thinking skills upon which these lessons are based will also be explained together with pointers as to how teachers can develop these lessons themselves.

Audience: K-12

(Sunday 3:15-4:45 ART 108)

**Swartz, Robert**

**Assessing the Quality of  
Student Thinking:  
Techniques for Classroom  
Teachers**

While multiple choice tests have been the standard vehicle used in national and statewide testing programs, assessment needs at the classroom level to diagnose and monitor the quality of student thinking call for other reliable, but less formal, means of assessment. One important way that teachers themselves can design such ways of assessing the critical thinking skills of their students is demonstrated and discussed in this presentation. It involves constructing appropriate prompting questions raised about examples which call for the use of specific critical thinking skills and then assessing students' responses against well-articulated characterizations of these critical thinking skills

(Swartz, Robert, cont.)

which teachers use in developing critical thinking lessons. A number of specific lessons will be examined, and participants in this workshop will be shown how they can make use of what is incorporated into these lessons to construct such assessment items.

Audience: G, K-12

(Tuesday 8:45-10:15 SU: MP)

**Sweers, Carolyn**

*Teacher*  
Department of Philosophy  
New Trier High School  
Winnetka, IL 60093

**Helping Students Examine  
Their Lives: How to Elicit  
And Analyze  
Experimental Information**

The basic intent of the Socratic method is to examine lives, not books or great ideas. This is difficult but possible to do in school. It is difficult because school removes persons from their "real life" setting and places them in an environment designed for specialized kinds of learning. "Real life" tends to be left outside the classroom door and is thereby immune to the kind of searching self-examination which is the heart and soul of the humanities. This workshop is based on the premise that the separation between "real" life and school can be overcome. The workshop will explore specific ways in which the humanities can be taught in a genuinely Socratic fashion.

Audience: G

(Tuesday 10:30-12:00 STEV 2049)  
(Wednesday 1:30-3:00 ART 108)

**Sweers, Carolyn**

**Effective Uses of the  
Dialogue Process in a  
Classroom Setting**

Students tend to learn more when they have the opportunity to share important life experiences that bear on the content being studied. On the other hand, unstructured sharing, though pleasant for the participants, has limited educational value unless the discussion is guided in such a way that insights are discovered and deepened in the process. The master of the technique of insightful conversation was Socrates. This participatory workshop will explore a variety of techniques for deepening understanding through Socratic dialogue.

Audience: G

(Wednesday 8:45-10:15 ART 108)

**Szumski, Bonnie**

Senior Editor  
Greenhaven Press  
P.O. Box 289009  
San Diego, CA 92128-9009

Using paraphrased primary sources in a pro/con format is an ideal way to teach students basic critical thinking skills such as fact vs. opinion, recognizing stereotypes, identifying propaganda techniques, and understanding words in context. Each participant will receive a copy of Greenhaven's *Opposing Viewpoints Juniors* series and discuss ways to introduce critical thinking through the use of controversial topics. Class participation is welcome.  
Audience: Gifted and/or 6th grade, JH, remedial HS

(Tuesday 1:30-3:00 ART 108)

**Talbot, Jan**

Consultant  
California Department of  
Education (CAP)  
Sacramento County Office of  
Education (Curriculum)  
Home Address:  
5307 Rimwood Drive  
Fair Oaks, CA 95628

**Beyond the Bubble:  
Reconceptualizing  
Assessment**

The new focus on assessment of learning is directed away from narrowly defined, fragmented objectives to a "stronger" sense of what constitutes critical thinking and learning. As teachers wrestle with authentic assessment they are looking at schoolwide pilots of portfolio assessments of reading and writing across the curriculum; at curriculum assessment modules (group tasks spanning three to five days); and at formats that involve debates, simulations, and mock trials. The California Assessment Program hopes to have statewide performance testing by 1991. Early efforts toward authentic assessment and several performance examples will be shared during the session.  
Audience: K-12

(Sunday 1:30-3:00 ART 108)

**Tatikonda, Rao J.**

Professor  
College of Business  
Administration  
University of Wisconsin-  
Oshkosh  
800 Algoma Blvd.  
Oshkosh, WI 54901

**Infusing Critical and  
Creative Thinking Into the  
Operations Management  
Courses**

This presentation is directed at the faculty teaching in business administration, economics, engineering, and technology disciplines at the community college, four-year college, and university levels. The courses can be either undergraduate or

(Tatikonda, Rao J., cont.)

graduate. Participants will see how this presenter tried to infuse critical and creative thinking into his operations management courses, what materials, methods, assignments, and examinations were used, challenges faced by the instructor and students, and the reactions and recommendations of the instructor and students. Finally, the participants will have an opportunity to discuss how this approach may be applied in their own courses and what further improvements can be made to this instructor's approach.

Audience: CC, U

(Sunday 10:30-12:00 STEV 3076)

**Tavris, Carol**

Author  
1847 Nichols Canyon Road  
Los Angeles, CA 90046

**Thinking Critically About  
Close Relations**

Why do perfectly calm, clear-headed people go completely mush-brained when the subject of love arises? Many individuals hold one of two equally unsupported views: the uncritical position that love is a mystery, or the cynical position that love is an impossibility. In this presentation I will discuss evidence that debunks some of the erroneous beliefs about love, attraction, and the ingredients of happiness in marriage. I hope to show why the principles of critical thinking apply to close relationships as they do to any other sphere of life — with perhaps more consequences for everyday contentment.

Audience: G

(Wednesday 8:45-10:15 DAR 108)

**Tetrault, Alma**

School Psychologist  
Westford Schools  
Home Address:  
10 Anthony Road  
Wayland, MA 01778

**Facilitating Thinking  
Dispositions In Children**

Evidence from the 1983 National Commission on Excellence suggests that schools have done well in teaching facts but also in inhibiting critical thinking in children. Students continue to make hasty judgements, fail to take into account the total situation, or to consider alternatives. In general they continue to use narrow-minded thinking which finds easy solutions.

While some educators have begun to teach for thinking in the schools, the major emphasis has been on the development of specific critical thinking skills, such as causal reasoning, prediction, and decision-making. Although these are important, there is a greater need to facilitate dispositions of thought, such as

(Tetrault, Alma, cont.)

openmindedness, seeking reasons, and suspending judgment until all the evidence is considered. Direct attention to these in the curriculum will enhance the use of critical thinking skills, not only to problems in subjects other than those in which these skills are taught, but to the more complex problems of the world in which these children will need to solve problems as adults.

This workshop will focus on developmental aspects of critical and creative thinking dispositions as endemic to small children and as representations of the biological imperative to discover. Ways of identifying and nurturing these dispositions in early childhood will be a major focus. An interactive format will help participants to integrate their own experience to generate an understanding of thinking dispositions. The presentation will use small group work, discussion and demonstration.

Audience: K-6

(Sunday 1:30-3:00 CH 20)

**Thayer-Bacon,  
Barbara**

*Doctoral Student*  
School of Education  
Indiana University  
Bloomington, IN 47405

**Children Should Be Heard:  
Developing an Open-  
Minded Foundation in the  
Early Years**

From an early age, children learn fairmindedness and reasonableness, by how they are treated and the opportunities available to them. Although we think it is important for children to speak and listen to what their peers say, we don't give them the opportunity to do this. We think children have valuable, insightful things to say, yet we don't let children say them. We know language development and thinking ability are interconnected, and we all support the idea that conversation is important, yet children spend hours daily in school, forbidden to discuss ideas or converse with each other. Families have little time at home together to encourage family discussions. This presentation will examine the current underlying philosophy, "children should be heard but not now," and look at what happens if we let children be heard. Participants will look at specific issues about the development of a foundation in the early years for openmindedness, and share examples and experiences from their viewpoints.

Audience: G, E

(Wednesday 1:30-3:00 STEV 3072)

**Tishman, Shari**

*Educational Consultant &  
Research Assistant for Project  
Zero*  
Harvard University  
Graduate School of Education  
13 Appian Way  
Cambridge, MA 02138

**Thinking Strategies and  
the Readiness Factor**

Thinking strategies are increasingly popular in contemporary thinking skills programs and for good reason. A student who has learned to think strategically is a student who has learned to effectively deploy a host of higher-order thinking skills. But just as competent athletic performance depends on adequate preparation, so too, the competent use of thinking strategies depends on an adequate state of mental readiness.

There has been a fair amount of attention to the content and design of thinking strategies, but the prerequisite cognitive and affective conditions that enable students to learn and wield them effectively remain largely unexplored. What is involved in preparing students to use thinking strategies competently? What are some features of mental readiness, and how are they taught?

This workshop explores the question of mental readiness. In part theoretical, and in part hands-on practical, it looks at various ways the teaching of mental readiness is, and might be, included in the teaching of thinking strategies.

Audience: Teachers, Administrators, Higher Education

(Monday 1:30-3:00 DAR 139)

**Tishman, Shari**

**Co-Presenter  
Perkins, David**

**Connections: A New Look  
at Subject Matter  
Instruction and Thinking  
Skills**

*Connections* is a new program aimed at helping teachers reshape their instruction so that the teaching of thinking is infused into the teaching of the regular subject matters. *Connections* is currently being developed by The Northeast Regional Laboratory and David Perkins at Harvard University. This approach is unique because it builds on the best that is known from research and practice in two spheres of knowledge — cognitive science and teacher development.

*Connections* is not a curriculum; it is materials for teachers to guide them in making their teaching more thoughtful and make the

(Tishman, Shari, cont.)

existing curriculum content more meaningful to students. *Connections* is made up of strategies that aim to teach broad teaching goals, such as problem solving, decision making, understanding, and communicating. By infusing these strategies into the regular lessons and, sometimes, applying them to out-of-school contexts, teachers help their students become good, independent, strategic thinkers.

Workshop participants will learn about the *Connections* approach and have hands-on practice with one *Connections* strategy.  
Audience: Teachers, Administrators, Technical Assistance Providers, e.g. state department of education staff, consultants; Higher Education

(Tuesday 10:30-12:00 DAR 112)

**Tonella, Deborah**

Teacher  
Howell Mountain School  
525 White Cottage Road  
Angwin, CA 94508

**A Walk in Their Shoes:  
Teaching Students How to  
See Other Points of View**

A British officer during the American Revolution. A contemporary Central American leader's view of 20th century Latin American policy. A Vietnamese nationalist's reasons for his stance in the 1950's. The Palestinian Question from the points of view of a Palestinian youth in the Occupied Territories, a Jordanian government official, a Conservative Jewish religious leader, a liberal American Jew, a PLO leader, an elderly Holocaust survivor now living in Israel. Mom's rationale for putting you on restriction. You know the scene. You ask students to write a diary entry for Harry Truman as he ponders whether to use the atom bomb or not, and you get back lines like, "The blast would be rad" and "Nuclear power plants are using it." Elementary, junior high and high school students have difficulty taking on the historical and experiential perspectives of others. They need plenty of opportunities to step into other people's world view. Come and see discussion, pre-writing, and writing activities in social studies and language arts that can help students take on a multiplicity of perspectives. Activities range from representing differing viewpoints in current issue debates to writing practical problem/solution letters that anticipate the needs and concerns of the opposing parties.  
Audience: JH, HS

(Sunday 1:30-3:00 DAR 112)  
(Tuesday 10:30-12:00 STEV 3028)

**Traverso, Everett**

Professor  
Department of Philosophy  
Santa Rosa Junior College  
1501 Mendocino Avenue  
Santa Rosa, CA 95401

**Extended Arguments and  
the General Education  
Student**

When critical thinking is taught as a general education requirement, at least three problems arise. The students' background knowledge becomes a problem, since the students in a general education class have very diverse backgrounds, and the passages used in practicing critical thinking skills frequently assume that the student has specific background information. A second problem can be motivation. The principles of logic may not be intrinsically interesting to a student who has been required to take the course. The third problem concerns goals. Since the course is required, the student should be able to see that the skills learned in the course are applicable to his academic work. However, the skills learned practicing on short arguments are not the same skills needed to analyze the longer passages that occur in most college work. One solution for these problems is to emphasize throughout a course extended arguments grouped around common themes. The session will show how a critical thinking course can be structured to do this. The session will also explore the participants' experience with these problems and exchange ideas about solutions.  
Audience: CC, U

(Sunday 3:15-4:45 STEV 3076)

**Tyner, Kathleen**

Executive Director  
Strategies for Media Literacy  
347 Dolores Street, Suite 306  
San Francisco, CA 94110

**Strategies for Media  
Literacy: From Rhetoric to  
Action**

Strategies for Media Literacy recommends pushing the definition of literacy beyond the printed page to include critical thinking about all sources of mass-mediated information. When people think critically about the content and structure of mass media, they are media literate. The session looks at models for media education from around the world and their application to media education in the United States. Participants will discuss the successes and failures of the U.S. critical viewing movement in the late 1970's and its implication for the present. Formal and informal settings for media literacy education will be examined. Finally, avenues to incorporate media literacy issues into educational policy decisions about curricula will be explored.  
Audience: JH, HS, CC, U, G

(Sunday 10:30-12:00 STEV 3026)  
(Tuesday 10:30-12:00 NICH 166)

**Van Diest, Paul**

Teacher  
Analy High School  
6950 Analy Avenue  
Sebastopol, CA 95472

**Critical Thinking in the Middle School and High School Classroom: Results-Oriented Frustration, Just Like the Old Days, Only Better, Or; The Chicken and the Egg**

Instead of emphasizing differences between disciplines, critical thinking develops the shared skills which all areas have in a thinking process that promotes clarity and collaboration rather than competition and separation. critical thinking is a natural choice for improving students' performances in reading, writing, speaking, and listening. Because thinking determines the quality of insight and performances in communication, and because most of our students' errors result from careless or flawed thinking, English teachers must consider the higher probability of ultimately improving students' skills through critical thinking instruction rather than following the traditional method of isolating individual skills and mistakenly focusing on the effect rather than the cause of our problems. This participatory workshop will focus upon critical thinking as the primary process through which student communication skills can be refined for truth and clarity, allowing them to understand and represent concepts more clearly to a greater number of people. Since this ability automatically transfers to other areas of study, application to other disciplines will be explored. Sample lessons, problems, frustrations, and successes will be presented as this session focuses upon critical thinking within and beyond the traditional domains of English instruction.

Audience: JH, HS

(Monday 10:30-12:00 STEV 3040)  
(Tuesday 1:30-3:00 STEV 3049)

**Velk, Robert J.**

President  
Cognitive Science Corporation  
Post Office Box 1487  
Fort Collins, CO 80522

**Hot Cognition: Teaching Critical Thinking to Busy, Experienced (Often Cynical) Adults — Analyzing Ill-Defined Problems**

Executives, managers, administrators, and technical experts work on complex, multilogical situations with severe time constraints and interpersonal-political pressures. In government and industry it is common to see experienced people believing that statements such as "the homeless," "low productivity," "a lack of creativity," or "poor morale," constitute understanding of the

(Velk, Robert J., cont.)

problem. Dangerously premature decision making (usually involving brainstorming) aimed at resolving such global conceptions is often the norm.

This presentation will overview some thinking techniques which have proven successful in helping experienced adults understand what it means to define or understand current real life situations.

Audience: CC, U, G

(Tuesday 3:15-4:45 STEV 3028)

**Velk, Robert J.**

**Hot Cognition: The Problem with the Word Problem**

What is the difference between problem-solving and decision-making? Are they just different kinds of decision situations? Knowing the difference between choice problems, cause problems, defining ill-defined situation problems, implementation planning problems, strategic planning problems, etc., is critical to selecting the most appropriate method of analysis to use on current real life situations.

This presentation will cover heuristics taught to executives to help them select the most appropriate method of analysis, and to develop a concise statement of the question-at-issue. A convergent problem solving (not decision-making) method will also be reviewed.

Audience: CC, U, G

(Wednesday 8:45-10:15 STEV 3028)

**Velk, Robert J.**

**Hot Cognition: The Use and Abuse of Knowledge and Experience — Components of an Intensive Seminar/Workshop Used to Upgrade the Critical Thinking Skills of Experienced Adults**

The Productive Thinking Seminar has been used to improve the critical thinking skills of executives, managers, administrators, technical specialists, and production personnel. The roles of hot cognition and cold cognition in teaching critical thinking skills to adults will be addressed, along with moving from concrete to the

(Velk, Robert J., cont.)

more abstract concepts, barriers to learning in the adult, and moving from weak to strong sense critical thinking.

Some of the primary blocks to critical thinking in experienced adults will be highlighted.  
Audience: CC, U, G

(Wednesday 10:30-12:00 STEV 3028)

**Walton, Craig**

*Professor*  
Department of Philosophy  
University of Nevada, Las Vegas  
4505 S. Maryland Pkwy.  
Las Vegas, NV 89154

**Critical Thinking and The  
NAEP Illiteracy Studies**

The National Assessment of Educational Progress (NAEP) recently published studies of what it defines as the "functional literacy" of our 21-25 year old Americans. In these studies, significant drops in reasoning ability occur when questions changed from single-item, or clearly-flagged information, to two- (or more) item questions calling for ability to interpret and analyze information in order to solve the problem and construct the answer. These findings were the same for verbal as for mathematical skills. The weakness of young Americans, the studies conclude, is a "functional illiteracy" by which they are not able to "process" information when it is provided. This phrase is not referring to E.D. Hirsh's notion of "cultural literacy," but is drastically more primitive, a much earlier and foundational prerequisite to the possibility of anyone being able to read and evaluate any serious cultural achievement.

In this talk I want to do two things: 1) present a variety of examples from the NAEP studies in order to illustrate the depth and width of the link between "functional illiteracy" and inability to reason; and then 2) to indicate which critical thinking skills are needed, from primary grades on up, if our people are to become able to grow from a single-factor or information-recognition levels, so close to "conditioning," to multi-factor, synthesizing and problem-solving levels of reasoning such as we associate with adulthood, self-government and the (possible) freedom of the human spirit.  
Audience: G

(Wednesday 10:30-12:00 STEV 1002)

**Walton, Craig**

**Critical Thinking and the  
Art of Judgment**

From Socrates, Plato and Aristotle to Montaigne, Pascal, Hume, and Dewey, a vital but largely-forgotten part of the history of logic had discussed the "art of judging well," and its relation to the more formally definable and rule-governed processes of formal, purely-deductive judgment. For these thinkers, it was necessary to show both where and why the art of judgment comes to bear in our uses of the various reasoning skills. In this talk I would like first to illustrate what is meant by the art of judgment as discussed by several of these classical thinkers, and then present a sequence of places in the teaching of critical thinking where a student's potential art of judgment comes into play, and what we can do to nurture it. I shall also indicate where, in my understanding of it, the formal judgment skills come into play, and where they do not. The presentation is intended for a general audience, but draws upon the history of logic in ways of special interest to philosophers. My larger concern is to contribute to the identification of, and then the cultivation of, each individual student's own powers of judgment.  
Audience: G

(Tuesday 8:45-10:15 DAR 139)  
(Wednesday 1:30-3:00 NICH 173)

**Webster, Yehudi**

*Professor*  
Department of Pan-African  
Studies  
California State University, Los  
Angeles  
Los Angeles, CA 90032

**Are There White and Black  
People? Reasoning about  
Racial Classification**

Criticisms of race 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 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 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 (realistic and relativist) philosophical inputs in the training of teachers and social scientists.  
Audience: G, K-12, CC, U

(Wednesday 10:30-12:00 DAR 143)

**Weddle, Perry**

*Professor*  
 Department of Philosophy  
 California State University,  
 Sacramento  
 6000 J Street  
 Sacramento, CA 95819

**"Action" Arguments**

If critical thinking textbooks were a reliable indicator, then you'd imagine that 95-100% of all arguments conclude, "Such-and-such is the case." Critical thinking textbooks are not reliable indicators. Of the next ten arguments you encounter, the presenter bets that at least five, if not all, conclude not in terms of what is the case, but in terms of what the addressee should **DO**. Typical conclusions of ordinary arguments are, for example: "Buy *v*;" "Follow practice *w*;" "Vote for *x*;" "Join *y*;" "Avoid *z*." To redress this imbalance the presenter will outline an understandable, pedagogically useful schema, an expansion and update of the Aristotelian practical syllogism. He will explain his monster, defend his many choices, and argue for the schema's widespread adoption into critical thinking instruction.

Discussion (ample) will entertain at least the questions, "What are the plusses and minuses?" "Can it be done better?" "Is it needed at all?" And, "Hey, hasn't an important question been begged?"

Audience: HS, CC, U

(Monday 8:45-10:15 NICH 173)

**Weddle, Perry****A Streamlined Critical Thinking Essay Strategy**

Paper scoring can be a scourge. Hating it roundly, the presenter has devised a scheme (scam?) by which at once to combine the critical thinking tasks of argument analysis and argument construction; to allow students frequently to exercise and practice many essay-writing skills; to quiz; and to give instructors of normal energies a slight respite, or to give workaholics opportunity to assign even more writing.

The scheme single-spaces a short (6-12 line) piece of argumentation atop a standard (occasionally legal-size) otherwise blank ditto sheet. Students can't write beyond the bottom of the sheet. They answer according to a "canned" format. The format makes some organizational decisions for students, allowing for attention-to-content.

In this workshop, participants will be asked to write an answer themselves (anonymous, ungraded). Then, the pros and cons of the scheme will be discussed by all. Finally, the not inconsiderable topic of critical thinking paper scoring in general will be discussed.

Audience: HS, CC, U

(Sunday 10:30-12:00 DAR 139)

**Weinstein, Mark**

*Associate Director*  
 Institute for Critical Thinking  
 Montclair State College  
 Upper Montclair, NJ 07043

**Critical Thinking Across the Disciplines**

If critical thinking is to go "beyond the superficial" at the undergraduate level, it must respond to the embeddedness of college learning in the various academic disciplines. In particular, the following question must be responded to: Is critical thinking as currently conceived sufficient to develop and apply appropriate skills and dispositions to the various areas of college studies and to transfer such competencies to problems that cross disciplines and especially to complex problems in the "real world"?

This presentation will offer an analysis of thinking in the disciplines that supports the particularity of inquiry and language in the various fields. Given the analysis, it seems likely that most current conceptions of critical thinking are insufficient and possibly unnecessary for the educational objectives implicit in the question above. A model for critical thinking across the disciplines will be offered that has both theoretic and practical consequences for the critical thinking movement. The presentation includes a formal paper and is intended to prompt discussion.

Audience: CC, U

(Monday 10:30-12:00 DAR 108)

**Wiederhold, Charles**

*Director of Think Camp*  
*Staff Development Coordinator*  
 Placer County Office of Education  
 360 Nevada Street  
 Auburn, CA 95603

**Quality Questions to Promote Critical Thinking**

The art of questioning has a rich tradition dating back to Socrates and accounts for eighty percent of classroom activity, yet few teachers have been willing to examine the distribution and types of questions which they ask. This presentation will focus on the research related to teacher questioning and will present participants with a recently developed matrix of question types which is a practical observation instrument for examining teacher questions. Information pertaining to the relationship between teacher questions and student thinking will be addressed. Also included in this presentation will be many "how-to" activities to motivate thinking from the Think Camp staff development program.

Audience: G,

(Monday 10:30-12:00 DAR 143)

**Wiederhold, Charles**

**Co-Presenter**

**Olive, George**

*Co-Director of Think Camp  
& Principal*

Nevada City Elementary School  
505 Main Street  
Nevada City, CA 95959

Think Camp, which began as an experimental staff development program, is now in its fourth year and has successfully trained over 200 teachers and administrators. The basic philosophy of Think Camp is that teachers must personally develop the attitudes, dispositions, and skills of critical thinking before they can successfully implement them in their classrooms. Think Camp is a unique program which has created exercises in "strong sense" critical thinking as proposed by Richard Paul and others. The program utilizes materials from several major programs including ASCD's *Tactics* and deBono's *Thinking Course*. Special features of the program include resident scientists and artists who discuss critical and creative thinking in their own work together with a program that shifts curriculum emphasis annually to align with the California state adoption cycle. Emphasis in this presentation will be on program content and on the design features necessary for the establishment of a powerful K-12 program.

Audience: K-12, G

(Wednesday 8:45-10:15 DAR 139)

**Wilson, John K.**

*Instructor*  
School of Arts and Humanities  
Charles Stewart Mott  
Community College  
1401 East Court Street  
Flint, MI 48502

**Critical Thinking  
Transference Across the  
Disciplines**

After examining John McPeck's claim that "critical thinking" shifts in meaning when applied to various subject matters, I proceed to examine the skills involved in the natural and social sciences, using chemistry and history as examples. The skills involved in the disciplines are first reviewed independently and then in the context of the cognitive information processing model for cognitive psychology. In concurrence with McPeck, I claim that discipline-specificity is a reasonable assumption regarding the transference of critical thinking across some of the disciplines, and that critical thinking in a discipline entails a substantial awareness of discipline-specific background information.

Audience: CC, U

(Wednesday 10:30-12:00 STEV 3008)

**Designing And Managing  
A Comprehensive K-12  
Staff Development  
Program In Critical  
Thinking**

**Winocur, S. Lee**

*National Director IMPACT &  
Administrator*  
Center for the Teaching of Critical  
Thinking  
21412 Magnolia Street  
Huntington Beach, CA 92646

**IMPACT**

Extensive Research has shown that learning just the mechanics of basic skills (and thus teaching by "mindstuffing" students) is no longer acceptable. Real competency requires training in critical thinking. IMPACT (Improving Minimal Proficiencies by Activating Critical Thinking) focuses on effective strategies for infusing the direct teaching of critical thinking into existing curriculum. IMPACT has been successfully implemented in classrooms at all grade levels, K-College. This presentation will give participants an awareness of thinking skills necessary to implement such a program. Some examples of instructional techniques will also be presented.

Audience: K-CC

(Monday 10:30-12:00 DAR 139)

**Witte, Mariys**

**A Syllabus for a  
Curriculum on Medical  
and Other Ignorance:  
Probing the Depths of the  
Unknown and Chaos**

**Co-Presenter**

**Kerwin, Ann**

**Co-Presenter**

**Tyler, James**

*Research Specialist in Ignorance*  
University of Arizona, Tucson

**Co-Presenter**

**Witte, Andrea**

*Research Specialist in Ignorance*  
University of Arizona, Tucson

For the past several years, we have designed and taught courses in Medical Ignorance at the College of Medicine and special seminars on Ignorance in the Honors Program at the University of Arizona. Our associates have presented related offerings elsewhere. While we do not presume to be experts on ignorance, we and our students find exploration of the vast terrain of the not-known exciting and rewarding. A syllabus which sets out some approaches, techniques, methods, and responses to this Curriculum on Medical Ignorance is ready for field-testing. We welcome this opportunity to disseminate the syllabus and solicit critiques and suggestions, as well as to arrange for field-testing and collaborations with participants. Those who traverse the unknown forsake the superficial safety of the "knowledge factory," the "way we've always done it," and "the way everyone does it." So,

(Witte, Marllys, cont.)

while the mission of enlightened "ignorami" is not attractive to all, we urge adventurous, inventive, critical/creative thinkers to join us for this participatory foray into some depths of ignorance and chaos, and perhaps to linger there awhile.

Audience: G

(Tuesday 3:15-4:45 NICH 204)

**Yli-Luoma, Pertti V. J.**

Research Associate  
University of Uppsala  
Box 1604  
75146 Uppsala, Sweden

**Predictors of Critical  
Thinking Abilities  
Cross-National  
Multivariate Study**

Some predictors of critical thinking abilities physics learning and teaching processes will be discussed. Home background, classroom climate, and teaching strategies are considered as exogenous predictors of critical thinking abilities. The logical structures that students create in physics are considered as endogenous predictors of critical thinking abilities. The goal is to develop and empirically test a conceptual model of these concepts. The LISREL method is used.

The conceptual model was empirically tested on 18-year-old students (around 20,000 students) in Australia, England, Finland, Hungary, Italy, Sweden, and the U.S.A.

The data strongly support a critical laboratory approach to physics learning and teaching processes. The exogenous variables, home background and classroom climate strongly predict physics achievement through critical thinking. Home background seems to be a more powerful predictor of both critical thinking ability and physics achievement than classroom climate. Cross-national differences were found.

Audience: G

(Sunday 3:15-4:45 NICH 204)

## PANELS

### Student Perspectives on Critical Thinking

Sonoma State University Students:

**Adamson, Kenneth**

**Pitstick, Randy**

**Adrian, Jennifer**

**Scott, Rick**

**Wilkinson, Roxane**

A panel of graduate and post graduate students will express their views on and experiences with critical thinking. Each panel member has had considerable experience both as students and as teaching assistants for Richard Paul. The panel members will discuss their personal experiences in the traditional, didactic coursework which prevails in their education as well as critical thinking in their personal lives and in various classes. Finally, they will discuss their perspectives on the relationship between critical thinking and the educational process. Ample time will be allowed following the presentation for participants' questions and comments.

Audience: G

(Tuesday 1:30-3:00 SU:MP)

## A Variety of Strategies for Developing and Assessing Critical Thinking

### Armstrong, Nolan A.

*Professor*  
Department of Leadership and  
Educational Policy Studies  
Northern Illinois University  
DeKalb, IL 60115

### Armstrong, Carmen

*Professor*  
School of Art  
Northern Illinois University

### Harkins, Michael

*Director*  
Research, Evaluation, and  
Program Development  
Naperville Community School  
District #203  
203 West Hillside  
Naperville, IL 60566

### Bunt, Don D.

*Professor*  
Department of Math  
and Computer Science  
Chicago State University  
95th and Kings Drive  
Chicago, IL 60628

### Bunt, Marilyn

*Dean*  
College of Nursing  
Lewis University  
Route #53  
Romeoville, IL 60441

### Lang, Robert

*Professor*  
Department of  
Leadership and Policy  
Studies  
Northern Illinois  
University

Commissions concerned with educational reform have cited many problem areas in education. One goal that emerged in every report is to increase the importance of teaching for higher order thinking, problem-solving, and/or critical thinking.

Panelists will address some specific problems encountered in teaching for and assessing higher order thinking and related abilities in the following disciplines: Art, Computer Science, Foundational Studies, Nursing, and the Social Sciences. In addition, the importance of leadership strategies conducive to facilitating higher order thinking will be discussed.

After an overview by the panel organizer, each panelist will give special attention to one of the following topics: foundational studies as basic to critical thinking in the educational reform movement, group problem solving strategies in computer science, leadership strategies to facilitate problem solving and critical thinking, assessing critical thinking in nursing, use of simulation in staff development to facilitate critical thinking strategies, or non-traditional assessment of critical thinking in art education. A discussion among panelists will be followed by small group sessions with each panel member responding to questions from audience members who wish to discuss critical thinking in the particular context from which the presenter spoke.  
Audience: G

(Monday 8:45-10:15 STEV 3008)

## Achieving Extraordinary Ends

Bailin, Sharon

Hatcher, Donald

Ralph Johnson

This panel will be based on Sharon Bailin's new book, entitled *Achieving Extraordinary Ends: An Essay on Creativity*.  
Audience: G, CC, U

(Tuesday 3:15-4:45 DAR 108)

## Intersegmental Transfer and Standardization of Critical Thinking Courses in California

Geigle, Ray

*Chair*  
Academic Senate  
California State University  
400 Golden Shore, Suite 134  
Long Beach, CA 90802

Kully, Bob

Rudinow, Joel

Weddle, Perry

Recent attempts to achieve a General Education Transfer Curriculum common to the nine campuses of the University of California, the nineteen campus California State University system, and the 106 California Community Colleges have raised issues over the structure and status of critical thinking courses in the higher education curriculum. This panel will discuss the background and current status of the General Education Transfer Curriculum, as well as its future implications for critical thinking instruction in the state of California.  
Audience: CC, U

(Tuesday 3:15-4:45 SU: MP)

## Critical Thinking and the Liberal Arts

### Hatcher, Donald L.

Center for Critical Thinking at  
Baker University  
Baker University  
Baldwin, KS 66006

### Kirk, Earl

Professor  
Department of Foreign Language  
Baker University

### Horvath, Karen

Professor  
Department of Political Science  
Baker University

In this session, a panel of educators from a variety of disciplines will discuss Baker University's new required two-semester critical thinking course which integrates instruction in critical thinking and English composition with the study of primary texts often taught in the humanities: Hesiod, Biblical texts, Platonic Dialogues, Roman literature, and selections from later utopian literature. This discussion will focus on issues surrounding faculty development, course development, and problems with trying to integrate instruction in reasoning and writing skills, while studying texts. Course description and syllabi will be distributed. Because the course was developed through a grant from the Department of Education Fund for the Improvement of Post-Secondary Education (FIPSE), the panel members will make suggestions for attaining outside funding for the development of such programs. Special attention will also be given to the problems of assessing the success of such programs.  
Audience: CC, U

(Monday 8:45-10:15 SU:MP)

### Price, Lucy

Professor  
Department of English  
Baker University

### Wiley, George

Professor  
Department of  
Philosophy  
Baker University

## Critical Thinking Across the College Curriculum

### Hoaglund, John

Director, Center for Critical  
Thinking at CNC  
Christopher Newport College  
Newport News, VA 23606

### Bryan, Sandra

Professor,  
Department of Education  
Christopher Newport College

### Pellett, Lea

Chair  
Department of Sociology & Social Work  
Christopher Newport College

### Sacks, Larry

Professor  
Department of Biology, Chemistry,  
and Environmental Science  
Christopher Newport College

How can we incorporate critical thinking objectives into introductory courses in the disciplines? A response is offered for the disciplines of sociology and chemistry as well as teacher education in this presentation by Fellows of the Center for Critical Thinking at Christopher Newport College. A generous grant from the State Council of Higher Education in Virginia gave them the opportunity to re-design introductory courses and develop teaching and testing materials for critical thinking in their disciplines. Teaching materials from the courses taught will be shared with participants.

Audience: CC, U

(Tuesday 10:30-12:00 SU:MP)

## Community Service, Civic Responsibility, and Critical Thinking

### Lazere, Donald

### Milton, Catherine

Director  
The Public Service Center  
Owen House  
Stanford University  
Stanford, CA 94305

### Choate, Robert

Operation Civic Serve  
3717 Buchanan St., #4  
San Francisco, CA  
94123

In recent years there has been a growing movement in high schools and colleges to combine course work with community service activities, with the intention of fostering a sense of civic responsibility in students. Although not many explicit links have been made between these activities and critical thinking, civic activism can be far more effective than classroom exercises in helping students to overcome egocentrism and sociocentrism. This panel will explore ways of linking instruction in critical thinking with community service projects and will survey service-for-academic credit courses in California and elsewhere.  
Audience: G

(Tuesday 3:15-4:45 CH 68)

## Critical Thinking Across the Campus: A Report On The Gavilan College Staff Development Program

### **Klein, Donald R.**

Chair, Planning Committee  
Department of Philosophy  
Gavilan Community College  
5055 Santa Teresa Blvd. Gilroy,  
CA 95020

### **Bishop, Cheri**

Registrar,  
Gavilan Community College

### **Epstein, Janet**

Director  
Assessment Center  
Gavilan Community College

### **Fletcher, Frank**

Professor  
Department of Social Science  
Gavilan Community College

### **Johnson, Martin**

Professor  
Department of Natural Science  
Gavilan Community College

### **Paul, Richard**

Consultant, Planning Committee  
Director, Center for Critical Thinking  
and Moral Critique

With Critical Thinking becoming, in the early part of the decade, an expected General Education component in California Higher Education, Gavilan College, during a 1986 Staff Development Program, moved, in compliance with Title V, to immediately implement Critical Thinking across the curriculum. Within a year, interest in the principles and concepts of Critical Thinking expanded to a point where it was proposed that Critical Thinking would be implemented across the *entire campus*. This panel, which served as the planning committee and consultant to infuse Critical Thinking throughout the campus, will discuss the initial concept, the plan development, the plan implementation, and the outcome. Included will be perceived strengths and weaknesses, suggested alterations, and other pertinent reflective comments. Audience questions and interchange will be encouraged.

Audience: CC, G

(Monday 1:30-3:00 SU: MP)

## Critical Thinking and Faculty Development

### **Lipman, Matthew**

### **Michelli, Nicholas**

### **Oxman, Wendy**

### **Waters, Gregory**

Acting President for Academic Affairs  
Montclair State College  
Upper Montclair, NJ 07043

### **Weinstein, Mark**

Montclair State College, with funds from the New Jersey Department of Higher Education, has established an Institute for Critical Thinking to serve as a "catalyst in the development of educational excellence across the curriculum at the College." After two years of faculty development efforts toward this goal, we have learned a great deal that is of relevance to educators interested in the design and implementation of critical thinking programs. The basic structure of Montclair State College's program will be presented, as well as our sense of what has worked and what has not, analyzed with reference to principles of institutional change and from the perspectives of both administration and faculty.

Audience: CC, U

(Monday 3:15-4:45 SU: MP)

### **No School is an Island: Social Conditions for Critical Thinking in Our Schools and Others — A Three Part Panel Discussion —**

Panel Organizer:

### **Zelazkiewicz, Marek**

Associate Professor  
Center for Slavic and East European Studies  
University of California  
Berkeley, CA 94720

In the long run the success of educational change depends on factors beyond any school. The reformer who attempts to infuse critical thinking into the curriculum is not an exception to this principle: the less the society opposition and the more the support for his/her action, the greater the chances for our reformer's success.

Identifying those aspects of social life (culture, politics, technology, and economy) and those social units (persons, groups, and institutions) which can likely contradict or support critical thinking in our schools is not less important than the redesign of a curriculum. The panels will examine both the adversaries and the allies of critical thinking and their impact upon school practices.

We will discuss conditions for critical thinking and strategies to minimize influence of the adversaries and maximize support of the allies.

**Part 1: International Perspective on Social Conditions for Critical Thinking**

Experience from Austria, England, Hungary, Poland, and the US will be discussed.

**Moderator: Zelazkiewicz, Marek**

**Panelists: Boal, Iain**  
*Professor*  
Program of Values, Technology, Science & Society  
Stanford University  
Stanford, CA 94305

**Miszlivetz, Ferenc**  
*Visiting Professor*  
Institute for International Studies  
University of California, Berkeley  
Berkeley, CA 94720

**Misztal, Broniek**  
*Professor*  
Department of Sociology  
Purdue University  
Fort Wayne, IN 46805

**Part 2: Domestic Adversaries of Critical Thinking and Strategies to Minimize Their Impact**

Experience from California and other states will be discussed.

**Moderator: Zelazkiewicz, Marek**

**Panelists: Bielecki, Marek**  
*Professor*  
Department of Philosophy  
California State University, Hayward  
Hayward, CA 94542

**Ducat, Stephen**  
*Professor*  
Department of Psychology  
New College of California  
50 Fell Street  
San Francisco, CA 94102

**Stoper, Emily**  
*Professor*  
Department of Political Science  
California State University, Hayward  
Hayward, CA 94542

**Part 3: Domestic Allies of Critical Thinking and Strategies to Maximize Their Support**

Experience from California and other states will be discussed.

**Moderator: Zelazkiewicz, Marek**

**Panelists: Chico, Nan**  
*Professor*  
Department of Sociology  
California State University, Hayward  
Hayward, CA 94542

**Kloss, Robert**  
*Professor*  
Department of Sociology  
California State University, Sacramento

**Nebri, Lloyd**  
*Professor*  
Gifted Children Program  
University of California, Berkeley  
5607 Tolman Hall  
Berkeley, CA 94720

Audience: G

Part 1 (Tuesday	10:30-12:00	DAR 143)
Part 2 (Tuesday	1:30-3:00	DAR 143)
Part 3 (Tuesday	3:15-4:45	DAR 143)

## SPECIAL INTEREST GROUPS

(Tuesday, August 8, 7:35-8:35 am)

In order to facilitate networking within critical thinking special interest groups, a special time has been set aside for such groups to organize themselves if they so wish. The nature and extent of the organization that is set up will be dependent entirely upon the will of the members present at the meeting. The Center will continue to schedule meeting times for the groups at future conferences if interest justifies such continuance. Please feel free to join any of the following groups and to act as a mover in setting up a network.

- Elementary (K-6) SU: MP
- Middle School (7-8) SU: MP
- High School (9-12) SU: MP
- Critical Thinking Staff Development CH 68
- Community College STEV 3008
- Four-Year College and University STEV 2049
- Critical Thinking in Literature and Language Arts STEV 3072
- Critical Thinking and Psychology STEV 3046
- Critical Thinking in the Arts ART 108
- Critical Thinking in Science and Math CH 20
- Critical Thinking Assessment STEV 3026
- Critical Thinking for the Slow or Disadvantaged Learner STEV 3038
- Learning and Tutorial Centers STEV 3040
- Feminist Education STEV 3049
- Critical Pedagogy N 173
- Critical Thinking and Computer Programs N 204
- Informal Logic and Reasoning Studies STEV 3028
- Critical Thinking Staff Development and Inservice STEV 3076
- Critical Thinking and Cooperative Learning STEV 3095
- Critical Thinking and Religious Education CH 10
- Critical Thinking and Communication Studies NICH 166
- Critical Thinking and Preservice Education STEV 3030
- Starting Critical Thinking Newsletters STEV 3077
- Critical Thinking for Pre-School Children NICH 320

## VIDEOTAPE RESOURCES

Videotapes are one of the most important resources for critical thinking in-service education. They can be used in a variety of ways: 1) as discussion starters, 2) as sources of information on the nature of critical thinking, 3) as models of critical thinking, and 4) as models for classroom instruction. All of the following videotapes have been developed as low-cost resources. No attempt has been made to achieve broadcast quality. Some of these videotapes will be shown in an alcove in the Commons during the evening social hours and during the day in the Student Union downstairs lobby. A complete description of available videotapes may be picked up at the conference registration desk. A partial listing of the Center's videotape library follows:

Critical Thinking in Science

Critical Thinking in History

Dialogical Practice I

Dialogical Practice II

Socratic Questioning in Large Group Discussion (4<sup>th</sup> Grade)

Socratic Questioning in Large Group Discussion (6<sup>th</sup> Grade)

Socratic Questioning in Large Group Discussion (7<sup>th</sup> & 8<sup>th</sup> Grades)

Learning How to Think About Thinking

The Attributes of a Critical Thinker

Designing an Elementary or Middle School Inservice Program for

Infusing Critical Thinking into Subject Matter Instruction

Critical Thinking Staff Development

Teaching Critical Thinking Across the Curriculum: An Approach

Through Specific Courses

The American High School: What Needs to Be Done to Prepare Students for College

Why Is It Imperative to Distinguish Weak Sense from Strong Sense Critical Thinking? A Challenge to All Comers

Mini-Critical Thinking Course: Assignments that Stimulate Critical Thinking

Designing Staff Development that Models Thinking Skills  
Remodelling Lesson Plans in Middle School and High School to  
Infuse Critical Thinking  
Empowering Teachers and Students Toward Critical Thinking: K-12  
A Staff Development Plan to Model Critical Thinking Throughout a  
Community College  
Student Insights into Metacognition  
Critical and Creative Thinking  
Coaching Teachers Who Teach Critical Thinking  
Critical Thinking and Women's Issues  
Problems with Teaching How to Use Arguments to Decide What to  
Believe  
Effective Design for Critical Thinking Inservice  
Critical Thinking and the History-Social Science Curriculum, Grades  
9-12  
Bridging the Gap Between Teachers' Verbal Allegiance to Critical  
Thinking and Their Actual Behavior  
Teaching Critical Thinking Across the Curriculum  
Language Arts and Critical Thinking for Remedial and Bilingual  
Students  
A Conception of Critical Thinking  
How to Write Critical Thinking Test Questions  
Egocentricity: What It Is and Why It Matters  
Philosophy for Children  
Critical Thinking in Math and Science  
Projects for Integrating Critical Thinking  
Varieties of Critical Thinking Tests: Their Design and Use  
Teaching Critical Thinking in the Strong Sense in Elementary,  
Secondary and Higher Education

Workshop on the Art of Teaching Critical Thinking in the Strong  
Sense  
Knowledge as Design in the Classroom  
The Possibility of Invention  
The Role of Thinking in Reading Comprehension  
Critical Thinking at the Community College  
Teaching Thinking Strategies Across the Curriculum: The Higher  
Order Thinking (H.O.T.) Project: Elementary Level  
Why Not Debate? Strong Sense Critical Thinking Assignments  
Introducing Affective Awareness  
Mini-Critical Thinking Course:  
Using Arguments to Decide What to Believe  
Critical and Creative Problem Solving  
Learning About Good Arguments Through the Fallacies  
Information and the Mass Media  
Practical Reasoning  
The Nature of Critical Thinking through Socratic  
Interrogation  
Dispositions : The Neglected Aspect of Critical Thinking  
Epistemological Underpinnings of Critical Thinking

## National Council for Excellence in Critical Thinking Instruction

As the term "Critical Thinking" gains greater and greater currency in education, there is a growing number of individuals who are declaring themselves experts in the field and promising to provide short-term training for teachers and simple-to-apply programs and strategies. The purpose of the National Council is to draw upon the collective wisdom of those in leadership in the field to articulate minimal standards for quality in-service and instruction for critical thinking and to help serve as a clearinghouse for information about quality programs and strategies:

### Membership

#### **Jonathan Kozol**

Fellow, John Simon Guggenheim  
Memorial Foundation

#### **George Hanford**

President Emeritus, College Board

#### **Albert Shanker**

President, American Federation  
of Teachers

#### **Joseph Williams**

University of Chicago

#### **Matthew Lipman**

Director, Institute for the  
Advancement of Philosophy  
for Children

#### **Irving Siegel**

Educational Testing Service

#### **Trudy Govier**

Formerly University of Calgary

#### **John Pihoda**

President/Superintendent,  
Iowa Valley Community College

#### **Ian Wright**

University of British Columbia

#### **Vincent Ruggiero**

S.U.N.Y. Delhi College

#### **Michael Scriven**

University of Western  
Australia

#### **David Perkins**

Harvard University

#### **Robert Ennis**

Director, Illinois  
Critical Thinking  
Project

#### **Stephen Norris**

Memorial University of  
Newfoundland

#### **Carolyn Sue Hughes**

Past President,  
A.S.C.D.

#### **John Hoaglund**

Christopher Newport  
College

#### **Ronald Giere**

University of Minnesota

#### **Dolores Gallo**

Co-director, Critical  
and Creative  
Thinking Program  
University of  
Massachusetts, Boston

#### **S. Morris Engel**

University of Southern California

#### **Robert Swartz**

Founder, Critical and Creative  
Thinking Program,  
University of Massachusetts, Boston

#### **Gerald Nosich**

University of New Orleans

#### **T. Edward Damer**

Emory and Henry College

#### **Ralph Johnson**

University of Windsor

#### **J. Anthony Blair**

University of Windsor

#### **Edward M. Glaser**

Past President, Human Interaction  
Research Institute

#### **David Hitchcock**

McMaster University

#### **Donald Lazere**

California Polytechnic  
State University

#### **Rita King**

History-Social Science  
Assessment Advisory Committee

#### **Harvey Siegel**

University of Miami

#### **Diane Halpern**

California State University,  
San Bernardino

#### **Richard W. Paul**

Director, Center for  
Critical Thinking and  
Moral Critique

#### **Jonathan Adler**

Brooklyn College,  
C.U.N.Y.

#### **Art Costa**

Past President, A.S.C.D.

#### **Carol La Bar**

University of British  
Columbia

#### **Edys Quellmalz**

Formerly Stanford  
University

#### **Perry Weddle**

California State  
University, Sacramento

#### **Lenore Langsdorf**

University of Texas

#### **Joel Rudinow**

Research Associate,  
Center for Critical  
Thinking and Moral  
Critique

#### **Ronald S. Brandt**

Executive Editor,  
Educational Leadership

## Center for Critical Thinking & Moral Critique

### Sonoma State University

The Center conducts advanced research, inservice education programs, professional conferences, and disseminates information on critical thinking and moral critique. It is premised on the democratic ideal as a principle of social organization, that is, that it is possible

so to structure the arrangements of society as to rest them ultimately upon the freely given consent of its members. Such an aim requires the institutionalization of reasoned procedures for the critical and public review of policy; it demands that judgments of policy be viewed not as the fixed privilege of any class or elite but as the common task of all, and it requires the supplanting of arbitrary and violent alteration of policy with institutionally channeled change ordered by reasoned persuasion and informed consent.\*

It conducts its research through an international network of fellows and associates, as follows:

#### Honorary Fellows

Max Black, Professor of Philosophy, Cornell University, Ithaca, NY

Robert Ennis, Director, Illinois Thinking Project, University of Illinois, Champaign, IL

Edward M. Glaser, Psychologist, Author, Watson-Glaser Critical Thinking Appraisal, Los Angeles, CA

Matthew Lipman, Professor of Philosophy, Founder and Director, Institute for the Advancement of Philosophy for Children, Montclair, NJ

Israel Scheffler, Thomas Professor of Education and Philosophy, Harvard University, Cambridge, MA

Michael Scriven, Professor of Philosophy, University of Western Australia, Nedlands, Australia

#### Research Associates

J. Anthony Blair, Professor of Philosophy, University of Windsor, Ontario, Canada

Carl Jensen, Associate Professor of Communications Studies,  
Sonoma State University, Rohnert Park, CA

Ralph Johnson, Professor of Philosophy, University of Windsor,  
Ontario, Canada

Don Lazere, Professor of English, California Polytechnic State  
University, San Luis Obispo, CA

Perry Weddle, Professor of Philosophy, California State University,  
Sacramento, CA

Ian Wright, Professor of Education, University of British Columbia,  
British Columbia, Canada

Joel Rudinow, Assistant Professor of Philosophy,  
Sonoma State University, Rohnert Park, CA

#### Teaching Associates

Robert Ennis, Center Fellow

Carl Jensen, Center Research Associate

Don Lazere, Center Research Associate

Richard Paul, Director

Dianne Romain, Assistant Professor of Philosophy,  
Sonoma State University

Douglas Martin, Associate Professor of Chemistry,  
Sonoma State University

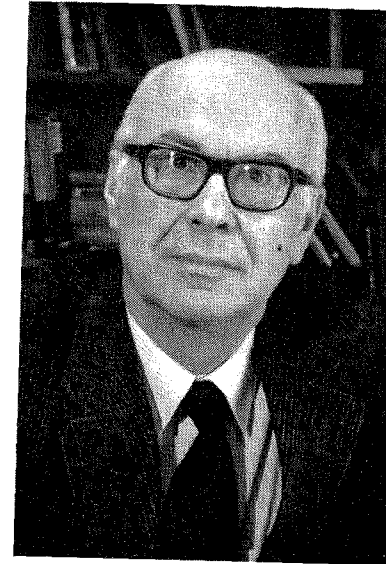
Joel Rudinow, Center Research Associate

## Director

Richard W. Paul, Center for Critical Thinking and Moral Critique

The work of the Center includes an annual international Conference on Critical Thinking and Education; Master's Degree in Education with emphasis in Critical Thinking; Supplementary Authorization Program in the teaching of critical thinking (under the Single Subject Waiver Credential Program of the State of California); inservice programs in the teaching of critical thinking; Research Intern Program (for graduate students in the field of critical thinking and moral critique); a resource center for the distribution of tests, documents, position papers; and research in the field of critical thinking and moral critique and in the reform of education based upon the teaching of reasoning and critical thinking skills across the curriculum. Other recent contributors include the historian Henry Steele Commager and George H. Hanford, President of the College Board.

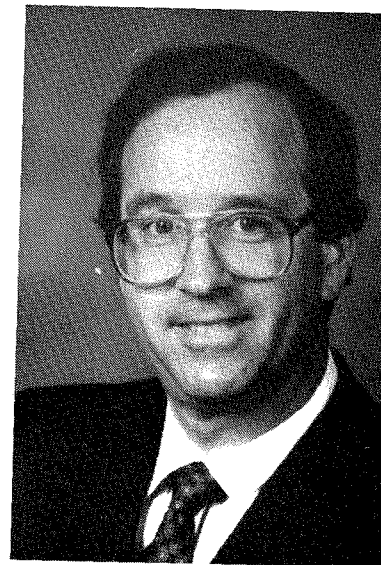
Center for Critical Thinking and Moral Critique  
Sonoma State University  
Rohnert Park, CA 94928



**Matthew Lipman**



**Cynthia Barnes**



**Stanley Pogrow**

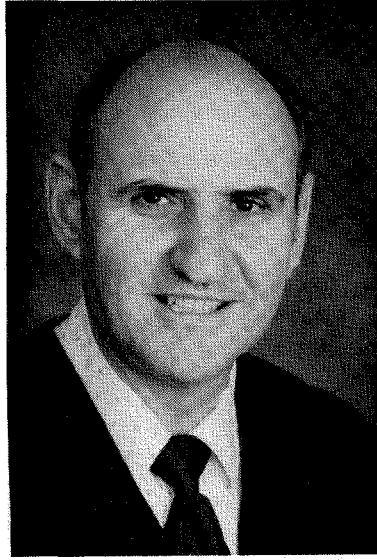


**Carol Gontang**

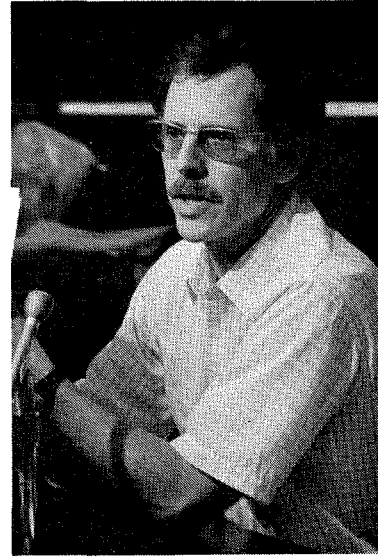
\*Israel Scheffler, *Reason and Teaching* (1973, Bobbs-Merrill Co., Inc.) page 137



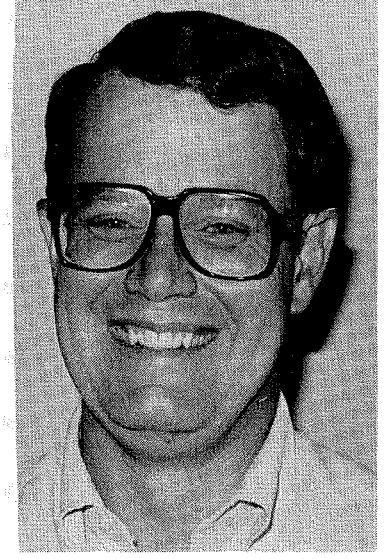
**Priscilla Agnew**



**Peter Kneedler**



**Thomas Jackson**



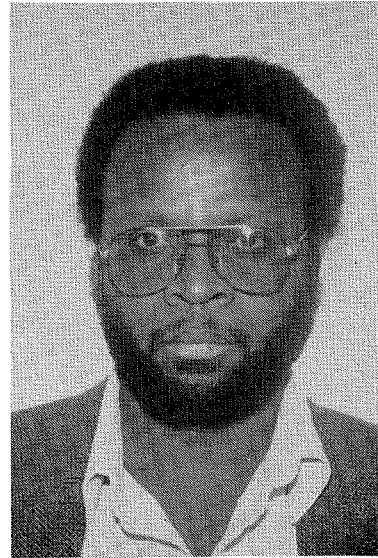
**Chet Meyers**



**Nicholas Michelli**



**Beau Jones**



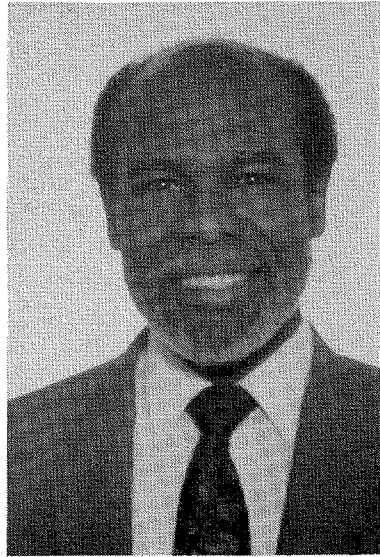
**Winthrop Holder**



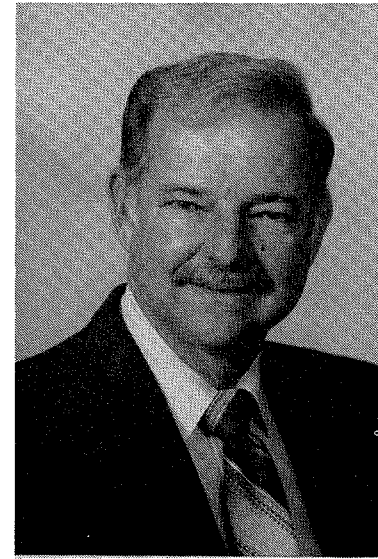
**Barbara Presseisen**



**Sharon Bailin**



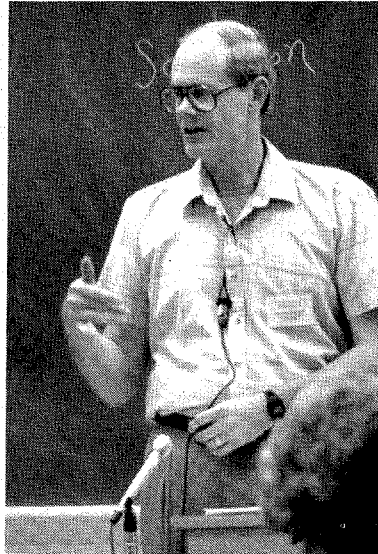
**Hollibert Phillips**



**Art Costa**



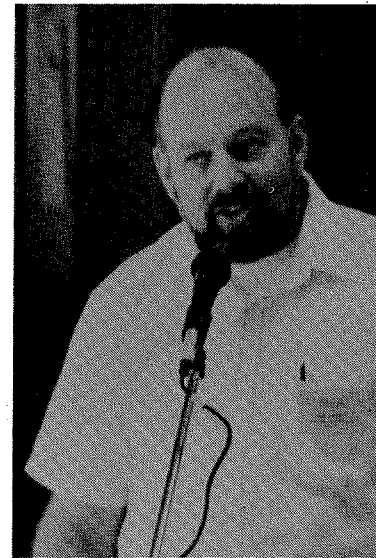
**Wendy Oxman**



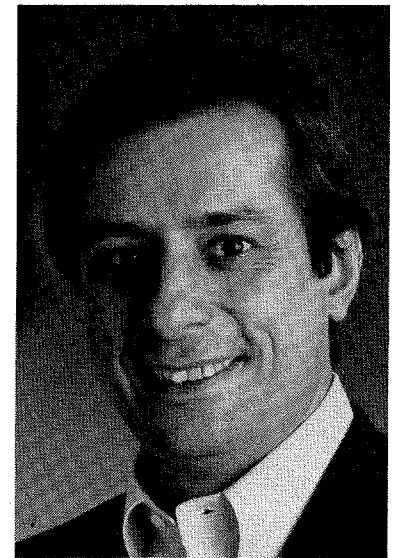
**Ralph Johnson**



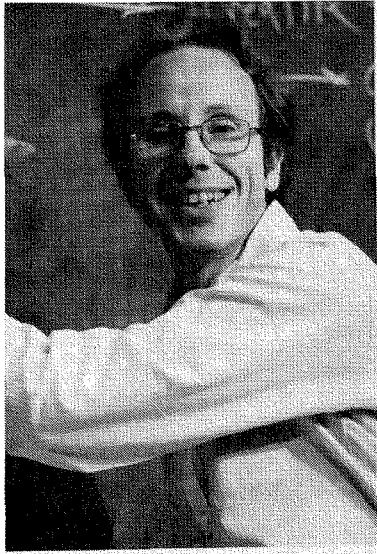
**Ann Kerwin**



**Robert Swartz**



**John Chaffee**



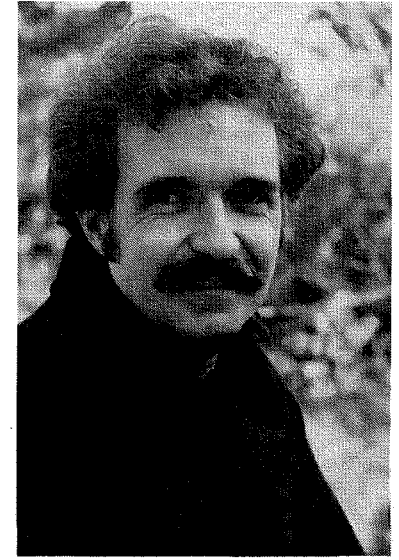
**David Perkins**



**Connie Missimer**



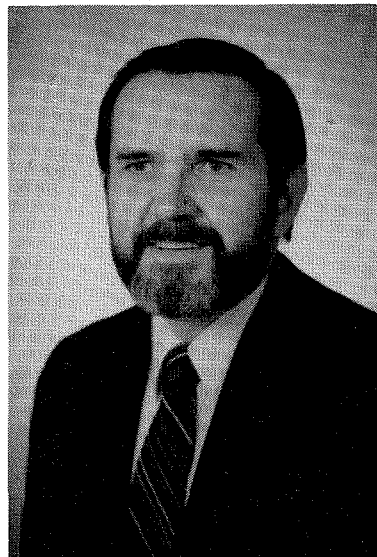
**Karen Jensen**



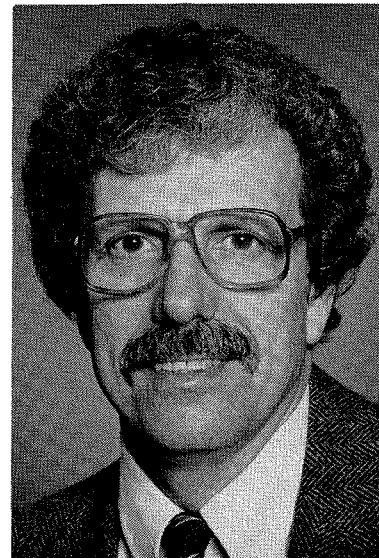
**John Barell**



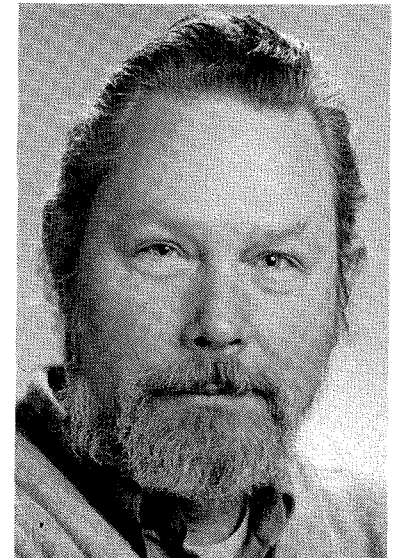
**Carol Tavris**



**Edward Damer**



**William Dorman**



**Perry Weddle**

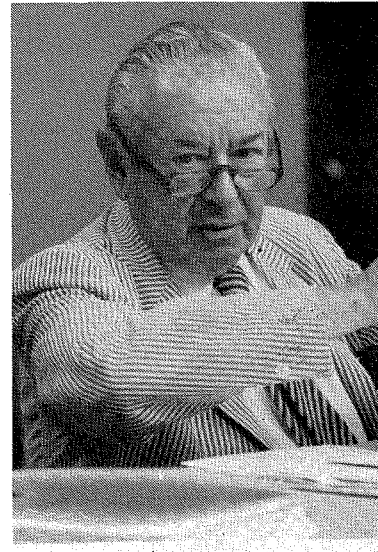
**From Previous Conferences:**



**Mark Weinstein**



**Sallie Wilson**



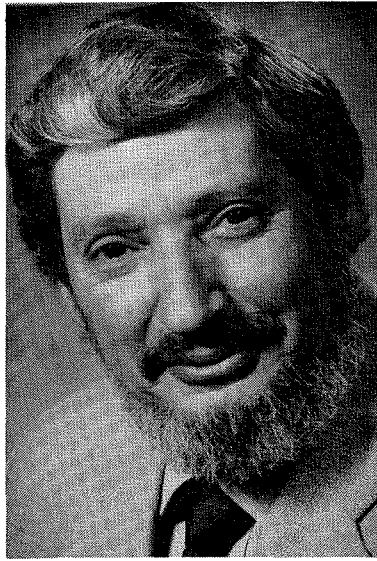
**Edward M. Glaser**



**Delores Gallo**



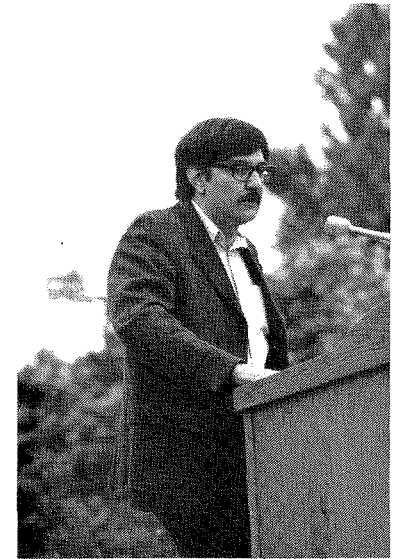
**Donald Hatcher**



**Robert Kully**



**Tony Blair**



**Gerald Nosich**

