



Proceedings of the 12th Annual International
Conference On
ritical Thinking
& Educational Reform

1981-1982

1985

1986

1987

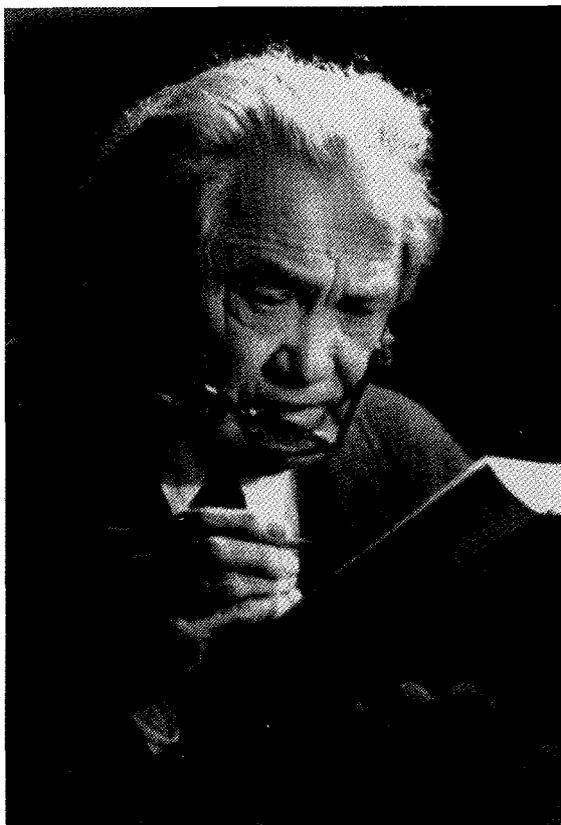
1988

1989

1990

1991

1992



Henry Steele Commager
Dean of American Historians

Addressing the First International Conference
on Critical Thinking and Educational Reform

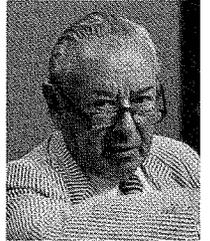
◆
Proceedings of
**The Twelfth Annual
International Conference on
Critical Thinking and Educational Reform**

◆
August 9-12, 1992
◆

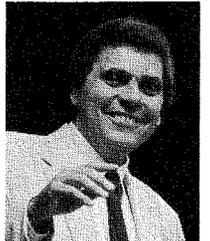
*Under the auspices of the
Center for Critical Thinking and Moral Critique
Sonoma State University*

From Previous Conferences

Ed Glaser



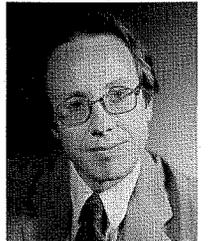
Neil Postman

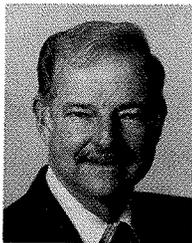


Delores Gallo

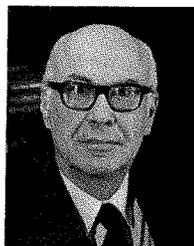


David Perkins





Art Costa



Matthew Lipman



Frances Moore Lappé



Nicholas Michelli



Thomas Jackson

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About The Center

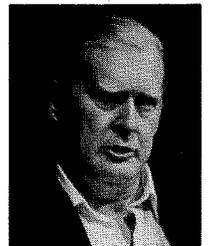
John Chaffee



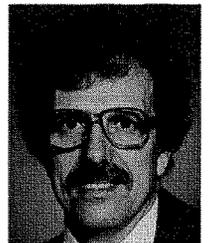
Judith Collison



Michael Scriven



William Dorman





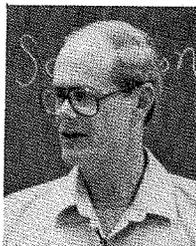
Vincent Ruggiero



Robert Swartz



Wendy Oxman-Michelli



Ralph Johnson



Sharon Bailin

About the Center

About the Center for Critical Thinking

The Center conducts advanced research and disseminates information on critical thinking and moral critique. It has been working closely with the Foundation for Critical Thinking, The National Council for Excellence in Critical Thinking Instruction, 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 U. S. State Department of Education to facilitate implementation of high standards of critical thinking instruction from kindergarten through college.

Its major work includes:

International Conferences on Critical Thinking

Each summer, in early August, the Center hosts the oldest and largest critical thinking conference with registrants from virtually every state of the union and numerous foreign countries. Over 300 distinguished experts in the field present more than 300 sessions on critical thinking and critical thinking instruction over four days. These sessions are designed to meet the needs of the widest variety of educational levels and concerns from kindergarten through graduate school. A variety of subject matters and academic fields are used as examples of critical thinking infusion. The two days preceding the conference are used for intensive sessions that lay a foundation for the conference and for critical thinking instruction.

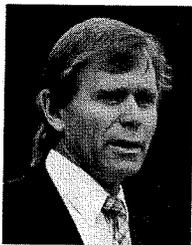
Staff Development Services

The Center provides staff development services at every level of education from kindergarten through graduate school (see following pages). Staff development programs emphasize the critique and redesign of instruction to infuse critical thinking principles into subject matter instruction.

For more information, contact:

The Center for Critical Thinking
& Moral Critique
Sonoma State University
Rohnert Park, CA 94928
(707) 664-2940

Research and Inservice Team



RICHARD W. PAUL, Director of The Center for Critical Thinking, is an internationally recognized authority on critical thinking, with five books and over 40 articles published on the subject. Professor Paul has given lectures on critical thinking at many universities in both the United States and abroad, including Harvard, the University of Chicago, The University of Illinois, and The Universities of Puerto

Rico, Costa Rica, Toronto, and Amsterdam. He has been regularly teaching beginning and advanced courses in critical thinking at the university for over 14 years. His workshops have been attended by thousands of educators, both K-12 and university. He is highly sought as a keynote speaker at conferences.



ALEC FISHER is the leading British educator in the critical thinking movement. He organized the First British National Conference on Critical Thinking, in 1988, and is establishing the first Center for Critical Thinking at the University of East Anglia. Professor Fisher has been active in bringing critical thinking and the art of learning how to learn into every level of British education. Working with Cambridge

University, he is developing a national higher studies test. His book on critical thinking, *The Logic of Real Arguments*, illustrates his commitment to redesigning classroom instruction to focus on problems and issues that link traditional subject matter with real world situations and tasks.



GERALD NOSICH is a noted authority on critical thinking and the author of *Reasons and Arguments*. A regular presenter at international conferences on critical thinking, he has also given many lectures and workshops on critical thinking across the country. Professor Nosich is presently working on a book on critical thinking across the curriculum. His ability to give subject-specific examples of critical thinking has

given him high credibility when working with subject-matter instructors and teachers. His commitment as a classroom teacher and command of diverse teaching strategies and his ability to express himself in non-technical language have made him a popular staff development leader.



DAN WEIL is the Center's inservice specialist in critical thinking in the elementary school as well as in multi-cultural education, K-12. He has taught kindergarten, first, and second grades for four years; has lived in Central America for three years; and is fluent in Spanish. He has conducted many inservices in the United States as well as in Mexico. In addition, Dr. Weil has experience working with

remedial learners and, as a bar-certified attorney, has a keen awareness of why we should teach students the art of disciplined reasoning. He is acutely aware of the concerns of classroom teachers and is skilled at giving examples involving the immediate application of critical thinking to the classroom.

Inservice Philosophy and Principles

The Center's Inservice Philosophy

Since most educators have themselves been taught by didactically oriented educators, most, without necessarily intending it, focus more on rote memorization than on student reasoning as the primary strategy for learning. What is more, since didactic instruction primarily relies on accuracy of recall as the major standard of "correctness", most educators do not have a clear idea how to help students analyze and assess reasoning, nor how to teach so as to foster student learning of explicit intellectual standards and values. The shift from didactic to critical teaching is, therefore, a challenging long-term, not a painless short-term, process, one that involves global shifts, a basic change in orientation and philosophy. Successful inservice, though properly focused on immediate application, must nevertheless provide for an extended evolution, not an immediate revolution, in instructional practices. See the Resources and Events Section of this Program for information on inservice videotapes. Call or write the Center for Critical Thinking for more information on inservice.

Statement of Principles

The Center Staff believes strongly in the following principles:

- 1) Knowledge is acquired only through thinking.
- 2) Students can learn what to think only as they learn how to think.
- 3) To become educated is to learn how to gather, analyze, synthesize, assess, and apply information for oneself.
- 4) Student talk, focused on live issues, is a better sign of learning than silent students passively accepting what the instructor says.
- 5) Students gain significant knowledge only if they value it.
- 6) Information should be presented so as to be understandable from the point of view of the learner.
- 7) Speedy coverage often produces mis-learning which retards deeper understanding.
- 8) Depth is more important than coverage.
- 9) Students can often provide correct answers, repeat definitions, and apply formulas they do not understand.
- 10) Students learn best by working with other students in settings that generate mutually supportive debate and empathic exchange of ideas.
- 11) Students need intellectual standards to assess their thinking and the thinking of others.

Inservice Possibilities

Critical thinking is presupposed by, and shapes, every academic work or activity. Below is a sampling of inservice emphases built upon critical thinking. The inservice team is experienced in working with a wide range of audiences, from standard academic disciplines to specific and innovative fields. Inquiries regarding costs, presenters, session break-down, and alternative emphases are available upon request from the Center for Critical Thinking.

- Infusing Critical Thinking into College and University Instruction (one or two days)
- How to Infuse Critical Thinking Across the K-12 Curriculum (one or two days)
- Critical Thinking: The Role of the Administration
- College Reading and Writing as Modes of Thinking (one or two days)
- Using Questioning Strategies to Teach College and University Students to Reason Persuasively, Master Content, and Discipline their Minds (one or two days)
- Questioning Students and Teaching Students to Question, K-12 (one or two days)
- Ethics Without Indoctrination: Moral Reasoning Across the College/University Curriculum (one or two days)
- Ethics Without Indoctrination: Moral Reasoning Across the K-12 Curriculum (one or two days)
- How to Establish Intellectual Standards Across College/University Curriculum (one or two days)
- How to Establish Intellectual Standards Across K-12 Curriculum (one or two days)
- Dimensions of Critical Thinking and Instructional Redesign

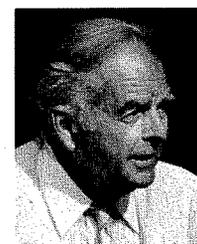
Introduction



Angel Villarini



Connie Missimer



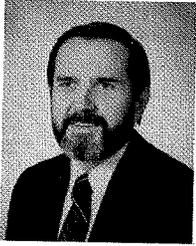
George Hanford



Donald Hatcher



Betty Duffey



T. Edward Damer



Mariys Mayfield



Mark Weinstein



Yehudi Webster

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 themselves, to misconceive, distort, and stereotype, to become dogmatic, prejudiced, and narrow-minded. Humans are the only animal whose thinking can be characterized as clear, precise, accurate, relevant, consistent, profound, and fair; they are also the only animal whose thinking can be characterized as often vague, imprecise, inaccurate, irrelevant, inconsistent, superficial, trivial, and biased.

Critical thinking makes sense in the light of this paradoxical dichotomy. Humans should not simply trust their instincts. They should not believe unquestioningly what spontaneously occurs to them. They should not accept as true everything taught as true. They should not assume their experience is unbiased. They are not born with, but need to form, 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 them from thinking seriously about what they are 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 narrow-mindedness — 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 logic, of what they are learning, we can make all 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 results in it. “Good” students have developed

techniques for short-term, rote memorization; "poor" students have not. But few students know 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 educator, when they do not entertain a variety of points of view, do not analyze concepts, theories, or explanations from their own points 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, and are certainly 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 U.S., 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 realization that both developed and underdeveloped nations face complex problems that cannot be solved without 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 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 through 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 are 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.

Lower Order Learning

There are a variety of forms of lower order learning in the schools. We can understand them 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 students' 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 into 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 instructional practices imply 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 formulas 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, assess, and apply 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, which requires that it be related to the learner's experiences,
- 7) that superficial learning is often mis-learning that stands as an obstacle to deeper understanding,
- 8) that depth is more important than coverage,
- 9) that students can often provide correct answers, repeat definitions, and apply formulas while not understanding those answers, definitions, or formulas, and
- 10) that students learn best by working with other students, and by gaining much experience in mutually supportive debate and empathic exchange of ideas.

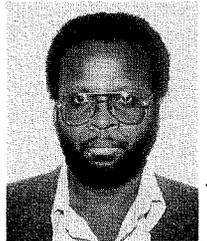
These contrasting beliefs about education, knowledge, teaching, and learning have contrasting implications for how textbooks should be written, how instruction should be carried out, and how students should go about learning. If

the first set of statements collectively defines a didactic conception of education, the second defines a critical conception of education. If the first set encourages lower order learning, the second encourages higher order. A paradigm shift is needed to make higher order thinking a classroom reality. The sessions of the Twelfth International Conference on Critical Thinking and Educational Reform are focused on making this shift a reality.

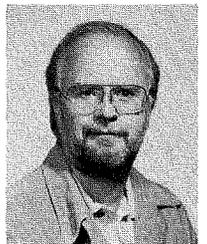
Conference History



Anne Kerwin



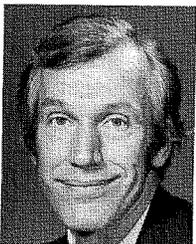
Winthrop Holder



George Collison



M. Neil Browne



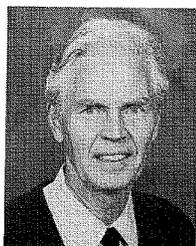
Stuart Keeley



Connie De Capite



George Luckey, Jr.



John Feare



Perry Weddle

Conference History

The 1992 Conference on Critical Thinking and Educational Reform reflects the development implicit in the eleven 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 to 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 on which to build. 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.

Subsequent conferences 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 modeling 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 characterized:

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 3rd, 6th, 8th, 10th, and 12th grades. A number of other states, including Texas, 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 in all other basic academic competencies. And, just recently, the American Federation of Teachers has published a national position paper on critical thinking.

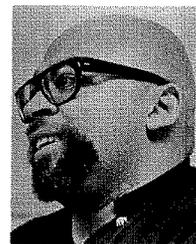
The Center for Critical Thinking and Moral Critique has been working closely with the California State Department of Education, the College Board, numerous school districts, the Association for Supervision and Curriculum Development, the National Education Association, the U.S. Department of Education, 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 for fair-minded critical thinking skills.

Philosophy of the Conference



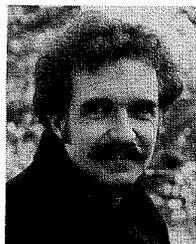
Susan Hales



Maulana Karenga



Virginia O'Keefe



John Barell

Philosophy of the Conference



J. Anthony Blair



Olivia Rovinescu



Stewart Bellman



Alma Tetrault



Rexford Brown

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 numerous ways: 1) by classifying all presentations with a label that indicates possible special interest concerns (see audience code chart on page 30 and facing the inside back cover), 2) by listing sessions by special interest categories (see the grouped by interest section on page 45), and 3) by setting up a meeting time on Sunday evening (7:30-8:30 pm) for groups to organize themselves into networks (see the section entitled Special Interest Groups, page 65, for more information on these special interest meetings). In addition, in order to help participants view the big picture of the conference, paragraphs written by presenters which relate their sessions to the conference theme have been posted. See the bulletin board in the Student Union, entitled "The Conference ... Putting it All Together". All sessions have been scheduled for 90 minutes 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 rarely possible in question and answer sessions might be facilitated.

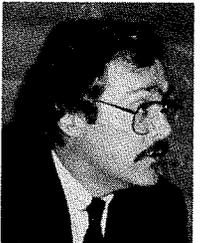
Conference Theme



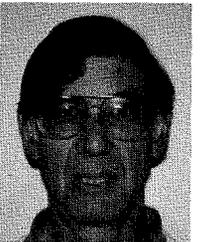
Cynthia Barnes



Carol Gontang



Charles Blatz



John Dickinson May

Conference Theme



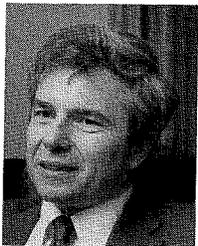
Constance DeVereaux



Jeanette Catsoulis



Virginia Epstein



Peter Facione



Les Gottesman

Each year a conference theme is selected to give participants a central concept that provides a thread of continuity between the various presentations. This year the focus is on the cultivation of reasoning minds and the important interrelated problems of teaching for reasoning, internalizing standards appropriate to it, and testing and assessing it. Only a mind which reasons as it learns can learn rationally and deeply, and only some modes of teaching, testing, and assessment are appropriate to reason's development.

Integral to all three — its teaching, testing, and assessment — are intellectual criteria and standards, for the evaluation of reasoning requires intellectual criteria, mindfully applied. Unfortunately, most teachers, as well as most professors, have received an education deficient in intellectual criteria and standards. And since we teach as we were taught, classes today typically proceed with little or no reference to intellectual standards. Students don't learn through them and are not tested by them. They do not use reasoning as a tool of learning; they do not read or write with the structure of reasoning in mind; and they do not speak or listen as if what they were saying or hearing had an intellectual organization or foundation.

They write and speak, yes, but not as though the parts of what they utter should be informed by the general character of the whole of their utterance, nor even that that whole should have a general (and unifying) character which all of its parts reflect. They form no intellectual values, make no intellectual commitments, develop no intellectual canons or principles which stand as authorities in their minds. And, what is more, they are at peace in this state of intellectual malaise, as if there were no need for such values, no serious void created by the lack of such commitments, and no deep and abiding pathology signaled by the absence of such canons and principles.

Three Essential Insights

Educators today lack three fundamental insights, that: 1) thought and knowledge of content must be developed together, 2) both presuppose the utilization of intellectual standards, and 3) we cannot internalize intellectual standards without disciplining our minds in the process. Let us briefly consider the interrelation of these insights.

There is no such thing as "content-less" thinking or content that can be mastered without thought. Hence, there is no need to choose between an emphasis on content and an emphasis on thinking. Furthermore, students can master content only through disciplined thinking. Thinking, in turn, can be disciplined only insofar as the mind is guided in its judgments by defensible intellectual standards. To think well, we must reason well. To reason well, we must strive to be reasonable in our judgments. To strive for reasonability in our judgments, we must make a commitment to clarity, precision, accuracy,

relevance, consistency, logicalness, depth, breadth, completeness, significance, adequacy, and fairness of thought, and hence we must learn how to detect unclarity, imprecision, vagueness, inaccuracy, irrelevance, inconsistency, illogicalness, superficiality, narrowness, incompleteness, triviality, inadequacy, bias or one-sidedness of thought. To highlight these insights let us examine the implications that follow from the fact that all knowledge is embedded in thinking.

Knowledge Is Embedded in 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 by its very nature depends 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 thought we mean critical thought. Knowledge is not to be confused with belief nor with the mere symbolic representation of belief. Humans are quite capable of believing things that are false or believing 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 subject areas — mathematics, physics, chemistry, biology, geography, sociology, anthropology, history, philosophy, and so on — are not simply modes of thinking, but, more precisely, modes of *disciplined* thinking. We know mathematics not to the extent that we can recite mathematical formulas and “mindlessly” apply them when asked, but only to the extent that we can think with mathematical discipline. 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 with scientific discipline. We understand sociology only to the extent that we can think with sociological discipline, history only to the extent that we can think with historical discipline, and philosophy only to the extent that we can think with philosophical discipline.

When we teach each subject in such a way that students pass courses without having to discipline their thinking to achieve the knowledge that each makes possible, students leave their courses without any more knowledge than they had when they entered them. When we sacrifice disciplined thought to gain coverage, we sacrifice knowledge at the same time. The issue is not, “Shall we sacrifice knowledge to spend time on intellectual discipline?” but, “Shall we continue to sacrifice both knowledge and intellectual discipline for the mere appearance of learning, for mis-learning, for fragmentary learning, for transitory learning, for inert, confused learning?”

The Ability to Reason: A Defining Feature of Humans

Our capacity to reason is at the heart of all disciplined thinking. It explains how we alone of all the creatures of the earth have been able to develop full-fledged academic disciplines: biology, physics, botany, zoology, chemistry, geography, history, psychology, sociology, etc. We can go beyond immediate, instinctive reactions to reflective, reasoned responses precisely because we are

able to develop small-scale and large-scale systems in which to intellectually operate and act. These systems enable us to mentally manipulate our possible responses to situations — to formulate them explicitly, to hold them at intellectual arm’s length, to analyze and critique them, and to decide what their implications are for us. Let me explain.

We understand the various particulars of everyday life by constructing abstract models or systems that abridge and summarize their features. In simplest form, we call these models or systems *ideas*. For example, our abstract concept of a bird is a model or system for thinking about actual birds in order to make sense of their behavior — in contrast to the behavior, say, of cats, dogs, turtles, beetles, and people. As we construct these abstract systems or models, we are enabled to use the reasoning power of our minds to go beyond a bare unconceptualized noticing of things to the making of inward interpretations of them, and hence derivations from them. In short, our concepts provide our minds with systems in which to experience and think; our minds operate (reason) within them to invest the world we experience with meanings rich in implications and consequences. Much of this is done, of course, quite automatically and subconsciously.

I can reason to any number of conclusions as the result of my having one simple model for a thing. For example, if I recognize a creature to be a dog, I can quickly infer it will:

- 1) bark rather than meow or chirp
- 2) wag its tail when pleased
- 3) growl when irritated
- 4) be unable to fly
- 5) have no feathers
- 6) be unable to live under water
- 7) be carnivorous
- 8) need oxygen
- 9) have teeth
- 10) have paws rather than feet, etc.

This word (‘dog’) is part of a much larger logical map upon which our minds can move in virtue of our capacity to reason. As we act bodily in the world, we act intellectually in our minds. These intellectual moves guide our actions in the world. Without these maps and the capacity to locate particulars on them, we would either thrash about aimlessly or be paralyzed by the bewildering mystery of things and events before us. In every situation in our lives we “construct” a response that results from how we are modeling the situation in our minds.

Hence, put us in any situation and we start to give it meaning, to figure it out with the logical structures we have at our disposal. So quickly and automatically do we make inferences — as the result of the way we are modeling the situation in our minds — that we do not typically notice those inferences.

For example, we see dark clouds and infer rain. We hear the door slam and infer someone has arrived. We see a frowning face and infer the person is angry. Our friend is late and we infer she is being inconsiderate. We meet a tall boy and infer he is good at basketball, an Asian and infer he will be good at math. We read a book, and infer what the various sentences and paragraphs, indeed what the whole book, is saying. We listen to what people say, and make a continual series of inferences as to what they mean. As we write we make inferences as to

what others will make of what we are writing. We make inferences as to the clarity of what we are saying, as to what needs further explanation, as to what needs exemplification or illustration. We could not do this without "logical structures" by means of which to draw our inferences.

Many of our inferences are justified and reasonable. But, of course, many are not. One of the most important critical thinking skills is the skill of noticing and reconstructing the inferences we make, so that the various ways in which we inferentially shape our experiences become more and more apparent to us. This skill, this sensitivity or ability, enables us to separate our experiences into analyzed parts. We learn to distinguish the raw data of our experience from our interpretations of those data (in other words, from the inferences we are making about them). Eventually we realize that the inferences we make are heavily influenced by our point of view and the assumptions we have made. This puts us in the position of being able to broaden the scope of our outlook, to see situations from more than one point of view, to become more open-minded. This requires that we recognize our point of view as a "logical system" that guides our inferences, a system that we can exchange for another (an alternative point of view), depending on our assumptions.

Often, then, different people make different inferences because they bring to situations a different point of view. They see the data differently. Or, to put it another way, they have different assumptions about what they see. For example, if two people see a man lying in a gutter, one might infer, "There's a drunken bum." The other might infer, "There's a man in need of help." These inferences are based on different assumptions about the conditions under which people end up in gutters and these assumptions are connected to the point of view about people that each has formed. The first person assumes: "Only drunks are to be found in gutters." The second person assumes: "People lying in the gutter are in need of help." The first person may have developed the point of view that people are fundamentally responsible for what happens to them and ought to be able to take care of themselves. The second may have developed the point of view that the problems people have are often caused by forces and events beyond their control. The two are modeling the situation differently. They are using a different system for experiencing it.

In any case, if we want our students to become good reasoners, we must become concerned to help them begin to notice the inferences they are making, the assumptions they are basing those inferences on, and the point of view about the world they are taking — hence the systems in which they are thinking. To help our students do this, we need to give them clear examples of simple cases, and lots and lots of practice analyzing and reconstructing them. For example, we could display the above inferences in the following way:

Person One:

Situation: "A man is lying in the gutter."

Assumption: "Only bums lie in gutters."

Inference: "That man's a bum."

Person Two:

Situation: "A man is lying in the gutter."

Assumption: "Anyone lying in the gutter is in need of help."

Inference: "That man is in need of help."

Our goal of sensitizing students to the inferences they make and to the assumptions that underlie their thinking enables them to begin to gain command over their thinking (the way they are using logical structures to model the world). Of course, it may seem odd to put any effort into making explicit such obvious examples. In the harder instances, however, the value of the explication becomes more evident. In any case, because all human thinking is inferential in nature, and all inferences are embedded in a system, we cannot gain command of our thinking unless we can recognize, one way or another, the inferences embedded in it and the assumptions that underlie it.

Consider the way in which we plan and think our way through everyday events. We think of ourselves as washing up, eating our breakfast, getting ready for work, arriving on time, sitting down at our desks, making plans for lunch, paying bills, engaging in small talk, etc. Another way to put this is to say that we are continually interpreting our actions, giving them meanings — making inferences within a system we have created — about what is going on in our lives.

And this is to say that we must choose among a variety of possible systems for thinking about things. Again, consider some simple cases. As I am sitting in my easy chair, am I "relaxing" or "wasting time"? Am I being "determined" or "stubborn", or worse, "pig-headed"? Did I "join" the conversation or "butt in"? Is Jack "laughing with me" or "laughing at me"? Am I "helping him" or "being taken advantage of"? Every time I interpret my actions within one of these systems that each word in the language represents, every time I give them a meaning, I make one or more inferences on the basis of one or more assumptions within some point of view.

Imagine a ballet dancer improving her ballet without knowing that she is a dancer or how and when she is dancing. Imagine a chess player who does not know she is playing chess. Or a tennis player who does not know she is playing tennis. We can hardly imagine people developing these physical and intellectual abilities without high consciousness of how and what they are doing in the doing of it. Yet we expect students to develop the ability to reason well without any mindfulness of the nature of reasoning, the elements of reasoning, or the criteria for assessing reasoning. We expect students to become good reasoners, in other words, without any knowledge of the logic of reasoning. Not surprisingly, our approach doesn't work. Most students are very poor reasoners.

Teaching and Assessing the Dimensions of Critical Thinking

Breaking the concept of critical thinking into dimensions, into a number of manageable parts, will make clearer the aspects of critical thinking that we want students to master. It is also intended to make clearer the ways we can teach for that mastery.

The dimensions of critical thinking can be usefully divided into five categories: Elements of Reasoning, Reasoning Abilities, Modes of Reasoning, Traits of Mind, and Intellectual Standards.

Elements of Reasoning

The elements of reasoning are the building blocks, the nuts and bolts out of which all reasoning is constructed. As a teacher committed to advancing critical thinking, then, I will be redesigning my classes around the elements, at least in the sense that I want my students to become familiar with the terms for the

elements and handy in using them. In a class that is well-versed in critical thinking, the various abilities to use the elements, consciously and explicitly, will come to seem natural, even second-nature. There are several such abilities:

1) On the most basic level, students need to be able to *identify* and *recognize* elements of reasoning in their own and in others' thinking. I will want to redesign my teaching so that students get better at picking out their assumptions, at pinpointing several relevant points of view on a multilogical problem, at spelling out clearly and precisely the question at issue.

2) Students need *comprehension abilities* with respect to the elements of reasoning. They need to be able to compare various formulations of an assumption, say, in order to decide which is the more accurate. They need to be able to clarify their purpose, the conceptual dimension of their reasoning, or other elements.

3) *Application abilities* here include being able to use each of the elements insightfully in various contexts. Students can learn, for example, to take their evidence or their point of view on one issue and try them out on a different issue. They can apply the elements to a new topic, extrapolating from a familiarity with them in one area to an area they have not yet considered deeply.

4) The ability to *analyze* thinking in terms of the elements of reasoning cuts deeper than the ability to merely identify the elements. Students will become familiar with asking and answering questions like, "What other points of view is that assumption operative in?", "What evidence supports this assumption, and what other implications would that assumption have?", and "Why would that assumption be made?"

5) *Synthesis abilities* center around students' being able to integrate the elements within the reasoning process. Developed critical thinkers learn not just to take things apart in a reasonable fashion, but to put them back together, too. In the last analysis, I cannot fully reason about someone's conclusions on an issue without taking account of her assumptions, her point of view, her purpose and the purposes of those around her, etc. Elements of thought do not exist as fragments apart from one another; rather, working together they constitute a logic of the issue or thing being investigated. The ability to grasp the way the elements work together as a whole in a piece of reading, say, or in a unit of subject matter, is to begin to acquire a crucial synthesis ability.

6) Students need to be able to *evaluate* the accuracy, the plausibility, the depth and breadth of the elements of thought in their own reasoning as well as in the reasoning of others. They need to be able to tell, and tell reasonably, whether an assumption is well-evidenced, whether a formulation of a particular question at issue is clear and precise enough, whether a person's reasons merit drawing his conclusions. Assessment is at the heart of critical thinking, and assessment of the use of the elements of thought is at the heart of mastering the nuts and bolts of reasoning.

7) Students need not just to be able to think critically about arguments and theories that are givens, finished. They also need to be able to *create* or *generate* rational arguments and reasonable theories themselves, and to do so by using the

Elements of Reasoning

Purpose
Question at Issue or Problem
Conclusions or Inferences
Reasons
Evidence
Concepts
Assumptions
Implications and Consequences
Point of View or Frame of Reference

elements of thought. Students need to develop, in other words, a command over the elements of their own reasoning so that they can use them actively to write better-organized papers, to construct sound solutions to problems, to invent plausible explanations.

Reasoning Abilities

Critical thinking is sometimes called "higher order thinking skills". Though this is not adequate as a full description of critical thinking (acquiring affective traits, for example, is an essential part of becoming a critical thinker), it does point up the centrality of abilities, skills — moves — in the development of critical thinking.

In redesigning instruction, then, these abilities will often function as the direct goal of my teaching. How can I get my students better able to make interdisciplinary connections? To analyze and evaluate actions and policies? To clarify values and standards? That is, I will reason out my redesign as follows: These are critical thinking abilities that are crucial for my students to have both in school and outside of school. How can I better get them to acquire and develop these abilities? How can I construct or modify lessons in my class so as to teach for these abilities?

The abilities will also function in our redesigns as something more than goals. They function, in addition, as essential means toward the end of getting students to reason their way through the subject matter. Thus, to understand much of American history, students must acquire and develop an ability to compare and contrast American ideals with American practice. Without such an ability, it is impossible to think clearly and accurately about American history. Development of the ability, then, is an essential tool on the way toward thinking historically. In a class that deals with literature, students will similarly need the tool — the ability — of questioning deeply; raising and pursuing significant questions is an essential tool for reasoning through the insights contained in stories, poems, and plays. In both these cases, I will ask myself: Which critical thinking abilities are most central to reasoning through the subject matter, and how can I redesign my teaching of that subject matter so that students begin to develop and improve those abilities?

A Selection of Reasoning Abilities Identification & Recognition:

identifying and recognizing elements of reasoning
recognizing contradictions, inconsistencies, and double standards

Comprehension Abilities: Comparing & Clarifying

uncovering significant similarities and differences
refining generalizations and avoiding oversimplifications

Application Abilities

transferring insights to new contexts
carrying out tests of concepts, theories, and hypotheses

Abilities of Analysis

analyzing issues, conclusions, or beliefs
analyzing actions or policies

Synthesis Abilities

reasoning dialogically: comparing perspectives, interpretations, or theories
making interdisciplinary connections

Evaluation Abilities

evaluating arguments, interpretations, beliefs, or theories
evaluating the credibility of sources of information

Abilities to Create or Generate

designing tests of concepts, theories, and hypotheses
generating solutions to problems

Modes of Reasoning

Much of what has been said about abilities applies to the modes of reasoning as well. The modes are in fact orchestrated groups of abilities, and each of them functions in redesigning classes both as ends and as means toward ends. To read, write, speak, and listen — and to do each of these critically — to question ourselves or others Socratically, are all clearly worthwhile — indeed, essential — ends in themselves. That is, they clearly embody the integration of critical thinking abilities and the probing of elements of thought, and they are a major part of what every reasoning person needs to be able to do well. The same is true of the ability to work and learn in groups, collaboratively, using our peers as resources in our learning. Finally, this is also true of role playing. To enter empathetically into other people's points of view, to follow the reasoning of others, whether we agree with them or not, to see things from different cultural perspectives, from different historical frameworks — all these examples of role playing are essential parts of living in a pluralistic society. Thus role playing, like the other modes, is fruitfully seen as a direct goal of our teaching.

But each of the modes is a means as well as an end in itself. Indeed, it would be hard to underestimate their importance as the pervasive means by which classes run. My students will not be able to reason about social studies without well-developed abilities to read critically and to write critically. They will not be able to reason deeply about social studies without well-developed abilities to question themselves about the elements of their thought and to enter empathetically into other social perspectives. Therefore, when I redesign my social studies classes, I will constantly be asking myself: How can I best use the mode of critical reading to help students gain insight into this subject matter? What critical writing assignments could I give students to augment the understanding they have gained so far? Which of the concepts we are studying would be most usefully taught by means of Socratic questioning? How can role playing be used in the most advantageous way?

Traits of Mind

Critical thinking, in the last analysis, is not equivalent to a set of abilities or skills or actions. In a deeper sense, each of these is rooted not in what a person does but in what a person is. Thinking critically is rooted in being a critical thinker.

The group of traits is intended to capture the central aspects of what a critical thinker is. Traits like intellectual perseverance, fairmindedness, and intellectual independence are not peripheral dimensions of critical thinking. They are what make exercise of the critical thinking abilities and modes possible. That is, if you are not willing to persevere in your attempts at reasoning, if you are not fairminded in giving equal weight to evidence whether it supports your preconceptions or opposes them, if you are not independent enough to draw your own conclusions rather than simply accepting the conclusions of others, then you will not be able to read or write critically, you will not be able to reason dialogically, you will not be able to evaluate people's arguments or their beliefs.

Modes of Reasoning

reading critically
writing critically
speaking critically
listening critically
questioning Socratically: probing the elements of thought
collaborative learning
role playing

Development of the abilities and modes requires the concomitant development of the intellectual traits that make the abilities and modes possible.

A major part of teaching for critical thinking, then, is redesigning our instruction so that we promote development of traits of mind. Sometimes this will occur almost automatically in a classroom that is geared toward teaching for critical thinking. Thus in all classes where students voice conflicting views, especially about controversial issues, a general climate of intellectual civility and intellectual integrity has to be standard operating procedure. Otherwise, strong-sense critical thinking will be squelched at the outset. But in addition to setting a general climate where the free interchange of ideas can take place, teachers can redesign lessons so that a particular cluster of traits is actively and explicitly fostered. Students can be assigned, for example, to discuss Socratically the concept of intellectual civility; they can write group papers on its importance; they can spell out how you tell if a person is being intellectually civil or intellectually rude.

Intellectual Standards

Intellectual standards are a pervasive, constant part of teaching for critical thinking. Thinking that qualifies as critical thinking is thinking that is clear, accurate, relevant to the question at issue, fair, etc. Standards like these and the others on the list are implicit in all the ways we talk about critical thinking: where standards are not explicitly stated, they are presupposed. We sometimes say, for instance, that students need to learn to identify their assumptions, or to generate solutions; what we mean, of course, is that students need to learn to identify assumptions accurately, to generate solutions that are relevant.

Though standards are implicit in all considerations of critical thinking, they are much more effectively taught if they are made explicit. Part of the redesign of any instruction will appropriately include the standards we will use in assessing the reasoning in that lesson. As a teacher, I will want my students to become clear about the standards relevant to critical thinking at their level, and I will try to design classes and assignments that help students to understand these standards and to internalize them.

Traits of Mind

intellectual autonomy
intellectual insight into egocentricity or sociocentricity
fairmindedness
intellectual humility
intellectual courage
intellectual good faith or integrity
intellectual perseverance
confidence in reason
intellectual curiosity
intellectual civility
intellectual responsibility
intellectual discipline
intellectual empathy

Intellectual Standards

clarity
precision
specificity
accuracy
relevance
plausibility
consistency
logicalness
depth
breadth
completeness
significance
adequacy
fairness

Assessing Student Reasoning

To assess student reasoning requires that we focus our attention as teachers on two inter-related dimensions of reasoning. The first dimension consists of the elements of *reasoning*; the second dimension consists of the *universal intellectual standards* by which we measure student ability to use, in a skillful way, each of those elements of reasoning.

Elements of Reasoning. Once we progress from thought which is purely associational and undisciplined, to thinking which is conceptual and inferential, thinking which attempts in some intelligible way to figure something out, in short, to reasoning, then it is helpful to concentrate on what can be called “the elements of reasoning”. The elements of reasoning are those essential dimensions of reasoning whenever and wherever it occurs. Working together, they shape reasoning and provide a general logic to the use of reason. We can articulate these elements by paying close attention to what is implicit in the the act of figuring anything out by the the use of reason. These elements, then — purpose, question at issue, assumptions, inferences, implications, point of view, concepts and evidence — constitute a central focus in the assessment of student thinking.

Standards of Reasoning. When we assess student reasoning, we want to evaluate, in a reasonable, defensible, objective way, not just *that* students are reasoning, but *how well* they are reasoning. We will be assessing not just that they are using the elements of reasoning, but the degree to which they are using them well, critically, in accord with appropriate intellectual standards.

To assess a student response, whether written or oral, in structured discussion of content or in critical response to reading assignments, by how *clearly* or *completely* it states a position, is to assess it on the basis of a standard of reasoning. Similarly, assessing student work by how *logically* and *consistently* it defends its position, by how *flexible* and *fair* the student is in articulating other points of view, by how *significant* and *realistic* the student’s purpose is, by how *precisely* and *deeply* the student articulates the question at issue — each of these is an evaluation based on standards of reasoning.

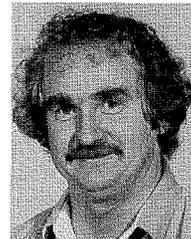
Distinct from such reasoning standards are other standards that teachers sometimes use to assess student work. To evaluate a student response on the basis of how concisely or elegantly it states a position is to use standards that are inappropriate to assessing student reasoning. Similarly unrelated to the assessment of reasoning is evaluating student work by how humorous, glib, personal or sincere it is, by how much it agrees with the teacher’s views, by how “well-written” it is, by how exactly it repeats the teacher’s words, by the mere quantity of information it contains. The danger is that such standards are often conflated with reasoning standards, often unconsciously, and students are assessed on grounds other than the degree to which they are reasoning well.

The conference theme focuses, as we hope you can see, on a much neglected but essential dimension, indeed the *fundamental* dimension, of education: the cultivation of reasoning minds through a process of discipline that deeply involves the internalization of intellectual standards.

Conference Scheduling



Jan Williamson



John Edwards



Norman Unrau



Priscilla Agnew



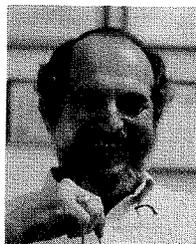
Alice Iaquina



Sandra Parks



Daisy Arredondo



Chuck Wiederhold



Ruth Loring

How to Find the Sessions You Want to Attend

Due to the large number of sessions, we have designed the Conference Schedule with several special sections, each listing the sessions in a unique way: chronologically, by presenter name, and some sessions grouped by interest (see page 45). The following recommendations may make planning your conference attendance easier.

- Each session has audience codes which indicate areas addressed. Most of these codes are assigned by the presenter. The key to these codes is located on the following page, as well as on the last page of the program.
- The conference schedule section is best used to view the schedule as a whole. It lists the sessions chronologically, giving the presenter name(s), session title, location, and audience codes. The abstracts can be located by referencing the presenter's name.
- The abstracts are listed alphabetically by presenter's name. If there are some speakers you especially want to see, you can find out what talks they will give and when.
- There is also a listing of some sessions by selected interest categories. This listing by category is not intended to give a complete list of every session addressing that category, but rather to highlight some that have especially strong emphasis in the listed areas. Again, the abstracts can be found by referencing the presenter's name.
- Some of the interest categories also have an interest room or rooms where the sessions that are focused on that category will be held. This makes finding sessions easier for those interested in attending many sessions with a particular focus. Not all sessions listed in a category, however, are in the interest room, and some interest categories do not have a designated room. All room numbers are shown in the group by interest section of the program.
- Some sessions will inevitably attract many attendees. Because this is difficult to predict, you should always have one or two back-up sessions selected just in case your first and second selections are already filled.
- If you're especially interested in hands-on sessions, check the abstract. Many abstracts describe the nature of the session, as well as more detail about the content. If the abstract is unclear, arrive early and ask the presenter if the session is hands-on.
- Mark all changes from the Special Announcements and Changes Sheet in your schedule.
- Note: The ID #'s located after the titles in the Session Abstracts section are provided for use with the Session Evaluation Forms enclosed in your conference packet. We encourage you to turn in evaluations to help us in our on-going commitment to improve the conference.

Audience Codes

ADV	advanced level session*
CC	community college
CONCEPT	concept of critical thinking
CREAT	creative thinking
ELEM	elementary school
G	general
HS	high school
K-12	kindergarten-12 th grade
LANG	language arts, English
MATH	math
MEDIA	media, media literacy
MID	middle school, junior high
SCI	science
SOC STUD	social studies
STAFF DEV	staff development
TCH STR	teaching strategies
TEST	testing and assessment
U	college/university

* indicates that beginners in the field may find the session especially challenging or that some level of preparation is presupposed.

Conference Schedule

Sunday 7:30-9:00 am

Registration Check-In

Sunday 9:00-10:15 am

Richard Paul

Cultivating the Reasoning Mind:
Teaching, Testing, Standards, and
Assessment

COMMENCEMENT AREA

Sunday 10:30-12:00 pm

Vincent Ryan Ruggiero

Why Aren't Students Learning?

EPT MEDIA, TCH STR, G

Robert Swartz, Sandra Parks

Infusing Critical and Creative
Thinking in Content Area
Instruction

DAR 108 TCH STR

John Chaffee

Designing an Effective Course in
Critical Thinking

STV 1002 TCH STR, C/U, STAFF DEV

Connie De Capite

Critical Thinking for All Students

SU 100 TCH STR, LANG, MID

Robert Pinto

The Relationship Between
Argument and Inference

STV 3038 ADV, CONCEPT

Michael Scriven

Taking Over the Universe: Radical
Extensions of the Critical Thinking
Curriculum Using the "Mini-Max
Approach" (Minimum
Jargon/Maximum Impact)

STV 3008 CONCEPT, G

James West

What Does Sonoma Have to Do
with Athens and Jerusalem?

CH 10 TCH STR, SOC STUD, C/U

Jo Ann Carter-Wells

Critical Thinking Assessment: Use
of Both the Product and the Process
for Learning

CH 20 TCH STR, TEST, U

Gerald Nosich

Motivating Students to Think
Critically by Teaching for
Discovery

CH 6B TCH STR, G

C. Lincoln Johnson

Social Psychological Principles
Underlying Critical Thinking in the
Classroom and in Everyday Life

STV 2049 TCH STR, CONCEPT

Sharon Bailin

The Myths of Creativity

ART 108 CREAT

John R. Feare

Critical Thinking and Discussion
Across the Campus and the
Community

DAR 143 CONCEPT, STAFF DEV, CC

Phyllis Edwards

Cognitive Training Wheels:
Strategies for Developing Thinking
Skills

IVES 24 TCH STR, STAFF DEV, G

Dianne Romain, Edward F.

Mooney

Gender, Emotions, and Critical
Thinking

STV 3036 TCH STR, C/U

Winthrop Holder

Dialogue and Discovery in the
Polyglot Classroom

STV 3076 TCH STR, SOC STUD, HS

Perry Weddle

Cigarette Advertising and the Press:
A Critical Thinking Case Study

STV 3049 TCH STR, MEDIA

John E. Doody, Emily D. Mathis

Introducing Critical Thinking into
Physical Sciences: Grades 4-8

DAR 122 TCH STR, SCI, 4-8 GRADE

Sandra A. Jones, Lynda N.

Brown

Nursing Process and Critical
Thinking in Nursing Education:
Convergence and Divergence

DAR 137 CONCEPT, TCH STR, TEST, U

Guy Axtell, Hal Thorsrud
Informing Our Reformers: On
Criteria for Effective Intervention
with Juvenile Offenders
STV 2052 TCH STR, STAFF DEV SOC STUD

Glenn Earley
Critical Thinking Through Study of
the Holocaust
IVES 35 G, SOC STUD

Deborah Martin Floyd, Amy Meeker
Growth and Change in Teaching
and Learning Science in the
Elementary School as Evidenced by
Portfolios
STV 3044 TCH STR, SCI, ELEM

Lynn J. Lofthouse
Cultivating the Reasoning Mind
Through Speech Preparation and
Delivery
STV 3030 TCH STR, C/U

Pam T. Jenkins
Vocabulary - Fun if You Think
About it
NH 166 TCH STR, LANG, MID

**Lunch 12:00-1:30 pm or
1:30-3:00 pm**
DINING COMMONS
*Dorm Residents between 11:30-1:30 only
Residence Dining Hall*

Sunday 12:15-1:45 pm
Angel R. Villarini
Understanding and Fostering
Intellectual Attitudes
CH 10 CONCEPT, TCH STR, G

Jane L. Robinson, Anne Bohn
All You Ever Wanted to Know
About Critical Thinking Skills, But
Were Far Too Afraid to Ask ... a
beginning approach to teaching
critical thinking skills
STV 3046 TCH STR, CREAT, LANG, ELEM

Jay G. VerLinden
Why Do You Believe That?
Backing Evidence in Everyday
Argument
IVES 34 HS, C/U, CONCEPT

Frances Martine
"I Cannot Get it Done and Cover
the Curriculum!" - Future Problem
Solving at its Best
IVES 78 TCH STR, CREAT, HS

Judith Bank
Creating Cultural Synthesis: The
Goal of Multi-Cultural Education
STV 3076 TCH STR, CREAT, SOC STUD

**Marlys Witte, Charles L. Witte,
Ann Kerwin**
Education Is That Which Remains
...: Uses of Ignorance
DAR 137 CONCEPT, TCH STR, CREAT, SCI

Thomas G. Pagliasotti
Tilling the Hardened Soil:
Challenging Traditional
Perspectives in American History
IVES 35 TCH STR, G, SOC STUD

Marta Manterola, Josefina Beas
The Teaching of Thinking in
Teacher Education
CH 30 STAFF DEV, U

Sunday 1:30-3:00 pm

Mark Battersby
Critical Thinking and the
Competent Layperson: What Every
Critical Thinker Needs to Know
EPT CONCEPT, G, U

Richard Paul
How to Teach Students to Seek the
Logic of Things: To Dissolve
Wholes into Parts, Unite Parts into
Wholes, Question, Infer, and Reason
to Purposeful and Creative Ends
IVES WA TCH STR, STAFF DEV, G

**Wendy Oxman-Michelli,
Raymond Dandridge, Princess
Towe, Robert Davis, Elisa de la
Roche**
Critical Thinking and
Developmental Theater in
Education
DAR 108 STAFF DEV, CREAT

**John R. Feare, Robert Swartz,
Sandra Parks**
Panel: Critical Thinking and a
Theological Dimension
SU 100 G

Victor Quinn
A Critique of John McPeck, and an
Example of Practice as an
Alternative Proposal
STV 3008 CONCEPT, LANG, MID

George H. Hanford
The Reasoning Mind in Academic
Preparation for College
CH 20 TCH STR, HS, TEST

**Ralph H. Johnson, William
Dorman**
Handling News Media: Johnson's
and Dorman's Bag of Tricks
CH 68 TCH STR, MEDIA, U

Susan Hales
Understanding the Relationship
Between Critical Thinking and Self-
Esteem: Part I
STV 2049 G

Diane D. Cheatwood
The Integrated Thinking Skills
Project: Teaching Teachers to
Teach Thinking
DAR 143 TCH STR, STAFF DEV, CC, U

Allan McKissick
Debate and Critical Thinking in the
Classroom, the Community, and the
Mass Media
DAR 139 CONCEPT, TCH STR, HS

**Patricia Foster, David Larson,
Edna Maye Loveless, Gina Foster**
Using Critical Thinking Skills to
Assess Ethical Decision-Making
IVES 24 TCH STR, TEST, C/ U

Judith Collison
Using Performance-Based Tests to
Assess Mathematical Dispositions
DAR 122 TEST, MATH, HS

Diana Milesko-Pytel
Writing, She Murdered
NH 173 TCH STR, LANG, C/U

Charles V. Blatz
Critical Thinking and Strategies of
Reasoning
STV 3040 CONCEPT, CREAT, ADV

Yung Che Kim
Diagnosis and Development of
Thinking Styles
STV 2052 TEST, CREAT, C/U

Larry Litecky
Active Teaching and Learning
Strategies: How to Develop Critical
Thinkers
IVES 45 TCH STR, STAFF DEV, C/U

Dennis Matthies
Computers, Question-Driven
Learning, and Working with a Two-
Track Mind
STV 1040 STAFF DEV, G

Jane Willsen
Critical Thinking in the Affective
Domain: Character Education
STV 3044 LANG, 1-8 GRADE, SOC STUD

Faye O'Dell
Turning Our Taryn's on to Reading
... Turning off the Terror
NH 166 TCH STR, CREAT, LANG

Sonia Flores
Evaluación de Destrezas de
Pensamiento en el Aprendizaje
Cooperativo (Assessment of
Thinking Skills in Cooperative
Learning) (Presented in Spanish*)
CH 14 TEST, HS, U
*This session will also be conducted in English.
See Abstract for day and time.

Sunday 3:15-4:45 pm

Carol Tavis
The Mismeasure of Woman
EPT G

Richard Paul
How to Teach Students to Listen
and Read Well
IVES WA TCH STR, STAFF DEV, G

Sandra Parks
Using Graphic Organizers to
Improve Thinking and Learning
DAR 108

Donald Hatcher, Sharon Bailin
Critical Thinking and Some
Standards of Rationality (by Donald
Hatcher)
Critical Thinking, Rational
Evaluation, and Strong Poetry
(Sharon Bailin's Response to
Hatcher)
STV 3008 G, CONCEPT

T. Edward Damer
A Positive Approach to the
Teaching of the Fallacies: A Simple
Method for Determining the Quality
of Any Argument
STV 3038 G, TCH STR

Linda Nowell
Thinking in the Classroom: A
Community of Inquiry
CH 10 ELEM, MID, STAFF DEV

Jim Pollard
Self Assessment and High
Standards
CH 20 TCH STR, HS, C/U

Gerald Nosich
Learning to Think Well: Quality-
Control in Teaching
CH 68 TCH STR, STAFF DEV, G

- Susan Hales**
Understanding the Relationship
Between Critical Thinking and Self-
Esteem: Part II
STV 2049 G
- Gail Hickey**
Black Sheep or Kissing Cousins?
Social Studies and Critical Thinking
in the Elementary Grades
STV 3046 TCH STR, SOC STUD, ELEM
- Alec Fisher**
A Critical Thinking Research
Program
ART 108 G, U
- Judi Hirsch, Judith Bank**
Thinking Critically About the Quin-
centennial: A Symposium and
Discussion of the Arab, Jewish,
Native American, and Catholic
Perspectives
STV 3072 CONCEPT, TCH STR, STAFF DEV
- Constance DeVereaux**
The Critical Thinking Debate:
Design and Implementation of
Critical Thinking Policy in
California Community Colleges
DAR 143 CONCEPT, TEST, CC
- John Edwards, Ann Kerwin**
Ignorance and Lateral Thinking
IVES 78 TCH STR, STAFF DEV
- Virginia O'Keefe**
Debating the Issues: Classroom
Group Debate
IVES 24 TCH STR, LANG, HS
- Dan Weil**
On the Nature of Prejudice: Cultural
Literacy and Fairminded Critical
Thinking
STV 3076 K-12, SOC STUD
- Ed Rippy**
Garbage In, Garbage Out: Thinking
Cannot Be Better Than Its
Information Sources
STV 3049 MEDIA
- Charlotte King Eady**
Socratic Questioning with the
Middle School Student
NH 173 TCH STR, LANG, MID
- David Bernstein**
Slouching Towards Fairness
STV 3040 CONCEPT, TCH STR, ADV
- Patrick J. M. Costello**
Education, Citizenship, and Critical
Thinking
STV 3044 CONCEPT, TCH STR, ELEM

- Sallie Wilson**
Teaching Advanced Skills to
Educationally Disadvantaged
Children to Implement Critical
Thinking Skills on a Day-to-Day
Basis
STV 3030 ELEM, MID, TCH STR, STAFF DEV
- Les Gottesman**
My Values (A Literary History and
Critique)
NH 166 LANG, U
- Jose R. Villalón**
Pensamiento Critico y las
Dimensiones Afectivas de
Cognicion y Comportamiento
(Critical Thinking and the Affective
Dimensions of Cognition and
Behavior) (Presented in Spanish*)
CH 14 CONCEPT, ADV
**This session will also be conducted in English.
See Abstract for day and time.*

Sunday 7:00-8:30 pm

- Special Interest Goups**
See page 65 for list of groups and
locations.

Sunday 8:00-11:00 pm

- Social Hour**
DINING COMMONS

Monday 8:45-10:15 am

- Richard Paul**
How to Teach Students to Write
Well
IVES WA TCH STR, STAFF DEV, G
- Vincent Ryan Ruggiero**
"Ha! Ha! I'm Thinking"
EPT TCH STR, CREAT, G
- John Barell**
Why Are School Buses Yellow?
Empowering Students to Pose
Questions and Engage in Critical
Inquiry
STV 1002 TCH STR, ELEM, G
- M. Neil Browne, Stuart Keeley**
Getting Started as a Teacher of
Critical Thinking Part I: Planning
Curriculum Materials, Assignments,
and Evaluation
IVES 119 TCH STR, STAFF DEV, CC/U
- Ralph H. Johnson**
Informal Logic in the Classroom
STV 3008 CONCEPT, CC, U

- Pieter Van Veuren**
"Ideological" Fallacies
STV 3038 TCH STR, U
- Nancy Allen**
S. C. A. N. D. A. L.: (Studying
Critically and Analytically
Develops Achieving Learners)
CH 10 TCH STR, LANG, MID
- Marc Becker**
Critical Thinking as a Framework
for Assessment
CH 20 CONCEPT, TEST, G
- Gerald Nosich**
A Sense of the Past, a Sense of the
Present
CH 68 TCH STR, SOC STUD, G
- Peggy Perkins**
Developing Critical Thinking for
Future Evaluators
STV 2049 TCH STR, TEST, U
- George M. Luckey, Jr.**
Problem Solving for the 21st
Century
ART 108 U, K-12 STAFF DEV
- Rosemary Patton, Sheila Cooper**
Critical Thinking, Writing, and
Literature: Can the Community
College Do It All?
DAR 143 TCH STR, LANG, CC
- Darlene Boyd**
Developing Insight into an
Egocentric Personality of the Highly
Critical Thinker: Implications for
Curriculum Development
IVES 78 TCH STR, SOC STUD, G
- Jose R. Villalón**
Critical Thinking and the Affective
Dimensions of Cognition and
Behavior
DAR 139 CONCEPT, ADV
- Donald R. Klein**
Critical Thinking and the
Committee Process
IVES 24 STAFF DEV, G, TCH STR
- Charles Angeletti**
Kicking the Habits: Uncommon
Thoughts about Teaching Critical
Thinking in African American History
STV 3076 CC/U, TCH STR, SOC STUD
- Janet M. Maddox, Phyllis F.
Sanders**
Middle School Math: Motivational
Materials and Modeling
DAR 122 MATH, MID, TCH STR
- Kristan Cavina**
Teaching Critical Thinking in the
Writing Class
NH 173 TCH STR, LANG, C/U
- Deborah Martin Floyd**
Ways of Knowing: Preservice
Teachers' Thinking and the Case
Study Approach
STV 3082 U, TCH STR, STAFF DEV
- Frank E. Colbourn**
The Roles and Impact of Epistemic
Applications in Perception and
Assessment of Problems Analyzed
with Audience Participation
STV 2052 G, CREAT
- William J. Hisker, George Leiner**
Render unto Caesar ... Ethics,
Business, and Critical Thinking
STV 2050 G, CC/U, TCH STR
- Gordon Leon Black**
Analyzing Moral Disputes
IVES 45 SOC STUD, TCH STR
- Jackie Giuliano**
The Development of Social
Responsibility and Environmental
Awareness Through Techniques in
Critical Teaching: A Community
Involvement Approach
IVES 35 TCH STR, CREAT, SOC STUD, H
C/U
- Ernest Rosenberg**
World Critical Numerical Data in
the Curriculum
STV 1040 TCH STR, SCI, SOC STUD
- Eric Miller**
Conservation of Mass and Inductive
Thinking
STV 3044 TCH STR, SCI, 3-6 GRADES
- Lewis Bright**
At Last: A Concrete Way of
Studying Values
CH 30 G, SOC STUD, U
- Norman Betz**
Critical Thinking and Writing: An
Experimental Course
NH 166 TEST, LANG, U
- Marlen Oliver Vasquez, Mayra
Vega Gerena**
Un Modelo de Pensamiento para la
Salud, Educaion: Teoria y Practica
(A Model of Thinking for Health
Education: Theory and Practice)
(Presented in Spanish)
CH 14 CONCEPT, TCH STR, U

Monday 10:30-12:00 pm

Robert Swartz

Assessing the Quality of Student Thinking: Performance Assessment Techniques for Classroom Teachers
EPT TEST

Richard Paul

How to Teach Students to Assess Their Own Work: The Foundation
IVES WA TEST, TCH STR, STAFF DEV

Jan Williamson, Carolyn Eller

Authentic Assessment: Why and When?
STV 1002 K-12, TEST, STAFF DEV

A. Neil Browne

Getting Started as a Teacher of Critical Thinking Part II: Classroom Strategies and Hurdles
IVES 119 TCH STR, STAFF DEV, CC/U

Edward Damer

How to Construct Moral Arguments
STV 3008 G, TCH STR

Huck Wiederhold

Cooperative Learning and Critical Thinking
CH 10 CONCEPT, CREAT, SCI

Robert Kern

Self-Assessment: The Role Emotions Play in Monitoring Success
CH 20 TEST, CONCEPT, C/U

Shudi O. Webster

Multi-Culturalism and Critical Thinking: Compatibility or Competition? *
CH 68 G

*This session repeats, see abstract for other times.

John Green

Cognitive Psychology and Critical Thinking
STV 2049 CONCEPT, ADV

Andy R. Downs

A Mini-Workshop in Critical and Creative Thinking
ART 108 CONCEPT, CREAT

Richard Pope

From Question to Invention: A Program to Make Blooms Blossom in Your Classroom and to Make You Thinner, Sexier, and More Attractive to Movie Stars!
STV 3046 ELEM, CREAT, TCH STR

Dick Rundall

Rock Valley College Model of Critical Thinking Across the Curriculum
DAR 143 STAFF DEV, C/U

Maria Roddy, Michael Roddy

Critical Thinking in Real Life: A Family Literacy Model
IVES 34 G, ADULT ED, ESL

Angel R. Villarini, Dan Weil,**Judi Hirsch, William Schweers,****Hilda Caputis**

Critical Thinking and Critical Consciousness: Ideas for a Critical Thinking and Liberatory Pedagogy of the Hispanic Communities in the United States
DAR 139 CONCEPT, G

Jim Pollard

What Is Not Critical Thinking
IVES 78 CONCEPT, TCH STR, HS, C/U

Corrinne Bedecarré

Self-Reflection: What's Waldo?
STV 3036 CONCEPT, TCH STR, TEST, ADV

Kostas Bagakis, Art Pearl

A Mini-Workshop on Democratic Education: The Next Stage in Critical Thinking
STV 3076 CONCEPT, TCH STR, SOC STUD

Perry Weddle

Thinking Critically About Images
STV 3049 G

Barry Leshowitz

Developing Critical Thinking Skills and Dispositions Through Instruction in Scientific Reasoning
DAR 122 TCH STR, SCI, U

Peter Facione, Noreen W. Facione

Assessing and Teaching Critical Thinking in Nursing Education
DAR 137 TCH STR, TEST, C/U

Donald Hatcher, Lucy Price,**George Wiley**

Critical Thinking and Composition: A Synthesis Without Compromise
NH 173 CONCEPT, TCH STR, LANG, U

Mark Weinstein

Rationalistic Hopes and Utopian Visions
STV 3040 ADV, G, SOC STUD

Deborah Court, Leslee Francis

Teachers' Conceptions of Critical Thinking
STV 3082 CONCEPT, TCH STR, STAFF DEV

William Higa

Teaching and Thinking About Abnormal Psychology
STV 2052 TCH STR, CC, U

Robert J. Velk

Hot Cognition: Teaching Critical Thinking to Busy, Experienced, Often Cynical Adults - Analyzing Ill-Defined Problems
STV 2050 TCH STR, STAFF DEV, U

Thomas Noer

How to Fight the Tyranny of the Textbook: Critical Thinking, Primary Sources, and the Teaching of History
IVES 35 TCH STR, SOC STUD, HS, U

George Collison

A Constructivist Approach to Electricity: Building and Tearing Down Models for Current, Based on Phenomena that "Just Don't Fit." Naive Viewpoints
STV 1040 SCI, MID, HS, CC

Sharon H. Nelson

Cultivating the Reasoning Mind Through Musical Experiences
STV 3044 G, LANG, SOC STUD, ELEM

Lunch 12:00-1:30 pm or 1:30-3:00 pm

DINING COMMONS
Dorm Residents between 11:30-1:30 only
Residence Dining Hall

Monday 12:15-1:45 pm**Jared Haynes**

Cultivating Critical Thinking in Classroom Discussions
ART 108 TCH STR, U

Robert T. Davis, Princess Towe,**William Gaudelli, Nancy****Soderberg**

Multi-Culturalism, Stereotypes, and Critical Thinking: Breaking Down Barriers Among Urban and Rural High School Students
STV 3072 G, SOC STUD, HS

Deanna L. Yameen

Critical Thinking: Creating a Context for Student Involvement, Curricular Reform, and Institutional Change
DAR 143 CONCEPT, TCH STR, CC

Millie Lawson

Teaching Critical Thinking Through Gender Issues
STV 3036 TCH STR, CREAT, LANG, HS, C/U

Linda Vogel

Developing Critical Reading and Thinking Skills with "At Risk" Students
NH 173 LANG, TCH STR

Jackie Giuliano

Critical Textbook Selection - A Fundamental Pre-Requisite for Critical Teaching
STV 3082 TCH STR, CREAT, G

Eileen Gambrill

Distinguishing Between Propaganda and Scholarship
CH 30 TCH STR, SOC STUD, U

Renee Ruderman

Like Falling in Dreams: A Metaphorical Exercise to Engage Critical Thinking Across Disciplines
NH 166 CREAT, LANG, TCH STR

Monday 1:30-3:00 pm**Richard Paul**

How to Teach Students to Assess Their Own Work: The Tactics
IVES WA TEST, TCH STR, STAFF DEV

Vincent Ryan Ruggiero

Thinking Critically About Self-Esteem
EPT CONCEPT, G

Priscilla Agnew

Sex, Death and Advertising: Cultivating the Reasoning Mind
STV 1002 TCH STR, MEDIA, C/U

Irvine Reid, Gregory L. Waters,**Wendy Oxman-Michelli, Mark****Weinstein**

Goodlad's Teacher Education in a Democracy Project: Report from the Field
SU 100 G, STAFF DEV

James B. Freeman

Overall Argument Evaluation:
Procedures and Problems (Part I)
STV 3008 TCH STR, U

Elmut Reich

Knowing Why You Know, Better:
Developing Epistemic Competence
STV 3038 CONCEPT, TCH STR, HS

erry Cederblom

Can Students Apply Critical
Thinking to Classroom Lectures?
CH 10 TCH STR, U

a Peak

Teaching Critical Thinking by
Involving Students in Formulating
Personalized Programs of
Assessment
CH 20 TEST, C/U

William Dorman

The Not-So-Odd Couple: Critical
Thinking and Global Education
CH 68 G, SOC STUD

ice Iaquinta

The 4 C's of the 90's (Part I):
Critical and Creative Thinking,
Chemical and Co-Dependency
STV 2049 CONCEPT, STAFF DEV, G

h Wright

Practical Reasoning
STV 3046 TCH STR, SOC STUD, ELEM

ivia Rovinescu, Clifton

Reducing Prejudice: The Role of
Critical Thinking
STV 3076 TCH STR, HS, C/U

Stepien

Problem Based Learning:
Integrating Theory with Practice in
the K-12 Classroom
DAR 122 TCH STR, K-12, SCI

e R. Villalón

Mythical Thinking: A Permanent
Thinking Style That Must Be Taken
Care of
STV 3040 CONCEPT, ADV

ny Heaslip

Creating the Thinking Practitioner:
Critical Thinking in Clinical
Nursing Practice
DAR 137 TCH STR, TEST, U

old Hayes

Decreating the Mind of the
Criminally Inclined and
Educationally Dysfunctional
STV 2052 STAFF DEV, ADV, G

Jim Pollard

Critical Thinking: A Partner in
Quality
STV 2050 CONCEPT, C/U

Glenn Earley

Historical-Critical,
Phenomenological Teaching About
Religion — Case-Study on
Understanding 1st Century Judaism
and Christianity Using a
Problematic Textbook
IVES 35 G, SOC STUD

Monday 3:15-4:45 pm**Wendy Oxman-Michelli, Elaine**

Lane
Developing Case Studies in
Teaching for Critical Thinking
EPT G, STAFF DEV, TCH STR

Richard Paul

Why Students — and Often Teachers
— Don't Reason Well
IVES WA TCH STR, STAFF DEV, G

Marlys Mayfield

Clear Listening for Clear Thinking:
Teaching What We Take for
Granted
STV 1002 G, TCH STR

Virginia Epstein

When the Smoke of Theory Meets
the Fire of Practice: It Was England
and I Didn't Inhale
IVES 119 CONCEPT, TCH STR, LANG

Judith Collison

Critical Thinking, Preservice
Teacher Education, and Educational
Equity
SU 100 TCH STR, MATH, SCI, ELEM, MID

Mohamed H. Rajabally

Confirmation of Theories: Problems
with Methodology
STV 3038 CONCEPT, ADV

James B. Freeman

Overall Argument Evaluation:
Procedures and Problems (Part II)
STV 3008 TCH STR, U

Connie Missimer

Is Simple Beautiful?
CH 10 CONCEPT, TCH STR, G

John Edwards

Teaching Thinking: How Do You
Know if You Are Achieving
Anything?
CH 20 CONCEPT, TEST

Sonia Bodi

Collaboration Between Faculty and
Librarians in Cultivating the
Reasoning Mind
STV 3030 TCH STR, STAFF DEV, C/U

William Schweers, Jr.,

Madeleine Hudders
Teaching Critical Thinking in
Second or Foreign Language
Instruction
NH 166 TCH STR, LANG

Luz E. López, Adolpho Sánchez

Un Modelo para Integrar
Habilidades de Pensamiento en la
Curricula (A Model for Integrating
Thinking Skills in the Curriculum)
(Presented in Spanish*)
CH 14 G, U, STAFF DEV

*This session will also be conducted in English.
See Abstract for day and time.

Monday 5:30-8:00 pm

Banquet
DINING COMMONS

Monday 8:00-9:15 pm

National Council Meeting
(NCECT)
SU100

Monday 8:00-11:00 pm

Social Hour
DINING COMMONS

Tuesday 8:45-10:15 am

John Chaffee, Sandra Dickinson
Critical Literacy and Critical
Thinking: Partners in Education
EPT TCH STR, LANG, HS, C/U

Richard Paul

Why Intellectual Standards? Why
Teach for Them?
IVES WA TEST, TCH STR, STAFF DEV

Bradley Bowen

Putting Background Logic into the
Foreground
STV 3038 CONCEPT, ADV, U

Patrick Mahaffey

Three Forms of Worldview
Analysis
STV 3008 C/U, SOC STUD

T. Edward Damer

A Code of Conduct for Critical
Thinkers
CH 10 G, TCH STR, CONCEPT

John Chaffee

Teaching and Evaluating Critical
Thinking in the Disciplines
CH 68 TCH STR, TEST, STAFF DEV, U

Alice Iaquinta

The 4 C's of The 90's (Part II):
Unpacking Dysfunctional Thinking
Paradigms
STV 2049 CONCEPT, STAFF DEV, G, P
REQUISITE: ATTENDANCE AT PART 1

Judi Hirsch, Ann Kerwin, Kostas

Bagakis
Using Critical Thinking for
Empowerment: Combatting
Powerlessness and Passivity Among
Teachers
ART 108 STAFF DEV, TCH STR,
ADV, CREAT

Jack Kirschenbaum, Fred Peters

Always Leave them Striving: Peer
Coaching to Infuse Critical
Thinking into Teaching
IVES 34 STAFF DEV, TCH STR

Cecile Sandeen

Constructive Controversy: Making
the Most Out of Conflict
IVES 78 TCH STR, STAFF DEV,
SOC STUD, K-12

Sonia Flores

Assessment of Thinking Skills in
Cooperative Learning
DAR 139 TEST, HS, U

Jackie Giuliano

The Environmental Studies
Curriculum as a Vehicle for the
Introduction of Feminist
Philosophies and Spirituality into
the Classroom — An Example of
Remodeling a Curriculum
STV 3036 TCH STR, CREAT

Carole Srole, Anthony Bernier

History Pedagogy, Language, and
Student Hermeneutics: Addressing
a Student Audience
STV 3076 TCH STR, SOC STUD, U

Robert J. Velk

Hot Cognition: The Problem with
the Word Problem
STV 2050 TCH STR, STAFF DEV, U

Linda Noer

Using Fiction to Enhance Critical
and Creative Thinking in the Social
Sciences
IVES 45 TCH STR, CREAT, TEST, U

- F. Allan Hanson**
Does Testing Create What It Purports to Measure?
CH 20 TEST, U
- William Dorman**
Beyond Reason: The Media, Politics, and Public Discourse
CH 68 SOC STUD, MEDIA, U
- Alice Iaquinta**
Self-Esteem and Critical and Creative Thinking
STV 2049 CONCEPT, TCH STR, STAFF DEV
- Ruth M. Loring**
Models for Change: Toward the Thoughtful Classroom
ART 108 TCH STR, STAFF DEV
- Pamela P. Bearden, J. Charles Dukes**
Back to the Future: Part IV — This Time Marty Gets the Right Start in School!
STV 3046 TCH STR, ELEM
- Thomas Tominaga**
Towards a Confucian Approach to Cultivating the Reasoning Mind for a Social Order
STV 3072 TCH STR, CREAT, SOC STUD
- Ogden Morse**
Literature and Problem Solving: The Integration of Thinking Skills and Subject Matter
DAR 139 HS, C/U, LANG
- Stewart Bellman, Wanda Bellman**
The Structured Controversy: A Cooperative Learning Strategy That Elicits Powerful Thinking
IVES 24 TCH STR, HS, U
- Paula Karenga**
Contestation, Critical Thinking, and Multiculturalism: An Afro-Centric Contribution
STV 3076 SOC STUD, TCH STR
- John Dickinson May**
Words as Pictorial Cues: Images and Inferences Evoked by Reportorial Prose
STV 3049 TCH STR, MEDIA, HS, C/U
- Arthur Voorhees**
Developing a Course in Scientific Reasoning
DAR 122 MATH, SCI, U

- James Henry Quina**
Metaphor as Method: Teaching Critical Thinking Through Storytelling
NH 173 TCH STR, CREAT, LANG, SOC STUD
- Charles William Strong**
Critical Thinking and the Analysis of Language
STV 3040 ADV
- Luz E. López, Adolpho Sánchez**
A Model for Integrating Thinking Skills in the Curriculum
STV 3082 G, U, STAFF DEV
- Wayne Rickard**
Origami and Creative Transformation
IVES 35 CONCEPT, CREAT, G
- Chris Kuchuris**
The Role of Critical Thinking in Career Choices
IVES 45 TCH STR, HS, CC
- Daisy E. Arredondo**
Developing Student Dispositions to Think Critically Within Content Classrooms Using *Dimensions of Learning* Strategies
STV 3030 CONCEPT, TCH STR, STAFF DEV
- Edwin Chin-Shong**
A Model for Analyzing Narrative Text
NH 166 HS, C/U, LANG, TCH STR

Tuesday 10:30–12:00 pm

- Richard Paul**
Reasoning, Critical Thinking, Creativity, Problem-Solving, Communicating, Mastering Content—Putting it All Together
IVES WA TCH STR, STAFF DEV, G
- Vincent Ryan Ruggiero**
“Who’s to Say What’s Right and Wrong?”
EPT CONCEPT, TCH STR, G
- Gerald Nosich**
Rethinking Education: Designing Courses, Fields, and Curricula to Teach for Critical Thinking
STV 1002 TCH STR, STAFF DEV, G
- Ralph H. Johnson**
The Need for Discrimination in Argument Analysis
STV 3008 CONCEPT, ADV

- Perry Weddle**
The “Aesthetic” Argument
IVES 119 ADV
- Mark Weinstein**
Critical Thinking Across the College Curriculum: What Faculty Wants and Needs
CH 10 STAFF DEV, C/U
- Ted Spear**
A Philosophical Critique of Student Assessment Practices
CH 20 TEST
- Jan Williamson, Carolyn Eller**
The Greensboro Model for Staff Development
CH 68 STAFF DEV
- Carol Hayes**
Critical Thinking in Psychology: Decision Theory and Motivation
STV 2049 TCH STR, SOC STUD
- Carol La Bar**
Reasoning About Moral Concepts
ART 108 TCH STR, HS
- Ian Wright**
Questions of Meaning
STV 3046 TCH STR, SOC STUD, ELEM
- Dan Weil, Angel Villarini, Judi Hirsch, Yehudi Webster, Judi Bank, Olivia Rovinescu**
Critical Thinking and the Issue of Multi-Culturalism
STV 3072
- Zachary Seech**
Teaching Open-Mindedness in Grades 5–12
IVES 34 TCH STR, GRADES 5-12
- Maira Gutteridge**
Strategies for Dealing With Unexpected Individual Difficulties in Critical Thinking
IVES 78 TCH STR, TEST, CC/U
- John O’Brien**
What Are Children Thinking in Your Classroom?
DAR 139 TCH STR, G, HS
- René Trujillo, Jr**
Integrating African and Latin American Materials into Critical Thinking
STV 3076 TCH STR, C/U
- Kass Hogan**
Habits of Mind in a Classroom “Collaboratory”
DAR 122 TCH STR, TEST, SCI, ELEM, MID
- Alma Tetrault**
Transfer of Critical and Creative Thinking Through Development of the Dispositions
STV 3040 CONCEPT, TEST, ADV, K-12
- Nancy T. Zuercher**
Double Vision: Critical Thinking for Preservice Teachers
STV 3082 TCH STR, LANG, U
- Betty Duffey**
Tools for Assessing Business Students’ Critical Thinking Skills
STV 2050 TEST, HS, CC
- George Collison**
Computer Simulations as Platforms for Critical Thinking and Constructivist Pedagogy in Life Science Education
STV 1040 SCI, MID, HS, CC
- James P. Marshall**
Teaching Critical Thinking Through Critical Pedagogy
CH 30 TCH STR, G, U
- Sandra Soghikian (McIntyre)**
Critical Thinking in ESL
NH 166

Lunch 12:00–1:30 pm or 1:30–3:00 pm

DINING COMMONS
Dorm Residents between 11:30–1:30 only
Residence Dining Hall

Tuesday 12:15–1:45 pm

- James Rosenberger**
Critical Thinking Applied to Classroom Teaching
CH 10 TEST, K-12, TCH STR
- Adrian W. Frana**
Encouraging the Mind’s Best Work: A View from the Trenches
DAR 139 TCH STR, HS
- John C. S. Kim, Barbara Hitchko**
Sound Family — Sound Education — Sane Society
STV 3076 CREAT, HS, U
- Deanne C. Quinn, Frances Martine**
A Critical Assessment of Ethics in Today’s Music and Media
STV 3049 TCH STR, HS, CC

Colm McEwen
Relationships Among Higher Order Thinking Skills, Process Skills, and Teaching Strategies in the Science Classroom
DAR 122 SCI, ELEM, HS

Hard Pope
Break-the-Mold at Your Elementary School! Design a School Environment That Maximizes Critical Thinking and Promotes Learning for Understanding!
STV 3044 ELEM, CREAT, TCH STR

uesday 1:30-3:00 pm

n Barell
What if You Were a Crew Member on Santa Maria in 1492? Critical Thinking in History
EPT TCH STR, MID, SOC STUD

den Morse
Points of View: The Application of Thinking Skills to Subject Matter
STV 1002 HS, C/U

yneth Evans
Educating Mind and Heart Together: The Relationship between Critical Thinking and Emotion in Children's Literature
IVES 119 LANG, ELEM, MID

es B. Freeman
The Appeal To Popularity: A Theoretical Inquiry
STV 3008 ADV

es Tursi
The Question of What Constitutes Authentic Testing in a Typical High School Social Studies Class
CH 20 TEST, SOC STUD, HS

Weil
Critical Thinking in Social Studies: Reasoning Multi-Culturally
CH 68 TCH STR, SOC STUD, MID, HS

Y. Luckey
Active Learning Strategies that Enhance Critical Thinking
ART 108 TCH STR, G, U

ey I. Gelfer
Student Portfolios for Young Children: An Avenue for Developing Critical Thinking
STV 3046 TEST, KINDERGARTEN

old Drake
Teaching Critical Thinking by Way of General Semantics
STV 3072 TCH STR, LANG

Alec Fisher
Assessing Higher Order Thinking Skills
IVES 34 TEST, U

Robert W. Greenstreet
Academic Debate and Critical Thinking: A Look at the Evidence
IVES 78 TCH STR, HS, U

Norman Unrau
Fostering Critical Reading in English and Social Studies Through Claim Analysis
NH 173 TCH STR, LANG, SOC STUD

Juan Miguel Fernandez-Balboa
Critical Pedagogy: Making Critical Thinking Really Critical
STV 3040 CONCEPT, ADV, SOC STUD

Richard DeWitt
Critical Thinking and Faculty Development
STV 3082 TCH STR, STAFF DEV, U

Webster E. Cotton
Metaphorical Thinking and the Human Condition: Some Themes in the Writings of Dewey, Buber, and Heidegger
STV 2052 CONCEPT, CREAT, G, HS, C/U

Helen Brantley, Donald Small
Using Critical Thinking in Reading Research Articles
STV 3030 CONCEPT, TCH STR, G

Tuesday 3:15-4:45 pm

Richard Paul
How to Devise Assignments and Activities That Require Reasoning
Students are Capable of
IVES WA TCH STR, STAFF DEV, G

Yehudi O. Webster
Are There White and Black People? Reasoning About Racial Classification
EPT G, SOC STUD

Stanley Scott
Teaching Writing as Critical and Creative Thinking
STV 1002 TCH STR, CREAT, U

Judi Hirsch
The Dynamic Assessment of Learning Potential: Combining the Theories of Freire and Feuerstein
IVES 119 TCH STR, TEST, G

Mark Weinstein
Critical Thinking and the Goals of Science Education
SU 100 G, SCI

Robert Boyd
Introduction to Logic: An Approach to Critical Reasoning
STV 3038 TCH STR, TEST, U

Peter Facione
CT Assessment — The Basic Ways and Means
CH 20 TEST, C/U

Jack Kirby, Anne Jensch
Art Literacy for Children: An Art Appreciation Program Which Engages Students in Critical Thinking
STV 3046 ELEM, CREAT

Sherle L. Boone
Using High-Achieving African-American High School Students to Develop Critical Thinking in Younger High-Achieving Urban Students
STV 3072 TCH STR, MATH, MID

Judith Waters
Appeal to Authority: A Love-Hate Relationship
IVES 34 G

Mark Stoner, Linda Martin
Outcome-Mapping: A Search Model for Pathways to Goal Achievement
IVES 78 CONCEPT, STAFF DEV, TCH STR

Toby Klinger, Michael Connert
When Minds Must Meet: How Critical Thinking is Developed in Distance Learning Instruction
DAR 139 TCH STR

Jeannette M. Catsoulis
Images of Women
STV 3036 TCH STR, MEDIA, G

William Hayes
The Process of Science as a Way of Thinking
DAR 122 TCH STR, TEST, SCI

Herman Haluza
Teaching Writing Through Plato
NH 173 CONCEPT, TCH STR, CC, LANG

Marybeth Young
Assessments and Teaching Strategies to Stimulate Critical Thinking in Nursing Students
DAR 137 TCH STR, C/U, TEST

Helen E. R. Ditzhazy
Cultivating the Reasoning Mind: Melding Arete and Techné in Analysis of Incidences Reported in the Log of the Master's and Specialist's Internships
STV 3040 CONCEPT, TEST, U

Walter Veit
Sociology and the Moral Imperative
STV 2052 SOC STUD

Ellen O'Connor
Critical Thinking for Business and Management Education: Four Essential Skills and Strategies for Teaching Them
STV 2050 CONCEPT, TCH STR, U

Carol Lynn H. Knight
Teaching Critical Thinking in the Social Sciences: What to Teach and How to Teach it
IVES 35 TCH STR, SOC STUD, C/U

Pippa Lee Davis
It's Coming, It's Coming, the Thinking Is Coming!
STV 3030 TCH STR, LANG, MID

Mary Curfman
Character Education Through Secondary Literature Classes
NH 166 TCH STR, LANG, SOC STUD, HS

Tuesday 8:00-11:00 pm

Social Hour
DINING COMMONS

Wednesday 8:45-10:15 am

Joanne Gainen, Steven Gelber, Terry Beers
Assessment of a Freshman Seminar to Develop Skills of Critical Inquiry
IVES WA TCH STR, TEST, U

Yehudi O. Webster
Multi-Culturalism and Critical Thinking: Compatibility or Competition?
SU 100 G

William J. Pankratius
Assessing a Learner's Knowledge Base Through Concept Mapping
CH 20 TCH STR, CREAT, G

Renate Otterbach
Abstract of Educating for the Future
CH 10 MID, HS, STAFF DEV, ADV

Wednesday, August 12

**Ann Kerwin, Marlys Witte,
Charles L. Witte**
The Gift of Fantasy: Uses of
Ignorance
CH 68 TCH STR, CREAT, SCI, G

Charles V. Blatz
Contextualizing Justified Belief and
Critical Thinking
STV 3008 CONCEPT, CREAT, ADV

Mark Weinstein
Critical Thinking: The Great Debate
STV 2049 ADV, CONCEPT, G

Edith Collison
Critical Thinking in the Elementary
School: Making Sense of the
Wealth of Ideas Presented at the
Conference
STV 3046 EL
RECOMMENDED FOR NEWCOMERS

Albert H. Gardner
Critical Thinking Solutions to
Problems in the People's Republic
of China
STV 3072 CONCEPT, CREAT, SOC STUD

Max Dresden
The Undefinability of Successful
Critical Thinking in Science and
Science Education
DAR 122 CONCEPT, CREAT, G, MATH, SCI
HS, C/U

William K. Marek
The Nature of Reason, Thought,
and Emotion
STV 2052 CONCEPT, CREAT, G

George Collison
SimEarth, SimCity: Microworlds
that Bring "What If" Modeling and
Argumentation to the Classroom on
a Global/Societal Scale
STV 1040 TCH STR, SCI, HS, CC

Wednesday 10:30-12:00 pm

Vincent Ryan Ruggiero
Teaching Thinking Across the
Curriculum
IVES WA TCH STR, STAFF DEV, CONCEPT

**Christi Peterman, Donna
Barrett**
A "Novel" Twist on Writing with
Critical Thinking
DAR 108 TCH STR, LANG, CREAT, 3-4

**Wendy Oxman-Michelli, Mark
Weinstein, Lourdes Zaragoza
Mitchel**
Critical Thinking and Madelyn
Hunter's Instructional Theory into
Practice
STV 1002 K-12, STAFF DEV

George M. Luckey, Jr.
Teaching for Thinking
SU 100 STAFF DEV, K-12

Cindy Lynch
Encouraging and Assessing
Reflective Thinking Within
Curricular Contexts
CH 20 TCH STR, TEST, STAFF DEV, U

Richard Paul
Critical Thinking and Informal
Logic: Rethinking the Connection
CH 68 ADV

Ogden Morse
Making Meaning in the Classroom:
Skills, Perspectives, and Subject
Matter
STV 3008 TCH STR, G, LANG

Neil M. Daniels
Moral Ecology: A New Paradigm
for Moral Critique
STV 2049 CREAT, G, SOC STUD, SCI

Jackie Imbimbo
How to Create Thematic Integrated
Units With a Critical Thinking
Foundation (for K-2 Teachers)
STV 3046 K-2, TCH STR

Thomas Secco
The Flight of Reason and the Crisis
of Knowledge
ART 108 CONCEPT, ADV

John C. S. Kim
Multi-Cultural Solution in
Philosophy Teaching
STV 3076 CC, U

Christopher Storer
Thinking About Composition
NH 173 TCH STR, LANG, CC

Wednesday 12:00-1:30 pm
DINING COMMONS
*Dorm Residents between 11:30-1:30 only
Residence Dining Hall*

Wednesday 1:30-3:00
Wrap-up
EPT

Conference Schedule

Some Sessions Grouped by Interest

Introduction to Special Listings

Due to the large number of sessions, we have listed some sessions — those that suggest an especially strong emphasis in some areas, levels, and concerns — in the selected interest group categories on the following pages. The sessions are listed under each category in the order in which they appear in the schedule. Neither the categories nor the subsequent lists are to be considered complete. Some categories (such as "teaching strategies" and "concept of critical thinking") would have made the lists too long to be useful. Furthermore, there are more sessions than appear below that apply to these areas; the sessions listed were chosen because their titles and abstracts imply an especially strong emphasis in these categories. Therefore, we have doubtless missed some sessions whose titles or descriptions do not clearly indicate the actual emphasis of the session. We apologize to those presenters whose sessions we may have neglected to list. In addition, appearance on these lists does not necessarily imply superior quality.

Some of the interest categories also have an interest room or rooms where the sessions that are focused on that category will be held. This makes finding sessions easier for those interested in attending many sessions with a particular focus. Not all sessions listed in a category, however, are held in the interest room and some interest categories do not have a designated room. All room numbers are shown in the session listing.

Some categories below are not audience code categories, therefore this section will be the only place to find specific mention of some interest categories. The special interest categories are listed alphabetically below.

Advanced	Math
Business	Media
College and University	Middle School
Community College	Multi-Cultural
Computer Assisted Instruction	Psychology/Sociology
Elementary School	Science
Feminist Issues	Social Studies
Health Sciences Education	Spanish (Presented in Spanish)
High School	Staff Development
Informal Logic	Testing and Assessment
Language Arts	

Conference Schedule

45

Advanced

Room: Stev 3040

Robert Pinto

The Relationship Between
Argument and Inference
Sunday, 10:30
STV 3038 ADV, CONCEPT

Charles V. Blatz

Critical Thinking and Strategies of
Reasoning
Sunday, 1:30
STV 3040 CONCEPT, CREAT, ADV

David Bernstein

Slouching Towards Fairness
Sunday, 3:15
STV 3040 CONCEPT, TCH STR, ADV

Jose R. Villalón

Critical Thinking and the Affective
Dimensions of Cognition and
Behavior
Monday, 8:45
DAR 139 CONCEPT, ADV

Mark Weinstein

Rationalistic Hopes and Utopian
Visions
Monday, 10:30
STV 3040 ADV, G, SOC STUD

Corrinne Bedecarré

Self-Reflection: What's Waldo?
Monday, 10:30
STV 3036 CONCEPT, TCH STR, TEST, ADV

Jose R. Villalón

Mythical Thinking: A Permanent
Thinking Style That Must Be Taken
Care of
Monday, 1:30
STV 3040 CONCEPT, ADV

Charles William Strong

Critical Thinking and the Analysis
of Language
Tuesday, 8:45
STV 3040 ADV

Ma Tetrault

Transfer of Critical and Creative
Thinking Through Development of
the Dispositions
Tuesday, 10:30
STV 3040 CONCEPT, TEST, ADV, K-12

Alph H. Johnson

The Need for Discrimination in
Argument Analysis
Tuesday, 10:30
STV 3008 CONCEPT, ADV

Perry Weddle

The "Aesthetic" Argument
Tuesday, 10:30
IVES 119 ADV

Juan Miguel Fernandez-Balboa

Critical Pedagogy: Making Critical
Thinking Really Critical
Tuesday, 1:30
STV 3040 CONCEPT, ADV, SOC STUD

James B. Freeman

The Appeal To Popularity: A
Theoretical Inquiry
Tuesday, 1:30
STV 3008 ADV

Mark Weinstein

Critical Thinking: The Great Debate
Wednesday, 8:45
STV 2049 ADV, CONCEPT, G

Charles V. Blatz

Contextualizing Justified Belief and
Critical Thinking
Wednesday, 8:45
STV 3008 CONCEPT, CREAT, ADV

Renate Otterbach

Abstract of Educating for the Future
Wednesday, 8:45
CH 10 MID, HS, STAFF DEV, ADV

Richard Paul

Critical Thinking and Informal
Logic: Rethinking the Connection
Wednesday, 10:30
CH 68 ADV

Thomas Secco

The Flight of Reason and the Crisis
of Knowledge
Wednesday, 10:30
ART 108 CONCEPT, ADV

Business

Room: Stev 2050

William J. Hisker, George Leiner

Render unto Caesar ... Ethics,
Business, and Critical Thinking
Monday, 8:45
STV 2050 G, CC/U, TCH STR

Robert J. Velk

Hot Cognition: Teaching Critical
Thinking to Busy, Experienced,
Often Cynical Adults — Analyzing
Ill-Defined Problems
Monday, 10:30
STV 2050 TCH STR, STAFF DEV, U

Jim Pollard

Critical Thinking: A Partner in Quality
Monday, 1:30
STV 2050 CONCEPT, C/U

Conference Schedule**Robert J. Velk**

Hot Cognition: The Problem with
the Word Problem
Monday, 3:15
STV 2050 TCH STR, STAFF DEV, U

Betty Duffey

Tools for Assessing Business
Students' Critical Thinking Skills
Tuesday, 10:30
STV 2050 TEST, HS, CC

Ellen O'Connor

Critical Thinking for Business and
Management Education: Four
Essential Skills and Strategies for
Teaching Them
Tuesday, 3:15
STV 2050 CONCEPT, TCH STR, U

College and University**Jo Ann Carter-Wells**

Critical Thinking Assessment:
Use of Both the Product and the
Process for Learning
Sunday, 10:30
CH 20 TCH STR, TEST, U

James West

What Does Sonoma Have to Do
With Athens and Jerusalem?
Sunday, 10:30
CH 10 TCH STR, SOC STUD, C/U

John Chaffee

Designing an Effective Course in
Critical Thinking
Sunday, 10:30
STV 1002 TCH STR, C/U, STAFF DEV

Larry Litecky

Active Teaching and Learning
Strategies: How to Develop Critical
Thinkers
Sunday, 1:30
IVES 45 TCH STR, STAFF DEV, C/U

Diana Milesko-Pytel

Writing, She Murdered
Sunday, 1:30
NH 173 TCH STR, LANG, C/U

Mark Battersby

Critical Thinking and the
Competent Layperson: What Every
Critical Thinker Needs to Know
Sunday, 1:30
EPT CONCEPT, G, U

Les Gottesman

My Values (A Literary History and
Critique)
Sunday, 3:15
NH 166 LANG, U

Conference Schedule**Norman Betz**

Critical Thinking and Writing: An
Experimental Course
Monday, 8:45
NH 166 TEST, LANG, U

Deborah Martin Floyd

Ways of Knowing: Preservice
Teachers' Thinking and the Case
Study Approach
Monday, 8:45
STV 3062 U, TCH STR, STAFF DEV

M. Neil Browne, Stuart Keeley

Getting Started as a Teacher of
Critical Thinking Part I: Planning
Curriculum Materials, Assignments,
and Evaluation
Monday, 8:45
IVES 119 TCH STR, STAFF DEV, CC/U

Robert J. Velk

Hot Cognition: Teaching Critical
Thinking to Busy, Experienced,
Often Cynical Adults — Analyzing
Ill-Defined Problems
Monday, 10:30
STV 2050 TCH STR, STAFF DEV, U

Donald Hatcher, Lucy Price,**George Wiley**

Critical Thinking and Composition:
A Synthesis Without Compromise
Monday, 10:30
NH 173 CONCEPT, TCH STR, LANG, U

M. Neil Browne

Getting Started as a Teacher of
Critical Thinking Part II: Classroom
Strategies and Hurdles
Monday, 10:30
IVES 119 TCH STR, STAFF DEV, CC/U

Eileen Gambrill

Distinguishing Between Propaganda
and Scholarship
Monday, 12:15
CH 30 TCH STR, SOC STUD, U

Jared Haynes

Cultivating Critical Thinking in
Classroom Discussions
Monday, 12:15
ART 108 TCH STR, U

Ira Peak

Teaching Critical Thinking by
Involving Students in Formulating
Personalized Programs of
Assessment
Monday, 1:30
CH 20 TEST, C/U

onia Bodi

Collaboration Between Faculty and Librarians in Cultivating the Reasoning Mind
Monday, 3:15
STV 3030 TCH STR, STAFF DEV, C/U

obert J. Velk

Hot Cognition: The Problem with the Word Problem
Monday, 3:15
STV 2050 TCH STR, STAFF DEV, U

hn Chaffee

Teaching and Evaluating Critical Thinking in the Disciplines
Monday, 3:15
CH 68 TCH STR, TEST, STAFF DEV, U

hris Kuchuris

The Role of Critical Thinking in Career Choices
Tuesday, 8:45
IVES 45 TCH STR, HS, CC

z E. López, Adolpho Sánchez

A Model for Integrating Thinking Skills in the Curriculum
Tuesday, 8:45
STV 3082 G, U, STAFF DEV

hn Chaffee, Sandra Dickinson

Critical Literacy and Critical Thinking: Partners in Education
Tuesday, 8:45
EPT TCH STR, LANG, HS, C/U

nes P. Marshall

Teaching Critical Thinking Through Critical Pedagogy
Tuesday, 10:30
CH 30 TCH STR, G, U

ira Gutteridge

Strategies for Dealing with Unexpected Individual Difficulties in Critical Thinking
Tuesday, 10:30
IVES 78 TCH STR, TEST, CC/U

rk Weinstein

Critical Thinking Across the College Curriculum: What Faculty Wants and Needs
Tuesday, 10:30
CH 10 STAFF DEV, C/U

hard DeWitt

Critical Thinking and Faculty Development
Tuesday, 1:30
STV 3082 TCH STR, STAFF DEV, U

Sue Y. Luckey

Active Learning Strategies that Enhance Critical Thinking
Tuesday, 1:30
ART 108 TCH STR, G, U

Helen E. R. Ditzhazy

Cultivating the Reasoning Mind: Melding Arete and Techné in Analysis of Incidences Reported in the Log of the Master's and Specialist's Internships
Tuesday, 3:15
STV 3040 CONCEPT, TEST, U

Stanley Scott

Teaching Writing as Critical and Creative Thinking
Tuesday, 3:15
STV 1002 TCH STR, CREAT, U

Joanne Gainen, Steven Gelber,

Terry Beers
Assessment of a Freshman Seminar to Develop Skills of Critical Inquiry
Wednesday, 8:45
IVES WA TCH STR, TEST, U

Christopher Storer

Thinking About Composition
Wednesday, 10:30
NH 173 TCH STR, LANG, CC

Community College

Room: Dar 143

John R. Feare

Critical Thinking and Discussion Across the Campus and the Community
Sunday, 10:30
DAR 143 CONCEPT, STAFF DEV, CC

Diane D. Cheatwood

The Integrated Thinking Skills Project: Teaching Teachers to Teach Thinking
Sunday, 1:30
DAR 143 TCH STR, STAFF DEV, CC, U

Constance DeVereaux

The Critical Thinking Debate: Design and Implementation of Critical Thinking Policy in California Community Colleges
Sunday, 3:15
DAR 143 CONCEPT, TEST, CC

Dick Rundall

Rock Valley College Model of Critical Thinking Across the Curriculum
Monday, 10:30
DAR 143 STAFF DEV, C/U

Herman Haluza

Teaching Writing Through Plato
Tuesday, 3:15
NH 173 CONCEPT, TCH STR, CC, LANG

Computer Assisted Instruction

Room: Stev 1040

Dennis Matthies

Computers, Question-Driven Learning, and Working with a Two-Track Mind
Sunday, 1:30
STV 1040 STAFF DEV, G

Ernest Rosenberg

World Critical Numerical Data in the Curriculum
Monday, 8:45
STV 1040 TCH STR, SCI, SOC STUD

George Collison

A Constructivist Approach to Electricity: Building and Tearing Down Models for Current, Based on Phenomena that "Just Don't Fit." Naive Viewpoints
Monday, 10:30
STV 1040 SCI, MID, HS, CC

George Collison

Computer Simulations as Platforms for Critical Thinking and Constructivist Pedagogy in Life Science Education
Tuesday, 10:30
STV 1040 SCI, MID, HS, CC

George Collison

SimEarth, SimCity: Microworlds that Bring "What If" Modeling and Argumentation to the Classroom on a Global/Societal Scale
Wednesday, 8:45
STV 1040 TCH STR, SCI, HS, CC

Elementary School

Rooms: Stev 3044 and Stev 3046

Deborah Martin Floyd

Amey Meeker
Growth and Change in Teaching and Learning Science in the Elementary School as Evidenced by Portfolios
Sunday, 10:30
STV 3044 TCH STR, SCI, ELEM

John E. Doody, Emily D. Mathis

Introducing Critical Thinking into Physical Sciences: Grades 4-8
Sunday, 10:30
DAR 122 TCH STR, SCI, 4-8 GRADE

Jane L. Robinson, Anne Bohn

All You Ever Wanted to Know About Critical Thinking Skills, But Were Far Too Afraid to Ask ... a beginning approach to teaching critical thinking skills
Sunday, 12:15
STV 3046 TCH STR, CREAT, LANG, ELEM

Jane Willsen

Critical Thinking in the Affective Domain: Character Education
Sunday, 1:30
STV 3044 LANG, 1-8 GRADE, SOC STUD

Patrick J. M. Costello

Education, Citizenship, and Critical Thinking
Sunday, 3:15
STV 3044 CONCEPT, TCH STR, ELEM

Gail Hickey

Black Sheep or Kissing Cousins? Social Studies and Critical Thinking in the Elementary Grades
Sunday, 3:15
STV 3046 TCH STR, SOC STUD, ELEM

Eric Miller

Conservation of Mass and Inductive Thinking
Monday, 8:45
STV 3044 TCH STR, SCI, 3-6 GRADES

John Barell

Why Are School Buses Yellow? Empowering Students to Pose Questions and Engage in Critical Inquiry
Monday, 8:45
STV 1002 TCH STR, ELEM, G

Sharon H. Nelson

Cultivating the Reasoning Mind Through Musical Experiences
Monday, 10:30
STV 3044 G, LANG, SOC STUD, ELEM

Richard Pope

From Question to Invention: A Program to Make Blooms Blossom in Your Classroom and to Make You Thinner, Sexier, and More Attractive to Movie Stars
Monday, 10:30
STV 3046 ELEM, CREAT, TCH STR

Ian Wright

Practical Reasoning
Monday, 1:30
STV 3046 TCH STR, SOC STUD, ELEM

Judith Collison

Critical Thinking, Preservice
Teacher Education, and Educational
Equity

Monday, 3:15
SU 100 TCH STR, MATH, SCI, ELEM, MID

Pamela P. Bearden, J. Charles**Dukes**

Back to the Future: Part IV — This
Time Marty Gets the Right Start in
School!

Tuesday, 8:45
STV 3046 TCH STR, ELEM

Kass Hogan

Habits of Mind in a Classroom
"Collaboratory"

Tuesday, 10:30
DAR 122 TCH STR, TEST, SCI, ELEM, MID

an Wright

Questions of Meaning

Tuesday, 10:30
STV 3046 TCH STR, SOC STUD, ELEM

Richard Pope

Break-the-Mold at Your Elementary
School! Design a School
Environment That Maximizes
Critical Thinking and Promotes
Learning for Understanding!

Tuesday, 12:15
STV 3044 ELEM, CREAT, TCH STR

Jeffrey I. Gelfer

Student Portfolios for Young
Children: An Avenue for
Developing Critical Thinking

Tuesday, 1:30
STV 3046 TEST, KINDERGARTEN

wyneth Evans

Educating Mind and Heart
Together: The Relationship
Between Critical Thinking and
Emotion in Children's Literature

Tuesday, 1:30
IVES 119 LANG, ELEM, MID

hn Barell

What if You Were a Crew Member
on Santa Maria in 1492? Critical
Thinking in History

Tuesday, 1:30
EPT TCH STR, MID, SOC STUD

ck Kirby, Anne Jensch

Art Literacy for Children: An Art
Appreciation Program Which
Engages Students in Critical
Thinking

Tuesday, 3:15
STV 3046 ELEM, CREAT

Judith Collison

Critical Thinking in the Elementary
School: Making Sense of the
Wealth of Ideas Presented at the
Conference

Wednesday, 8:45
STV 3046 ELEM, ESPECIALLY RECOMMENDED
FOR NEWCOMERS

Jackie Imbimbo

How to Create Thematic Integrated
Units With a Critical Thinking
Foundation (for K-2 Teachers)

Wednesday, 10:30
STV 3046 K-2, TCH STR

Christi Peterman, Donna**Garrett**

A "Novel" Twist on Writing with
Critical Thinking

Wednesday, 10:30
DAR 108 TCH STR, LANG, CREAT, 3-4

Feminist Issues

Room: Stev 3036

Dianne Romain, Edward F.**Mooney**

Gender, Emotions, and Critical
Thinking

Sunday, 10:30
STV 3036 TCH STR, C/U

Carol Tavris

The Mismeasure of Woman

Sunday, 3:15
EPT G

Corrinne Bedecarré

Self-Reflection: What's Waldo?

Monday, 10:30
STV 3036 CONCEPT, TCH STR, TEST, ADV

Millie Lawson

Teaching Critical Thinking Through
Gender Issues

Monday, 12:15
STV 3036 TCH STR, CREAT, LANG, HS, C/U

Jackie Giuliano

The Environmental Studies
Curriculum as a Vehicle for the
Introduction of Feminist
Philosophies and Spirituality into the
Classroom — An Example of
Remodeling a Curriculum

Monday, 3:15
STV 3036 TCH STR, CREAT

Judith Collison

Critical Thinking, Preservice
Teacher Education, and Educational
Equity

Monday, 3:15
SU 100 TCH STR, MATH, SCI, ELEM, MID

Deanne C. Quinn, Frances**Martine**

A Critical Assessment of Ethics in
Today's Music and Media

Tuesday, 12:15
STV 3049 TCH STR, HS, CC

Harold Drake

Teaching Critical Thinking by Way
of General Semantics

Tuesday, 1:30
STV 3072 TCH STR, LANG

Jeannette M. Catsoulis

Images of Women

Tuesday, 3:15
STV 3036 TCH STR, MEDIA, G

Health Science Education

Room: Dar 137

Sandra A. Jones, Lynda N.**Brown**

Nursing Process and Critical
Thinking in Nursing Education:
Convergence and Divergence

Sunday, 10:30
DAR 137 CONCEPT, TCH STR, TEST, U

Marlys Witte, Charles L. Witte,**Ann Kerwin**

Education Is That Which
Remains...: Uses of Ignorance

Sunday, 12:15
DAR 137 CONCEPT, TCH STR, CREAT, SCI

Marlen Oliver Vasquez, Mayra**Vega Gerena**

Un Modelo de Pensamiento para la
Salud, Educaon: Teoría y Práctica
(A Model of Thinking for Health
Education: Theory and Practice)
(Presented in Spanish)

Monday, 8:45
CH 14 CONCEPT, TCH STR, U

Peter Facione, Noreen W.**Facione**

Assessing and Teaching Critical
Thinking in Nursing Education

Monday, 10:30
DAR 137 TCH STR, TEST, C/U

Penny Heaslip

Creating the Thinking Practitioner:
Critical Thinking in Clinical
Nursing Practice

Monday, 1:30
DAR 137 TCH STR, TEST, U

Marybeth Young

Assessments and Teaching
Strategies to Stimulate Critical
Thinking in Nursing Students

Tuesday, 3:15
DAR 137 TCH STR, C/U, TEST

Ann Kerwin, Marlys Witte,**Charles L. Witte**

The Gift of Fantasy: Uses of
Ignorance

Wednesday, 8:45
CH 68 TCH STR, CREAT, SCI, G

High School**Frances Martine**

"I Cannot Get it Done and Cover
the Curriculum" — Future Problem
Solving at its Best

Sunday, 12:15
IVES 78 TCH STR, CREAT, HS

George H. Hanford

The Reasoning Mind in Academic
Preparation for College

Sunday, 1:30
CH 20 TCH STR, HS, TEST

Robert T. Davis, Princess Towe,**William Gaudelli, Nancy****Soderberg**

Multi-Culturalism, Stereotypes, and
Critical Thinking: Breaking Down
Barriers Among Urban and Rural
High School Students

Monday, 12:15
STV 3072 G, SOC STUD, HS

Edwin Chin-Shong

A Model for Analyzing Narrative
Text

Tuesday, 8:45
NH 166 HS, C/U, LANG, TCH STR

Chris Kuchuris

The Role of Critical Thinking in
Career Choices

Tuesday, 8:45
IVES 45 TCH STR, HS, CC

John O'Brien

What Are Children Thinking in
Your Classroom?

Tuesday, 10:30
DAR 139 TCH STR, G, HS

Zachary Seech
Teaching Open-Mindedness in
Grades 5-12
Tuesday, 10:30
IVES 34 TCH STR, GRADES 5-12

Adrian W. Frana
Encouraging the Mind's Best Work:
A View from the Trenches
Tuesday, 12:15
DAR 139 TCH STR, HS

James Tursi
The Question of What Constitutes
Authentic Testing in a Typical High
School Social Studies Class
Tuesday, 1:30
CH 20 TEST, SOC STUD, HS

Mary Curfman
Character Education Through
Secondary Literature Classes
Tuesday, 3:15
NH 166 TCH STR, LANG, SOC STUD, HS

Stanley Scott
Teaching Writing as Critical and
Creative Thinking
Tuesday, 3:15
STV 1002 TCH STR, CREAT, U

Informal Logic
Rooms: Stev 3008 and Stev 3038

Robert Pinto
The Relationship Between
Argument and Inference
Sunday, 10:30
STV 3038 ADV, CONCEPT

Michael Scriven
Taking Over the Universe: Radical
Extensions of the Critical Thinking
Curriculum Using the "Mini-Max
Approach" (Minimum
Jargon/Maximum Impact)
Sunday, 10:30
STV 3008 CONCEPT, G

Victor Quinn
A Critique of John McPeck, and an
Example of Practice as an
Alternative Proposal
Sunday, 1:30
STV 3008 CONCEPT, LANG, MID

Donald Hatcher, Sharon Bailin
Critical Thinking and Some Standards
of Rationality (by Donald Hatcher)
Critical Thinking, Rational
Evaluation, and Strong Poetry
(Sharon Bailin's Response to
Hatcher)
Sunday, 3:15
STV 3008 G, CONCEPT

T. Edward Damer
A Positive Approach to the
Teaching of the Fallacies: A Simple
Method for Determining the Quality
of Any Argument
Sunday, 3:15
STV 3038 G, TCH STR

Ralph H. Johnson
Informal Logic in the Classroom
Monday, 8:45
STV 3008 CONCEPT, CC, U

Pieter Van Veuren
"Ideological" Fallacies
Monday, 8:45
STV 3038 TCH STR, U

Mark Weinstein
Rationalistic Hopes and Utopian
Visions
Monday, 10:30
STV 3040 ADV, G, SOC STUD

T. Edward Damer
How to Construct Moral Arguments
Monday, 10:30
STV 3008 G, TCH STR

James B. Freeman
Overall Argument Evaluation:
Procedures and Problems (Part I)
Monday, 1:30
STV 3008 TCH STR, U

Helmut Reich
Knowing Why You Know, Better:
Developing Epistemic Competence
Monday, 1:30
STV 3038 CONCEPT, TCH STR, HS

Mohamed H. Rajabally
Confirmation of Theories: Problems
with Methodology
Monday, 3:15
STV 3038 CONCEPT, ADV

James B. Freeman
Overall Argument Evaluation:
Procedures and Problems (Part II)
Monday, 3:15
STV 3008 TCH STR, U

Bradley Bowen
Putting Background Logic into the
Foreground
Tuesday, 8:45
STV 3038 CONCEPT, ADV, U

Ralph H. Johnson
The Need for Discrimination in
Argument Analysis
Tuesday, 10:30
STV 3008 CONCEPT, ADVANCE

Perry Weddle
The "Aesthetic" Argument
Tuesday, 10:30
IVES 119 ADV

James B. Freeman
The Appeal To Popularity: A
Theoretical Inquiry
Tuesday, 1:30
STV 3008 ADV

Robert Boyd
Introduction to Logic: An Approach
to Critical Reasoning
Tuesday, 3:15
STV 3038 TCH STR, TEST, U

Richard Paul
Critical Thinking and Informal
Logic: Rethinking the Connection
Advanced Session
Wednesday, 10:30
CH 68 ADV

Language Arts
Rooms: Nich 166 and Nich 173

Pam T. Jenkins
Vocabulary — Fun if You Think
About it
Sunday, 10:30
NH 166 TCH STR, LANG, MID

Jane L. Robinson, Anne Bohn
All You Ever Wanted to Know
About Critical Thinking Skills, But
Were Far Too Afraid to Ask ... a
beginning approach to teaching
critical thinking skills
Sunday, 12:15
STV 3046 TCH STR, CREAT, LANG, ELEM

Faye O'Dell
Turning Our Taryn's on to Reading
... Turning off the Terror
Sunday, 1:30
NH 166 TCH STR, CREAT, LANG

Diana Milesko-Pytel
Writing, She Murdered
Sunday, 1:30
NH 173 TCH STR, LANG, C/U

Les Gottesman
My Values (A Literary History and
Critique)
Sunday, 3:15
NH 166 LANG, U

Charlotte King Eady
Socratic Questioning with the
Middle School Student
Sunday, 3:15
NH 173 TCH STR, LANG, MID

Norman Betz
Critical Thinking and Writing: An
Experimental Course
Monday, 8:45
NH 166 TEST, LANG, U

Kristan Cavina
Teaching Critical Thinking in the
Writing Class
Monday, 8:45
NH 173 TCH STR, LANG, C/U

Rosemary Patton, Sheila Cooper
Critical Thinking, Writing, and
Literature: Can the Community
College Do It All?
Monday, 8:45
DAR 143 TCH STR, LANG, CC

**Donald Hatcher, Lucy Price,
George Wiley**
Critical Thinking and Composition:
A Synthesis Without Compromise
Monday, 10:30
NH 173 CONCEPT, TCH STR, LANG, U

Renee Ruderman
Like Falling in Dreams: A
Metaphorical Exercise to Engage
Critical Thinking Across Disciplines
Monday, 12:15
NH 166 CREAT, LANG, TCH STR

Linda Vogel
Developing Critical Reading and
Thinking Skills with "At Risk"
Students
Monday, 12:15
NH 173 LANG, TCH STR

Millie Lawson
Teaching Critical Thinking Through
Gender Issues
Monday, 12:15
STV 3036 TCH STR, CREAT, LANG, HS, C/U

**William Schweers, Jr.,
Madeleine Hudders**
Teaching Critical Thinking in
Second or Foreign Language
Instruction
Monday, 3:15
NH 166 TCH STR, LANG

Linda Noer
Using Fiction to Enhance Critical
and Creative Thinking in the Social
Sciences
Monday, 3:15
IVES 45 TCH STR, CREAT, TEST, U

Virginia Epstein

When the Smoke of Theory Meets
the Fire of Practice: It Was England
and I Didn't Inhale

Monday, 3:15
IVES 119 CONCEPT, TCH STR, LANG

Edwin Chin-Shong

A Model for Analyzing Narrative
Text

Tuesday, 8:45
NH 166 HS, C/U, LANG, TCH STR

James Henry Quina

Metaphor as Method: Teaching
Critical Thinking Through
Storytelling

Tuesday, 8:45
NH 173 TCH STR, CREAT, LANG, SOC STUD

John Chaffee, Sandra Dickinson

Critical Literacy and Critical
Thinking: Partners in Education

Tuesday, 8:45
EPT TCH STR, LANG, HS, C/U

Norman Unrau

Fostering Critical Reading in
English and Social Studies Through
Claim Analysis

Tuesday, 1:30
NH 173 TCH STR, LANG, SOC STUD

Gwyneth Evans

Educating Mind and Heart
Together: The Relationship
Between Critical Thinking and
Emotion in Children's Literature

Tuesday, 1:30
IVES 119 LANG, ELEM, MID

Mary Curfman

Character Education Through
Secondary Literature Classes

Tuesday, 3:15
NH 166 TCH STR, LANG, SOC STUD, HS

Merman Haluza

Teaching Writing Through Plato

Tuesday, 3:15
NH 173 CONCEPT, TCH STR, CC, LANG

Christopher Storer

Thinking About Composition

Wednesday, 10:30
NH 173 TCH STR, LANG, CC

Math

Room: Dar 122

Judith Collison

Using Performance-Based Tests to
Assess Mathematical Dispositions

Sunday, 1:30
DAR 122 TEST, MATH, HS

Janet M. Maddox, Phyllis F.**Sanders**

Middle School Math: Motivational
Materials and Modeling

Monday, 8:45
DAR 122 MATH, MID, TCH STR

Burton Voorhees

Developing a Course in Scientific
Reasoning

Tuesday, 8:45
DAR 122 MATH, SCI, U

Media

Room: Stev 3049

Perry Weddle

Cigarette Advertising and the Press:
A Critical Thinking Case Study

Sunday, 10:30
STV 3049 TCH STR, MEDIA

Vincent Ryan Ruggiero

Why Aren't Students Learning?

Sunday, 10:30
EPT MEDIA, TCH STR, G

Ralph H. Johnson, William**Dorman**

Handling News Media: Johnson's
and Dorman's Bag of Tricks

Sunday, 1:30
CH 68 TCH STR, MEDIA, U

Ed Rippy

Garbage In, Garbage Out: Thinking
Cannot Be Better Than Its
Information Sources

Sunday, 3:15
STV 3049 MEDIA

Perry Weddle

Thinking Critically About Images

Monday, 10:30
STV 3049 G

Priscilla Agnew

Sex, Death and Advertising:
Cultivating the Reasoning Mind

Monday, 1:30
STV 1002 TCH STR, MEDIA, C/U

John Dickinson May

Words as Pictorial Cues: Images
and Inferences Evoked by
Reportorial Prose

Tuesday, 8:45
STV 3049 TCH STR, MEDIA, HS, C/U

William Dorman

Beyond Reason: The Media,
Politics, and Public Discourse

Tuesday, 8:45
CH 68 SOC STUD, MEDIA, U

Deanne C. Quinn, Frances**Martine**

A Critical Assessment of Ethics in
Today's Music and Media

Tuesday, 12:15
STV 3049 TCH STR, HS, CC

Jeannette M. Catsoulis

Images of Women

Tuesday, 3:15
STV 3036 TCH STR, MEDIA, G

Middle School**Pam T. Jenkins**

Vocabulary — Fun if You Think
About it!

Sunday, 10:30
NH 166 TCH STR, LANG, MID

John E. Doody, Emily D. Mathis

Introducing Critical Thinking into
Physical Sciences: Grades 4-8

Sunday, 10:30
DAR 122 TCH STR, SCI, 4-8 GRADE

Connie De Capite

Critical Thinking for All Students

Sunday, 10:30
SU 100 TCH STR, LANG, MID

Jane Willsen

Critical Thinking in the Affective
Domain: Character Education

Sunday, 1:30
STV 3044 LANG, 1-8 GRADE, SOC STUD

Victor Quinn

A Critique of John McPeck, and an
Example of Practice as an
Alternative Proposal

Sunday, 1:30
STV 3008 CONCEPT, LANG, MID

Charlotte King Eady

Socratic Questioning with the
Middle School Student

Sunday, 3:15
NH 173 TCH STR, LANG, MID

Janet M. Maddox, Phyllis F.**Sanders**

Middle School Math: Motivational
Materials and Modeling

Monday, 8:45
DAR 122 MATH, MID, TCH STR

Nancy Allen

S. C. A. N. D. A. L.: (Studying
Critically and Analytically
Develops Achieving Learners)

Monday, 8:45
CH 10 TCH STR, LANG, MID

Kass Hogan

Habits of Mind in a Classroom
"Collaboratory"

Tuesday, 10:30
DAR 122 TCH STR, TEST, SCI, ELEM, MID

Zachary Seech

Teaching Open-Mindedness in
Grades 5-12

Tuesday, 10:30
IVES 34 TCH STR, GRADES 5-12

Gwyneth Evans

Educating Mind and Heart
Together: The Relationship
Between Critical Thinking and
Emotion in Children's Literature

Tuesday, 1:30
IVES 119 LANG, ELEM, MID

Pippa Lee Davis

It's Coming, It's Coming, the
Thinking Is Coming!

Tuesday, 3:15
STV 3030 TCH STR, LANG, MID

Sherle L. Boone

Using High-Achieving African-
American High School Students to
Develop Critical Thinking in
Younger High-Achieving Urban
Students

Tuesday, 3:15
STV 3072 TCH STR, MATH, MID

Multi-Cultural

Rooms: Stev 3072 and Stev 3076

Winthrop Holder

Dialogue and Discovery in the
Polyglot Classroom

Sunday, 10:30
STV 3076 TCH STR, SOC STUD, HS

Judith Bank

Creating Cultural Synthesis: The
Goal of Multi-Cultural Education

Sunday, 12:15
STV 3076 TCH STR, CREAT, SOC STUD

Dan Weil

On the Nature of Prejudice: Cultural
Literacy and Fairminded Critical
Thinking

Sunday, 3:15
STV 3076 K-12, SOC STUD

Judi Hirsch, Judith Bank

Thinking Critically About the Quin-
centennial: A Symposium and
Discussion of the Arab, Jewish,
Native American, and Catholic
Perspectives

Sunday, 3:15
STV 3072 CONCEPT, TCH STR, STAFF DEV

Charles Angeletti

Kicking the Habits: Uncommon Thoughts about Teaching Critical Thinking in African American History
 Monday, 8:45
 STV 3076

CC/U, TCH STR, SOC STUD

Kostas Bagakis, Art Pearl

A Mini-Workshop on Democratic Education: The Next Stage in Critical Thinking
 Monday, 10:30
 STV 3076

CONCEPT, TCH STR, SOC STUD

**Angel R. Villarini, Dan Weil,
 Judi Hirsch, William Schweers,
 Hilda Caputis**

Critical Thinking and Critical Consciousness: Ideas for a Critical Thinking and Liberatory Pedagogy of the Hispanic Communities in the United States
 Monday, 10:30
 DAR 139

CONCEPT, G

Yehudi O. Webster

Multi-Culturalism and Critical Thinking: Compatibility or Competition?
 Monday, 10:30
 CH 68

G

**Robert T. Davis, Princess Towe,
 William Gaudelli, Nancy
 Oderberg**

Multi-Culturalism, Stereotypes, and Critical Thinking: Breaking Down Barriers Among Urban and Rural High School Students
 Monday, 12:15
 STV 3072

G, SOC STUD, HS

Olivia Rovinescu, Clifton

uggles
 Reducing Prejudice: The Role of Critical Thinking
 Monday, 1:30
 STV 3076

TCH STR, HS, C/U

William Dorman

The Not-So-Odd Couple: Critical Thinking and Global Education
 Monday, 1:30
 CH 68

G, SOC STUD

Carole Srole, Anthony Bernier

History Pedagogy, Language, and Student Hermeneutics: Addressing a Student Audience
 Monday, 3:15
 STV 3076

TCH STR, SOC STUD, U

Maulana Karenga

Contestation, Critical Thinking, and Multi-Culturalism: An Afro-Centric Contribution
 Tuesday, 8:45
 STV 3076

SOC STUD, TCH STR

Thomas Tominaga

Towards a Confucian Approach to Cultivating the Reasoning Mind for a Social Order
 Tuesday, 8:45
 STV 3072

TCH STR, CREAT, SOC STUD

René Trujillo, Jr

Integrating African and Latin American Materials into Critical Thinking
 Tuesday, 10:30
 STV 3076

TCH STR, C/U

John C. S. Kim, Barbara Hitchko

Sound Family — Sound Education — Sane Society
 Tuesday, 12:15
 STV 3076

CREAT, HS, U

Harold Drake

Teaching Critical Thinking by Way of General Semantics
 Tuesday, 1:30
 STV 3072

TCH STR, LANG

Dan Weil

Critical Thinking in Social Studies: Reasoning Multi-Culturally
 Tuesday, 1:30
 CH 68

CONCEPT, SOC STUD, MID, HS

Sherle L. Boone

Using High-Achieving African-American High School Students to Develop Critical Thinking in Younger High-Achieving Urban Students
 Tuesday, 3:15
 STV 3072

TCH STR, MATH, MID

Yehudi O. Webster

Are There White and Black People? Reasoning About Racial Classification
 Tuesday, 3:15
 EPT

G, SOC STUD

Albert H. Gardner

Critical Thinking Solutions to Problems in the People's Republic of China
 Wednesday, 8:45
 STV 3072

CONCEPT, CREAT, SOC STUD

Yehudi O. Webster

Multi-Culturalism and Critical Thinking: Compatibility or Competition?
 Wednesday, 8:45
 SU 100

G

John C. S. Kim

Multi-Cultural Solution in Philosophy Teaching
 Wednesday, 10:30
 STV 3076

CC, U

Psychology/Sociology

Rooms: Stev 2049 and Stev 2052

Guy Axtell, Hal Thorsrud

Informing Our Reformers: On Criteria for Effective Intervention with Juvenile Offenders
 Sunday, 10:30
 STV 2052

TCH STR, STAFF DEV, SOC STUD

C. Lincoln Johnson

Social Psychological Principles Underlying Critical Thinking in the Classroom and in Everyday Life
 Sunday, 10:30
 STV 2049

TCH STR, CONCEPT

Yung Che Kim

Diagnosis and Development of Thinking Styles
 Sunday, 1:30
 STV 2052

TEST, CREAT, C/U

Susan Hales

Understanding the Relationship Between Critical Thinking and Self-Esteem: Part I
 Sunday, 1:30
 STV 2049

G

Susan Hales

Understanding the Relationship Between Critical Thinking and Self-Esteem: Part II
 Sunday, 3:15
 STV 2049

G

Frank E. Colbourn

The Roles and Impact of Epistemic Applications in Perception and Assessment of Problems Analyzed with Audience Participation
 Monday, 8:45
 STV 2052

G, CREAT

Jose R. Villalón

Critical Thinking and the Affective Dimensions of Cognition and Behavior
 Monday, 8:45
 DAR 139

CONCEPT, ADV

Peggy Perkins

Developing Critical Thinking for Future Evaluators
 Monday, 8:45
 STV 2049

TCH STR, TEST, U

William Higa

Teaching and Thinking About Abnormal Psychology
 Monday, 10:30
 STV 2052

TCH STR, CC, U

Alison Green

Cognitive Psychology and Critical Thinking
 Monday, 10:30
 STV 2049

CONCEPT, ADV

Harold Hayes

Recreating the Mind of the Criminally Inclined and Educationally Dysfunctional
 Monday, 1:30
 STV 2052

STAFF DEV, ADV, G

Alice Iaquinta

The 4 C's of the 90's (Part I): Critical and Creative Thinking, Chemical and Co-Dependency
 Monday, 1:30
 STV 2049

CONCEPT, STAFF DEV, G

Vincent Ryan Ruggiero

Thinking Critically About Self-Esteem
 Monday, 1:30
 EPT

CONCEPT, G

Alice Iaquinta

The 4 C's of The 90's (Part II): Unpacking Dysfunctional Thinking Paradigms
 Monday, 3:15
 STV 2049

CONCEPT, STAFF DEV, G

REQUISITE: ATTENDANCE AT PART I

Alice Iaquinta

Self-Esteem and Critical and Creative Thinking
 Tuesday, 8:45
 STV 2049

CONCEPT, TCH STR, STAFF DEV

Carol Hayes

Critical Thinking in Psychology: Decision Theory and Motivation
 Tuesday, 10:30
 STV 2049

TCH STR, SOC STUD

Deanne C. Quinn, Frances**Martine**

A Critical Assessment of Ethics in Today's Music and Media
 Tuesday, 12:15
 STV 3049

TCH STR, HS, CC

Webster E. Cotton

Metaphorical Thinking and the Human Condition: Some Themes in the Writings of Dewey, Buber, and Heidegger
 Tuesday, 1:30
 STV 2052

CONCEPT, CREAT, G, HS, C/U

Walter Veit
Sociology and the Moral Imperative
Tuesday, 3:15
STV 2052 SOC STUD

William K. Marek
The Nature of Reason, Thought,
and Emotion
Wednesday, 8:45
STV 2052 CONCEPT, CREAT, G

Mark Weinstein
Critical Thinking: The Great Debate
Wednesday, 8:45
STV 2049 ADV, CONCEPT, G

Neil M. Daniels
Moral Ecology: A New Paradigm
for Moral Critique
Wednesday, 10:30
STV 2049 CREAT, G, SOC STUD, SCI

Science

Room: Dar 122

**Deborah Martin Floyd, Amy
Teeker**
Growth and Change in Teaching
and Learning Science in the
Elementary School as Evidenced by
Portfolios
Sunday, 10:30
STV 3044 TCH STR, SCI, ELEM

John E. Doody, Emily D. Mathis
Introducing Critical Thinking into
Physical Sciences: Grades 4-8
Sunday, 10:30
DAR 122 TCH STR, SCI, 4-8 GRADE

Eric Miller
Conservation of Mass and Inductive
Thinking
Monday, 8:45
STV 3044 TCH STR, SCI, 3-6 GRADES

George Collison
A Constructivist Approach to
Electricity: Building and Tearing
Down Models for Current, Based on
Phenomena that "Just Don't Fit."
Naive Viewpoints
Monday, 10:30
STV 1040 SCI, MID, HS, CC

Barry Leshowitz
Developing Critical Thinking Skills
and Dispositions Through
Instruction in Scientific Reasoning
Monday, 10:30
DAR 122 TCH STR, SCI, U

Bill Stepien
Problem Based Learning:
Integrating Theory with Practice in
the K-12 Classroom
Monday, 1:30
DAR 122 TCH STR, K-12, SCI

Jackie Giuliano
The Environmental Studies
Curriculum as a Vehicle for the
Introduction of Feminist
Philosophies and Spirituality into
the Classroom — An Example of
Remodeling a Curriculum
Monday, 3:15
STV 3036 TCH STR, CREAT

Burton Voorhees
Developing a Course in Scientific
Reasoning
Tuesday, 8:45
DAR 122 MATH, SCI, U

George Collison
Computer Simulations as Platforms
for Critical Thinking and
Constructivist Pedagogy in Life
Science Education
Tuesday, 10:30
STV 1040 SCI, MID, HS, CC

Kass Hogan
Habits of Mind in a Classroom
"Collaboratory"
Tuesday, 10:30
DAR 122 TCH STR, TEST, SCI, ELEM, MID

Malcolm McEwen
Relationships Among Higher Order
Thinking Skills, Process Skills, and
Teaching Strategies in the Science
Classroom
Tuesday, 12:15
DAR 122 SCI, ELEM, HS

William Hayes
The Process of Science as a Way of
Thinking
Tuesday, 3:15
DAR 122 TCH STR, TEST, SCI

Mark Weinstein
Critical Thinking and the Goals of
Science Education
Tuesday, 3:15
SU 100 G, SCI

George Collison
SimEarth, SimCity: Microworlds
that Bring "What If" Modeling and
Argumentation to the Classroom on
a Global/Societal Scale
Wednesday, 8:45
STV 1040 TCH STR, SCI, HS, CC

Max Dresden
The Undefinability of Successful
Critical Thinking in Science and
Science Education
Wednesday, 8:45
DAR 122 CONCEPT, CREAT, G, MATH, SCI, HS,
C/U

Social Studies

Room: Ives 35

Glenn Earley
Critical Thinking Through Study of
the Holocaust
Sunday, 10:30
IVES 35 G, SOC STUD

James West
What Does Sonoma Have to Do
with Athens and Jerusalem?
Sunday, 10:30
CH 10 TCH STR, SOC STUD, C/U

Thomas G. Pagliasotti
Tilling the Hardened Soil:
Challenging Traditional
Perspectives in American History
Sunday, 12:15
IVES 35 TCH STR, G, SOC STUD

Gail Hickey
Black Sheep or Kissing Cousins?
Social Studies and Critical Thinking
in the Elementary Grades
Sunday, 3:15
STV 3046 TCH STR, SOC STUD, ELEM

Jackie Giuliano
The Development of Social
Responsibility and Environmental
Awareness Through Techniques in
Critical Teaching: A Community
Involvement Approach
Monday, 8:45
IVES 35 TCH STR, CREAT, SOC STUD, HS, C/U

Ernest Rosenberg
World Critical Numerical Data in
the Curriculum
Monday, 8:45
STV 1040 TCH STR, SCI, SOC STUD

Charles Angeletti
Kicking the Habits: Uncommon
Thoughts about Teaching Critical
Thinking in African American
History
Monday, 8:45
STV 3076 CC/U, TCH STR, SOC STUD

Gerald Nosich
A Sense of the Past, a Sense of the
Present
Monday, 8:45
CH 68 TCH STR, SOC STUD, G

Thomas Noer
How to Fight the Tyranny of the
Textbook: Critical Thinking,
Primary Sources, and the Teaching
of History
Monday, 10:30
IVES 35 TCH STR, SOC STUD, HS, U

Glenn Earley
"Historical-Critical,
Phenomenological Teaching About
Religion — Case-Study on
Understanding 1st Century Judaism
and Christianity Using a
Problematic Textbook
Monday, 1:30
IVES 35 G, SOC STUD

William Dorman
The Not-So-Odd Couple: Critical
Thinking and Global Education
Monday, 1:30
CH 68 G, SOC STUD

Linda Noer
Using Fiction to Enhance Critical
and Creative Thinking in the Social
Sciences
Monday, 3:15
IVES 45 TCH STR, CREAT, TEST, U

James Henry Quina
Metaphor as Method: Teaching
Critical Thinking Through
Storytelling
Tuesday, 8:45
NH 173 TCH STR, CREAT, LANG, SOC STUD

Patrick Mahaffey
Three Forms of Worldview
Analysis
Tuesday, 8:45
STV 3008 C/U, SOC STUD

Ian Wright
Questions of Meaning
Tuesday, 10:30
STV 3046 TCH STR, SOC STUD, ELEM

Norman Unrau
Fostering Critical Reading in
English and Social Studies Through
Claim Analysis
Tuesday, 1:30
NH 173 TCH STR, LANG, SOC STUD

John Barell
What if You Were a Crew Member
on Santa Maria in 1492? Critical
Thinking in History
Tuesday, 1:30
EPT TCH STR, MID, SOC STUD

Carol Lynn H. Knight

Teaching Critical Thinking in the
Social Sciences: What to Teach and
How to Teach it
Tuesday, 3:15
IVES 35 TCH STR, SOC STUD, C/U

Albert H. Gardner

Critical Thinking Solutions to
Problems in the People's Republic
of China
Wednesday, 8:45
STV 3072 CONCEPT, CREAT, SOC STUD

Spanish (Presented in Spanish)

Room: CH 14

Sonia Flores

Evaluación de Destrezas de
Pensamiento en el Aprendizaje
Cooperativo
Sunday, 1:30
CH 14 TEST, HS, U

Jose R. Villalón

Pensamiento Crítico y las
Dimensiones Afectivas de
Cognición y Comportamiento
Sunday, 3:15
CH 14 CONCEPT, ADV

Marlen Oliver Vasquez, Mayra

Ega Gerena
Un Modelo de Pensamiento para la
Salud, Educación: Teoría y Práctica
Monday, 8:45
CH 14 CONCEPT, TCH STR, U

Luz E. López, Adolpho Sánchez

Un Modelo para Integrar
Habilidades de Pensamiento en la
Curricula
Monday, 3:15
CH 14 G, U, STAFF DEV

Staff Development**John R. Feare**

Critical Thinking and Discussion
Across the Campus and the
Community
Sunday, 10:30
DAR 143 CONCEPT, STAFF DEV, CC

Gerald Nosich

Motivating Students to Think
Critically by Teaching for
Discovery
Sunday, 10:30
CH 68 TCH STR, G

John Chaffee

Designing an Effective Course in
Critical Thinking
Sunday, 10:30
STV 1002 TCH STR, C/U, STAFF DEV

Robert Swartz, Sandra Parks

Infusing Critical and Creative
Thinking in Content Area
Instruction
Sunday, 10:30
DAR 108 TCH STR

Marta Manterola, Josefina Beas

The Teaching of Thinking in
Teacher Education
Sunday, 12:15
CH 30 STAFF DEV, U

Larry Litecky

Active Teaching and Learning
Strategies: How to Develop Critical
Thinkers
Sunday, 1:30
IVES 45 TCH STR, STAFF DEV, C/U

Diane D. Cheatwood

The Integrated Thinking Skills
Project: Teaching Teachers to
Teach Thinking
Sunday, 1:30
DAR 143 TCH STR, STAFF DEV, CC, U

Wendy Oxman-Michelli,**Raymond Dandridge, Princess****Towe, Robert Davis, Elisa de la****Roche**

Critical Thinking and Developmental
Theater in Education
Sunday, 1:30
DAR 108 STAFF DEV, CREAT

Sallie Wilson

Teaching Advanced Skills to
Educationally Disadvantaged
Children to Implement Critical
Thinking Skills on a Day-to-Day
Basis
Sunday, 3:15
STV 3030 ELEM, MID, TCH STR, STAFF DEV

Gerald Nosich

Learning to Think Well: Quality-
Control in Teaching
Sunday, 3:15
CH 68 TCH STR, STAFF DEV, G

Richard Paul

How to Teach Students to Listen
and Read Well
Sunday, 3:15
IVES WA TCH STR, STAFF DEV, G

Linda Nowell

Thinking in the Classroom: A
Community of Inquiry
Sunday, 3:15
CH 10 ELEM, MID, STAFF DEV

Donald R. Klein

Critical Thinking and the
Committee Process
Monday, 8:45
IVES 24 STAFF DEV, G, TCH STR

Richard Paul

How to Teach Students to Write
Well
Monday, 8:45
IVES WA TCH STR, STAFF DEV, G

George M. Luckey, Jr.

Problem Solving for the 21st
Century
Monday, 8:45
ART 108 U, K-12 STAFF DEV

Deborah Court, Leslee Francis

Teachers' Conceptions of Critical
Thinking
Monday, 10:30
STV 3082 CONCEPT, TCH STR, STAFF DEV

Richard Paul

How to Teach Students to Assess
Their Own Work: The Foundation
Monday, 10:30
IVES WA TCH STR, STAFF DEV, G

Dick Rundall

Rock Valley College Model of
Critical Thinking Across the
Curriculum
Monday, 10:30
DAR 143 STAFF DEV, C/U

Jan Williamson, Carolyn Eller

Authentic Assessment: Why and
When?
Monday, 10:30
STV 1002 K-12, TEST, STAFF DEV

Deanna L. Yameen

Critical Thinking: Creating a
Context for Student Involvement,
Curricular Reform, and Institutional
Change
Monday, 12:15
DAR 143 CONCEPT, TCH STR, CC

Richard Paul

How to Teach Students to Assess
Their Own Work: The Tactics
Monday, 1:30
IVES WA TEST, TCH STR, STAFF DEV

Harold Hayes

Recreating the Mind of the
Criminally Inclined and
Educationally Dysfunctional
Monday, 1:30
STV 2052 STAFF DEV, ADV, G

**Irvine Reid, Gregory L. Waters,
Wendy Oxman Michelli, Mark
Weinstein**

Goodlad's Teacher Education in a
Democracy Project: Report from the
Field
Monday, 1:30
SU 100 G, STAFF DEV

Richard Paul

Why Students — and Often
Teachers — Don't Reason Well
Monday, 3:15
IVES WA TCH STR, STAFF DEV, G

Sonia Bodi

Collaboration Between Faculty and
Librarians in Cultivating the
Reasoning Mind
Monday, 3:15
STV 3030 TCH STR, STAFF DEV, C/U

Jack Kirschenbaum, Fred Peters

Always Leave them Striving: Peer
Coaching to Infuse Critical
Thinking into Teaching
Monday, 3:15
IVES 34 STAFF DEV, TCH STR

**Judi Hirsch, Ann Kerwin, Kostas
Bagakis**

Using Critical Thinking for
Empowerment: Combatting
Powerlessness and Passivity Among
Teachers
Monday, 3:15
ART 108 STAFF DEV, TCH STR, ADV, CREAT

**Wendy Oxman-Michelli, Elaine
Lane**

Developing Case Studies in
Teaching for Critical Thinking
Monday, 3:15
EPT G, STAFF DEV, TCH STR

Richard Paul

Why Intellectual Standards? Why
Teach for Them?
Tuesday, 8:45
IVES WA TEST, TCH STR, STAFF DEV, G

Daisy E. Arredondo

Developing Student Dispositions to
Think Critically Within Content
Classrooms Using Dimensions of
Learning Strategies
Tuesday, 8:45
STV 3030 CONCEPT, TCH STR, STAFF DEV

Luz E. López, Adolpho Sánchez

A Model for Integrating Thinking Skills in the Curriculum
 Tuesday, 8:45
 STV 3082

G, U, STAFF DEV

Ruth M. Loring

Models for Change: Toward the Thoughtful Classroom
 Tuesday, 8:45
 ART 108

TCH STR, STAFF DEV

Richard Paul

Reasoning, Critical Thinking, Creativity, Problem-Solving, Communicating, Mastering Content—Putting it All Together
 Tuesday, 10:30
 IVES WA

TCH STR, STAFF DEV, G

Nancy T. Zuercher

Double Vision: Critical Thinking for Preservice Teachers
 Tuesday, 10:30
 STV 3082

TCH STR, LANG, U

Jan Williamson, Carolyn Eller

The Greensboro Model for Staff Development
 Tuesday, 10:30
 CH 68

STAFF DEV

Mark Weinstein

Critical Thinking Across the College Curriculum: What Faculty Wants and Needs
 Tuesday, 10:30
 CH 10

STAFF DEV, C/U

Harold Nosich

Rethinking Education: Designing Courses, Fields, and Curricula to Teach for Critical Thinking
 Tuesday, 10:30
 STV 1002

TCH STR, STAFF DEV, G

Richard DeWitt

Critical Thinking and Faculty Development
 Tuesday, 1:30
 STV 3082

TCH STR, STAFF DEV, U

Mark Stoner, Linda Martin

Outcome-Mapping: A Search Model for Pathways to Goal Achievement
 Tuesday, 3:15
 IVES 78

CONCEPT, STAFF DEV, TCH STR

Richard Paul

How to Devise Assignments and Activities That Require Reasoning
 Students are Capable of
 Tuesday, 3:15
 IVES WA

TCH STR, STAFF DEV, G

Renate Otterbach

Abstract of Educating for the Future
 Wednesday, 8:45
 CH 10

MID, HS, STAFF DEV, ADV

Cindy Lynch

Encouraging and Assessing Reflective Thinking Within Curricular Contexts
 Wednesday, 10:30
 CH 20

TCH STR, TEST, STAFF DEV, U

George M. Luckey, Jr.

Teaching for Thinking
 Wednesday, 10:30
 SU 100

STAFF DEV, K-12

Lourdes Zaragoza Mitchel

Critical Thinking and Madelyn Hunter's Instructional Theory into Practice
 Wednesday, 10:30
 STV 1002

K-12, STAFF DEV

Vincent Ryan Ruggiero

Teaching Thinking Across the Curriculum
 Wednesday, 10:30
 IVES WA

TCH STR, STAFF DEV, CONCEPT

Testing and Assessment

Room: CH 20

Jo Ann Carter-Wells

Critical Thinking Assessment: Use of Both the Product and the Process for Learning
 Sunday, 10:30
 CH 20

TCH STR, TEST, U

Yung Che Kim

Diagnosis and Development of Thinking Styles
 Sunday, 1:30
 STV 2052

TEST, CREAT, C/U

Judith Collison

Using Performance-Based Tests to Assess Mathematical Dispositions
 Sunday, 1:30
 DAR 122

TEST, MATH, HS

George H. Hanford

The Reasoning Mind in Academic Preparation for College
 Sunday, 1:30
 CH 20

TCH STR, HS, TEST

Jim Pollard

Self Assessment and High Standards
 Sunday, 3:15
 CH 20

TCH STR, HS, C/U

Conference Schedule**Marc Becker**

Critical Thinking as a Framework for Assessment
 Monday, 8:45
 CH 20

CONCEPT, TEST, G

Peter Facione, Noreen W. Facione

Assessing and Teaching Critical Thinking in Nursing Education
 Monday, 10:30
 DAR 137

TCH STR, TEST, C/U

Roberta Kern

Self-Assessment: The Role Emotions Play in Monitoring Success
 Monday, 10:30
 CH 20

TEST, CONCEPT, C/U

Jan Williamson, Carolyn Eller

Authentic Assessment: Why and When?
 Monday, 10:30
 STV 1002

K-12, TEST, STAFF DEV

Richard Paul

How to Teach Students to Assess Their Own Work: The Foundation
 Monday, 10:30
 IVES WA

TEST, TCH STR, STAFF DEV

Robert Swartz

Assessing the Quality of Student Thinking: Performance Assessment Techniques for Classroom Teachers
 Monday, 10:30
 EPT

TEST

Richard Paul

How to Teach Students to Assess Their Own Work: The Tactics
 Monday, 1:30
 IVES WA

TEST, TCH STR, STAFF DEV

Penny Heaslip

Creating the Thinking Practitioner: Critical Thinking in Clinical Nursing Practice
 Monday, 1:30
 DAR 137

TCH STR, TEST, U

Ira Peak

Teaching Critical Thinking by Involving Students in Formulating Personalized Programs of Assessment
 Monday, 1:30
 CH 20

TEST, C/U

Sonia Flores

Assessment of Thinking Skills in Cooperative Learning
 Monday, 3:15
 DAR 139

TEST, HS, U

John Chaffee

Teaching and Evaluating Critical Thinking in the Disciplines
 Monday, 3:15
 CH 68

TCH STR, TEST, STAFF DEV, U

John Edwards

Teaching Thinking: How Do You Know if You Are Achieving Anything?
 Monday, 3:15
 CH 20

CONCEPT, TEST

Richard Paul

Why Intellectual Standards? Why Teach for Them?
 Tuesday, 8:45
 IVES WA

TEST, TCH STR, STAFF DEV

F. Allan Hanson

Does Testing Create What It Purports to Measure?
 Tuesday, 8:45
 CH 20

TEST, U

Betty Duffey

Tools for Assessing Business Students' Critical Thinking Skills
 Tuesday, 10:30
 STV 2050

TEST, HS, CC

Alma Tetrault

Transfer of Critical and Creative Thinking Through Development of the Dispositions
 Tuesday, 10:30
 STV 3040

CONCEPT, TEST, ADV, K-12

Maira Gutteridge

Strategies for Dealing With Unexpected Individual Difficulties in Critical Thinking
 Tuesday, 10:30
 IVES 78

TCH STR, TEST, CC/U

Ted Spear

A Philosophical Critique of Student Assessment Practices
 Tuesday, 10:30
 CH 20

TEST

Alec Fisher

Assessing Higher Order Thinking Skills
 Tuesday, 1:30
 IVES 34

TEST, U

James Tursi

The Question of What Constitutes Authentic Testing in a Typical High School Social Studies Class
 Tuesday, 1:30
 CH 20

TEST, SOC STUD, HS

Conference Schedule

eter Facione
CT Assessment — The Basic Ways
and Means
Tuesday, 3:15
CH 20 TEST, C/U

**oanne Gainen, Steven Gelber,
erry Beers**
Assessment of a Freshman Seminar
to Develop Skills of Critical Inquiry
Wednesday, 8:45
IVES WA TCH STR, TEST, U

indy Lynch
Encouraging and Assessing
Reflective Thinking Within
Curricular Contexts
Wednesday, 10:30
CH 20 TCH STR, TEST, STAFF DEV, U

Special Interest Groups

Sunday, 7:00–8:30pm

In order to facilitate networking within critical thinking special interest groups, a special time has been set aside for such groups to organize themselves. The nature and extent of the organization is dependent on the will of the members present. We suggest as a minimum that each group develop a sign-up list with addresses and phone numbers. To facilitate this, a conference staff member will deliver a sign-up form at the beginning of the meeting and collect it at the end. Copies will be available at the Conference Center, located downstairs in the Student Union, on Monday. The members present should also note that most of the groups listed parallel a proposed standing committee of the newly formed National Council for Excellence in Critical Thinking Instruction (see page 202). Some groups may wish to form a liaison with the National Council standing committee. The Center for Critical Thinking will facilitate that liaison.

Some of the interest groups (most with similar interests) will be scheduled together in one large room. The various groups, depending on how many people show up with a particular concern, may then divide and meet in a quiet corner of the same room or some may leave to find an alternative, quieter, place to meet.

Critical Thinking and Assessment

Critical Thinking Standards	CH 20
Critical Thinking Tests & Assessment	CH 20
Critical Thinking and the Assessment of Education	CH 20
Critical Thinking and the Evaluation of Teaching	CH 20

Critical Thinking and Basic Skills

Critical Thinking and Reading	CH 68
Critical Thinking and Writing	CH 68
Critical Thinking and Oral Expression	CH 68
Critical Thinking and Reasoning	Nich 166
Critical Thinking and Media Literacy	Stev 1002
Critical Thinking and ESL.....	Stev 3007

Critical Thinking In the Disciplines

Critical Thinking Across the Disciplines	Stev 3076
Critical Thinking in Mathematics	Dar 139
Critical Thinking in Science	Dar 122
Critical Thinking in History	Stev 3008
Critical Thinking in Sociology	Stev 3008
Critical Thinking in Anthropology	Stev 3008
Critical Thinking in Political Science	Stev 3008
Critical Thinking in Social Studies	Stev 3008
Critical Thinking in Language Arts	CH 68
Critical Thinking and Rhetoric	CH 68

Critical Thinking and Psychology	Stev 2049
Critical Thinking and Cognitive Psychology	Stev 2049
Critical Thinking and Philosophy	Art 108
Critical Thinking in Nursing	Dar 137
Critical Thinking in Home Economics	Stev 3082
Critical Thinking in Vocational Education	Stev 3030
Critical Thinking in Business Education	Stev 2050
Critical Thinking in Communication Studies	Ives 78
Critical Thinking in Legal Education	Stev 3008
Critical Thinking and the Arts	CH 10
Critical Thinking in Religious Education	Ives 24
Critical Thinking and Food Science Nutrition.....	Ives 45
Critical Thinking and Environmental Studies.....	CH 30
Critical Thinking and Women's Studies.....	Nich 173

The Nature and Theory of Critical Thinking

Critical Thinking and Informal Logic	Art 108
Critical Thinking and Creativity	Nich 204
Critical Thinking and Developmentalism	Stev 2049
The Role of Reasoning in Education and Critical Thinking	Art 108
The Role of Affect in Critical Thinking	Stev 3059
Critical Thinking and Moral Education	Ives 44
Critical Thinking and Practical Epistemology	Art 108
Critical Thinking and Practical Reasoning	Ives 24
Critical Thinking and the Recognition and Understanding of Ignorance	Stev 3095
Critical Thinking and Ideology	Dar 112
Critical Thinking and the Art of Questioning	Stev 3095
Critical Thinking and Self-Esteem	Stev 2049
Critical Thinking and Problem Solving	Art 108
Critical Thinking and the New Global Economic Realities.....	Stev 2050

Critical Thinking Pedagogy

On the Fostering of Critical Thinking in Young Children	Stev 3072
Critical Thinking and Remedial Instruction	Stev 3028
Critical and Multi-Cultural Thinking	Ives 119
Critical Thinking and Computer Assisted Instruction	Stev 3026
Critical Thinking and Cooperative Learning	Ives 79
Critical Thinking and Educational Policy	Stev 3040
Developing a School Environment Conducive to Critical Thinking	Dar 143
Critical Thinking Staff Development	Dar 143
Critical Thinking and Learning Centers	Nich 304
Critical Thinking and Preservice Teacher Education	Ives 35
Critical Thinking and Minority/Ethnic Issues	Ives 34
Critical Thinking and Feminism	Stev 3036
Critical Thinking and Distance Learning.....	CH 34

Critical Thinking and Educational Levels

Critical Thinking & Elementary Education	Stev 3072
Critical Thinking & Middle School	SU 100
Critical Thinking & High School	Stev 3038
Critical Thinking & The Community College	Stev 3046
Critical Thinking and The Four-Year College or University	Stev 3049
Critical Thinking and Graduate Programs	Stev 3044

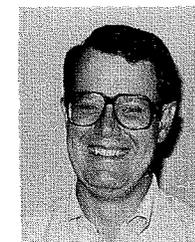
Conference Abstracts



Millie Lawson



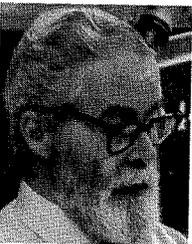
Dianne Romaine



Chet Meyers



Marlys Witte



Will Robinson



Ogden Morse



Judy Downs



Dan Weil



Judi Hirsch

Session Abstracts

Agnew, Priscilla

Professor of Philosophy, Saddleback College

Sex, Death and Advertising: Cultivating the Reasoning Mind (ID # 197)

Each student is exposed to over 1000 advertisements daily. Many students view these advertisements without critically seeing and evaluating them. 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, but we can cultivate the critical eye and the reasoning mind in order to evaluate these ads. This presentation includes a video demonstration of techniques for teaching some important components of critical thinking, including the clarification of three kinds of ambiguity. Participants will have the opportunity to experiment with techniques for teaching these skills to students.

TCH STR, MEDIA, C/U

STEV 1002

MONDAY, 1:30

Allen, Nancy

English, Reading, and Study Skills Teacher, R. E. Lee Junior High School

S. C. A. N. D. A. L.: (Studying Critically and Analytically Develops Achieving Learners) (ID # 214)

Acquisition of study skills is a need of many middle school students. This workshop will provide specific strategies used in the classroom to incorporate critical thinking in the teaching of information-access and organizational skills, studying and test-taking strategies, and vocabulary development. The group will also participate in an activity that will be applicable in the classroom.

TCH STR, LANG, MID

CH 10

MONDAY, 8:45

Angeletti, Charles

Professor of History, Metropolitan State College of Denver

Kicking the Habits: Uncommon Thoughts About Teaching Critical Thinking in African American History (ID # 269)

This presentation (lecture plus discussion and demonstration samples) will survey some of the practices and pitfalls of traditional approaches and methodologies in the teaching of minority history. It will be argued that those who cannot reflect critically on their own pedagogical practices will seldom know what constitutes critical teaching/learning. The tacit assumptions of those who teach Black History are often impediments to a meaningful multi-cultural approach to the American past and present. Concepts, strategies, and methodologies that infuse critical thinking into the teaching of African American History will be discussed. The presenter was one of the "pioneers" in the teaching of Black History in the

1960's and 70's in that I originated the African American History courses at Metropolitan State College. I wish to share my experiences, mistakes, insights, and reflections on teaching race and ethnic studies — then and now.

CC/U, TCH STR, SOC STUD

MONDAY, 8:45

STEV 3076

Arredondo, Daisy E.

Assistant Professor of Education, University of Missouri at Columbia

Developing Student Dispositions to Think Critically Within Content Classrooms Using *Dimensions of Learning* Strategies (ID # 171)

Participants in this workshop will learn about the dispositions toward accuracy, clarity, open-mindedness, restraint, reasoned support, and sensitivity as components necessary for critical thinking within content classrooms. They will practice strategies from *Dimensions of Learning* (Marzano, Pickering, Arredondo, Blackburn, Brandt, and Mofett, 1992, ASCD) which have been judged successful in developing student attitudes toward, and skill in, thinking critically, by a consortium of classroom teachers representing more than 15 states and two countries. Specific strategies for building support for positions, identifying errors, and analyzing values will be presented. Assessment criteria and standards for evaluating the quality of critical thinking will be discussed.

CONCEPT, TCH STR, STAFF DEV

TUESDAY, 8:45

STEV 3030

Axtell, Guy

Lecturer in Philosophy, University of Nevada, College of Arts and Sciences

Hal Thorsrud

Lecturer in Philosophy, University of Nevada, Reno

Informing Our Reformers: On Criteria for Effective Intervention with Juvenile Offenders (ID # 194)

For much gang-related violent crime in America today, the idea that incarceration constitutes "reform" or "rehabilitation" is mis-guided. Today violent crimes are committed in unprecedented numbers by individuals so young and socially alienated that they have never become socially "habilitated" or cultivated a moral sense of community and responsibility.

Our interest in researching educational programs in place at prisons and reform schools was motivated by a concern to better prepare our reformers. Effective education/re-education requires new techniques for combining critical thinking with basic moral education.

We begin our session with a brief analysis of social factors underlying a sense of shrinking community. We consider various ways in which empirical theories of moral and logical development might provide an impetus for the reform of reformatory institutions. We survey programs in place and analyze controversies about their effectiveness. Issues relating to the testing, standards, and assessment of behavior are raised and treated in turn. Finally, we draw attention to some innovative programs and teaching heuristics which we believe provide sound educational reform in these institutions.

TCH STR, STAFF DEV, SOC STUD

SUNDAY, 10:30

STEV 2052

Bagakis, Kostas

Lecturer in Philosophy, San Francisco State University

Art Pearl

Emeritus Professor of Psychology and Education, University of California, Santa Cruz

A Mini-Workshop on Democratic Education: The Next Stage in Critical Thinking (ID # 68)

Democratic education has four requirements: inclusive debate over necessary knowledge, equal participation in decisions that affect student lives, identification of and respect for individual rights, and equal encouragement. Each of these has a multi-cultural dimension and has implications for teaching. The goal of democratic education is to create a democratic culture that is synthesized from the diverse cultures of the world. This mini-workshop will emphasize the understanding and application of the principles of democratic education. A problem will be presented for small group discussion and simulated teaching, which will be critiqued and evaluated. In contrast to the typical textbook approach to critical thinking, whose goal is a generalizable skill, our approach is that critical thinking must be developed in a dynamic and contextual environment. Democratic critical thinking addresses problems that are relevant to students. Furthermore, the consequence of critical thinking is perceptibly empowering — it must have a significant bearing on student lives.

CONCEPT, TCH STR, SOC STUD

MONDAY, 10:30

STEV 3076

Bailin, Sharon

Associate Professor of Education, Simon Fraser University

The Myths of Creativity (ID # 49)

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.

CREAT

SUNDAY, 10:30

ART 108

Bank, Judith

Instructor in Language Arts and Reading, Los Medanos College

Creating Cultural Synthesis: The Goal of Multi-Cultural Education (ID # 126)

Synthesis is an inductive search for connectedness among ideas or themes. Multi-culturalism creates that same search for connectedness, the same use of inference in developing relationships among various histories, cultural reasoning patterns, knowledge of the past and present, all synthesized into a new image of community.

Multi-cultural education is more than the sum of the ethnic parts of the classroom. Unlike ethnic studies, which analyzes a group into its parts in order to understand its uniqueness, multi-culturalism's goal is synthesis: the creation of a

new and fundamentally different way of being in, seeing, and thinking about American society. This synthesis should lead to the equality of access to knowledge and thought processes for all students in the class.

The format of this session will be presentation of the initial learning analogy with classroom examples and handouts, encouraging discussion and critique.

TCH STR, CREAT, SOC STUD

SUNDAY, 12:15

STEV 3076

Barell, John

Professor of Curriculum and Teaching, Montclair State College

Why Are School Buses Yellow? Empowering Students to Pose Questions and Engage in Critical Inquiry (ID # 100)

Students come to school full of questions, but we provide too few opportunities for them to ask meaningful questions about subject matter. This workshop will engage participants in a model of inquiry in which students generate questions from curriculum, research how to find answers, and reflect on their intellectual and emotional behaviors. Students' closed, open, and imaginative questions will be shared together with a video tape of how third-graders engage in the critical inquiry necessary to find answers.

TCH STR, ELEM, G

MONDAY, 8:45

STEV 1002

Barell, John

Professor of Curriculum, Montclair State College

What If You Were a Crew Member on Santa Maria in 1492? Critical Thinking in History (ID # 101)

Imagine departing on a journey with no fixed destination, poor living conditions, and a captain committed to sailing into the unknown reaches of the Atlantic Ocean. What was it like? How would members survive and what would be the consequences of their actions once they encountered the "new world"? This session focuses on a model of historical analysis that uses imagination, critical thinking, and narrative in order to help students play the roles of "history makers". Participants will engage in such specific skills as problem identification, decision making, projecting consequences, visualizing, and drawing reasonable conclusions.

TCH STR, MID, SOC STUD

TUESDAY, 1:30

EPT

Mattersby, Mark

Professor, Capilano College

Critical Thinking and the Competent Layperson: What Every Critical Thinker Needs to Know (ID # 111)

Richard Paul has pointed out that critical thinkers must be multi-logical; they must be able to critically utilize information from a variety of disciplines. Fundamental to this task is knowledge of the criteria necessary for the assessment of the range of claims that are based on expert or authoritative pronouncements. Most of our non-autobiographical knowledge (from germs to holes in the ozone) is warranted by intellectual disciplines. If we are to rationally accept these beliefs (vs. just accepting them on faith) and use them to

guide our actions, we must have an intelligent and critical appreciation of the disciplines and professions which produced them. A person who has this appreciation is a "competent layperson".

This session will discuss the knowledge necessary for being a competent layperson and the implications this idea has for the standard university course and curriculum which is based on the presumption of preparing people to be participants in a discipline.

CONCEPT, G, U

SUNDAY, 1:30

EPT

Bearden, Pamela P.

Teacher, Lamar County Elementary School

J. Charles Dukes

President, Educare, Inc.

Back to the Future: Part IV — This Time Marty Gets the Right Start in School! (ID # 202)

This session will demonstrate the liberating power of critical thinking methodology in an elementary classroom. The teacher, through the devices of Socratic questioning and cooperative learning activities, becomes the lead member in a circle of learning, at once guiding the process and being stimulated by the responses of the "other students". Three novels, chosen by a network of classroom teachers, drive the curriculum to be modeled. The explication of these novels by critical thinking questions and activities becomes the organizing catalyst for an interdisciplinary network; the events in the novels prompt activities that affect all core content areas: math, language arts, social studies, science, and the performance/plastic arts. The subsequent combination of recitation, discussion, coaching, and hands-on critical thinking activities — which involve a high degree of co-operative learning — makes for a lively classroom with a high degree of natural momentum. Session participants will be supplied with extensive model lesson guides, strategic research with recent bibliographies, and a list of key concepts and players in the formation of Georgia's Project Insight.

TCH STR, ELEM

TUESDAY, 8:45

STEV 3046

Becker, Marc

Director of Research and Evaluation, Glendale Union High School District

Critical Thinking as a Framework for Assessment (ID # 186)

The changing realities of the workplace and recent brain research have called into question conventional ways of measuring and evaluating student performance. Excessive reliance upon standardized, multiple-choice assessments fails to sample the full spectrum of student capabilities and provides an artificial context for the demonstration of learning. As a consequence, many students emerge from our schools ill prepared to deal with a world that requires critical thinking, the continuous integration of new knowledge, creative responses to change, and a tolerance for ambiguity.

This session is a participatory workshop which will focus upon critical thinking as a framework for the development of performance-based assessments characterized by authenticity and precision. Particular emphasis will be placed upon a model for the development of assessments that require students to engage

in the highest levels of thinking in tasks which parallel real life. Participants will acquire a set of guidelines for assessment which apply to all educational levels, K through university.

CONCEPT, TEST, C
CH 20

MONDAY, 8:45

Bedecarré, Corrinne

Visiting Professor of Philosophy, Gustavus Adolphus College

Self-Reflection: What's Waldo? (ID # 280)

Many critical thinking theorists advocate critical self-reflective thinking. But what are the objects of their/our reflection? Brookfield's courses focus on the articulation and examination of assumptions embedded in students' autobiographies. Paul advises an awareness and reconciliation of the many inconsistencies of our lives as means to construct a coherent and conscious viewpoint. I've been encouraging students to reflect upon themselves as reasoners, as individuals capable of epistemic authority. Another important aspect of self-reflection, explicitly noted by Brookfield and Johnson, is the presence of reliable feedback from others. The reasoning community should be and could be a source of genuine information and "reality checking" of the results of critical self-reflection. Yet every reasoning community does not constitute a positive or reliable source of information. I'll discuss these considerations as well as provide ideas for making the self-reflective reasoning process explicit in the course materials and throughout class discussions. This session is for those who are interested in some theoretical analysis of self-reflection along with specific suggestions for incorporating self-reflection into the course agenda.

CONCEPT, TCH STR, TEST, ADV

MONDAY, 10:30

STEV 3036

Bellman, Stewart

Professor of English, Black Hills State University

Wanda Bellman

Professor of Speech Communication, Black Hills State University

The Structured Controversy: A Cooperative Learning Strategy That Elicits Powerful Thinking (ID # 257)

Based on the publications of Karl Smith at the Center for Cooperative Learning at the University of Minnesota, this session will present a model for structuring controversies that cause opponents to seek viable resolutions to controversy in a structured and purposeful manner. The session will include several examples of the structured controversy for a variety of subject areas. Participants will experience a structured controversy and will collaborate with others on hypothesizing structured controversies for their own courses. This session will be applicable across the disciplines as well as across the grade levels from high school through college.

TCH STR, HS, U
IVES 24

TUESDAY, 8:45

Bernstein, David

Professor of Psychology, Grand Valley State University

Slouching Towards Fairness (ID # 256)

This session will be roughly half presentation and half discussion. In the first half, I will describe a fifteen-year teaching and research project dedicated to teaching students that critical thinking must be fair-minded thinking. I will present various conceptual models and pedagogical techniques intended to engender a fair-minded approach to controversial issues. I will also reflect on these, drawing from my diary notes, student comments, and some limited research findings. In the second half of the session, I wish to explore the philosophical questions at the heart of my project. These are questions of how one does the right thing and how one knows what is the right thing. These are questions about critical thinking in the strongest sense. And they will be raised early enough in the session to leave time for earnest discussion.

CONCEPT, TCH STR, ADV

SUNDAY, 3:15

STEV 3040

Betz, Norman

Associate Professor of English and Philosophy, Central Missouri State University

Critical Thinking and Writing: An Experimental Course (ID # 147)

This session will report on an experimental Critical Thinking and Writing course (replacing the traditional writing about literature course) for college freshmen. The report will describe the standardized pre- and post-tests, a further critical thinking test involving writing, the use of thought journals, the use of brief selections taped from television, the book (Marlys Mayfield, *Thinking for Yourself*, 1991), the assignments, some student models, and the concluding teacher evaluation of the project.

The second part of the session will involve the audience in critiquing the pilot and offering suggestions for future versions of the course.

TEST, LANG, U

MONDAY, 8:45

NICH 166

Black, Gordon Leon

Instructor in Philosophy, College of the Redwoods

Analyzing Moral Disputes (ID # 170)

How can we hope to resolve a dispute unless we can describe it? This session demonstrates a teaching procedure while training participants in the objective description of moral positions. We'll employ Stevenson's distinction between (factual) belief and (emotional) attitude. Examples will be taken from contemporary issues. Identification of verbal ambiguity is added to complete the strategy. The method not only can describe complex disputes, it may be useful as early as in K-3 metacognition, distinguishing factual observations from "likes" and "dislikes".

Handout and bibliography provided.

SOC STUD, TCH STR

MONDAY, 8:45

IVES 45

Blatz, Charles V.

Associate Professor and Chair of Philosophy, University of Toledo

Critical Thinking and Strategies of Reasoning (ID # 103)

Critical thinking seems to involve the construction of a defensible belief, plan, or decision. Such constructions involve interpreting both the question and possible avenues of approach confronting the thinker. In addition, they involve seeking, sifting through, contextualizing, combining and inferring from available hypotheses, data, principles of reasoning, and answers to the questions or problems at hand. Thus critical thinking, in its constructive dimension, seems to call for continual exploration and judgements on the part of the reasoner. How then, are we to understand the process of critical thinking, and how are we to engender and facilitate its occurrence? This session will report work on three concepts which define an approach to understanding and assisting with constructive thinking, the concepts of: a critical thinking portfolio, the thinker's critical circumstances, and circumstantially appropriate master strategies of thinking. These concepts will be illustrated for forming defensible beliefs, plans, or decisions. Comments and discussion will follow.

CONCEPT, CREAT, ADV

SUNDAY, 1:30

STEV 3040

Blatz, Charles V.

Associate Professor and Chair of Philosophy, University of Toledo

Contextualizing Justified Belief and Critical Thinking (ID # 102)

Whether or not someone is justified in a belief is a matter concerning that person. Determining this calls for a judgment of the individual in her circumstances of reasoning. But things might seem to be different for the question of whether someone's belief is itself (objectively) justified. Beliefs might seem to be justified regardless of the sophistication of thinkers, of what evidence thinkers bring to bear on the issue, and of how that evidence was collected and brought into play. The social, cultural, and informational contexts in which the thinker operates might seem to be irrelevant to whether the thinker's belief is justified or not. Standards of proper reasoning to the truth, as well as standards of proper evidential support, might seem to be fixed and not open to variability introduced by the constructive decisions of thinkers themselves. This session will present reasons for challenging these claims and for challenging the separation of a reasoner's being justified in believing, from the belief in questions being justified. Discussion will follow a report of work on these issues and on some of this work's implications for critical thinking.

CONCEPT, CREAT, ADV

WEDNESDAY, 8:45

STEV 3008

Bodi, Sonia

Professor of Bibliography and Head Reference Librarian, North Park College

Collaboration Between Faculty and Librarians in Cultivating the Reasoning Mind (ID # 221)

Perhaps the most fundamental distinction between faculty and librarians is the emphasis faculty place on the discipline and the emphasis librarians place on access. Yet the agendas of both are complementary; namely, to cultivate people who reason. This session will explore collaboration between faculty and librarians by addressing such questions as, "How can students judge the relevance of resources in my discipline?" "How will they find multiple perspectives on an issue?" "How will they find know-how to find evidence to evaluate arguments?"

Further, we will look at the following theories as a framework for bibliographic instruction: Ruggiero's holistic approach to critical thinking, Perry's stages of development, and Kuhlthau's stages of the research process. Finally, the session will give practical examples of bibliographic sessions presented to classes in English composition, genetics, education, and Old Testament prophecy.

TCH STR, STAFF DEV, C/U

MONDAY, 3:15

STEV 3030

Boone, Sherle L.

Professor of Psychology, William Paterson College and Associate Professor of Sociology, William Paterson College

Using High-Achieving African-American High School Students to Develop Critical Thinking in Younger High-Achieving Urban Students (ID # 18)

Do high-achieving African-American students attending middle schools in urban districts learn to master mathematics and refine their critical thinking abilities in a more effective and efficient manner working with high-achieving African-American high school students in small groups than in regular classes with their peers and teachers? This session will present an analysis of data obtained from participants in the W.E.B. DuBois Fellows Mentoring Forum during the summer of 1991. The W.E.B. DuBois Fellows Mentoring Forum is a nonresidential pre-college honors program at Rutgers University in New Brunswick, New Jersey, for high-achieving African-American and Latino eighth- and ninth-graders in New Jersey. It is part of a larger effort to develop a cadre of young leaders who will rebuild, restore, and strengthen institutions in their communities.

Under professional supervision, high-achieving African-American high school students (W.E.B. DuBois Scholars) served as mentors and provided W.E.B. DuBois Fellows with highly structured, small group instruction in mathematics. During the three weeks of the program, each participant received math instruction four hours weekly. Math classes were followed by participation of fellows and scholars in a 60-minute seminar on the "Sociology of Contemporary Community".

The main focus of the proposed presentation will be on the results of the information obtained from students. In addition, the following topics will be discussed: A) Program Aims; B) Program's philosophical underpinnings; C) Program structure and design; D) Curriculum; and E) New Directions.

TCH STR, MATH, MID

TUESDAY, 3:15

STEV 3072

Bowen, Bradley

Graduate Student in Philosophy, University of California at Santa Barbara

Putting Background Logic into the Foreground (ID # 44)

In this session, Mr. Bowen will clarify and develop Dr. Richard Paul's concept of "background logic". The clarification will include consideration of how this concept might be applied in some real-life cases. Mr. Bowen will cover four basic issues: 1) What is background logic? 2) What are the dimensions of background logic? 3) Why is background logic important? and 4) What are the implications of this concept in relation to how we should teach critical thinking? Part of the session will be set aside for responses to Mr. Bowen's presentation and for discussion of these issues.

CONCEPT, ADV, U

TUESDAY, 8:45

STEV 3038

Boyd, Darlene

Director of Pre-College Programs, UC Irvine

Developing Insight into an Egocentric Personality of the Highly Critical Thinker: Implications for Curriculum Development (ID # 228)

Truly critical thinkers who are knowledgeable and high achievers often become comfortable and quite used to being informationally accurate. In some cases these critical thinkers may run the risk of dysfunction and/or patterns of underachievement. Confusing one's immediate perceptions with reality may result in a tendency towards *egocentricity*. The egocentric personality may be characterized by a need to be right about everything and a lack of self-consciousness of one's own thought processes. For the egocentric, belief in one's rightness is easy to maintain while suppressing faults in one's thinking.

Selected instructional strategies that may encourage students to recognize sociocentric bias through reconstruction and consideration of many view-points on current and historical issues, will be discussed and demonstrated.

TCH STR, SOC STUD, G

MONDAY, 8:45

IVES 78

Boyd, Robert

Instructor in Philosophy, Texas Christian University

Introduction to Logic: An Approach to Critical Reasoning (ID # 58)

In many schools, cultivating the reasoning mind is one of the goals in courses entitled "Introduction to Logic". Unfortunately, in some of these courses, while students are introduced to acceptable patterns of reasoning, they are not encouraged to be critical reasoners. In this session we will briefly look at some things that can be done in an "Introduction to Logic" class that will stimulate critical reasoning. The format of this session will include a presentation to encourage participant involvement. It is the goal of this session to share proven approaches to teaching and testing in "Introduction to Logic" courses which will encourage students to become better critical reasoners.

TCH STR, TEST, U

TUESDAY, 3:15

STEV 3038

Brantley, Helen

Associate Professor, South Carolina State University

Donald Small

Associate Professor of Education, South Carolina State University

Using Critical Thinking in Reading Research Articles (ID # 248)

Many students in junior high, high school, and college have difficulty analyzing and understanding research articles. This session will introduce a model for teaching students (middle school through college) how to use critical thinking skills in reading, interpreting, and applying research articles to daily issues and problems. The session will emphasize how to: 1) judge the theoretical base of research articles, 2) synthesize and analyze a relationship of the objectives or purposes to the base for which the research article is built, 3) draw overall conclusions in relationship to the experimental design and representative samples, 4) determine the most valid and reliable instrumentation used, 5) evaluate the conclusion and implications according to opinions, judgements,

theories, personal explanations, and facts, 6) distinguish relevant from irrelevant information to societal problems. The session will allow for hands-on experience and discussion.

CONCEPT, TCH STR, G

TUESDAY, 1:30

STEV 3030

Bright, Lewis

Professor of Speech Communication, Humboldt State University

At Last, A Concrete Way of Studying Values! (ID # 95)

Building upon a tradition of social science research almost fifty years old, Malcolm Sillars and Richard Rieke, in 1984, set forth a six-part classification of American values with a group of key words describing each. In several separate works Lewis Bright and Armeta Rietzel have taken this classification, and, utilizing computer technology, attempted to define the nature of the value system of Garrison Keillor. I intend to describe the method used above and consider its potential for the study of values in argument. My presentation method will be extemporaneous lecture and discussion.

G, SOC STUD, U

MONDAY, 8:45

CH 30

Browne, M. Neil

Distinguished Professor of Economics, Bowling Green State University

Stuart Keeley

Professor of Psychology, Bowling Green University

Getting Started as a Teacher of Critical Thinking Part I: Planning Curriculum Materials, Assignments, and Evaluation (ID # 59)

Now that you are committed to teaching critical thinking, how can you best achieve your intentions?

This session is designed to share experiences and lessons from over 20 years of teaching critical thinking. The presentation will proceed logically through the entire teaching process from the creation of course objectives through assessment of student performance. Emphasis of the presentation will be on the practical. Numerous handouts will be provided to serve as stimuli for thinking about typical problems and options. Experienced members of the audience will be given the opportunity to spell out approaches and strategies that they have found especially effective.

TCH STR, STAFF DEV, CC/U

MONDAY, 8:45

IVES 119

Browne, M. Neil

Distinguished Professor of Economics, Bowling Green State University

Stuart Keeley

Professor of Psychology, Bowling Green University

Getting Started as a Teacher of Critical Thinking Part II: Classroom Strategies and Hurdles (ID # 60)

The session is an extension of the earlier presentation that focused on planning a critical thinking course and assessing performance. In this session we will move into the classroom and discuss teaching behaviors particularly

conducive to encouraging critical thinking. We will share strategies that have proved especially productive. Again, emphasis will be on the practical. Handouts will be provided for each participant.

TCH STR, STAFF DEV, CC/U

MONDAY, 10:30

IVES 119

Carter-Wells, Jo Ann

Professor and Coordinator, Undergraduate Reading Program, California State University, Fullerton

Critical Thinking Assessment: Use of Both the Product and the Process for Learning (ID # 104)

One of the aims of assessment is for improvement through a focus on questions, patterns, and trends with results linked to improvement in the General Education experience of students. The focus of this participatory workshop, then, is on both the product and the process of assessment for learning in the area of critical thinking for undergraduate learning. Discussion/presentation items include an analysis of post-secondary critical thinking assessment instruments using the Carter-Wells matrix, as well as a think-aloud, peer-edited collaborative learning activity, a protocol analysis strategy with individual interviews, and other classroom assessment/learning activities.

TCH STR, TEST, U

SUNDAY, 10:30

CH 20

Catsoulis, Jeannette M.

Lecturer, University of Nevada, Las Vegas

Images of Women (ID # 172)

In spite of the critical attention paid to advertisements by the women's movement and other groups over the last ten years or so, little seems to have changed. Indeed, the ways in which advertising campaigns depict women (and so-called "feminine" qualities) have become even more disturbing. Violent crimes against women in our society have been increasing steadily; and while one cannot blame advertising itself for this phenomenon, a critical examination of the cultural force of its messages does suggest a link between the images of women who appear in advertisements and society's attitudes and behaviors toward women in general. In this session we will discuss slides of current advertising campaigns and look at ways in which teachers of critical thinking can help students to deal with these images.

TCH STR, MEDIA, G

TUESDAY, 3:15

STEV 3036

Cavina, Kristan

Instructor of English and ESL, Rancho Santiago College, Fullerton College, Mt. San Antonio College, University of La Verne

Teaching Critical Thinking in the Writing Class (ID # 190)

In this workshop, the presenter will demonstrate a method of writing instruction based on the principles of critical thinking. Students, through this method, learn to limit a topic and focus on a controlling idea. They organize their ideas logically, experimenting with levels of support, distinguishing

generalization from details, and eliminating non-relevant information. They examine the variety of meanings achieved through the use of transitions and sentence combining. The relevance of point of view, purpose, and audience in the writing process is studied. The function of grammar in the expression of meaning is examined. Writing is analyzed for various possible interpretations. Students, working by this method, come to see a composition as an orderly exposition of a clearly defined thesis. Presentation/workshop.

TCH STR, LANG, C/U

MONDAY, 8:45

NICH 173

Cederblom, Jerry

Professor of Philosophy, University of Nebraska — Omaha

Can Students Apply Critical Thinking to Classroom Lectures? (ID # 253)

We might hope that students could practice what they have learned in critical thinking courses when they listen to lectures in their other courses. Unfortunately, a study of a sample of faculty lecture notes indicates that the typical lecture would make this task difficult and unproductive. After summarizing the findings of the study, the presentation will offer some ideas concerning why classroom lectures pose few opportunities for critical thinking. The latter part of the presentation will be a participatory workshop focusing on 1) strategies that would better enable students to apply critical thinking skills to other courses, and 2) strategies for making these courses more accessible to critical thinking.

TCH STR, U

MONDAY, 1:30

CH 10

Chaffee, John

Director, Creative and Critical Thinking Studies, LaGuardia Community College

Designing an Effective Course in Critical Thinking (ID # 46)

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

TCH STR, C/U, STAFF DEV

SUNDAY, 10:30

STEV 1002

Chaffee, John

Director, Creative and Critical Thinking Studies, LaGuardia Community College

Teaching and Evaluating Critical Thinking in the Disciplines (ID # 45)

This interactive session will present a comprehensive model for teaching and evaluating critical thinking. Based on an interdisciplinary critical thinking program which involves 30 faculty and 800 students annually, this approach integrates an independent Critical Thinking course with an initiative for infusing

critical thinking across the disciplines through faculty development and curriculum redesign. Workshop participants will explore practical strategies for fostering critical thinking, engage in a variety of sample activities drawn from diverse disciplines, and examine methods for evaluating critical thinking abilities.

TCH STR, TEST, STAFF DEV, U

MONDAY, 3:15

CH 68

Chaffee, John

Director, Creative and Critical Thinking Studies, LaGuardia Community College

Sandra Dickinson

Professor of Linguistics and Communication, LaGuardia Community College, The City University of New York

Critical Literacy and Critical Thinking: Partners in Education (ID # 47)

The development of sophisticated thinking abilities is closely tied to the development of complex language abilities — and vice versa. This insight forms the basis of an interdisciplinary LaGuardia program in which students enrolled in a Critical Thinking course linked to writing, reading, and oral communication courses have consistently demonstrated impressive gains in language skills and thinking abilities. Workshop participants will explore the intimate, reciprocal relationship between thought and language, reflected in Lev Vygotsky's comment that "A thought may be compared to a cloud shedding a shower of words." They will actively engage in a variety of activities which illustrate the integration of critical thinking with critical writing, reading, speaking, and listening.

TCH STR, LANG, HS, C/U

TUESDAY, 8:45

EPT

Cheatwood, Diane D.

Faculty Development Specialist, Community College of Aurora

The Integrated Thinking Skills Project: Teaching Teachers to Teach Thinking (ID # 83)

Proceduralizing the Impossible ... Solving Difficult Problems ... Decision Making with Confidence ... Mapping Elusive Concepts ... Faculty members at the Community College of Aurora, Colorado, have infused these thinking strategies into a variety of courses so that both thinking skills and content are taught. Started with an exemplary program grant, the Integrated Thinking Skills Project (ITSP) helps instructors define thinking skills, "marry" thinking skills and content objectives, explore and practice classroom activities, and evaluate their progress.

Participants in this session will 1) analyze how these methods could be used with interdisciplinary teams of faculty at their schools, 2) try methods and activities which have helped students use thinking skills to master content, and 3) develop transfer applications for thinking skills in their discipline.

TCH STR, STAFF DEV, CC, U

SUNDAY, 1:30

DAR 143

Chin-Shong, Edwin

Volunteer Tutor, Learning Center, U.C. Berkeley

A Model for Analyzing Narrative Text (ID # 30)

This workshop offers an action model for analysis, comprehension, and evaluation of narrative prose content. All the components are clearly defined, and familiar enough to pose no problems for high school students. What is distinctive, however, are the connections, so that comprehension as a unitary whole results, rather than as a collection of main ideas. The model 1) fosters analytic thinking by searching for prior known components, 2) fosters deeper comprehension as a whole, and 3) fosters evaluation by asking what pieces are missing from a text, and whether the claimed connections are acceptable.

The action model also promotes rhetorical reading. The categories foster probing of the writer's goals, motives, possible bias, and strategies to persuade the reader.

HS, C/U, LANG, TCH STR

TUESDAY, 8:45

NICH 166

Colbourn, Frank E.

Full Professor of Speech Communication, Pace University, N.Y.C.

The Roles and Impact of Epistemic Applications in Perception and Assessment of Problems Analyzed with Audience Participation (ID # 173)

(A Socratic search for audience members' individual insights into the inner maps of their own thought processes.) This session will focus on the value of obtaining personal insights into our individual perception and evaluation habits. Demonstration: five to seven items of appropriate size for all to view are easily displayed, and the audience is asked to write one or two brief paragraphs about what they represent or are perceived to be by the individual. Some responses will be shared and considered in terms of the epistemes applied, so far as possible. Five epistemic structures will be considered: Primal; Authoritative-Categorical; Objective Reality; Subjective Reality; and Transcendental. Group insights and comments will be invited and possible advantages or disadvantages/limitations of each approach or combination of approaches will be suggested. Each writer will be asked to consider A) roots of his or her own epistemic approach, B) why used, and C) whether it has broader implications in his or her opinion. Interest and excitement are guaranteed.

G, CREAT

MONDAY, 8:45

STEV 2052

Collison, George

School of Education, University of Massachusetts/Amherst

A Constructivist Approach to Electricity: Building and Tearing Down Models for Current, Based on Phenomena that "Just Don't Fit." Naive Viewpoints (ID # 276)

This hands-on workshop focuses on work by Dr. Mel Steinberg of Smith College on practical ways to provide students with labs in electricity that challenge their misconceptions about electric current and voltage. Constructivists assert that our world views, the working models we use to make sense of the world, are built up or "constructed" gradually through our early years. Howard Gardner claims in *The Unschooled Mind* that these naive views remain largely unchallenged through 12+ years of schooling. The conventional "chalk talk"

models of electrons jumping from one atomic ball to another certainly do not challenge students' concepts of current as "flow". But what is a voltage? Is it why the electron jumps? This session gives concrete ways to explore these ideas and set up labs that directly challenge students' naive views of current as flow and voltage as push, to bring about conceptual change. Limited seating.

SCI, MID, HS, CC

STEV 1040

MONDAY, 10:30

Collison, George

School of Education, University of Massachusetts/Amherst

Computer Simulations as Platforms for Critical Thinking and Constructivist Pedagogy in Life Science Education (ID # 274)

This hands-on workshop focuses on new ways to approach life science education using computer simulations in genetics and ecology. Featured will be sample student-centered explorations using John Jungck's "3-P's", Problem Posing, Problem Solving, and Persuasion. This innovative method based on constructivist principles will be demonstrated using *Heredity Dog* by HRM, Judith Kinnear's *Catlab*, and some of the new *BioQuest* software from Dr. Jungck at Beloit College. The hardware platform used will be Apple II's, though the software is available for MS-DOS machines as well. Ways to extend the "3-P's" model to physical science instruction will be discussed.

SCI, MID, HS, CC

STEV 1040

TUESDAY, 10:30

Collison, George

School of Education, University of Massachusetts/Amherst

SimEarth, SimCity: Microworlds that Bring "What If" Modeling and Argumentation to the Classroom on a Global/Societal Scale (ID # 275)

Many of the problems facing our planet and our society are such that our minds and sensory apparatus do not even perceive them as problems at all: toxic chemicals, nuclear waste, ozone depletion, green house gases, urbanization. Our senses have evolved from immediate "fight or flight" mechanisms, once useful on the plains of Africa. These newer challenges require different mechanisms, new perceptual and conceptual frameworks attuned to see changes on a long-term scale. The world is changing in a decade more than it changed in a millennium and the rate of change is ever increasing. "Adapting to change must be the center of any new kind of teaching." [Ornstein & Erlich, *New World, New Mind*, 1989] Microworlds modeled in *SimEarth*, and *SimCity* provide a much needed extension, a window for learners of all ages to explore both personally and creatively the long-term consequences of slowly accumulating, even "invisible", processes in the world around us. Students aided by investigations with computer microworlds can develop insights and new conceptual frameworks that, perhaps, can help humankind solve the problems in the next century.

TCH STR, SCI, HS, CC

STEV 1040

WEDNESDAY, 8:45

Collison, Judith

Educational Consultant

Using Performance-Based Tests to Assess Mathematical Dispositions (ID # 278)

Performance-based assessment is one of the forms of alternatives to the standard, objective, multiple choice tests traditionally used to determine achievement and aptitude in mathematics. One great advantage of these tests is that they enable us to gain new and valuable information about not only students' achievement and aptitude, but about the reasons for their successes and their failures. Performance-based tasks can easily accommodate the use of multiple indicators, including those for determining students' dispositions towards the subject. This presentation focuses on a format of extended performance-based testing in mathematics as the context for assessing collaboration and communication in solving mathematical problems.

TEST, MATH, HS

DAR 122

SUNDAY, 1:30

Collison, Judith

Educational Consultant

Critical Thinking, Preservice Teacher Education, and Educational Equity (ID # 285)

A recent report based on research sponsored by the AAUW, entitled "How Schools Shortchange Girls", documented something of which we have had much anecdotal knowledge. While schools do injustice to the minds and self-concept of all children, the injustice is significantly worse for girls. Much of the harm is done at the elementary school level. A vast majority of elementary school teachers are women. These teachers not only are victims, but they are also the perpetrators, of the injustices of the educational establishment. This session will take a close look at the AAUW report, and discuss some necessary changes in teacher education.

TCH STR, MATH, SCI, ELEM, MID

SU 100

MONDAY, 3:15

Collison, Judith

Educational Consultant

Critical Thinking in the Elementary School: Making Sense of the Wealth of Ideas Presented at the Conference (ID # 286)

Three conferences ago, several teachers expressed frustration at having absorbed a great deal, but having no forum for sorting out ideas absorbed. They felt that it would be useful to devote a session to discussing the ideas, approaches, theories, and applications they were exposed to during the four days of the conference. This session aims to provide such a forum. It is a critical thinking digest for the smorgasbord of ideas at the conference. The hope is that this session will reinforce a sense of community for elementary school teachers interested in creating a community of inquiry in their classrooms.

ELEM, ESPECIALLY RECOMMENDED FOR NEWCOMERS

STEV 3046

WEDNESDAY, 8:45

Costello, Patrick J. M.

Lecturer in Education, University of Hull

Education, Citizenship, and Critical Thinking (ID # 40)

The purpose of this paper is to examine ways in which citizenship education can be promoted by fostering children's thinking and valuing processes. The paper has three sections. In the first, the argument that "education for citizenship" is essentially an exercise in indoctrination is examined and rejected. Having suggested that indoctrination is, in some sense, an "illness" which pervades educational institutions, I shall suggest that critical thinking provides an "antidote" to it. In the second section, I offer a brief examination of Matthew Lipman's *Philosophy for Children* program. Finally, I outline my own approach to the teaching of philosophy to children and examine some of the findings of a research project into "Improving the Quality of Argument 7-16" which is being undertaken at Hull University.

CONCEPT, TCH STR, ELEM

SUNDAY, 3:15

STEVE 3044

Cotton, Webster E.

Professor of Educational Foundations, California State University

Metaphorical Thinking and the Human Condition: Some Themes in the Writings of Dewey, Buber, and Heidegger (ID # 127)

It is through our metaphors that we make sense of our human existence. My focus in this session is on two contrasting "root metaphors" — the Game Metaphor and the Adventure Metaphor. A "root metaphor" functions as an *orienting idea* — it orients our way of being-in-the-world, and it carries with it a distinctive way of thinking, logic, rationality, and morality. Among the seminal thinkers of the past and present, we might associate Hobbes, Machiavelli, and B. F. Skinner with the Game Metaphor; while Socrates, Dewey, Buber, Heidegger may seem more in tune with the Adventure Metaphor.

After a brief analysis of these contrasting "root metaphors", I plan to explore some central themes in the thinking of Dewey, Buber, and Heidegger that have profound implications for what is happening in the classroom as well as the larger society. I hope, through this exploration, we will begin to see more clearly the intimate inter-relationship that exists between our ways of thinking, languaging, and experiencing. The session will involve a relatively brief presentation (15-20 minutes) and then open up to a seminar-type discussion.

CONCEPT, CREAT, G, HS, C/U

TUESDAY, 1:30

STEVE 2052

Court, Deborah

Assistant Professor, University of Victoria

Leslee Francis

Assistant Professor, University of Victoria

Teachers' Conceptions of Critical Thinking (ID # 39)

This presentation will report on research which investigated teachers' conceptions of critical thinking. Data was collected, through questionnaires and interviews, from 120 teachers of kindergarten through grade twelve. Teachers were asked to define critical thinking, to describe activities in their classes which they felt involved students in critical thinking, and to say how they evaluate

critical thinking. The resulting research report offers a fascinating picture of the ways critical thinking is (and is not) working in classrooms.

CONCEPT, TCH STR, STAFF DEV

MONDAY, 10:30

STEVE 3082

Curfman, Mary

Teacher, Clark County School District

Character Education Through Secondary Literature Classes (ID # 188)

Although it is not uncommon for members of the older generation to decry the values of youth and to criticize the moral decay of society, the situation in present-day America is more extreme than it has been in the past. Perhaps because of a lack of knowledge about cultural traditions and the inability to deliberate and apply critical thinking skills to ethical situations, American youth are disconnected from society and feel little obligation or responsibility to others. While public schools traditionally taught values and ethics, most no longer do so in any consistent or systematic fashion.

This session will defend a synthesis of the thinking of certain moral philosophers and learning theorists on the nature of character development. It will offer a rationale and specific strategies for character development and moral deliberation through secondary literature classes.

TCH STR, LANG, SOC STUD, HS

TUESDAY, 3:15

NICH 166

Damer, T. Edward

Professor of Philosophy, Emory and Henry College

A Positive Approach to the Teaching of the Fallacies: A Simple Method for Determining the Quality of Any Argument (ID # 258)

This workshop will demonstrate how a basic understanding of the nature of a fallacy can provide a simple and effective means of evaluating the quality of an argument. A fallacy is defined by the workshop leader as a violation of one of the four criteria of a good argument. A handout of common fallacies (violations committed so frequently that they even have their own names) from the workshop leader's *Attacking Faulty Reasoning* will be distributed to workshop participants.

G, TCH STR

SUNDAY, 3:15

STEVE 3038

Damer, T. Edward

Professor of Philosophy, Emory and Henry College

How to Construct Moral Arguments (ID # 260)

Most of us have found that it is primarily moral issues that engage our most serious critical attention. Yet many critical thinking courses give little focus to the peculiar character of moral arguments and the part that they play in persuading us toward moral commitment or action. This workshop will focus upon the important task of constructing moral arguments, with particular attention given to the task of formulating clear moral premises. There is no reason to believe that moral arguments should be any less rigorous in their structure or less compelling in their force than any other kind of argument.

G, TCH STR

MONDAY, 10:30

STEVE 3008

Damer, T. Edward*Professor of Philosophy, Emory and Henry College***A Code of Conduct for Critical Thinkers (ID # 259)**

Much of the focus in the critical thinking movement has been on the construction and evaluation of arguments and on pedagogical techniques. This session, however, will focus upon the rules of intellectual behavior that critical thinkers might be reasonably expected to follow in a dialogical context. The suggested code of conduct can be construed as both normative and descriptive in character. In so far as a spirit of fair-mindedness demands of all participants in rational discussions a commitment to the same minimal standards of intellectual behavior, these rules clearly take an ethical or normative dimension. However, the rules also come close to describing our actual behavior in those discussions which we regard as having been the most productive. Such a code can be presented to students as a simple but effective way of moving constructive discussion along in critical thinking courses or in any other course in the curriculum.

G, TCH STR, CONCEPT
CH 10

TUESDAY, 8:45

Daniels, Neil M.*Retired Clinical Psychologist and Family Counselor***Moral Ecology: A New Paradigm for Moral Critique (ID # 226)**

In his book, *The Morality Maze: An Introduction to Moral Ecology*, retired psychologist Neil M. Daniels, Ph.D., expands the concept of morality by assigning it a scientific base in biology. In the past, each individual immoral behavior was described and defined, but we failed to discern what they have in common, other than being forbidden. Daniels reveals one simple moral factor that pervades all moral and immoral behavior. This "common denominator" is a bio-environmental fact of human ecology. The human eco-system artifact common to all forms of morality is "property," an innovative component of moral ecology theory that has revolutionary implications for moral philosophy, law, education, and daily life. This session will be divided between the author's exposition of his theory and audience participation in applying the theory to the analysis of contemporary moral problems.

CREAT, G, SOC STUD, SCI
STEV 2049

WEDNESDAY, 10:30

Davis, Pippa Lee*Teacher, Lamar Middle School***It's Coming, It's Coming, the Thinking Is Coming! (ID # 206)**

Middle school students are often uninterested in school, and teachers pull their hair out trying to hold their attention. Many times this occurs because the lessons provided for middle schoolers do not challenge their minds. Critical thinking can grab those same uninterested students and get them involved in the learning process.

By using a variety of novels you can get students thinking critically not only during reading, but also in science, social studies, and yes, even in math. Emphasis during this session will be put on how to use a novel to employ effective questioning techniques and ideas that help students transfer the knowledge they receive while reading to other subject areas.

Lessons for this session will be focused around the novel, *Johnny Tremain*, by Esther Forbes. Participants will be provided with samples of the lesson plans presented in the session. Be a revolutionary. Learn to teach *Thinking!*

TCH STR, LANG, MID
STEV 3030

TUESDAY, 3:15

Davis, Robert T.*Teacher/Adjunct Instructor, Malcolm X Shabazz High School and Montclair State College***Princess Towe***Teacher, Malcolm X Shabazz High School and Montclair State College***William Gaudelli***Teacher, Hunterdon Central Regional High School***Nancy Soderberg***Teacher, Hunterdon Central Regional High School***Multi-Culturalism, Stereotypes, and Critical Thinking: Breaking Down Barriers Among Urban and Rural High School Students (ID # 168)**

Most high schools — urban, suburban, and rural — have relatively homogeneous student populations, and students frequently have little contact with those of different ethnic/cultural backgrounds. This presentation will discuss the organization, implementation, and results of a student exchange program involving an urban and a rural high school in New Jersey. Teachers involved will describe their experiences, and a question/answer period will encourage participants to share their own ideas and experiences with similar exchanges. An audio-video presentation will show student activities and their reactions to the program.

G, SOC STUD, HS
STEV 3072

MONDAY, 12:15

De Capite, Connie*Staff Development Project Specialist, Carr Intermediate School***Critical Thinking for All Students (ID # 105)**

In this workshop the audience will work through a unit of study which uses critical thinking strategies to help students master content and become more proficient in reading, writing, and discussion. This unit was originally prepared and used with both GATE and Chapter 1 students at Carr Intermediate School. However, the strategies are applicable at any grade level.

TCH STR, LANG, MID
SU 100

SUNDAY, 10:30

DeVereaux, Constance*Director of Institute for Socratic Research***The Critical Thinking Debate: Design and Implementation of Critical Thinking Policy in California Community Colleges (ID # 174)**

Among the many educational reforms that have taken place in the California Higher Education System, one that has stirred debate and raised questions for both critical thinking and public policy has been the incorporation of critical

thinking into the curriculum of the California Community Colleges. This session will focus on the curriculum reform effort with emphasis on the implementation of critical thinking at the course level — the process and its effects — as mandated by the revisions to the Title V regulations of the Education code.

This session will cover a brief history of the development of critical thinking as a tool for curriculum reform in the community colleges. We will look at how and why critical thinking became part of the efforts to strengthen the standards of the courses offered at the community colleges, as well as the process of formulating critical thinking into policy. We will explore the broad question of defining critical thinking, as well as how the different colleges define the term and the effect of this on implementing critical thinking into their course work. Finally, we will look at how a sample of the community colleges implemented the critical thinking policy and how effective this policy has been at achieving the intent of the reform efforts.

CONCEPT, TEST, CC

SUNDAY, 3:15

DAR 143

DeWitt, Richard

Assistant Professor of Philosophy, Fairfield University

Critical Thinking and Faculty Development (ID # 99)

We recently completed a two-year experimental project aimed at developing critical thinking skills in our freshman students. A handful of other professors and I were involved in this project at all stages, from its initial conception, to the planning of the seminar content, through the final evaluation of the project (which is currently in progress). My experience with this project has convinced me that we need to rethink our usual approach to developing critical thinking skills. In particular, I want to argue that we should focus more of our attention on faculty development as a means of developing critical thinking skills in our students. In this discussion I want to share my reasons for this conclusion, and I also want to solicit input about my claims.

TCH STR, STAFF DEV, U

TUESDAY, 1:30

STEV 3082

Ditzhazy, Helen E. R.

Associate Professor of Leadership and Counseling, Eastern Michigan University

Cultivating the Reasoning Mind: Melding Arete and Techne in Analysis of Incidences Reported in the Log of the Master's and Specialist's Internships (ID # 133)

With a new doctoral program, North Central Accreditation and National Council Accreditation of Teacher Education visits under-way, while University-wide task forces are filling out the notion of "A Learning University", a review of assessment practices becomes a priority. This session will take participants through some issues and critical thoughts about what some of the cap-stone experiences should be. It will focus on the internship as offering such an experience — when the analytical, evaluative, and synthesizing components are built in. Participants will receive and review copies of the handbook for the Masters' or Specialists' Internship as well as an evaluation form. They will also examine student thinking at the levels described. Discussion of the thought and the application in other settings will augment learning. Further analysis of the nature of student comments will be welcome and will be incorporated into further refinement of the assessment measures.

CONCEPT, TEST, U

TUESDAY, 3:15

STV 3040

Doody, John E.

Professor of Chemistry, Christian Brothers University

Emily D. Mathis

Professor, Christian Brothers University

Introducing Critical Thinking into Physical Sciences: Grades 4-8 (ID # 267)

One lesson plan for each required state-wide science objective in physical science for grades 4-8 has been prepared and tested by elementary teachers. The lesson plans follow the traditional Tennessee Instructional Model format to which has been added a critical thinking component. The critical thinking component follows a very simple format so that teachers can readily adapt the procedure to introduce critical thinking into other science lesson plans. Hands-on activities using simple materials are included in each lesson. Participating teachers will work through various lesson plans according to their grade level, performing experiments and participating in the critical thinking component. The lesson plans are useful to elementary teachers for classroom use, and to college professors for a special methods course or module for teaching elementary science.

TCH STR, SCI, 4-8 GRADE

SUNDAY, 10:30

DAR 122

Dorman, William

Professor of Journalism, California State University, Sacramento

The Not-So-Odd Couple: Critical Thinking and Global Education (ID # 57)

Now, more than ever, the skills embodied in the critical thinking movement are essential to any classroom at any level that has content dealing with world affairs. There simply is no more immediate or crucial task for the teacher of social sciences than to help students acquire the skills necessary for full citizenship in a multi-polar world which is as different from Cold War, bipolar thinking as the pre-industrial world was from the industrial. In this session I will offer some ideas about why critical thinking has such an important role to play in global education. I will also explore the critical thinking concepts and strategies that might be most useful during this historical period of transition. There will be time for others to contribute their ideas and suggestions.

G, SOC STUD

MONDAY, 1:30

CH 68

Dorman, William

Professor of Journalism, California State University, Sacramento

Beyond Reason: The Media, Politics, and Public Discourse (ID # 56)

To what degree do the mass media affect public discussion and thought about things that matter? Are there factors inherent in today's media system that make a rational discussion of politics virtually impossible? In this presentation, I'll discuss some of the problems I see with the mass media and contemporary public discourse, particularly in terms of how issues are portrayed (e.g., poverty/welfare reform; foreign policy/defense spending; the Savings and Loan bailout, criminal justice, and so on). The context for this analysis will be the 1992 presidential campaign. Emphasis will be on the need for teaching critical thinking skills about media and politics. Discussion will be encouraged.

SOC STUD, MEDIA, U

TUESDAY, 8:45

CH 68

Downs, Judy R.*Assistant Professor of English, University of Tampa***A Mini-Workshop in Critical and Creative Thinking (ID # 41)**

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

CONCEPT, CREAT
ART 108

MONDAY, 10:30

Drake, Harold*Associate Professor of Speech Communication, Millersville University of Pennsylvania***Teaching Critical Thinking by Way of General Semantics (ID # 11)**

Women's studies and considerations of the United States' multi-cultural society can be studied by way of general semantics criteria. General semantics can be an introduction to critical thinking for college and university students. This paper/workshop will present some contemporary examples of published material which stress various perspectives relative to feminism and racism; e.g., newspaper articles and fiction by or having to do with minority women. Those who are audience members for this presentation will be asked to analyze such materials by using select general semantics criteria. Audience members will also be asked to suggest further general semantics exercises for their respective classes, if they are teachers.

This presentation will also include excerpts from a PBS production on Native Americans and two other videos: 1) the Bunuel and Dali movie, "Un Chien Andalou," and, 2) Tom Petty and the Heartbreakers', "Don't Come Around Here No More."

TCH STR, LANG
STEV 3072

TUESDAY, 1:30

Dresden, Max*Professor Emeritus in Theoretical Physics, State University of New York, Stony Brook***The Undefinability of Successful Critical Thinking in Science and Science Education (ID # 254)**

Although much of the criticism of the "critical thinking community" directed at the "traditional" presentations and teaching of science is well taken and pertinent, there is an uncomfortable vagueness and lack of specificity in all the proposals and suggestions advanced to change and improve that situation. Two points will be stressed in this discussion: 1) A thorough and detailed knowledge of the (some) technical aspects of some parts of science is an indispensable preliminary for meaningful and effective scientific communication which is, in fact, what science teaching is. In this communication process, concrete issues must be analyzed on genuinely scientific levels (appropriate to the level of background and preparation). In order to carry out such a program, the students must individually master the needed techniques (experimental, numerical, mathematical). 2) It is probably impossible to define methods or procedures which are applicable to many different fields, different

levels of preparation and interests, different institutional settings. It is not even clear that a critical assessment of relevant problems can be carried out in a general context. The role of such an assessment in learning and teaching and research is so varied that it is most doubtful that a critical analysis has any value beyond a specific and concrete context. Even then the critical analysis must be considered with guesses and intuition. But it is well to remember that an intuition in turn is developed by the experience obtained from innumerable special cases. A general scheme can at best provide a heuristic guide for the learning and teaching of science, it cannot replace a detailed understanding and intellectual control of specific subjects.

CONCEPT, CREAT, G, MATH, SCI, HS, C/U
DAR 122

WEDNESDAY, 8:45

Duffey, Betty*Business Teacher, Maine West High School***Tools for Assessing Business Students' Critical Thinking Skills (ID # 134)**

Assessment tools such as: 1) student portfolios and other long-term projects, 2) performances tasks, and 3) multiple choice questions with multiple answers will be recommended and modeled. The presentation is designed to include interaction of participants with both the presenter and other participants.

TEST, HS, CC
STEV 2050

TUESDAY, 10:30

Eady, Charlotte King*Middle School Teacher, Taylor Street Middle School***Socratic Questioning with the Middle School Student (ID # 207)**

Utilizing a prepared video tape and a lecture/discussion, this session will focus on Socratic questioning techniques. The foundational question for the discussion will be taken from one of the central themes of the novel, *The Summer of the Swans* — physical appearances.

It is the inherent nature of middle-school aged students to be subject to peer pressure, emotional fluctuation, and physical instability. These factors have a marked effect on school progress. Exploratory Socratic questioning is one way in which teachers can allow students to probe their own thinking on issues which are of importance to them.

TCH STR, LANG, MID
NICH 173

SUNDAY, 3:15

Earley, Glenn*Coordinator of Interreligious Relations and Holocaust Studies for The National Conference of Christians and Jews, Adjunct Assistant Professor of Religious Studies, Santa Clara University***Critical Thinking Through Study of the Holocaust (ID # 6)**

This session will explore and analyze some experiences with and experiments from a long-established human-relations/historical-critical thinking seminar, which focuses on the Nazi Holocaust. We will undertake analysis of such issues as these: 1) historical-critical, hermeneutical issues in Holocaust historiography (causation); 2) deconstructing prejudice and stereotypes through study of fallacies and Venn diagrams; 3) critical listening skills, e.g., survivor-

witnesses, films, etc.; 4) analysis of critical ethical issues: resistance and rescue (altruism), judgment; 5) using varied learning methods, e.g., journals, teams, essays. We will also reflect on ways these issues can be adapted to different situations — middle school and high school and college; in-depth courses and brief surveys. I am interested in sharing my experiences, mistakes, and insights, and in having participants, including myself, learn from each other.

G, SOC STUD
IVES 35

SUNDAY, 10:30

Earley, Glenn

Coordinator of Interreligious Relations and Holocaust Studies for The National Conference of Christians and Jews, Adjunct Assistant Professor of Religious Studies, Santa Clara University

"Historical-Critical, Phenomenological Teaching About Religion — Case-Study on Understanding 1st Century Judaism and Christianity Using a Problematic Textbook (ID # 7)

As part of its Social-Science Framework's desire to teach "about" religion, California has adopted Houghton-Mifflin's "A Message of Ancient Days", which many scholars and educators criticized as biased, not reflective of recent historical scholarship in 1st Century Judaism and Christianity, and likely to exacerbate extant misconceptions and prejudices. The presenter has been involved in the critical discussions throughout, and has done numerous teacher-training workshops in California. First we will discuss some general and critically important issues, such as: legal teaching about religion versus illegal teaching of religion (state schools); rules about how to objectively teach about religions (phenomenological method); helpful metaphors for understanding sympathetic/critical study of religions.

Next we will discuss: 1) illuminating examples of how the textbook's treatment illustrates a problematic, uncritical, non-objective approach; 2) looking at classroom and workshop tested models/diagrams — usable by student and faculty — to supplement the book through an objective, accurate, up-to-date explanation of Christian origins in 1st century Judaism.

G, SOC STUD
IVES 35

MONDAY, 1:30

Edwards, John

Professor of Education, James Cook University

Ann Kerwin

Senior Lecturer in Humanities; Philosopher-in-Residence, Surgery, University of Arizona

Ignorance and Lateral Thinking (ID # 182)

Most education operates as if knowledge transmission is its central aim. This is based on the belief that knowledge is the major component of the educational world and that ignorance is some insignificant appendage. In fact, ignorance is the dominant and rapidly expanding component.

In this session we will explore the classroom implications that arise from the blending of Kerwin's research on ignorance and Edwards' research on lateral thinking. This raises a number of issues, including: recognizing and dealing productively with ignorance, uncertainty, and the unknown; tapping and mobilizing relevant resources; the use of questions; independence in learning; alternative

thinking approaches; the history of the evolution of ideas; the role of academic disciplines; reducing curriculum coverage; and challenging the status quo. Powerful techniques for teaching and learning will be demonstrated and discussed.

TCH STR, STAFF DEV

SUNDAY, 3:15

IVES 78

Edwards, John

Professor of Education, James Cook University

Teaching Thinking: How Do You Know if You Are Achieving Anything? (ID # 183)

Many claims and counter-claims are made about the benefits of using particular programs or teaching approaches for teaching thinking. Unfortunately, many of these claims are based on wishful thinking and questionable data. This session will draw on Professor Edwards' twenty years of experience in teaching and research in the field. Many of our standardized tests do not cognitively engage children; most of our tests focus solely on where the child is at, rather than on what can be done to aid the child's growth; and most teachers do not have strategies for tapping the valuable store of information they carry on each of the children they teach. In this session you will be introduced to the joys and frustrations, successes and failures, of extensive research studies. What does not work will be described, what appears to work will be demonstrated, and possibilities for action now will be shared.

CONCEPT, TEST

MONDAY, 3:15

CH 20

Edwards, Phyllis

Director, Curriculum and Staff Development, Santa Cruz City Schools

Cognitive Training Wheels: Strategies for Developing Thinking Skills (ID # 55)

How many times have you said or heard: "I can't use this stuff with my kids; they can't think this way."?

My initial reaction when hearing such comments has often been one of irritation that teachers would limit their students' potential by such an assumption. Lately, however, many educators have come to realize that, although few students are intrinsically incapable of critical thinking, *these teachers are not wrong* in their analysis of the *evidence* of the students' behavior. Indeed, students often act as though they cannot think "this way". Can they be taught to function differently?

For students who need help with learning how to think, there is good news. Not only can these skills be taught, but they can be taught to most students. This participatory workshop explores a group of strategies which lend themselves particularly well to a sequential instructional plan for measurably improving students' thinking. The sequences offered here provide teachers with an alternative to the isolated "good idea". These strategies, when included in lesson plans over time, can enhance the transfer of skill to new situations both in school and outside the classroom. The sequence, as outlined, leads the student through a series of activities which build upon each attained skill to develop the next level of thinking.

TCH STR, STAFF DEV, G

SUNDAY, 10:30

IVES 24

Epstein, Virginia

Associate Professor of Education, Regis University

When the Smoke of Theory Meets the Fire of Practice: It Was England and I Didn't Inhale (ID # 216)

There is a certain comfort in theorizing about teaching critical thinking, because the theory stays pure: it doesn't change unpredictably; it is clear and airtight. But that produces sterility and it's not until the theory is tested in the field, coming into contact with the impurities of human unpredictability, that it evolves into usefulness.

In this interactive workshop, teachers will be involved in the co-evolution of a theory and practice of teaching critical reading. This model for teaching critical reading that I propose acknowledges reading as an act of interpretation that is learned in social collaboration. It is politically active because it involves teachers and children raising important questions from various theoretical positions to evaluate and reconstruct the ends and means of any text they read. This spring, I field-tested this theory in an elementary classroom and in my teacher education courses. Literature and other examples from this pilot study will be used to raise questions that are significantly different from those typically raised in classrooms.

CONCEPT, TCH STR, LANG

MONDAY, 3:15

IVES 119

Evans, Gwyneth

Professor of English, Malaspina College

Educating Mind and Heart Together: The Relationship Between Critical Thinking and Emotion in Children's Literature (ID # 69)

Popular images of the intellectual, particularly in the media, suggest that the thinker is a person devoid or contemptuous of feeling — that the intellectual life is incompatible with a fulfilling emotional life. This presentation will examine the ways in which thought processes and the intellectual life are depicted in a variety of books for readers between approximately the ages of 8 and 14. For example, a recurrent image of evil in fantasy is the disembodied head or brain which exerts a callous tyranny over those who worship or are enslaved by it. While much imaginative literature does tend to favor the heart over the head, we will look at a number of children's books which offer positive models of cooperation between head and heart, and which show critical thinking as a valuable process in educating the feelings, rather than simply overcoming or denying them.

Format: presentation and discussion. Book lists will be provided.

LANG, ELEM, MID

TUESDAY, 1:30

IVES 119

Facione, Peter

Dean, College of Arts and Sciences, Santa Clara University

Noreen W. Facione

MSN, FNP

Assessing and Teaching Critical Thinking in Nursing Education (ID # 76)

How can a nursing program make an academically sensible and technically appropriate response to NLN accreditation standard #27 which calls for an

emphasis on the progressive development of critical thinking in the curriculum? And, apart from that, how can the nursing program, which is under so much pressure to "fact load", develop in nursing students the kind of critical thinking and decision-making skills needed for professional practice? This interactive and collaborative workshop will employ C. T. pedagogy to achieve its two outcomes: a) that the participants will identify at least three specific instructional strategies to incorporate into their teaching which will promote greater C. T. development in students; and b) that the participants will outline a multi-modal curricular assessment plan by which they can generate sophisticated and meaningful baseline and longitudinal data regarding the students' critical thinking development during their nursing education.

TCH STR, TEST, C/U

MONDAY, 10:30

DAR 137

Facione, Peter

Dean, College of Arts and Sciences, Santa Clara University

CT Assessment — The Basic Ways and Means (ID # 75)

How can the individual instructor design and implement workable classroom level strategies to assess critical thinking? We will start with fundamentals such as developing a robust, clear, and operational concept of CT. In this collaborative and interactive workshop, we will critique specific examples of classroom assessment strategies (such as project assignments, self-prompt reports, essay test questions, and multiple-choice items), and we will develop examples suited to our own teaching. We will consider the advantages and shortcomings of various assessment contexts (such as in-class vs. take-home, competitive vs. collaborative, and unannounced vs. scheduled). We will identify the criteria by which to compare published CT assessment instruments available for use at the classroom level. And, we will have some fun experimenting with unusual classroom assessment strategies such as team testing.

TEST, C/U

TUESDAY, 3:15

CH 20

Feare, John R.

Director, Center for the Cultivation of Critical Thinking, Grossmont Community College

Critical Thinking and Discussion Across the Campus and the Community (ID # 33)

Based on the position that thinking, however skillful, to be "critical" thinking, must be informed by certain values (e.g., pursuit of truth) and attitudes (e.g., fairmindedness), the process will be described by which Grossmont College is implementing the ideals and mandates of critical thinking. Included will be discussion of the holistic definition which serves as the campus-wide referent; staff-development activities; outreach to the community; and demonstration of a technique designed to profoundly improve the effectiveness of discussions of all kinds, from interpersonal to large-group. Ample time will be allowed for discussion.

CONCEPT, STAFF DEV, CC

SUNDAY, 10:30

DAR 143

Feare, John R.

Director, Center for the Cultivation of Critical Thinking, Grossmont Community College

Robert Swartz

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

Sandra Parks

Co-Director, National Center for Teaching Thinking

Panel: Critical Thinking and a Theological Dimension (ID # 32)

Are critical thinking and spirituality compatible? The argument will be presented, based on the work of anthropologist Ernest Becker, that human life and much of nonhuman life are doomed if we do not soon find, through soul-searching and empirical criticism, a universal standard to which men and women everywhere might be willing to subordinate their ego- and ethnocentrism. Ample time will be allowed for discussion.

SUNDAY, 1:30

SU 100

Fernandez-Balboa, Juan Miguel

Assistant Professor of Pedagogy/Teacher Preparation, University of Northern Colorado

Critical Pedagogy: Making Critical Thinking Really Critical (ID # 164)

This participatory session will address critical pedagogy (CP) as a valuable means for making critical thinking really critical. CP is a theoretical/practical approach to a) studying social relations and practices, b) raising students' awareness of the unjust and contradictory values and conditions in our society, and c) creating a better society for all. This session has two basic premises. First, critical thinking is not always critical due to the fact that we live in a socially constructed "reality" which limits and distorts the way we perceive and think about problems. This "reality" is constructed by several social mechanisms (i.e., institutionalization, objectivation, internalization, externalization, language, and tradition). These mechanisms are constantly present in our lives, and thus, shape our reasoning. Second, because educators are embedded in a particular social reality, what they perceive as critical thinking is often uncritical, custodial, and unproblematic. In this sense, critical thinking becomes a repertoire of skills with little connection to the context of real life and with no concern for social justice. Under these circumstances, it is little wonder that students are apathetic and anxious about learning and aloof to social and political issues. Conversely, CP can help students and teachers apply critical thinking skills to uncover their "reality", emancipate themselves, and transform the unjust social conditions. The praxis of CP as it relates to critical thinking will be discussed. Audience participation will be encouraged and welcome.

CONCEPT, ADV, SOC STUD

STEV 3040

TUESDAY, 1:30

Fisher, Alec

Lecturer in Philosophy at University of East Anglia and Assistant Director, Center for Critical Thinking, Sonoma State University

A Critical Thinking Research Program (ID # 73)

Though the critical thinking movement has made great advances during recent decades, there are still many problems to be solved. This workshop will identify some of these problems — problems which concern the very idea of critical

thinking, which affect teaching strategies, and which beset attempts to assess critical thinking skills — and will invite participants to help to formulate a coherent research program for the "community of enquiry" which the conference attracts.

G, U

SUNDAY, 3:15

ART 108

Fisher, Alec

Lecturer in Philosophy at University of East Anglia and Assistant Director, Center for Critical Thinking, Sonoma State University

Assessing Higher Order Thinking Skills (ID # 74)

This workshop will present and discuss material which has been developed in the U.K. by the University of Cambridge Examinations Syndicate for assessing the higher order thinking skills of candidates applying for admission to colleges and universities. The material tests logical reasoning, mathematical reasoning, reading comprehension, and communicative skills. The workshop will focus on the problems surrounding attempts to assess critical thinking in this context.

TEST, U

TUESDAY, 1:30

IVES 34

Flores, Sonia

Professor, University of Puerto Rico, Arecibo Campus

Evaluación de Destrezas de Pensamiento en el Aprendizaje Cooperativo (Assessment of Thinking Skills in Cooperative Learning) (Presented in Spanish) (ID # 157)

Cooperative learning has been demonstrated to be an effective method for the development of simple and complex thinking skills. What conditions in cooperative learning foster the development of thinking skills? How can thinking skills be assessed in an effective way in the cooperative learning process? In this session we will discuss the theoretical grounds for developing thinking skills through cooperative work. We will also examine observation sheets that facilitate the assessment of these skills, and demonstrate how they are used.

TEST, HS, U

SUNDAY, 1:30

CH 14

Flores, Sonia

Professor, University of Puerto Rico, Arecibo Campus

Assessment of Thinking Skills in Cooperative Learning (ID # 303)

Cooperative learning has been demonstrated to be an effective method for the development of simple and complex thinking skills. What conditions in cooperative learning foster the development of thinking skills? How can thinking skills be assessed in an effective way in the cooperative learning process? In this session we will discuss the theoretical grounds for developing thinking skills through cooperative work. We will also examine observation sheets that facilitate the assessment of these skills, and demonstrate how they are used.

TEST, HS, U

MONDAY, 3:15

DAR 139

Floyd, Deborah Martin

Teaching Associate, Doctoral Candidate, Florida State University

Amy Meeker

Assistant Director for Extended Day Program, Jensen Beach Elementary School

Growth and Change in Teaching and Learning Science in the Elementary School as Evidenced by Portfolios (ID # 88)

At Florida State University, a required senior level elementary education course entitled, "Teaching and Learning Science in the Elementary School", utilizes alternative forms of assessment. Portfolios are one technique used which appraises students' learning without the use of tests. Students, throughout this course, engage in the experience of creating and sharing with their peers and instructor a portfolio which shows their growth and change in the area of teaching and learning science in the elementary classroom. This session will provide a description of the course, explain how the concept of portfolios was introduced and developed, and supply examples of student portfolios. In addition, the case of one student who engaged in this process, and later became a change-agent in her school during internship, will be shared.

TCH STR, SCI, ELEM

STEV 3044

SUNDAY, 10:30

Floyd, Deborah Martin

Teaching Associate, Doctoral Candidate, Florida State University

Ways of Knowing: Preservice Teachers' Thinking and the Case Study Approach (ID # 87)

An interest in teachers' thinking has come about because of the recognition that teaching is a complex, situation-specific, and dilemma-ridden endeavor. It has been proposed that educational environments which provide preservice teachers the opportunity to face the complexity of real-life problem, cause them to question the received view of knowledge and reflect on their beliefs and learning. The case study method confronts students with problematic situations that arise in teaching, that are embedded contextually, and that do not have a "right answer". This allows the students to define the problem, identify alternatives, choose a course of action and plan for implementation, and consider the possible consequences of the given action. This session will focus on the results of a qualitative study which was undertaken to determine the perceptions and meaning a group of preservice teachers attached to their thinking during the experience of using the case study method. Themes that emerged from this study will be presented and discussed.

U, TCH STR, STAFF DEV

STEV 3082

MONDAY, 8:45

Foster, Patricia

Former Associate Dean for Academic Affairs, Loma Linda University

David Larson

Director for Center for Christian Bioethics, Loma Linda University

Edna Maye Loveless

Director of Freshman English Program, La Sierra University

Gina Foster

Graduate Student in Religion, Vanderbilt University

Using Critical Thinking Skills to Assess Ethical Decision-Making (ID # 249)

This session will focus on strategies for helping students to assess ethical issues in college classes and clinical situations. A variety of strategies will reflect

the perspectives of a nursing professor, a college English teacher, a medical school ethician, and a recent liberal arts graduate. Part of the session will address assessment of students' performances in writing and discussion, with special consideration given to providing for individual differences and varied class sizes.

TCH STR, TEST, C/U

SUNDAY, 1:30

IVES 24

Fraña, Adrian W.

Instructor in Humanities, Rich East High School

Encouraging the Mind's Best Work: A View from the Trenches (ID # 261)

Having students think critically as they learn subject matter is a worthy educational goal. Educators seeking to do more than pay lip service to this goal want to make critical thinking a regular, rather than occasional, part of the daily learning process. While not claiming to guarantee a systematic, consistent application, this program will provide a variety of approaches designed to implement critical thinking as a day-to-day activity, having students use it to learn more effectively. General strategies as well as specific techniques to make "movement of the mind" the focus of method and outcome in discussion, individual and group assignments, textbook and supplemental resource use, and other activities including evaluation will be presented. Those attending will have a hands-on opportunity to design unit activities using critical thinking systematically. Included will be a hand-out of classroom-tested materials, methods, procedures, and guidelines that make critical thinking central to learning.

TCH STR, HS

DAR 139

TUESDAY, 12:15

Freeman, James B.

Associate Professor of Philosophy, Hunter College/CUNY

Overall Argument Evaluation: Procedures and Problems (Part I) (ID # 304)

In the first part, we shall present a procedure for analyzing and evaluating arguments in natural language. This includes a method for representing diagrammatically what supports what in an argument and a series of critical questions for determining whether the argument is logically convincing. Four questions in the following order define the scope of logical appraisal: Are there any problems of meaning? Are the premises acceptable? Are they relevant to the conclusion? Do they constitute adequate grounds for the conclusion? We shall develop what each of these questions involves and how we may answer them. We shall also note what unresolved theoretical issues these questions raise.

TCH STR, U

STEV 3008

MONDAY, 1:30

Freeman, James B.

Associate Professor of Philosophy, Hunter College/CUNY

Overall Argument Evaluation: Procedures and Problems (Part II) (ID # 305)

The second part of the session will be a hands-on workshop in overall argument evaluation. We shall examine several arguments, applying the procedures and questions for analyzing and evaluating them to come to an overall assessment of their cogency.

TCH STR, U

STEV 3008

MONDAY, 3:15

Freeman, James B.

Associate Professor of Philosophy, Hunter College/CUNY

The Appeal to Popularity: A Theoretical Inquiry (ID # 25)

To appeal to the popularity of some belief or action, to say that everybody believes it or does it, to justify accepting that belief or perform that action, is standardly regarded as a fallacy. Why is this emotional appeal to an alleged herd instinct fallacious? In *Thinking Logically*, we diagnosed the problem this way: Although the fact that everyone believes some claim or does some action may be a mark in its favor, it is a relatively weak mark. The appeal to popularity is fallacious because it inflates a weak reason into a strong or compelling reason. However, in *Thinking Logically* and in our later work on premise acceptability, we indicate that common knowledge is one source of presumption, and we seek to explicate premise acceptability through presumption. In effect, we are saying that if common knowledge will vouch for a claim, that claim is rationally acceptable (barring counter-evidence). Aren't we saying then that a claim is acceptable just because everybody believes it? Can we maintain that the appeal to popularity is fallacious in the light of this principle of presumption? How may we extricate ourselves from this conundrum? That is the theme of this presentation.

ADV

STEV 3008

TUESDAY, 1:30

Gainen, Joanne

Director, Teaching and Learning Center and Associate Dean for Curriculum and Evaluation, College of Arts and Sciences, Santa Clara University

Steven Gelber

Professor of History, Santa Clara University

Terry Beers

Assistant Professor of English, Santa Clara University

Assessment of a Freshman Seminar to Develop Skills of Critical Inquiry (ID # 12)

Several faculty in the College of Arts and Sciences at Santa Clara University are experimenting with a third-quarter freshman seminar designed to cultivate the disposition toward intellectual inquiry and to build students' skill in the use of techniques to deepen their understanding of complex issues. We created a teaching model that could be used to stimulate critical exploration of texts and artifacts from various disciplines, then used the model to help students enter the intellectual community valued by faculty.

To assess the Seminar's effectiveness in the first year, we used several sources of information including a pre- post-seminar essay and an open-ended post-course questionnaire. During the second round of seminars we also administered the California Test of Critical Thinking Skills and a new measure based on William Perry's model of intellectual development. In the workshop we will describe the seminars, present results of the assessment, and invite participants to discuss implications of our findings.

TCH STR, TEST, U

IVES WA

WEDNESDAY, 8:45

Gambrill, Eileen

Professor, School of Social Welfare, University of California at Berkeley

Distinguishing Between Propaganda and Scholarship (ID # 150)

We are daily deluged with propaganda (material designed to encourage certain actions with the least critical thought possible). Often, this is in the guise of scholarship. In fact, mis-representing propaganda as scholarship is a common propaganda ploy. The purpose of this session is to provide participants with a bird's eye view of the history of propaganda, to offer recent examples of propaganda in scholarship, and to describe criteria for distinguishing between propaganda and scholarly material that can be used as a kind of template to review material. Practice opportunities to apply this template to recent examples will be offered, and a selected bibliography of relevant readings provided.

TCH STR, SOC STUD, U

CH 30

MONDAY, 12:15

Gardner, Albert H.

Associate Professor of Human Development and Child Study, University of Maryland

Critical Thinking Solutions to Problems in the People's Republic of China (ID # 175)

A paper presentation, with opportunities for audience participation, on using critical thinking in addressing problem areas in the People's Republic of China. The author, while teaching at Peking University in June 1991, introduced the technique of "brainstorming" to a class of 28 undergraduate psychology majors as a means of generating ideas for possible solutions to four of the current problems in China relating to: housing, transportation, population control, and food supply. The exercise yielded imaginative ideas and suggestions, a testimonial to the creative potential of these students (in spite of a restrictive government) and to the effectiveness of brainstorming as an instrument of critical thinking. Results of other brainstorming efforts with Chinese students are also discussed.

CONCEPT, CREAT, SOC STUD

WEDNESDAY, 8:45

STEV 3072

Gelfer, Jeffrey I.

Assistant Professor of Education, University of Nevada, Las Vegas

Student Portfolios for Young Children: An Avenue for Developing Critical Thinking (ID # 181)

Developing student portfolios involves the active participation of young children, their teachers, and their parents. The organization and development of a portfolio requires the participants to apply their critical thinking to determine what is included, analyze the selected entries, and evaluate the change that has occurred over time. These decisions are based on observations, experiences, and reflections of the persons involved.

This presentation will describe a portfolio project that was implemented in two elementary schools. The results will be discussed with special emphasis on the teachers' and parents' reactions and the implications for preservice teacher programs.

TEST, KINDERGARTEN

TUESDAY, 1:30

STEV 3046

Giuliano, Jackie

Adjunct Professor of Environmental Studies, Antioch University, Los Angeles

The Development of Social Responsibility and Environmental Awareness Through Techniques in Critical Teaching: A Community Involvement Approach (ID # 198)

If our educational system is to be successful in producing critically thinking and reasoning individuals capable of contributing to complex societal issues, then the development of social responsibility and environmental awareness in today's student population is of paramount importance. These skills are not second nature to most and are difficult to teach in a non-experiential environment. The application of action-oriented, community involvement projects that take the student to the immediate application of classroom learning can be quite effective.

In a course the author has designed and taught at Antioch University, Los Angeles, entitled "Environmental Action and Social Responsibility", the students' concepts of social responsibility is developed, their awareness of environmental problems heightened, and their critical thinking skills enlarged through direct involvement in active, controversial issues (our definition of "environment" is very large and includes essentially everything from abused women to the ozone layer). They are provided an understanding of the tools that are available to effectively involve themselves in social and environmental issues and each student selects a current issue and develops a campaign to pursue some aspect of that issue. Each student's project has to include a thorough discussion of the issue, including other points of view, a precise statement of his or her position on the issue, and a campaign for action that includes his or her objectives, how each would solicit support, his or her information dissemination plan, media utilization plan, and follow-through actions. Students carry out as many of their actions as feasible within the time frame of the quarter.

Participants in the session will be asked to develop action-oriented projects of their own, thus identifying with the process and excitement experienced by the students. Techniques will be shared to help the instructors to develop the framework for the course project and to help explore techniques for the implementation of this approach in the classroom.

TCH STR, CREAT, SOC STUD, HS, C/U

MONDAY, 8:45

IVES 35

Giuliano, Jackie

Adjunct Professor of Environmental Studies, Antioch University, Los Angeles

Critical Textbook Selection — A Fundamental Pre-Requisite for Critical Teaching (ID # 199)

Teaching critical thinking, listening, and reading skills in any subject is severely hampered without a good textbook. Too often, textbooks are used because they have become "standards" in the field without regard to their organization, layout, readability, and appearance. In this session, we will discuss the significance of establishing critical textbook selection criteria and the importance that each criterion plays in teaching critically. Participants will be asked to speculate on how they would "remodel" their current textbooks according to the criteria presented.

TCH STR, CREAT, G

MONDAY, 12:15

STEV 3082

Giuliano, Jackie

Adjunct Professor of Environmental Studies, Antioch University, Los Angeles

The Environmental Studies Curriculum as a Vehicle for the Introduction of Feminist Philosophies and Spirituality into the Classroom — An Example of Remodeling a Curriculum (ID # 200)

The goal of the ecofeminist and modern day radical feminist movements is more than the attainment of equal "rights" and "status" for women within the existing power structure. The larger objective is to achieve a redefinition and restructuring of the current social system to allow for a variety of roles based on the strengths and gifts of the individual and the concepts of personal empowerment and interconnectedness. These goals are in perfect harmony with what many believe is the fundamental aim of the environmental movement: to foster an understanding of the Earth as a collection of interconnected living systems, each dependent upon one another to survive. Curricula in environmental studies could provide an ideal vehicle for the infusion of these principles into the educational system. In addition, these curricula can address the reintegration of science, technology, and environmental understanding with ethics, values, and emotions. Key courses can be developed to provide future environmental managers and technicians with the tools that will be needed as humans enter the next century and take those first, uncertain steps toward true environmental and societal awareness. Critical thinking and teaching techniques will play an important role in the development of such curricula. The ecofeminist perspective of the inherent value of nature as fundamental to human existence must play a major role in educational values of the 1990's and its impact on thought, writing, research, science, and the humanities should be embraced and shared as a perspective that may reflect an ultimate global ethic. The author is exploring these principles and developing environmental studies curricula sensitive to these issues as part of a doctoral program.

TCH STR, CREAT

MONDAY, 3:15

STEV 3036

Gottesman, Les

Chair, Department of English and Creative Arts, Golden Gate University

My Values (A Literary History and Critique) (ID # 66)

Perhaps the trickiest step in strong critical thinking is achieving enough critical distance from the strong traditions which make up "my" assumptions and values. Hermeneutic philosopher Paul Ricoeur suggests an approach, which I have used with business students to understand their "business" values and "American" values by reading American literature. Says Ricoeur, "The power of the text to open a dimension of reality implies in principle a recourse against any given reality and thereby the possibility of the critique of the real." Our encounters with Ben Franklin's Philadelphia, Bartleby's law office, Frederick Douglass's Baltimore shipyard, Babbitt's real estate office, and Rabbit's Toyota showroom widen our own worlds enough for a critical self-inquiry.

LANG, U

SUNDAY, 3:15

NICH 166

Green, Alison

Psychologist, Local Exams Syndicate, CED, University of Cambridge

Cognitive Psychology and Critical Thinking (ID # 84)

Nickerson (1987) lists a set of characteristics associated with good thinking. The good thinker, amongst other things, can draw valid conclusions, can see a problem from a number of different perspectives, and can recognize bias. In short, the good thinker appears to have the ability to think critically. In their brochure describing the Center for Critical Thinking and Moral Critique, Scriven and Paul note that critical thinking has two components. These are:

- 1) A set of information and belief generating and processing skills and abilities, and
- 2) the habit, based on intellectual commitment, of using those skills and abilities to guide behavior.

If people have acquired this "habit" however, why is it that they fail to exercise it? Take one particularly pervasive phenomenon — people cannot or do not always use knowledge they actually possess.

This short paper explores the mutual benefits to be had in considering cognitive, social, and affective influences on thinking. In the paper I examine what cognitive psychology might gain by examining behavior at macroscopic levels and explore what critical thinking research might gain by considering research by cognitive psychologists interested in factors that limit our performance. Examples from cognitive psychology are used to refute the criticism that

Cognitive psychologists like to analyze and generalize about problems that are defined, explored, and settled in a fundamentally self-contained way. (Paul, 1987)

and to show that critical thinking research would do well to consider cognitive psychology research, especially in order to address the question of why people sometimes fail to think critically.

CONCEPT, ADV

MONDAY, 10:30

STEV 2049

Greenstreet, Robert W.

Assistant Professor of Speech Communication, Director of Forensics, East Central University

Academic Debate and Critical Thinking: A Look at the Evidence (ID # 130)

This session explores the available evidence concerning the relationship between study and experience in academic debate and student development of critical thinking skills. While a great many current textbooks in argumentation and debate claim a direct and causal relationship between debating and development of critical thinking abilities, this claim is not borne out by available empirical data gathered through appropriately controlled social experiments. Evidence of a scientific nature does establish a relationship between excellence in debate and high critical thinking ability, but it does not address the direction of that relationship. While evidence from other sources (such as testimony and experience) appears to support the hypothesized direct and causal relationship, such evidence is not a substitute for appropriately controlled scientific study. This session will feature a presentation which may be interrupted for discussion. Discussion will follow. A paper will be available.

TCH STR, HS, U

TUESDAY, 1:30

IVES 78

Gutteridge, Moira

Instructor in Philosophy, University College of the Fraser Valley

Strategies for Dealing With Unexpected Individual Difficulties in Critical Thinking (ID # 67)

Even the brightest students can have unexpected difficulties with critical thinking assignments. This participatory workshop offers assistance in detecting individual difficulties in reasoning and in deciding when and how to intervene. The workshop demonstrates how to identify some common types of reasoning difficulties in students' written and oral responses. Participants will develop techniques to help students overcome some of these difficulties and learn where to refer students for help that cannot be provided in the classroom.

TCH STR, TEST, CC/U

TUESDAY, 10:30

IVES 78

Hales, Susan

Associate Professor, Saybrook Institute

Understanding the Relationship Between Critical Thinking and Self-Esteem: Part I (ID # 217)

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

G

SUNDAY, 1:30

STEV 2049

Hales, Susan

Associate Professor, Saybrook Institute

Understanding the Relationship Between Critical Thinking and Self-Esteem: Part II (ID # 218)

Part two focuses on the development of self-esteem by identifying the early childhood experiences and parental socialization practices associated with self-esteem, competence, moral behavior, and critical thinking skills. The processes through which children internalize behavioral and critical thinking competencies and motivation to behave morally are given special attention, as are interventions to restructure the classroom and school-wide environment in order to eliminate the competitive achievement-reward structure that is presently so destructive to children's self-esteem and educational achievement. Ways to change feelings of family environment are described. Several currently popular self-esteem enhancement strategies are critically examined in terms of whether they are helpful or harmful to the development of self-esteem. Knowledge of the nature and dynamics of self-esteem covered in Part one is necessary for the understanding and successful application of the material covered in Part two.

G

SUNDAY, 3:15

STEV 2049

Haluza, Herman

English Instructor, Ohlone College

Teaching Writing Through Plato (ID # 21)

What actually is meant by Socratic dialogue? How do we apply this to remedial English and/or freshman composition? Where do we start — maybe with Plato himself? Such questions will be grist for our thoughts as we discuss introducing the writings of Plato to beginning writing students. The focus will be mostly with the *Apology*, *Crito*, and *Phaedo*. In these texts, all the strategies for good thinking (writing) are present: argumentation, analogy, narrative, comparison/contrast, etc. Also, the vocabulary is quite limited, though thought becomes suspended. We never hesitated to introduce high school students to Plato; why should we hesitate with beginning community college students?

CONCEPT, TCH STR, CC, LANG

TUESDAY, 3:15

NICH 173

Hanford, George H.

President Emeritus, The College Board

The Reasoning Mind in Academic Preparation for College (ID # 61)

The set of College Board publications known as "The Thinking Series" deals with a problem central to educational reform: the task of teaching all students, not just a few, how to become competent thinkers. The evolution of these books, emerging as they have from the pragmatic experience of high school teachers, parallels in many ways over the last dozen years developments in the critical thinking movement, emerging as it has from the "mind fields" of philosophy and cognitive psychology. This session will explore, in a discussion mode, how these parallel lines of development have converged and how they interrelate to "teaching, testing, standards, and assessment" in the cultivation of the "reasoning mind."

TCH STR, HS, TEST

SUNDAY, 1:30

CH 20

Hanson, F. Allan

Professor of Anthropology, University of Kansas

Does Testing Create What It Purports to Measure? (ID # 27)

Tests are generally considered to be measuring devices. Certain qualities are thought to exist in human beings — intelligence, honesty, interest in various activities, tendency to use drugs, etc. — and tests are used to determine if or to what degree particular individuals possess them. This presentation will develop the argument that, to a large extent, tests do not so much *measure* pre-existing realities as *create* them. From this point of view, for example, "intelligence" is less the target of intelligence testing than its product.

Many tests are future-oriented. They are concerned to reveal what is likely to happen: whether an individual will do well in college or in a particular vocation, be an honest and drug-free employee, and so on. School admissions, job offers, and other opportunities are often extended or withheld on the basis of future-oriented tests. Thus one's potential to do something in the future, as evaluated by tests, often takes priority over what one has actually done. This presentation will explore how, in this situation, tests transform and fabricate those human qualities which they purport to measure.

TEST, U

TUESDAY, 8:45

CH 20

Hatcher, Donald

Director, Center for Critical Thinking, Baker University

Sharon Bailin

Associate Professor of Education, Simon Fraser University

Critical Thinking and Some Standards of Rationality (by Donald Hatcher) Critical Thinking, Rational Evaluation, and Strong Poetry (Sharon Bailin's Response to Hatcher) (ID # 136)

Part I: Post-modern critiques of rationality — and by implication the standards of rational evaluation used in critical thinking classes — are well known. After discussing the general strategies of these critiques, Donald Hatcher will try to defend certain traditional standards of rationality by showing that they are constitutive of all communication and inquiry. When these standards are then applied to post-modern epistemologies, we then have good reasons to reject the post-modern critiques of rationality.

Part II: This paper is a commentary on Donald Hatcher's paper, "Critical Thinking and the Conditions of Rational Evaluation." In it, Sharon Bailin attempts to test Hatcher's criticisms of post-modernism by sympathetically reconstructing the view with which Hatcher disagrees through attempting to imagine how Rorty might respond to Hatcher's claims. Bailin's discussion centers around the notion of inquiry as a practice, the relationship between practices and principles, and the necessity for rational evaluation.

C, CONCEPT

SUNDAY, 3:15

STEV 3008

Hatcher, Donald

Director, Center for Critical Thinking, Baker University

Lucy Price

Chair, English Department, Baker University

George Wiley

Chair, Department of Philosophy and Religion, Baker University

Critical Thinking and Composition: A Synthesis Without Compromise (ID # 135)

Michael Scriven has recently criticized educators' response to the mandated critical thinking requirements. Specifically, he claimed that educators have prostituted the critical thinking requirement by either "repackaging something already in stock or by inventing something new but entirely inappropriate." ("Prostitution of the Critical Thinking Requirement," *CT News*, Vol. 10, #2, Nov./Dec. 1991.) We believe that we have created an approach to teaching CT that is new but not inappropriate.

In this presentation, we will describe Baker University's critical thinking/composition program, one that focuses on 1) an understanding and appreciation of logic and critical thinking, 2) the application of critical thinking skills to written composition, and 3) the use of primary texts as a vehicle to generate critical thought and discussion. Besides a description of the program's structure and our teaching methods, the presentation will include a workshop on using critical thinking strategies to generate thesis and argument outlines for critical papers. In addition, we will explain our methods of assessment and present the data we have gathered comparing our approach to other, more traditional ways of teaching both critical thinking and written composition.

CONCEPT, TCH STR, LANG, U

MONDAY, 10:30

NICH 173

Hayes, Carol

Psychology Instructor, Delta State University

Critical Thinking in Psychology: Decision Theory and Motivation (ID # 162)

Decision Theory provides a strong model for the application of critical thinking skills in psychology courses. An integration of Decision Theory with critical thinking skills will be presented. Participants will complete a paired activity including choosing a life goal then using motivation concepts including images, goals, and plans and applying critical thinking and decision making skills to develop an implementable plan for achieving that goal. Plans will be examined Socratically by pairs, and consequences of reaching and/or not reaching specific goals and subgoals will be discussed. This successful activity reinforces the importance of critical thinking skills to our success in the real world and is suitable for introductory and upper-level psychology courses.

Handouts will include a summary of Decision Theory concepts and principles and a model handout for classroom use.

TCH STR, SOC STUD

TUESDAY, 10:30

STEV 2049

Hayes, Harold

Professor of Human Development and Learning, Walters State Community College

Recreating the Mind of the Criminally Inclined and Educationally Dysfunctional (ID # 273)

We will present an overview of a comprehensive developmental model that shows significant promise as an aid to the criminally inclined and/or educationally dysfunctional as they work to achieve effective adaptive performance. The model includes types and levels of mental operators. Examples will be presented. It is anticipated that human performance professionals from all areas might be stimulated to re-analyze and re-synthesize parts of the models they presently use. Participants may share their thoughts on this model or present alternative ideas. The outcome for all will be greater insight into human behavior.

STAFF DEV, ADV, G

MONDAY, 1:30

STEV 2052

Hayes, William

Professor of Biology, and Center for Creative and Critical Thinking, Delta State University

The Process of Science as a Way of Thinking (ID # 180)

In order to define an effective path for developing scientific attitudes and thinking skills in young people, we must understand what science is and why it is the way it is. I will integrate the work of numerous recent authors with ideas developed by Malcolm McEwen and me to serve as a guide for further design in the teaching of scientific thinking. This will include the examination of the historical and evolutionary roots of science as a thinking process and the developmental basis of scientific thinking within the sensory, perceptual, and cognitive abilities of the individual. A model which analogizes scientific knowing to a growing tree will be presented. Through the model, I will explain the construction of scientific knowledge in simple terms. From this model will be drawn a description of the "Scientific Mode" of thinking to replace the simplistic "Scientific Method" often presented in texts. A lengthy

handout suitable as a guide for instructional design and classroom assessment will be given to participants.

TCH STR, TEST, SCI

TUESDAY, 3:15

DAR 122

Haynes, Jared

Lecturer in English, University of California, Davis

Cultivating Critical Thinking in Classroom Discussions (ID # 109)

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

This presentation will begin with participants engaging in model small group discussions. It will end with an examination of the theory behind the model and suggestions for adapting it to different courses, class sizes, and topics.

TCH STR, U

MONDAY, 12:15

ART 108

Heaslip, Penny

Coordinator, Year One Nursing Program, University College of the Cariboo

Creating the Thinking Practitioner: Critical Thinking in Clinical Nursing Practice (ID # 185)

Promoting student thinking in active clinical nursing practice requires self-evaluation strategies to help students recognize the effectiveness of their thinking. Students patterns of thinking need to be illuminated and evaluated according to legal, professional, and critical thinking standards. The development of thinking in students is linked to the sophistication of each student's ability to apply the Nursing Process: a nursing science, problem solving framework, in clinical practice. The development of students' abilities to think their way independently through clinical practice situations is reflected in nurses' narrative notes as part of the legal record of each patient's stay in hospital. The purpose of this interactive presentation is to share self-evaluation techniques used to promote nursing students' abilities to use critical thinking, professional standards, and legal guidelines to evaluate their own nursing notes so that they internalize the thinking standards of the profession of nursing.

TCH STR, TEST, U

MONDAY, 1:30

DAR 137

Hickey, Gail

Assistant Professor of Education, Indiana-Purdue University

Black Sheep or Kissing Cousins? Social Studies and Critical Thinking in the Elementary Grades (ID # 34)

Social studies and critical thinking are natural partners! Elementary educators will discover many ways to develop critical thinking through social

studies instruction. Participants will consider ways to "rethink and revise" existing curriculum, and will learn to create ongoing environments to enhance children's thinking processes. In a "County Fair" format, participants will try out old-time radio tapes, mock trials, folk literature, games, and folder activities through strategies designed to promote and encourage critical thinking and reading. Handouts provided.

TCH STR, SOC STUD, ELEM
STEV 3046

SUNDAY, 3:15

Higa, William

Associate Professor of Psychology, University of Hawaii at Hilo

Teaching and Thinking About Abnormal Psychology (ID # 166)

Description of a teaching style that seeks to foster critical thinking in a course in abnormal psychology. Drawing from diverse sources, the teaching style is characterized as a student-centered, active-engaged, and instructor-disclosing approach. Drawing from Rogers' (1961) client-centered therapeutic approach, the student-centered feature focuses on the students' own ideas and beliefs within a supportive setting. Drawing from research on learning (Bjork, 1991; Staats, 1968), the active-engaged aspect emphasizes the active participation of students in the learning process. Drawing from the work on self-disclosure (Jourard, 1971) the instructor-disclosing dimension highlights the role of instructor self-disclosure in stimulating student self-disclosure of private thoughts. Examples of each feature are discussed in terms of the class activities, e.g., seminars, papers, videos, demonstrations.

TCH STR, CC, U
STEV 2052

MONDAY, 10:30

Hirsch, Judi

Resource Specialist, Oakland Public Schools and Instructor, Cal State Hayward

Judith Bank

Instructor in Language Arts and Reading, Los Medanos College

Thinking Critically About the Quin-Centennial: A Symposium and Discussion of the Arab, Jewish, Native American, and Catholic Perspectives (ID # 123)

This session will include:

- 1) narratives of the different communities and ideologies directly involved in and affected by the events of 1492: the "Reconquista", the Expulsions, and the Conquest;
- 2) a discussion of how to raise multi-cultural issues in our classrooms without trivializing or offending ourselves, our students, or the content;
- 3) how to think about beliefs in conflict; how to be fair-minded when the conflict is not "fair". How do we apply the critical thinking (linear) process to peoples' narratives, knowing that the narrative is always subjective?

CONCEPT, TCH STR, STAFF DEV

STEV 3072

SUNDAY, 3:15

Hirsch, Judi

Resource Specialist, Oakland Public Schools and Instructor, Cal State Hayward

Ann Kerwin

Senior Lecturer in Humanities; Philosopher-in-Residence, Surgery, University of Arizona

Kostas Bagakis

Lecturer in Philosophy, San Francisco State University

Using Critical Thinking for Empowerment: Combatting Powerlessness and Passivity Among Teachers (ID # 124)

This workshop will help us to find ways of empowering ourselves, our colleagues, and our students, so that all of us can look forward to being in our classrooms, rather than feeling alienated or burned-out. It will help us to see how we can become better models for our students and our co-workers, and how to set up our learning environments to encourage maximum thinking, fun, and creativity. We will discuss ways of using critical thinking to foster democracy. We will think about how to have our classrooms reflect humanistic values. We will be sharing what we do that works and figuring out how to make things better. Come if you have questions. Come if you have answers. All are welcome.

STAFF DEV, TCH STR, ADV, CREAT

MONDAY, 3:15

ART 108

Hirsch, Judi

Resource Specialist, Oakland Public Schools and Instructor, Cal State Hayward

The Dynamic Assessment of Learning Potential: Combining the Theories of Freire and Feuerstein (ID # 125)

Concepts, skills and attitudes constitute the three fundamental dimensions of reflective and critical thinking. Educational psychologists and educators have paid a lot of attention to the first two dimensions, but little to the third. In this participatory session we will explore the nature and developmental process of intellectual attitudes and the role that they play in the thinking process. We will work in the formulation of teaching strategies and techniques that can help students to develop those intellectual attitudes that are a necessity for reflective and critical thinking.

TCH STR, TEST, G

TUESDAY, 3:15

IVES 119

Hisker, William J.

Director of Westinghouse Critical Thinking Project, St. Vincent College

George Leiner

Assistant Professor of Philosophy, St. Vincent College

Render unto Caesar ... Ethics, Business, and Critical Thinking (ID # 237)

Critical thinking demands that a person always seek the underlying value assumptions for any position. Unfortunately, the curriculum of many college and university business programs takes one of two basic approaches. Some programs ignore all value questions that cannot easily be relegated to direct monetary concerns, while others examine the moral dimensions of business but relegate

any serious discussion to a designated course in business ethics. These practices lead students to believe that moral and ethical behavior and business practice are parts of two distinct worlds.

This session will present a preliminary model developed at Saint Vincent College for the fusion of ethics and critical thinking at the individual course level. Information will be given on how the model is applied in specific business and non-business courses. The St. Vincent model uses four macro models of thinking (Aristotelian, Kantian, Judeo-Christian, and Utilitarian) as reference points for students. However, the model can be adapted to include other major philosophic traditions including nonwestern world views. The model was developed as part of a six-year project funded by the Westinghouse Foundation and is integrated with the critical thinking and writing programs of the college. In addition to reviewing the St. Vincent model, participants are encouraged to bring ideas and materials they are developing or have implemented for sharing with other seminar participants.

G, CC/U, TCH STR
STEV 2050

MONDAY, 8:45

Hogan, Kass

Educational Research and Developmental Specialist, Institution of Ecosystem Studies

Habits of Mind in a Classroom "Collaboratory" (ID # 195)

This session will begin with an overview of "Eco-Inquiry", an upper elementary/middle level science curriculum designed in part to foster development and transfer of the dispositions that guide and support inquiry. The curriculum's techniques and activities will be described and demonstrated to show how: standards and expectations, as well as perspectives on the usefulness of inquiry dispositions, are communicated to students and teachers; role modeling is accomplished; situations calling for use of the dispositions are constructed; tools for student reflection and self-evaluation are incorporated; and transfer of habits of mind from science class to everyday life is encouraged. A habit of mind framework and other embedded tools also will be presented.

The interaction of curricula that foster habits of mind with other elements within the larger context of school culture, as well as with 10-12-year-olds' stages of social and intellectual development, will be addressed. The session will conclude with small group tasks to promote discussion and contemplation of the issues raised.

TCH STR, TEST, SCI, ELEM, MID
DAR 122

TUESDAY, 10:30

Holder, Winthrop

Teacher, Sarah J. Hale High School

Dialogue and Discovery in the Polyglot Classroom (ID # 193)

Transforming American education and rising to the challenge and promise of multi-cultural education require not only distancing from didactic instruction and restrictive end-of-chapter evaluative exercises but also an exploration of the polyglot cognitive styles in the classroom and devising creative avenues for engaging parents. This interactive workshop models how questioning, aimed at stimulating inquiry and self-examination, empowers students to think about their thinking (metacognition) thereby creating a condition for a safe, enlivened classroom which humanizes the instruction while fostering a critical disposition. The session demonstrates ways of transforming the classroom into

a community of inquiry wherein robust dialogue — both oral and written — serves as a base for moral reasoning and movement away from partial truths toward self-discovery. By analyzing a variety of assignments which integrate contemporary issues with course content and provocative text in a student journal (Crossing Swords), participants reflect on their own practice and explore possibilities to facilitate diversity while eschewing conformity and dogmatism within the classroom.

TCH STR, SOC STUD, HS
STEV 3076

SUNDAY, 10:30

Iaquinta, Alice

Social Science / Communications Instructor, Funded by Moraine Park Federation of Teachers (AFT) Moraine Park Technical College

The 4 C's of the 90's (Part I): Critical and Creative Thinking, Chemical and Co-Dependency (ID # 77)

Participants will explore dysfunctional thinking patterns resulting from chemical dependency, being an adult child of an alcoholic, or being co-dependent, (which doesn't have to be alcohol related). We will discover connections to critical and creative thinking (CCT) dispositions that impact students, and many of us teachers as well, and that block our transfer of CCT concepts, and skills to our personal relationships and the work-place. *Applied CCT* focuses on doing and being a critical and creative thinker, not just knowing the theory for academic uses. But too frequently students learn the theory of what to do to become C&C thinkers but can't seem to be C&C thinkers outside of the classroom. Teaching CCT effectively requires our admission that the *whole* student is learning and that the whole teacher is teaching. If you believe learning ought to empower people to do something with it, join us for this experiential workshop which may provide insights regarding your own and your students' difficulties in living lives as creative and critical thinkers.

CONCEPT, STAFF DEV, G
STEV 2049

MONDAY, 1:30

Iaquinta, Alice

Social Science / Communications Instructor, Funded by Moraine Park Federation of Teachers (AFT) Moraine Park Technical College

The 4 C's of The 90's (Part II): Unpacking Dysfunctional Thinking Paradigms (ID # 78)

I believe any activity or pursuit which challenges professional educators to re-examine their own histories, practices and philosophies of learning results in more effectiveness with learners. Therefore, by examining the underlying resulting hypothesis from dysfunctional thinking paradigms, we teachers can also examine our own classroom and life performances, with the goal of developing the dispositions to actually do creative and critical thinking.

We will explore the roots of dysfunctional thinking paradigms which neutralize efforts to live life as a critical, and creative (CC) thinker. If CCT dispositions are to be developed and used by both teachers and students, then analyzing and relinquishing dysfunctional paradigms is essential.

CONCEPT, STAFF DEV, G, PRE-REQUISITE: ATTENDANCE AT PART 1

MONDAY, 3:15

STEV 2049

Iaquinta, Alice

Social Science / Communications Instructor, Funded by Moraine Park Federation of Teachers (AFT) Moraine Park Technical College

Self-Esteem and Critical and Creative Thinking (ID # 79)

When we use critical and creative thinking (CCT) behaviors and attitudes we encourage others to think critically and creatively. Additionally, these same behaviors and attitudes enhance both others' and our own self-esteem. We can apply these behaviors and attitudes in every area of our lives: at work (in the office, classroom, shop, or meeting table), at home (with partners, children, or extended family), in social relationships (community organizations, professional activities, even friendships). But do we? In this workshop we will use self-assessment to measure our successfulness in promoting C&C thinking and in enhancing self-esteem in ourselves and others. This will be an active learning workshop with involvement and group process, not a paper presentation. As a teacher of CCT, I find it continually necessary to review my own actions to see if I'm practicing what I preach. What about you? Are you just a C&C thinker or a CCT doer as well? Join us to find out.

CONCEPT, TCH STR, STAFF DEV
STEV 2049

TUESDAY, 8:45

Imbimbo, Jackie

Kindergarten Teacher, Rincon Valley School District

How to Create Thematic Integrated Units With a Critical Thinking Foundation (for K-2 Teachers) (ID # 50)

This session will be a participatory workshop that will give teachers tools for creating thematic, integrated units in a critical thinking framework. We will consider developmental needs and cognitive and critical thinking strategies as we develop an age-appropriate unit. The process will take the participants through each step, including:

- How to choose a topic:
 - What are the essential characteristics of the topic?
 - What are the underlying thinking strategies needed to understand the topic?
- How to design questions and activities that relate to all subject areas at a primary level including emergent literacy and cooperative learning.

K-2, TCH STR
IVES 119

WEDNESDAY, 8:45

Jenkins, Pam T.

Teacher and Reading Curriculum Chairperson, Fayette Middle School

Vocabulary — Fun if You Think About It! (ID # 205)

Many teachers are looking for ways to overcome the vocabulary "doldrums". Students are bored and only commit the words to short-term memory for a test. This session will present strategies for encouraging students to enjoy studying vocabulary while at the same time improving critical thinking skills. Focusing on language arts, the presentation will give practical suggestions for getting students to think about words and their meanings and have fun while

they are doing it. Handouts, discussion, and participatory activities will demonstrate using these activities with weekly vocabulary studies as well as with novels and short stories.

TCH STR, LANG, MID
NICH 166

SUNDAY, 10:30

Johnson, C. Lincoln

Associate Professor of Sociology and Director of Social Science Training and Research Laboratory, University of Notre Dame

Social Psychological Principles Underlying Critical Thinking in the Classroom and in Everyday Life (ID # 227)

This workshop will draw upon a number of well-established social psychological principles which affect an individual's perception and judgements, and consequently his or her ability to think critically. Major attention will be given to the attribution process, which is the term given to the way in which people perceive and judge others. All people are subject to attribution biases, which can affect critical thinking as it occurs in the classroom and in everyday life. Awareness of these biases is one means of enhancing critical thinking.

Participants will participate in a number of mini-exercises which will illustrate these social psychological principles.

TCH STR, CONCEPT
STEV 2049

SUNDAY, 10:30

Johnson, Ralph H.

Professor of Philosophy, University of Windsor

William Dorman

Professor of Journalism, California State University, Sacramento

Handling News Media: Johnson's and Dorman's Bag of Tricks (ID # 52)

It is clear that one important focal point for the critical thinker is the news media. Our students badly need to be sensitized to the inherent limits and dangers (as well as the strengths) of how the news media present news. In this workshop, Professors Johnson and Dorman, each of whom has spent decades teaching students to be more critical in their consumption of news, will open and share his "bag of tricks" — ways of accomplishing this important objective.

TCH STR, MEDIA, U
CH 68

SUNDAY, 1:30

Johnson, Ralph H.

Professor of Philosophy, University of Windsor

Informal Logic in the Classroom (ID # 53)

In this workshop, I will discuss how to promote the standards of critical thinking by using informal logic. I will explain what I take informal logic to be, how it relates to argumentation and critical thinking. I will also present the standards which govern good argumentation and examples to which they may be applied. We will also discuss how to teach this material effectively.

CONCEPT, CC, U
STEV 3008

MONDAY, 8:45

Johnson, Ralph H.

Professor of Philosophy, University of Windsor

The Need for Discrimination in Argument Analysis (ID # 54)

In this paper, I will argue that the Principle of Discrimination is the fundamental principle of argument criticism. After stating the principle and briefly describing its history, I will then turn to the task of clarifying it. After that I will develop a line of justification for the principle. Finally, I will indicate why fallacy theory is the normative theory best suited to the demands of this principle.

CONCEPT, ADV

TUESDAY, 10:30

STEV 3008

Jones, Sandra A.

Dean, School of Nursing, University of Indianapolis

Lynda N. Brown

Coordinator of Nursing Programs, University of Kentucky

Nursing Process and Critical Thinking in Nursing Education: Convergence and Divergence (ID # 42)

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

CONCEPT, TCH STR, TEST, U

SUNDAY, 10:30

DAR 137

Karenga, Maulana

Professor and Chair of Black Studies, California State University, Long Beach

Contestation, Critical Thinking, and Multi-Culturalism: An Afro-Centric Contribution (ID # 272)

This paper seeks to delineate and critically discuss contestation as an important multi-cultural contribution to critical thinking. It uses Africana Studies as a fundamental point of departure, but assumes a certain similarity of approach with other ethnic studies as well as with gender studies. Contestation as a category of intellectual exchange is posed in Africana Studies as a fundamental mode of understanding self, society, and the world. In this process a respect for critique evolves out of the very origin and *raison d'être* of Africana Studies with its stress on critique of the established order of things, the rescue and reconstruction of African history and culture, and the essentiality of critique being joined with corrective with an eye and initiative toward creating a just and good society.

As a means of encouraging and sustaining such a critique, Africana Studies is committed to creating a space and process for students to recover, discover, and speak the truth and meaning of their own experience, to locate themselves in social and human history, and having oriented themselves, bring their own unique contribution to multi-cultural exchange in the academy and society through critique and corrective, challenge and proposition. Ideally what results from this exchange is critical contestation over issues of both intellect

and life, a multi-cultural cooperative production of knowledge rather than its Euro-centric allocation and critical concern about the possibilities and proposals for a just and good society.

At the heart of the critical process of contestation is the compelling need to create both a different language and logic than that of the established order. As an emancipatory project, the language and logic are of necessity oppositional, i.e., different and in contestation. This logic, as a systematic and critical mode of understanding reality, is marked by five fundamental points of contestation which in turn are foci of creative tension in both the academy and society, in issues of intellect and social life. They are: a) the particular and the universal; b) the comparative and the singular; c) the present and the absent; d) the real and the illusionary, and e) diversity and unity. This paper will, then, discuss these fundamental points of contestation and the modes of analysis and critical categories they employ which contribute to both an enriched multi-cultural exchange and a valuable and varied conception of critique.

SOC STUD, TCH STR

TUESDAY, 8:45

STEV 3076

Kern, Roberta

President, Kern & Associates

Self-Assessment: The Role Emotions Play in Monitoring Success (ID # 137)

This video presentation shows five scenarios of students who are trying to become self-directed learners without the use of predetermined thinking strategies. By observing their emotional ups and downs while reasoning, it can be seen that they are relying on their emotions to monitor their chances of success — instead of the quality of their decisions. The video introduces a simple graphing technique to use with individuals who are not monitoring, assessing and regulating their reasoning process. Based in part on the Paired-Problem Solving format of Jack Lochhead and Arthur Whimbey, this work has been applied in classes and tutoring facilities with college-age students, though the information offered can be practically applied to school-aged students as well. Discussion and demonstration to follow.

TEST, CONCEPT, C/U

MONDAY, 10:30

CH 20

Kerwin, Ann

Senior Lecturer in Humanities, Philosopher-in-Residence, Surgery, University of Arizona

Marlys Witte

Professor of Surgery, Director, Curriculum on Medical Ignorance; Director, Medical Student Research Program, University of Arizona College of Medicine

Charles L. Witte

Professor of Surgery, University of Arizona College of Medicine

The Gift of Fantasy: Uses of Ignorance (ID # 115)

Albert Einstein once reflected: "When I examined myself, and my method of thought, I came to the conclusion that the gift of fantasy has meant more to me than my talent for absorbing positive knowledge." It cannot be denied that, for physicians and others, positive knowledge is essential. And yet, we can so quickly drown our gift for fantasy in a tide of necessary tasks and "core knowledge." This gift, so important to Einstein, so central to the human spirit,

and so often ignored, can and should be cultivated, at all levels of education, in traditional and non-traditional formats. In this participatory session, Drs. Ann Kerwin and Marlys and Charles Witte of the innovative Curriculum on Medical Ignorance at the University of Arizona, share their experiences in medical education — where knowledge is crucial, but where refined abilities to think beyond the status quo are just as essential. They will focus on ways and means to assist teachers and students identify and utilize “known unknowns” and “unknown unknowns” in critical/creative explorations of any field.

TCH STR, CREAT, SCI, G

WEDNESDAY, 8:45

CH 68

Kim, John C. S.

Professor of Philosophy, Rio Hondo College

Barbara Hitchko

Director of C.A.R.E.

Sound Family — Sound Education — Sane Society (ID # 19)

- 1) It is a commonly known fact that education in the U.S. has been failing for many years. The causes of this failure can be reduced to two main categories: a) the break-down of the unit of our society which is the family, and b) man's neglect of cultivating character. Using available statistics, I will elaborate in detail how critical the issue is and will attempt to offer some definite multi-cultural solutions.
- 2) The current comparative statistics on education show, time after time, that the Asian students surpass the U.S. students in achievement. I will introduce the main reasons for their success which are: a) sound family unit based on moral foundation, b) each family insuring children's readiness for education before sending them to school, etc.
- 3) I will suggest for possible adaption of their educational system into our own. (Our educational success is key to our current economic competition with some Asian nations and to insure a sane society.)

CREAT, HS, U

STEV 3076

TUESDAY, 12:15

Kim, John C. S.

Professor of Philosophy, Rio Hondo College

Multi-Cultural Solution in Philosophy Teaching (ID # 20)

Our freeways and highways are covered with automobiles made in Asian nations. We are supplied with computers made in Asian nations. Our students enjoy Chinese food, Japanese sushi, or Korean barbecue. Would you blame them for their good taste? Today inter-racial marriage is a common practice, especially on university and college campuses. While these cultural syntheses take place in our actual daily life outside of the classroom, educational systems everywhere are behind the times.

In an introductory course in philosophy, for example, where the leading role of cultural infusion is expected to take place, Eastern thoughts are carelessly ignored or simply overlooked as being inferior or unimportant. Thus this stagnation persists. The only time that our students receive systematic exposure to other cultures is when they advance to graduate studies, and only few students

choose to do so. While enjoying different diets to nourish the body, to be impoverished in the thoughts of other cultures, especially regarding philosophy, is totally unthinkable. Intellectual amalgamation is long over-due.

I am proposing that all introduction to philosophy courses be taught from this multi-cultural point of view, the concept of which I would like to share with fellow philosophy teacher's everywhere.

CC, U

WEDNESDAY, 10:30

STEV 3076

Kim, Yung Che

Professor of Psychology, Keimyung University

Diagnosis and Development of Thinking Styles (ID # 94)

The study developed a questionnaire to assess an individual's dominant as well as less preferred thinking styles, and made a training program to develop the thinking styles. The questionnaire measured the two distinctive stages of thinking process such as the perceptual and processing stage. Part one, labeled as “Perceptual thinking style” included five characteristic styles such as the white, the red, the black, the yellow, and the green. Part two, labeled as “Processing thinking style”, had four characteristic styles such as the idealist, the analyst, the pragmatist, and the realist. The program had three parts such as administration of the questionnaire, identification of the thinking styles, and introduction of de Bono's “Six thinking hat” method. The program was found very effective.

TEST, CREAT, C/U

SUNDAY, 1:30

STEV 2052

Kirby, Jack

Elementary School Principal, Founder of Art Literacy Program, Beaverton Schools

Anne Jensch

Coordinator of Staff Development, Washington County Educational Service District

Art Literacy for Children: An Art Appreciation Program Which Engages Students in Critical Thinking (ID # 298)

How does an artist think? Art Literacy is a model for helping students become more analytical, reflective, and creative in their thinking. The arts represent a rich curriculum content area and context for thinking and learning.

Participants will explore ways in which artists have used critical thinking standards to produce great and enduring works of art. These standards, procedures, and processes can be understood and emulated by students.

The Art Literacy Program was developed by an elementary school principal and a cadre of teachers and parents. Participants will learn of its ten-year history in a large and diverse suburban school district, and how it can translate to any school setting.

ELEM, CREAT

TUESDAY, 3:15

STEV 3046

Kirschenbaum, Jack*Professor of Psychology, Fullerton College***Fred Peters***Professor of Psychology, Fullerton College***Always Leave them Striving: Peer Coaching to Infuse Critical Thinking into Teaching (ID # 247)**

Public accountability and the education code in many states mandate that schools implement some form of Peer Evaluation. Research in staff development suggests that Peer Coaching can help teachers to "Cultivate the Reasoning Mind" by infusing critical thinking goals and practices into their lessons. This participatory workshop will show how Peer Coaching with the use of the authors' Critical Index Model can be used to enrich critical thinking teaching and staff development. A 15-minute critical thinking lesson will be taught with the audience acting as students. The audience will shift to the role of Peer Evaluator and work in cooperative groups to plan and conduct a peer evaluation of the teacher. The audience will then observe a model Peer Coaching session of the teacher. In cooperative groups, the audience will compare the model session with their evaluation plan and critically evaluate the implications of Peer Coaching and Peer Evaluation for staff development and critical thinking instruction. In both teaching and staff development, the goal is not to entertain or leave them "complacent", but to motivate, to always leave them "striving" to infuse more critical thinking into lessons that can Cultivate the Reasoning Mind.

STAFF DEV, TCH STR

MONDAY, 3:15

IVES 34

Klein, Donald R.*Professor of Philosophy, Gavilan Community College***Critical Thinking and the Committee Process (ID # 177)**

All of us spend much time working in committees. What is the level of productivity and satisfaction? This workshop will allow participants to look at the basic committee process, the infusion of critical thinking principles, some specific reasons for dysfunction, and some specific strategies for success. The workshop will include some formal presentation, questions and answers, and considerable audience participation and "practice" using the information.

STAFF DEV, G, TCH STR

MONDAY, 8:45

IVES 24

Klinger, Toby*Instructor in Psychology, Greenville Technical College***Michael Connett***Manager in Distance Learning, Greenville Technical College***When Minds Must Meet: How Critical Thinking is Developed in Distance Learning Instruction (ID # 239)**

At a time when critical thinking has gained acceptance as a fundamental base from which instruction occurs, educators are facing the double edged sword of the use of educational technology. Carefully designed courses which seek to infuse critical thinking skills must now make the transition to the electronic medium. As the field of distance learning continues its growth in constructing the

classrooms of the future, so must the process of teaching these distant learners critical thinking skills. The purpose of this session is to frame the question of how these skills can be taught to this newly identified group of learners.

Correspondingly, materials developed for a tele-learning course, can be used to enhance the development of critical thinking skills in a traditional class. The identification of who tele-learning students are, what special needs in critical thinking they might have as tele-learning students, and what obstacles may exist in this newly created learning environment, will be discussed. Suggestions for the successful implementation of critical thinking skills in a psychology tele-course and tele-class will be the focus of the session.

TCH STR

TUESDAY, 3:15

DAR 139

Knight, Carol Lynn H.*Professor of History, Tidewater Community College***Teaching Critical Thinking in the Social Sciences: What to Teach and How to Teach it (ID # 10)**

From 1989 to 1991 the Chancellor's Commonwealth Professor Program of the Virginia Community College System and Tidewater Community College funded a project to produce an instructional manual in critical thinking. *Teaching Critical Thinking in the Social Sciences: An Introduction to Techniques and Resources*, which I edited, is designed to be a reference tool for social science faculty, and others, who wish to incorporate the teaching of thinking into their disciplines. This interactive workshop would allow participants to experience a selection of the techniques and activities recommended in the manual using handouts drawn from it.

TCH STR, SOC STUD, C/U

TUESDAY, 3:15

IVES 35

Kuchuris, Chris*Research Assistant, Institute for Ethics and Policy Studies, University of Nevada, Las Vegas***The Role of Critical Thinking in Career Choices (ID # 252)**

What has the adage "If you want to succeed, get an education" come to mean for today's youth? Who are the role models for and what are the expectations of those beginning their careers? What are the assumptions and foundations with which many of today's youth base their conception of the work place on? Unfortunately, what routinely faces those entering the work force is the bitter disappointment of being inadequately prepared to cope with the complexities and politics of making informed career choices. The result is that many young people frame their conception of success based not on their intelligence, but rather on their ability to be clever: to work the system and scheme their way to success. By using a case study, during this workshop, I would like to examine the role critical thinking could play in debunking the assumptions that many young people have developed about the work place.

TCH STR, HS, CC

TUESDAY, 8:45

IVES 45

La Bar, Carol

Fellow, Association for Values Education and Research, University of British Columbia

Reasoning About Moral Concepts (ID # 144)

Reasoning about a social issue requires us to pay attention to moral concepts, as well as to the facts of the issue in question. In teaching students how to reason responsibly about such issues, we need to make clear that certain features of moral concepts distinguish them from other sorts of concepts. In this workshop participants will use strategies to help students understand the nature of moral concepts and how they operate in our reasoning.

TCH STR, HS

ART 108

TUESDAY, 10:30

Lawson, Millie

Assistant Professor of English, Critical Thinking, and Women's Studies, King's College

Teaching Critical Thinking Through Gender Issues (ID # 92)

This participatory workshop will begin with presentation of my experience using essays on gender written by both women and men as the reading content of a required first-year class in critical thinking. Through identifying cultural assumptions, conflicting values, and gender complexity, students move through exclusionary thinking (i.e. hierarchal, dichotomous, difference) into inclusionary (i.e. complementary, seeking new definitions) ways of viewing the world. Participants will do some brief writing exercises within the workshop. Sharing thoughts on how we, as teachers, can help our female and male students (and, perhaps, those outside our classrooms) move out of polarization on gender issue is the motivation behind this workshop.

TCH STR, CREAT, LANG, HS, C/U

STEV 3036

MONDAY, 12:15

Leshowitz, Barry

Associate Professor of Psychology, Arizona State University

Developing Critical Thinking Skills and Dispositions Through Instruction in Scientific Reasoning (ID # 90)

The goal of this workshop is to demonstrate how instruction in the practical use of the scientific method may be used to facilitate critical thinking in students with little or no background or interest in science. This instructional approach relies on Socratic dialogues to encourage exploration into the ways in which the rules of science may be applied to reasoning about everyday-life events. These rules emphasize that the students pose questions in terms of relationships between variables, test hypotheses, analyze and synthesize data, justify conclusions, and make bottom-line decisions. We will illustrate through participatory exercises how students can use scientific reasoning for detecting questionable schemes and bogus information and can inoculate themselves against the influence of false arguments proffered by "unscrupulous" salesmen, politicians, attorneys, acquaintances, and even their own bias.

TCH STR, SCI, U

DAR 122

MONDAY, 10:30

Litecky, Larry

Humanities Professor, Minneapolis Community College

Active Teaching and Learning Strategies: How to Develop Critical Thinkers (ID # 91)

Students need to be active learners if they are to think critically. To achieve this, faculty need to design courses and classroom activities which enable critical thinking. Students exhibit their thinking primarily through writing and speaking. One way faculty can develop critical thinking is to limit faculty lecture time and substitute writing and speaking activities.

Faculty development can move faculty beyond theory and provide them with a pragmatic approach to structuring activities for students. Faculty can draw a great deal on "writing across the curriculum" and on "collaborative learning" to focus on improving student thinking. Specific critical thinking activities for students can embody the general process and characteristics of critical thinking, specific critical thinking mechanisms within the disciplines, sequential writing assignments, and reflective self-assessment. The presentation will involve participant activities and concrete examples of infusing critical thinking into courses.

TCH STR, STAFF DEV, C/U

IVES 45

SUNDAY, 1:30

Lofthouse, Lynn J.

Assistant Professor of Speech Communication, Wesley College

Cultivating the Reasoning Mind Through Speech Preparation and Delivery (ID # 81)

Experts agree that six major cognitive skills are essential to critical thinking: interpretation, analysis, evaluation, inference, explanation, and self-regulation. Consensus is that these CT skills must be developed in ways that insure their extended use outside the instructional setting and across subject areas. The question is "how to" develop these cognitive skills in students. This paper seeks to show how and why preparing and delivering speeches is a useful means for achieving this goal.

TCH STR, C/U

STEV 3030

SUNDAY, 10:30

López, Luz E.

Associate Professor, Cayey University College — University of Puerto Rico

Adolpho Sánchez

Associate Professor, University of Puerto Rico, Cayey University College

A Model for Integrating Thinking Skills in the Curriculum (ID # 302) Un Modelo para Integrar Habilidades de Pensamiento en la Curricula (ID # 155)

The model is designed for curriculum integration. It provides for in-depth concept treatment, infusion of thinking skills, and identification of core content to avoid unnecessary repetition. The spiral curriculum, competency-based education, and concept-based instruction are the theoretical foundations of the

model. It can be used in any program. The implementation of the model at Cayey University College Teacher's Preparation Program will be presented as an example of the possibilities of the model in a university setting.

C, U, STAFF DEV
STEV 3082

MONDAY, 3:15

This session will be repeated in Spanish
Tuesday at 8:45am in Carson Hall 14

Loring, Ruth M.

Educational Consultant, The North Texas Center for Teaching Thinking

Models for Change: Toward the Thoughtful Classroom (ID # 128)

This workshop session will include guidelines for redesigning professional development activities to more effectively approach the kind of classroom where critical thinking is instructionally supported and practically demonstrated. Proposals for school-wide and district-wide change will be suggested and strategies for implementing these changes will be detailed. The presentation includes specific examples of lessons designed by teachers to infuse critical thinking within content instruction. In addition, descriptions of environments which reflect the change to a more thoughtful classroom and comments from teachers and administrators regarding these changes will be presented. Insights gained from redesigning professional development to "cultivate the reasoning mind" will be considered and discussion from the participants will be encouraged.

TCH STR, STAFF DEV
ART 108

TUESDAY, 8:45

Luckey, Sue Y.

Professor of Information Sciences, Morehead State University

Active Learning Strategies that Enhance Critical Thinking (ID # 156)

To enhance critical thinking skills, college students must be actively involved in the learning process rather than passive recipients of the lecture material. They must talk and write about what they are learning while relating it to past experiences and applying it to daily life. This dynamic participation in the learning process is called "active learning." Although college teachers generally see themselves as good lecturers, lecturing does not guarantee learning. Therefore, nineteen ways to alter the traditional lecture will be presented. These active learning strategies are designed to enhance student thinking and learning. Risks involved and barriers which prevent faculty from using an active learning approach will be discussed.

TCH STR, G, U
ART 108

TUESDAY, 1:30

Luckey, Jr., George M.

Professor of Philosophy and Director of Academic Honors Program, Morehead State University

Problem Solving for the 21st Century (ID # 107)

Honors students from several Kentucky universities participated in a weekend workshop in the fall of 1991. Students were introduced to critical thinking values, attitudes, and skills and to a simple problem-solving strategy. They were asked to generate questions, activities, and assignments related to critical thinking for adaptation by Kentucky public school teachers who are required to teach thinking and problem solving, K-12. This presentation describes the "Problem Solving for the 21st Century" workshop. Session participants will be invited to make suggestions for a more advanced workshop proposed for the fall conference of the National Collegiate Honors Council.

U, K-12 STAFF DEV

MONDAY, 8:45

ART 108

Luckey, Jr., George M.

Professor of Philosophy and Director of Academic Honors Program, Morehead State University

Teaching for Thinking (ID # 106)

In 1990, the Kentucky General Assembly passed a comprehensive education reform act. The legislation mandated ungraded primary schools (K-3), site-based management, performance-based assessment, and a K-12 curriculum which emphasizes thinking and problem solving. Since many public school teachers in Kentucky have little knowledge of the critical thinking movement in American education, an introductory workshop has been developed for them. This presentation describes the seven-hour "Teaching for Thinking" workshops offered to 400 teachers since November, 1991. Session participants will be invited to make suggestions for improving the Kentucky workshop model.

STAFF DEV, K-12

WEDNESDAY, 10:30

SU 100

Lynch, Cindy

FIPSE Project Coordinator, University of Denver

Encouraging and Assessing Reflective Thinking Within Curricular Contexts (ID # 229)

With the support of a 3-year grant from the Fund for the Improvement of Post-Secondary Education (FIPSE), educators and researchers from three universities are working together to develop conceptually-grounded and well-validated instruments to assess students' thinking about complex problems. They are also working with faculty as they redesign coursework to more adequately encourage reflective thinking. The project is based on the seven sequential stages of the Reflective Judgement model developed by Patricia King and Karen Kitchner. Their work has suggested that the ability to solve ill-structured problems is strongly related to the development of increasingly complex assumptions about knowledge and how it is gained. This workshop will inform participants about the project and engage participants in activities that demonstrate some of the teaching principles employed in the project's faculty consultation.

TCH STR, TEST, STAFF DEV, U

WEDNESDAY, 10:30

CH 20

Maddox, Janet M.

5th Grade Classroom Teacher, Booth Middle School

Phyllis F. Sanders

5th Grade Classroom Teacher, R. E. Lee Junior High School

Middle School Math: Motivational Materials and Modeling (ID # 213)

Helping students overcome math anxiety is a common problem among today's middle school teachers. Participants in this session will focus on remodeled lesson plans using cooperative learning activities, graphic organizers, calculator activities, and writing math journals. Our presentation is based on the idea that through connecting thinking skills and problem solving strategies in a cooperative setting, the middle school math student's self-worth will be enhanced. Thinking skills activities will be modeled by the facilitators, and handouts will be available to participants.

MATH, MID, TCH STR

DAR 122

MONDAY, 8:45

Mahaffey, Patrick

Counselor, UC Santa Barbara; Instructor, Ventura College, University of California, Santa Barbara and Ventura College

Three Forms of Worldview Analysis (ID # 187)

This presentation will explore three different ways to analyze worldviews. The presuppositions and methodological implications of each model will also be discussed. One of the models is based on the work of Ninian Smart and is exemplified in his book entitled *Worldviews* (Charles Scribners Sons, 1983). This model is particularly useful for analyzing the world views of traditional religions and their secular analogues such as Marxism and secular humanism. The second model is the anthropological framework articulated by Michael Kearney in his book *Worldview* (Chandler & Sharp, 1984). It is particularly useful for analyzing tribal worldviews such as Native American cultures. The third model is based upon David Dilworth's *Philosophy in World Perspective* (Yale University Press, 1989) and is particularly useful for comparative studies. The form of the presentation will be a paper but will include audience interaction. Each model will be illustrated with case examples. The content of the presentation will be especially useful for history of philosophy and comparative religion courses at the community college or university level.

C/U, SOC STUD

STEV 3008

TUESDAY, 8:45

Manterola, Marta

Professor of Educational Psychology, Pontificia Universidad Católica de Chile

Josefina Beas

Professor of Educational Psychology, Universidad Católica de Chile

The Teaching of Thinking in Teacher Education (ID # 82)

Being responsible for teacher education programs, this group is approaching the explicit teaching of thinking at two different levels: 1) Introducing a specific program in teacher's training curriculum, and 2) Designing and applying staff development programs for the teaching of thinking.

In relation to our first concern, this presentation intends to share some of the changes experienced by university students during exposure to the teaching of thinking, infused in a psychology of learning course at the School of Education (1991). As far as the second approach is concerned, we'll share some of the advances of a research project, sponsored by the Chilean government, whose main goal is to create a model and test a strategy to train in-service teachers in the infusion of thinking into regular subject area, using action research to approach the problem (1992). There will be an oral presentation, using examples and graphs to explain the experience, followed by a workshop and discussion of future projection of research.

STAFF DEV, U

SUNDAY, 12:15

CH 30

Marek, William K.

Staff Psychologist, FCI Pleasanton

The Nature of Reason, Thought, and Emotion (ID # 51)

The relationship between thought and emotion has long been known. In the 1st century AD Epictetus said, "Men are disturbed not by things, but by the views which they take of them." This paper will demonstrate that, except for a few circumscribed exceptions, all emotion is a product of thought. Emotion (as does reasoned discourse and disputation) then becomes knowable and modifiable. The implications for psychotherapy and conflict resolution are enormous.

CONCEPT, CREAT, G

WEDNESDAY, 8:45

STEV 2052

Marshall, James P.

Associate Professor of Sociology, University of Northern Colorado

Teaching Critical Thinking Through Critical Pedagogy (ID # 116)

This session offers practical methods for developing critical thinking skills within the context of Critical Pedagogy. Five years of classroom research on applying Critical Pedagogy has resulted in a number of findings that may be useful for teachers. A theoretical framework and model, informed by the works of Freire, Giroux, Shor, McLaren, and others implementing Critical Pedagogy is presented along with specific teaching strategies. In addition, multiple forms of evaluation will be discussed. Constraints over the application of Critical Pedagogy and possibilities for transformation will be presented. The format is dialogical.

TCH STR, G, U

TUESDAY, 10:30

CH 30

Martine, Frances

Director of Evaluation, California Future Problem Solving Program

"I Cannot Get it Done and Cover the Curriculum!" — Future Problem Solving at its Best (ID # 132)

The Future Problem Solving Program, based on the work of Alex Osborn and Sidney Parnes, was developed in 1974 by E. Paul Torrance and still stands as an exemplary way to bring students to creative and critical levels of learning. Practice scenarios are given to teams of four students who must then research the topic, brainstorm probable inherent problems, identify an underlying problem,

create alternative solutions, develop criteria for evaluation, and identify the best solution to the underlying problem. As the program has grown here in California, coaches have asked for a way to tie the scenarios more tightly to the curriculum for which they are responsible. This workshop will teach the process itself and share fourteen years of scenarios which contain issues applicable across the curriculum. It will also address the critical thinking skills necessary for the creation of scenarios appropriate to individual curriculum needs.

TCH STR, CREAT, HS

SUNDAY, 12:15

IVES 78

Matthies, Dennis

Lecturer, Resident Fellow, Stanford University

Computers, Question-Driven Learning, and Working with a Two-Track Mind (ID # 282)

In the past, the mark of a good tool was that it remained invisible. As soon as it squeaked, stuck, stalled, or in some other way drew our attention, either we fixed it or we tossed it out. Now — with the word processor, the spread sheet, the CD-ROM encyclopedia, and the electronic doorway into global networks — the tool constantly divides our mind, calling us to learn more. The “tool” has become a toolbox, and the toolbox is growing much faster than most of us can learn, so now learning is “always” and not just a two-month “training period”. Competition is heating up. The infusion of technology is accelerating. Who floats to the top? More important, who finds satisfaction in their work (that is, their learning)? Those who enjoy question-driven learning and who have learned to work with a two-track mind. This hands-on workshop is for Macintosh users. Participation will be limited 15 people.

STAFF DEV, G

SUNDAY, 1:30

STEV 1040

May, John Dickinson

Words as Pictorial Cues: Images and Inferences Evoked by Reportorial Prose (ID # 233)

Pictures put thoughts into our head and, conversely, words evoke mental images. In news stories, as well as in fiction, various narrative devices “place” readers and listeners in various observational vantage points: above the action, below it, among ground-level observers, in limbo, or among the players. Also shaped are images of external features of events and actors, images which in turn shape impressions of determinants and merits. To be sophisticated processors of news media messages we must be sensitive to visual and interpretive nudges that are imparted by recurring patterns of reportorial prose. Awareness comes from studying cases. Pedagogic possibilities will be explored in a participatory workshop.

TCH STR, MEDIA, HS, C/U

TUESDAY, 8:45

STEV 3049

Mayfield, Marlys

Author

Clear Listening for Clear Thinking: Teaching What We Take for Granted (ID # 48)

This is a workshop for those who want to enjoy teaching critical thinking live as it happens in the classroom. The focus will be on modeling listening skills, choosing from a variety of different styles for different teaching purposes. Role-playing and videotapes will illustrate how listening skills interface with critical thinking to teach the following:

- the difference between receptive and critical listening
- how a “safe” listener enables others to feel and think more clearly
- how reflection of feelings frees the capacity to reason
- how to restrain reactions and hear attentively
- non-listening habits which block the free flow of thinking exchange
- listening persistence in questioning, obtaining facts, and clarification
- listening for assumptions, contradictions, slant, missing information, and
- missing evidence.

G, TCH STR

MONDAY, 3:15

STEV 1002

McEwen, Malcolm

Assistant Professor of Science Education, Delta State University

Relationships Among Higher Order Thinking Skills, Process Skills, and Teaching Strategies in the Science Classroom (ID # 169)

This hands-on session will focus on the application of a conceptual model which relates higher order thinking skills, science process skills, and selected non-traditional teaching strategies to actual practice in the science classroom. The session will begin with an explanation of the model followed by two science experiments that have been designed to demonstrate the relationships among the areas mentioned above. Finally, we will examine how one existing science textbook series and one science curriculum project can be modified to more effectively reinforce these relationships.

SCI, ELEM, HS

TUESDAY, 12:15

DAR 122

McKissick, Allan

Instructor in Speech Communication, Modesto Junior College

Debate and Critical Thinking in the Classroom, the Community, and the Mass Media (ID # 271)

Argumentation has been described as the “advancement, support, and criticism of claims.” Traditional, critical thinking based argumentation emphasizes the confrontation of ideas with the goal of “discovering what is probably true in any given controversy.” Argumentation becomes “debate” when it is structured to ensure opportunity for rejoinder and to maximize such qualities as efficiency, thoroughness, and fairness. This workshop will focus on the examination of some of the basic logical precepts underlying reasoned discourse: the place of the status quo (on issues of fact, value, or policy), the establishment of presumption and the consequent assignment of the burden of proof, what constitutes a prima facie case, and the burdens of rejoinder (refutation and

rebuttal). It will also provide suggestions for designing debate structure: classroom debate models, candidates' forums, legislative simulations, mock court, etc. The workshop will provide conceptual tools by which to maximize the value of debate, a popular educational strategy, with emphasis on specific behavioral and curricular objectives. Participants will also gain background in training students as critical listeners to the wide variety of adversarial discussions of political, social, and economic issues in the mass media.

CONCEPT, TCH STR, HS

DAR 139

SUNDAY, 1:30

Milesko-Pytel, Diana

Learning Assistance Counselor and Dean, Loyola University Chicago

Writing, She Murdered (ID # 23)

Diana Milesko-Pytel will share a video mystery spoof, "Writing, She Murdered," and a program on critical thinking, which were developed with a Sears Foundation Grant. Although a murder is committed and a mystery solved, the video suggests a method faculty *across the curriculum* can use in assigning papers to help students think critically about the writing process.

The video presents a teaching challenge through a dramatic story. It is then stopped, a group formed to discuss two aspects of writing — creativity and control. Four areas of focus are: motivating students, getting them to prewrite, helping them structure a paper, and giving them feedback. After groups share ideas, the tape is resumed and possible solutions are presented. Also included is a brief exercise using three magic words, to let faculty experience critical thinking about their own writing.

Participants receive a free handbook and three templates to photocopy for students. The handbook includes inhibitors of critical thinking, ideas for assigning papers, and a way to visualize a paper's structure.

TCH STR, LANG, C/U

NICH 173

SUNDAY, 1:30

Miller, Eric

Enrichment Coordinator, Stayton Middle School

Conservation of Mass and Inductive Thinking (ID # 72)

Exploring the concept of inductive thinking with Tony the Tiger, jelly beans, and slime. Participants will determine if the sum of the masses of two separate substances will change once they are combined. Participants will combine chemicals that dramatically increase in volume, change state, change colors, and absorb large amounts of water. Inductive thinking concepts like premise, conclusion, probability, relevancy, and *post hoc ergo propter hoc* will be covered.

It's sure to be a Grrreat session. (Hands-on activities are limited to 30 participants, more are welcome to observe.)

TCH STR, SCI, 3-6 GRADES

STEV 3044

MONDAY, 8:45

Missimer, Connie

Author of Good Arguments,

Is Simple Beautiful? (ID # 264)

Think about the following question: If two theories explain the same thing but one theory is simpler, is the simpler theory better? Most scientists would say

"Yes", most humanists "No" or "Not necessarily." And therein lies a yawning gap between the sciences and humanities, a geological fault line which, if anything, has grown since C. P. Snow first identified it over forty years ago.

What has caused this fault line? What assumptions, ideals maintain it? What can we do to help students negotiate it? Which subjects fall clearly on one side or the other? Which others are ripped apart because they straddle the line? Finally, what are the implications for a theory for critical thinking which can bridge this geological gap?

The format of the session will be lively lecture for the first half, discussion for the second half.

CONCEPT, TCH STR, G

MONDAY, 3:15

CH 10

Morse, Ogden

Chair, English Department, Joel Barlow High School

Literature and Problem Solving: The Integration of Thinking Skills and Subject Matter (ID # 2)

The solving of problems is a major part of student's academic life, but most students associate this skill with mathematics or the sciences. Although students reading works of fiction recognize that the characters struggle to find solutions to complex problems, they fail to recognize any application of the text and its problems to their own lives. How is it possible to get students to understand that classroom activities have real life applications?

The purpose of the workshop is to demonstrate how this connection can be made through the use of higher order reasoning, communication and collaborative skills, and student creativity. By using the text, students try to answer important questions: What is a problem? Is there a process which will help to solve problems? Is more than one solution possible?

During the workshop participants will engage in typical classroom activities that demonstrate the integration of many thinking and communication skills. There will be handouts 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.

HS, C/U, LANG

DAR 139

TUESDAY, 8:45

Morse, Ogden

Chair, English Department, Joel Barlow High School

Points of View: The Application of Thinking Skills to Subject Matter (ID # 1)

Every subject matter teacher faces the same dilemma: too much material, too many skills, too little time. At the national level the debate between mastery of specific academic content and the development of intellectual and social habits leaves the classroom teacher wondering what the daily lessons should contain. What, in fact, is the curriculum: textbooks or skills?

This workshop is designed to suggest some practical methods by which teachers can integrate critical thinking skills with subject matter to produce a variety of student responses. Participants will be actively involved in the process of a classroom as they work through a series of exercises, noting the methods employed and the cognitive skills required. There will be a handout containing

excerpts from research, a theoretical learning model, a lesson plan, excerpts from student papers. And the group will view a videotape, the final project of a senior high school class.

HS, C/U
TUESDAY, 1:30 STEV 1002

Morse, Ogden

Chair, English Department, Joel Barlow High School

Making Meaning in the Classroom: Skills, Perspectives, and Subject Matter

(ID # 3)

What is the curriculum for the courses we teach today? Is it the subject matter in which most were trained, the texts, the laws, the traditions that were the canon of our schooling? Or is it those skills which students need in order to assimilate data that are important to their lives? This dilemma is compounded by the variety of learning styles which students bring to the classroom. Thus the teacher is faced with the task of helping students in the same class to make meaning of material which they may perceive and acquire very differently.

This workshop will begin with a learning styles assessment. Then participants will engage in a series of exercises which illustrate conceptual and practical approaches to student learning: the analysis of visual and written material, close reading of texts, interpretation of data, and the use of the dialectical notebook. There will be considerable emphasis on critical thinking skills, collaborative activities, and performance assessment.

TCH STR, G, LANG
WEDNESDAY, 10:30 STEV 3008

Nelson, Sharon H.

Assistant Professor, Coordinator of Music Education, Wright State University

Cultivating the Reasoning Mind Through Musical Experiences (ID # 108)

In this session a description of characteristics of the reasoning mind will be explored. From this analysis we will determine the relationship of these characteristics to music perception. A variety of musical activities, including critical listening for historical and cultural diversity in music, and creating compositions, will be provided with audience participation. These activities will provide experiences for demonstrating the cognitive functions music elicits.

G, LANG, SOC STUD, ELEM

MONDAY, 10:30 STEV 3044

Noer, Linda

Associate Professor of Sociology and Social Work, Carthage College

Using Fiction to Enhance Critical and Creative Thinking in the Social

Sciences (ID # 231)

The session will describe and analyze how the use of fiction (novels, short stories, and poetry) can enhance critical and creative thinking skills using dialectical writing exercises. The discussion leader will summarize her recent doctoral research on the use of fiction to teach ethical decision making models to undergraduates and demonstrate the device she used to measure change in critical

and creative thinking. Participants will engage in sample reading and writing exercises and their assessment. A bibliography of literary works especially effective in implementing this approach will be distributed.

TCH STR, CREAT, TEST, U

MONDAY, 3:15

IVES 45

Noer, Thomas

Professor of History, Chair of Humanities Division, Carthage College

How to Fight the Tyranny of the Textbook: Critical Thinking, Primary Sources, and the Teaching of History (ID # 243)

Most students view the textbook as a near sacred document that contains undisputed truth. This workshop will focus on one strategy to help students move away from their uncritical acceptance of the text: the use and analysis of short excerpts from primary sources in history courses as a means to develop critical thinking. It will offer suggestions on how to develop the ability of students to question the assumptions, audience, language, bias, and content of a document. The session will discuss ways to help students move from "studying history" by reading a textbook toward "becoming historians" themselves through critical analysis of historical sources. Participants will engage in this process through examination of several brief handouts (excerpts from diaries, letters, autobiographies, newspapers, and speeches). It will also suggest ways to incorporate this approach in disciplines other than history.

TCH STR, SOC STUD, HS, U

MONDAY, 10:30

IVES 35

Nosich, Gerald

Professor of Philosophy, University of New Orleans and Inservice Specialist, Center for Critical Thinking

Motivating Students to Think Critically by Teaching for Discovery (ID # 239)

Teaching strategies that foster students' ability to engage in genuine discovery about the subject-matter are unique in their capacity for generating student interest both in the content of courses and in the activity of engaging in informed, skillful thinking about significant issues.

In this workshop, we will go through three or four strategies for getting students to engage in discovery by thinking their way through the material. The strategies to be covered are 1) re-creating historical discoveries, 2) discovering naive misconceptions, 3) searching for ignorance, and 4) discovering alternative explanations. This will be a hands-on workshop in which participants will work at applying the strategies to the subject-matter of their own courses.

TCH STR, G

SUNDAY, 10:30

CH 68

Nosich, Gerald

Professor of Philosophy, University of New Orleans and Inservice Specialist, Center for Critical Thinking

Learning to Think Well: Quality-Control in Teaching (ID # 238)

Although education for critical thinking is closely allied with cooperative and collaborative education, the two are different in at least one crucial respect. Learning to think critically requires that students come to terms with assessing

the quality of their own reasoning. In practice, this is radically different from both "giving opinions" and "reporting facts".

Reasoned judgement, by contrast with both of the above, requires that students be able to identify points of view of others; to give plausible interpretations of what they believe, read, and hear; and to judge issues only in the light of context and relevant alternatives. Each of these activities can be performed well or badly, habitually or sporadically, enthusiastically or begrudgingly.

This will be a workshop on several of the major dimensions of good reasoning and on how to teach for them in courses with content. The workshop will be heavily dependent on the activity of the participants. In particular, participants will begin by identifying a central problem in their own courses, one that students need to learn to think their way through. Then participants will work through dimensions of the reasoning as it might be done in their classes.

TCH STR, STAFF DEV, G

SUNDAY, 3:15

CH 68

Nosich, Gerald

Professor of Philosophy, University of New Orleans and Inservice Specialist, Center for Critical Thinking

A Sense of the Past, a Sense of the Present (ID # 240)

This workshop will key in on how we find out about the past and how we use the past to illuminate the present. The focus throughout will be on strategies to get students (including ourselves) to think critically about history. What distortions are introduced by viewing events in the past? How, and to what extent, can we be accurate, objective, unbiased? To what extent does knowing about the past change our perspective on the present (and future)?

The workshop is relevant to courses that have a history-based component: history proper, most literature or art courses, history of science, archaeology, historical anthropology.

TCH STR, SOC STUD, G

MONDAY, 8:45

CH 68

Nosich, Gerald

Professor of Philosophy, University of New Orleans and Inservice Specialist, Center for Critical Thinking

Rethinking Education: Designing Courses, Fields, and Curricula to Teach for Critical Thinking (ID # 241)

The plan in this workshop is to approach the part in the light of the whole, to see specific courses in relation to the general goals of education and critical thinking. That is, we will not be concentrating here on how to design this or that day's class, nor on how to use this or that isolated teaching strategy. Rather, we will be rethinking individual courses (e.g. Music Appreciation, American History, 4th grade Language Arts, Algebra, Advanced Organic Chemistry) in the light of our goals in teaching the field as a whole. (What are we after in teaching music or history, math or English? What are the goals of 4th grade as a learning experience? Of graduate school in chemistry?) And we will be rethinking the goals of teaching a field or grade-level in the light of the overall goals of education. Finally we will explore the great variety of teaching resources available to teachers and how these resources can be used in concert to achieve the educational goals.

At each stage we will be working at the question, "How do these goals — of our courses, of the fields and grade-levels we teach, of education as a whole — fit in with a rich idea of critical thinking?" The aim of the workshop is to yield insight into how we could reasonably redesign a course to teach for critical thinking, how we could redesign our teaching of a field, and ultimately how we could redesign a curriculum: at the K-12 level, in a community college, at a 4-year college or university.

TCH STR, STAFF DEV, G

TUESDAY, 10:30

CH 68

Nowell, Linda

Managing Editor, Analytic Press; Center for Philosophy for Children, Texas Wesleyan University

Thinking in the Classroom: A Community of Inquiry (ID # 120)

When speaking of educational reform, the conversation often turns to the notion of "restructuring" the schools. We talk of accountability, competency, and responsibility; goals, one could argue, that merit attainment. However, this notion of restructuring appears to revolve around the existing educational model, and for our purposes, we can label this model as the traditional model. Rather than restructuring the existing model, we first might want to "rethink" the model and, in particular, the model of the classroom.

This paper will attempt to address some of the criticisms levied against the educational system, especially those addressing the failure of the schools to teach critical thinking skills. The presentation will focus on the notion of the classroom as a community of inquiry, how a community of inquiry differs from the traditional model, and how a community of inquiry develops the student's ability to think critically. The bridge between the notion of a community of inquiry and critical thinking is the notion of thinking that goes beyond that of higher order and lower order skills.

ELEM, MID, STAFF DEV

SUNDAY, 3:15

CH 10

O'Brien, John

Lecturer in Education, James Cook University of North Queensland

What Are Children Thinking in Your Classroom? (ID # 184)

Emphasis on research into classroom learning has moved from process-product models to the mediating process paradigm. The stimulated recall interview and think aloud techniques are the two main processes that have been used in attempting to find out what goes on inside students' heads while they are learning. This presentation will describe how to conduct stimulated recall interviews and examples will be cited of how this process has been used in classrooms. A brief outline will also be given on the use of a variation of this strategy to explore the thinking of a scientific researcher. Possibilities for the use of this process by classroom teachers to become active researchers into the thinking of their students will be outlined. Studies undertaken by this researcher and colleagues have produced findings with important implications for the classroom teacher, these will be shared.

TCH STR, G, HS

TUESDAY, 10:30

DAR 139

O'Connor, Ellen*Lecturer in Business, San Francisco State University***Critical Thinking for Business and Management Education: Four Essential Skills and Strategies for Teaching Them (ID # 93)**

The presenter identifies four critical thinking processes as being most important to include in business education at the college/university level: 1) ability to distinguish fact from opinion, for example in analyzing problems and giving performance feedback; 2) ability to recognize and articulate underlying hidden standards, for example in purchasing, delegating, and decision making; 3) ability to identify and ask probing questions, for example in sales and customer service conversations; and 4) ability to listen actively and openly, particularly in emotion-laden circumstances such as conflicts. The presenter will offer exercises that help students develop these four abilities. The format consists of lecture with ample time for discussion both during and after the formal presentation.

CONCEPT, TCH STR, U
STEV 2050

WEDNESDAY, 3:15

O'Dell, Faye*Teacher, Henderson Middle School***Turning Our Taryn's on to Reading ... Turning off the Terror! (ID # 203)**

A critical determinant of success in the classroom is the ability to think critically. An individual must be able to independently analyze information and make logical conclusions. How do we get the reluctant readers and even average readers turned on to reading? How can the discipline of reading be used to seduce our students into developing critical thinking skills? What can we do to lessen the anxiety that often lives in the hearts and souls of our students? The presentation will focus on classroom strategies that have proven to be effective not only in encouraging students to enjoy reading, but also in learning how to think critically. Lessons for this session will focus around AVI's *Wolf Rider* and several of his other novels. Many handouts will be provided. Take the "Terror" out of learning; add enthusiasm to *Thinking!*

TCH STR, CREAT, LANG
NICH 166

FRIDAY, 1:30

O'Keefe, Virginia*Speech, Debate, and English Teacher, West Potomac High School***Debating the Issues: Classroom Group Debate (ID # 89)**

Debate, that time-honored method of exchanging intellectual ideas, can be a useful method to explore concepts in any classroom from science to English. Debate, a structured analysis of the pros and cons of an idea, places the student in the critical thinking position of decision making and analysis. In a year of political debate, teaching some of the principles of good argumentation allows the student to analyze the rhetoric of candidates during the campaigns and to separate the facts from the fluff. This program is designed to present simplified methods of debate which can be adapted to any classroom. Materials, syllabus, and a hands-on experience should help teachers to implement a similar experience easily in their own environment.

TCH STR, LANG, HS
IVES 24

FRIDAY, 3:15

Otterbach, Renate*Education Specialist, Region IX Educational Service Center***Abstract of Educating for the Future (ID # 112)**

Educators are continually bombarded with various reform movements, many of them pointing in different and sometimes opposite directions. As educators we are the ones who should choose the direction of education. However, this choice carries with it a heavy responsibility and long-range consequences. It is therefore only prudent that we invest the time necessary to make wise choices. In this session we, as educators, will work on defining the purpose and goals of education in terms of 20th century needs. By comparing where we are today to where we need to be, we will start defining the direction that educational reform should take and some of its key components. We will also discuss new basic competency skills of students.

To gain the maximum benefit from this session it is suggested that participants be familiar with both Dr. Paul's elements of reasoning and his standards of reasoning, since they will form the basis of both the small and large group discussions. It is also suggested that participants bring one of their classroom units to this session and evaluate their own work in terms of insights gained from this session.

MID, HS, STAFF DEV, ADV

WEDNESDAY, 8:45

CH 10

Oxman-Michelli, Wendy*Director, Institute for Critical Thinking and Professor of Education, Montclair State College***Raymond Dandridge***Teacher, The Harold A. Wilson Professional Development School***Princess Towe***Teacher, Malcolm X Shabazz High School and Montclair State College***Robert Davis***Teacher/Adjunct Instructor of Social Studies, Malcolm X Shabazz High School and Montclair State College***Elisa de la Roche***Teacher, Harold A. Wilson Middle School for Professional Development***Critical Thinking and Developmental Theater in Education (ID # 140)**

As part of an on-going project toward critical thinking as an educational goal in the Newark Public Schools, a team of Montclair State College faculty and Newark teachers collaborated in preparing for a production of an original theatrical production about a recent community event. Teachers were engaged both in the analysis of social issues surrounding the event and in the creative process of developing, refining, and editing the script. How these processes function as a vehicle for teaching for critical thinking is the subject of this presentation.

STAFF DEV, CREAT

SUNDAY, 1:30

DAR 108

Oxman-Michelli, Wendy

Director, Institute for Critical Thinking and Professor of Education, Montclair State College

Elaine Lane

Teacher, The Harold A. Wilson Professional Development School

Developing Case Studies in Teaching for Critical Thinking (ID # 138)

It is impossible to demonstrate a wide range of techniques for teaching for critical thinking effectively via a single lesson; it is even harder to report adequately on how a teacher approaches teaching for critical thinking in different ways throughout a connected, on-going unit of instruction by observing and reporting on a single lesson.

In this presentation, we will discuss the development of a model collaborative research process, through which approaches to teaching for critical thinking can be more adequately reported. In this model, two professionals, one of them the classroom teacher, work together. Jointly, they prepare an instructional unit for a 2-3 week period, and develop initial inquiry questions to guide the case study. Reflective planning, observing, interviewing, writing, and editing are involved in the development of the case. Rich in contextual material, the instructional sequence as reported in the case study forms an elaborated picture of a teacher's experiences with a connected set of critical thinking experiences. Such a case study can convey far more information about teaching or critical thinking than anything that describes a single lesson or a set of decontextualized techniques. An example of a case developed through this method will be presented. The model is adaptable to peer or collaborative professional development and/or research at all levels of education.

G, STAFF DEV, TCH STR

MONDAY, 3:15

EPT

Oxman-Michelli, Wendy

Director, Institute for Critical Thinking and Professor of Education, Montclair State College

Mark Weinstein

Associate Director, Institute for Critical Thinking, Montclair State College

Sourdes Zaragoza Mitchel

Director, Harold A. Wilson Middle School for Professional Development

Critical Thinking and Madelyn Hunter's Instructional Theory into Practice

(ID # 139)

Montclair State College has added a new effort to its several critical thinking programs. The new program involves a collaborative effort of the Newark Board of Education, the Newark Teachers' Union, and Montclair State College, toward the professional development of Newark teachers. Under this professional development program, teachers are released from teaching at other Newark schools to visit and study full time at the Harold A. Wilson School for a five week period. Principles and practices of both critical thinking as an educational goal, drawn primarily from the traditions of philosophy, and Instructional Theory into Practice, drawn primarily from behavioral psychology, are featured in the study program for these visiting teachers. How do these approaches to teaching and learning relate to each other? Where are the areas of mutual concern? Of

conflict? Of redundancy? How can the two approaches be presented so that their "critical attributes" are well understood?

K-12, STAFF DEV

WEDNESDAY, 10:30

STEV 1002

Pagliasotti, Thomas G.

Associate Professor of Humanities and Social Sciences, Embry-Riddle Aeronautical University

Tilling the Hardened Soil: Challenging Traditional Perspectives in American History (ID # 232)

This session will be devoted to a discussion of the way Howard Zinn's *A People's History of the United States* was used to promote critical thinking in a survey course on post Civil War American History. Participants in the session will be asked to be part of a mock classroom session where material from Zinn and a more traditional text will be compared and the atmosphere of healthy confrontation created. Participants will then be invited to discuss the challenges posed by the use of revisionist material that confronts traditional values and perspectives. For example, how can one best encourage an atmosphere of exploration and investigation and diminish an atmosphere of polarization? How can one reduce the amount of energy spent in defense of a threatened or proffered position and increase that which is spent in critical analysis of both?

TCH STR, G, SOC STUD

SUNDAY, 12:15

IVES 35

Pankratius, William J.

Assistant Professor of Instruction and Curricular Studies, University of Nevada, Las Vegas

Assessing a Learner's Knowledge Base Through Concept Mapping (ID # 117)

Concept mapping is a metacognitive learning strategy that requires learners to bring forth prior knowledge in order to actively construct their own knowledge base and master content on a particular topic. Concept mapping makes learning more meaningful in the Ausubelian sense, and even helps the learner to understand what meaningful learning is. In this session the participants will be introduced to concept mapping and actively engage in constructing concept maps. The sharing of strategies that can be used to employ concept mapping in the classroom to help learners take charge of their own learning and the uses of concept mapping from curriculum planning to student evaluation will be discussed. Time permitting, a dialogue on innovative uses of concept maps to reveal deep seated and pervasive pre-existing convictions of preservice teachers and novice science students will be conducted.

TCH STR, CREAT, G

WEDNESDAY, 8:45

CH 20

Parks, Sandra

Co-Director, National Center for Teaching Thinking

Using Graphic Organizers to Improve Thinking and Learning (ID # 35)

This presentation will demonstrate how graphic organizers can be used to organize information and to guide critical thinking in ways that enhance both thinking and learning in the content areas. This technique is based on the idea that interactive visual representations can furnish us with simple but powerful

tools for achieving both thinking skills and content objectives. Samples of the graphic organizers used in the demonstrations will be provided to the participants. The demonstrations will be from material for students in grades K-12, including a number of lessons that infuse the teaching of critical and creative thinking into content instruction.

SUNDAY, 3:15

DAR 108

Patton, Rosemary

Coordinator of Composition, English Department, San Francisco State University

Sheila Cooper

Professor of English, San Francisco State University

Critical Thinking, Writing, and Literature (ID # 22)

Our presentation will be conducted as a workshop with maximum participation from the audience. We'll begin by illustrating the relationship between critical thinking and writing with exercises that focus on the relationship between inferences and facts, the evaluation of inferences, and the role writing plays in making reasoning visible to others.

We will then connect critical thinking and writing to literary analysis by having small groups read and respond — in writing — to a very short piece of fiction. They will collaborate on drawing inferences and marshaling evidence to support their conclusions.

Using examples from both classical and modern literature, we will conclude with a brief introduction to the ways in which literature and argument intersect and reflect dialectical and syllogistic reasoning.

TCH STR, LANG

MONDAY, 8:45

DAR 143

Paul, Richard

Director, Center for Critical Thinking, Sonoma State University

Cultivating the Reasoning Mind: Teaching, Testing, Standards, and Assessment (ID # 284)

Critical thinking is not viewed accurately when seen as something superimposed on current instruction. Rather it is a new view of education that shapes and integrates all classroom activities around a core idea: the reasoned engagement of students within a community daily engaged in disciplined intellectual work. In this view, students at all levels must learn to read and write, speak and listen critically; gather, analyze, and assess evidence thoughtfully; clarify and synthesize concepts insightfully; make valid inferences; and reason with care and precision within a reflectively-chosen point of view or perspective. All of these abilities presuppose not only the internalization of intellectual criteria and standards, but also special modes of teaching, assessment, and student- and teacher-mindfulness. This session makes the case that this cultivation of the reasoning mind, this basic reconceptualization of teaching and learning, which we are now very far from achieving, must become a long-term goal of education — if we are to prepare students for the problems looming in the 21st Century. It challenges educators to respond in practical and specific, but not easy and painless, ways.

SUNDAY, 9:00

KEYNOTE

Paul, Richard

Director, Center for Critical Thinking, Sonoma State University

How to Teach Students to Seek the Logic of Things: To Dissolve Wholes into Parts, Unite Parts into Wholes, Question, Infer, and Reason to Purposeful and Creative Ends (ID # 287)

We can seek to understand only by assuming that what we strive to understand has a logic, some order or coherence, reason or method, structure or pattern that makes sense, and hence can be translated by a reasoning mind into ideas effectively grounded in reasoned judgment and expressed in an ordered, rational way. This is true whether one is talking of poems or essays, painting or dance, histories or anthropological reports, experiments or scientific theories, philosophies or psychologies, accounts of particular events or those of general phenomena or laws. This is true whether one is a pre-school child making sense of his or her parents or a research scientist making sense of sub-atomic particles. Whether we are trying to explain ourselves to others, designing a new screwdriver, figuring out how to deal with a child's misbehavior, or working out a global perspective on religion, we must order our meanings into a system of ideas that make sense to us, and so, have a logic in our minds. In this session — which opens the "Critical Thinking: How to Teach" Series — Richard Paul sets out the foundations of a critical approach to teaching and learning. He elucidates how that approach fosters the ability of students to seek and grasp the logic of what they are studying by giving it a logic in their minds. Some hands-on application is involved. (The video series in its entirety, or any individual session, may be ordered at the conference.)

TCH STR, STAFF DEV, G

SUNDAY, 1:30

IVES WA

Paul, Richard

Director, Center for Critical Thinking, Sonoma State University

How to Teach Students to Listen and Read Well (ID # 288)

Most students spend the bulk of the time in school "listening". Teachers spend the bulk of their time "talking" (at their students). Students spend less, but very important time, reading. Currently, most student listening and reading is highly undisciplined and impressionistic. Furthermore, present instruction at all levels ignores the need to cultivate specific "listening" and "reading" skills and abilities. Most students do not realize that listening and reading have a logic they should strive to understand and take charge of. This significant mistake has serious negative consequences. Since listening and reading are effective means to learning only when done skillfully, and since most students — even many "A" students — lack basic listening and reading strategies, we need to teach explicitly for them. We need to do this not only at the elementary school level, but at the secondary and post-secondary levels as well. In this session, Richard Paul explains and models the process of teaching for excellence in listening and reading. Because he grounds the session in a conception of the logic of listening and reading, he is able to demonstrate how that logic can be grasped and used as a tool of listener and reader self-improvement. Some hands-on application is involved. This is the second in the "Critical Thinking: How to Teach" Series. (The series in its entirety, or any individual session, may be ordered at the conference.)

TCH STR, STAFF DEV, G

SUNDAY, 3:15

IVES WA

Paul, Richard

Director, Center for Critical Thinking, Sonoma State University

How to Teach Students to Write Well (ID # 289)

Most students spend too little time writing and too little of that little, writing analytically. But higher order thinking cannot be developed without developing students' reasoning abilities, while students' reasoning abilities, in turn, cannot be significantly developed unless students engage in extensive, if not continual, analytic writing. Present instruction at all levels, however, systematically ignores the real problems in cultivating analytic writing skills and abilities. This is a significant mistake with serious negative consequences. Since writing is an effective means to learning only when done skillfully and since most students — and many teachers — lack basic analytic writing abilities, we need to teach explicitly for them. We need to do this at the elementary school level, surely, but — unless and until instruction radically changes — at the secondary and post-secondary levels as well. In this session, Richard Paul explains and models the process of teaching for excellence in analytic writing. He details specific strategies. Some hands-on application of those strategies is involved. Some basic mistakes in the teaching of writing are documented. This is the third in Richard's new "Critical Thinking: How to Teach" Series. (The series in its entirety, or any individual session, may be ordered at the conference.)

TCH STR, STAFF DEV, G

IVES WA

MONDAY, 8:45

Paul, Richard

Director, Center for Critical Thinking, Sonoma State University

How to Teach Students to Assess Their Own Work: The Foundation

(ID # 290)

All thought and behavior, insofar as it aims at knowledge or excellence, entails three dimensions: 1) an *object* we focus on, 2) a *process* we employ, and 3) *standards* we use to assess our work. Few students, unfortunately, have ever thought about "intellectual processes" (e.g., analysis or synthesis), or "intellectual objects" (e.g., conclusion, evidence, or assumption), or "intellectual criteria" (e.g., clarity, accuracy, or consistency). Hence, they do not know what to do when asked, for example, to "analyze a question for clarity". In this session, Richard Paul explains and models specific strategies for teaching awareness of intellectual processes, objects, and standards. Some hands-on application is involved. This is the fourth in Richard's new "Critical Thinking: How to Teach" Series. (The series in its entirety, or any individual session, may be ordered at the conference.)

TEST, TCH STR, STAFF DEV

IVES WA

MONDAY, 10:30

Paul, Richard

Director, Center for Critical Thinking, Sonoma State University

How to Teach Students to Assess Their Own Work: The Tactics (ID # 291)

Everyone thinks but to think well we must learn how to think explicitly about how we are thinking and make corrective adjustments as a result. We all, for example, "go shopping". But we don't all think about how we shop, figure out how best to spend our money, and then reshape our buying habits as a result. Or again, all our students "study" but few of them think analytically about how they are studying and then reshape their studying habits as a result. Or, finally, all teachers "teach", but few learn to think insightfully about how they are teaching

and then restructure their teaching habits as a result. Most human thinking, in other words, is at a low level of awareness, is, or becomes, more or less automated, a matter of unconscious habit rather than explicit choice, something that happens in us, without much analytic self-command, rather than something we mindfully create. The result is that many of our habits of thought are not good ones. They do not serve us well. They do not improve the quality of our lives. This need not be so. It is possible to teach our students, and ourselves, to begin to think about our thinking, and as a result, to raise that thinking, to a higher level of quality. In this session, Richard Paul explains and models the process of teaching for excellence in self-assessment. He details specific strategies. Some hands-on application of those strategies is involved. This is the fifth in Richard's new "Critical Thinking: How to Teach" Series. (The series in its entirety, or any individual session, may be ordered at the conference.)

TEST, TCH STR, STAFF DEV

IVES WA

MONDAY, 1:30

Paul, Richard

Director, Center for Critical Thinking, Sonoma State University

Why Students — and Often Teachers — Don't Reason Well (ID # 292)

Though we are "logic-creating" and "logic-using" animals, we typically operate with little awareness of this fact. We create and apply systems that logically connect things without knowing that we are doing so. Our intellectual modeling of the world is done *sub rosa*, without mindfulness. It is small wonder, then, that often we don't reason well.

Imagine a ballet dancer improving her ballet without knowing that she is a dancer or how and when she is dancing. Imagine a chess player who does not know she is playing chess. Or a tennis player who does not know she is playing tennis. We can hardly imagine people developing these physical and intellectual abilities without high consciousness of how and what they are doing in the doing of it. Yet we expect students to develop the ability to reason well without any mindfulness of the nature of reasoning, the elements of reasoning, or the criteria for assessing reasoning. We expect students to become good reasoners, in other words, without any knowledge of the logic of reasoning. Not surprisingly our approach doesn't work. Most students are poor reasoners. In this session, Richard Paul first documents common problems in student and teacher reasoning. Then he explains some of the fundamental concepts and skills essential to good reasoning and hence to teaching for it. This is the sixth in Richard's new "Critical Thinking: How to Teach" Series. (The series in its entirety, or any individual session, may be ordered at the conference.)

TCH STR, STAFF DEV, G

IVES WA

MONDAY, 3:15

Paul, Richard

Director, Center for Critical Thinking, Sonoma State University

Why Intellectual Standards? Why Teach for Them? (ID # 293)

If you ask people the following question—choose almost anyone you want — "What are some of the intellectual criteria and standards you use to assess the quality of your thinking?" you will receive two kinds of responses: 1) a variety of puzzled stares (that imply "What could you possibly mean by that?) or 2) confused answers (that imply that your respondent has not thought the question through and, in any case, does not have a considered response). Why? The reason

simple. Schooling today, and everyday conversation as well, does not highlight intellectual criteria and standards. We may study many subjects but we don't study them in such a way as to make the criteria for assessing our thinking about them a matter of explicit formulation. And even though we express our thinking about what we say and do, we don't reflect much on how we get to our beliefs and conclusions, certainly not to the point that we come to recognize the criteria we use in that process. In this session, Richard Paul demonstrates the importance of making intellectual criteria and standards explicit in instruction. He provides examples of poor reasoning that occurs on the part of both students and teachers in the absence of clarity in assessment. This is the seventh in Richard's new "Critical Thinking: How to Teach" Series. (The series in its entirety, or any individual session, may be ordered at the conference.)

TEST, TCH STR, STAFF DEV
IVES WA

WEDNESDAY, 8:45

Paul, Richard

Director, Center for Critical Thinking, Sonoma State University

Reasoning, Critical Thinking, Creativity, Problem-Solving, Communicating, Mastering Content — Putting it All Together (ID # 294)

One of the most important, and most ignored, truths in education is this. Everything good in education is interdependent on every other good in education. When education is fragmented into parts that appear to both students and teachers as dissociated, little of quality is done, little of the deep, long-term ends of education are well served. Reasoning, critical thinking, creativity, problem-solving, communication, the mastery of content — these are not unrelated dimensions of quality education. They are six deeply interwoven, deeply interdependent processes. They are fostered by the same modes of teaching and learning. Taught as an interdependent whole, they are powerful. Taught as separate processes, they are superficial. In this session, Richard Paul demonstrates their intimate interconnections, relating them to particular teaching processes and strategies. This is the eighth in Richard's new "Critical Thinking: How to Teach" Series. (The series in its entirety, or any individual session, may be ordered at the conference.)

TCH STR, STAFF DEV, C
IVES WA

WEDNESDAY, 10:30

Paul, Richard

Director, Center for Critical Thinking, Sonoma State University

How to Devise Assignments and Activities That Require Reasoning Students Are Capable of Doing (ID # 295)

Many assignments and activities which take place in classes have the appearance of fostering or requiring reasoning when most often the student can get by with simply recall. This appearance is deceiving because most instructors are in fact looking for "right" answers, which they take to be what the text explicitly states or, at least, tells you more or less directly how to get. For this and other reasons, most students avoid developing any reasoning of their own and assume that what teachers really want is to hear what the textbook or the teacher said. It is not of course that students have a clear conception of what reasoning is and defiantly decide not to do it. It is rather that they have a clear sense of what they think teachers want them to do and that is to recapitulate what was said to them. They often think, in company with their instructors, that accurate recapitulation is equivalent to a demonstration of knowledge. In a well-conceived

educational plan, however, virtually all assignments and activities would involve some reasoning, some process of figuring something out, in other words, some genuine intellectual work — which is precisely what reasoning, and only reasoning, is. In this session, Richard Paul illustrates the art of designing assignments and activities that require reasoning, including discussion of how one holds students responsible for that reasoning. This is the ninth and last in Richard's new "Critical Thinking: How to Teach" Series. (The series in its entirety, or any individual session, may be ordered at the conference.)

TCH STR, STAFF DEV, C
IVES WA

TUESDAY, 3:15

Paul, Richard

Director, Center for Critical Thinking, Sonoma State University

Critical Thinking and Informal Logic: Rethinking the Connection (ID # 296)

"Everything is connected. We understand anything whatsoever by recognizing its connections. All connections have other connections, without end. Whatever is connected has a logic. Whatever has a logic can be reasoned through. Whatever can be reasoned through can be mindfully assessed." With premises such as these in the background, Richard Paul will make the case that informal logic comes in a variety of forms (the logic of concepts, the logic of statements, the logic of questions, the logic of disciplines) and is a special, and very important, dimension of the concept of anything whatsoever having a logic. Critical thinking is argued to be the art of mindfully creating or using — and assessing — some logic (in keeping with appropriate intellectual standards).

ADV

WEDNESDAY, 10:30

CH 68

Peak, Ira

Assistant Professor of Ethics and Policy Studies, University of Nevada, Las Vegas

Teaching Critical Thinking by Involving Students in Formulating Personalized Programs of Assessment (ID # 129)

This workshop involves its members in a variety of activities which are designed to equip them to utilize a novel approach to teaching critical thinking, namely requiring that students take responsibility for their own learning. The approach enlists students in the processes of developing, planning, calendaring, and carrying out a variety of self-chosen learning activities within the parameters of an "evaluation menu". By means of a personalized program of assessment, each student's learning and performance are evaluated.

Participants will take part in constructing sample programs of evaluation by taking the role of student in a course the participant teaches. The objectives of the "evaluation menu" technique provide the structure for the workshop: 1) involving students in decision making regarding the assignments upon which they will be evaluated; 2) expecting students to take responsibility for their learning in the course; 3) empowering students to become active, assertive, and critical in their academic experiences and goals; 4) treating students with a degree of fairness not normally available under traditional grading approaches to evaluation; and 5) exploiting students' diverse abilities and backgrounds to enhance learning.

TEST, C/U

MONDAY, 1:30

CH 20

Perkins, Peggy

Assistant Professor of Counseling and Educational Psychology, University of Nevada, Las Vegas

Developing Critical Thinking for Future Evaluators (ID # 201)

In the field of evaluation research, there is no single model that, when followed, will automatically correct all the problems for a client. Rather, there are several approaches and guidelines that evaluators apply. The very nature of evaluation requires critical thinking (i.e., focus on evaluation, design a plan, assess program implementation and outcomes, analyze the data, and communicate the findings). Therefore, a graduate course in Evaluation Research methods was developed and taught to specifically enhance future evaluators' critical thinking skills.

The teaching strategies and the students' reactions and feedback will be discussed in this presentation.

MONDAY, 8:45

TCH STR, TEST, U

STEV 2049

Peterman, Christi

Teacher, Pike County Elementary School

Donna Garrett

Teacher, Upton Elementary School

"Novel" Twist on Writing with Critical Thinking (ID # 204)

This session will make use of information written for "Project Insight" (a federally funded, state-supported critical thinking project). The session will direct educators' thoughts and techniques toward teaching critical thinking skills in the classroom based on children's novels; the third grade novel is *The Littles and the Ash Tinies* by John Peterson and the fourth grade novel is *Shades of Gray* by Carol Reeder. The hands-on activities will have geographical and historical significance that pertain to third and fourth graders. Informal writing organizational techniques based on critical thinking strategies will be demonstrated. Practical and useful ideas dealing with this session will be discussed and will be included in hand-outs which will be made available to participants in this "novel" session.

WEDNESDAY, 10:30

TCH STR, LANG, CREAT, 3-4

DAR 108

Anto, Robert

Associate Professor of Philosophy, University of Windsor

The Relationship Between Argument and Inference (ID # 80)

The tendency of logicians — both formal and informal — has been to treat inference and argument as a piece ("for every inference," it is said, "there is a corresponding argument"), and it has been common to assume that the standards for appraising arguments are the same as the standards for appraising inferences. This paper offers a contrary view. It begins from the idea that arguments are invitations to inference, and develops the concept that arguments paradigmatically involve the social interaction of two or more persons, whereas inferring (drawing a conclusion) is essentially an act performed by individuals. In

light of this, the presentation seeks to clarify the relation between a) traditional logical standards for appraising inferences and b) the "dialectical" or "dialogical" standards for argumentation that have recently come into prominence.

ADV, CONCEPT

SUNDAY, 10:30

STEV 3038

Pollard, Jim

Consultant, Facilitator, Learning Designer, Guarantee Software Inc.

Self Assessment and High Standards (ID # 245)

The premise that learners need to distinguish for themselves what they know from what they don't know, provides the focus of this presentation. The development of the learners self assessment skills not only reaches for higher standards, but can develop important critical thinking skills as well. This session will present a model used for assisting learners in developing self assessment criteria. Exploring ideas for self assessment activities and strategies will provide opportunities for participant interaction. Case studies will take participants beyond the mechanics of self assessment with a discussion of "Grade Expectations", a self fulfilling prophetic that drives the degree of success of individual students.

TCH STR, HS, C/U

SUNDAY, 3:15

CH 20

Pollard, Jim

Consultant, Facilitator, Learning Designer, Guarantee Software Inc.

What Is Not Critical Thinking (ID # 246)

Assumptions about how students learn are reflected in the design of instructional strategies. Traditional strategies such as L.A.P., Multimedia, Behavioral Objectives, Competency Based Instruction, Individualized Instruction, Computer Assisted Instruction, and Cooperative Learning will serve as a base. The focus of this session is on the development and design of Critical Thinking Learning Strategies. This session will begin with identifying the kind of learning activities that do not encourage critical thinking and conclude with ideas on developing learning activities that promote critical thinking. Participants in this session will explore, examine, and share their assumptions and how these assumptions effect the learning process.

CONCEPT, TCH STR, HS, C/U

MONDAY, 10:30

IVES 78

Pollard, Jim

Consultant, Facilitator, Learning Designer, Guarantee Software Inc.

Critical Thinking: A Partner in Quality (ID # 244)

Business and industry are looking to Quality to increase their competitive edge. Concepts such as empowerment, benchmarking, learning teams, reflective openness, ethical responsibility, shared vision, dynamic complexity, and continuous improvement are vehicles of change in today's workplace. Edward Deming, Peter Senge and others are providing models that will turn the workplace into a "learning environment". This session provides some answers to

question, "Where does critical thinking fit into the Quality movement?" Jim will share a successful model that integrates critical thinking into the business and industry communities in the Spokane area.

MONDAY, 1:30

CONCEPT, C/U
STEV 2050

Pepper, Richard

Elementary School Teacher, Director, Gateway to Great Thinking Program

From Question to Invention: A Program to Make Blooms Blossom in Your Classroom and to Make You Thinner, Sexier, and More Attractive to Movie Stars! (ID # 70)

Enjoy 90 minutes discovering a program that maximizes student inquisitiveness and creativity. Learn how the research/invention process can become the most invigorating part of your student's day. This program provides students with the skills and attitudes for a lifetime quest into learning and pondering.

MONDAY, 10:30

ELEM, CREAT, TCH STR
STEV 3046

Pepper, Richard

Elementary School Teacher, Director, Gateway to Great Thinking Program

Break-the-Mold at Your Elementary School! Design a School Environment that Maximizes Critical Thinking and Promotes Learning for Understanding! (ID # 71)

Enjoy 90 minutes designing your fantasy school environment. Imagine a learning atmosphere where student empowerment and the joys of 'FLOW' blossom daily. Imagine how authentic assessments and a commitment to Howard Gardner's seven intelligences could energize your school. Today turn fantasy into possibility.

TUESDAY, 12:15

ELEM, CREAT, TCH STR
STEV 3044

Quina, James Henry

Associate Professor of English Education, Wayne State University

Metaphor as Method: Teaching Critical Thinking Through Storytelling (ID # 5)

A participatory workshop based on the world hypotheses of Stephen C. Pepper and the teaching methodology of Georgi Lozanov. Participants will be provided an overview of Pepper's pluralistic system and of Georgi Lozanov's methodology, followed by a reading of "The Story of the Great Rock", a metaphoric story containing embeds of Pepper's world hypotheses. The story will be read with music. Each tribe described in the story represents one of Pepper's four world views: formism, mechanism, contextualism, and organicism.

Participants will draw their interpretations of the story, choose a favorite one, explore tribal beliefs, and use their tribal world views to analyze current world problems. In the process both the world hypotheses of Pepper and the methodology of Lozanov will be made explicit.

WEDNESDAY, 8:45

TCH STR, CREAT, LANG, SOC STUD
NICH 173

Quinn, Deanne C.

Instructor, Academic Talent Search, Cal State University, Sacramento

Frances Martine

Director of Evaluation, California Future Problem Solving Program

A Critical Assessment of Ethics in Today's Music and Media (ID # 131)

By using critical thinking in the strong sense and by applying Lawrence Kohlberg's Scale of Moral Development and Gilligan's findings on ethics among females, students are asked to evaluate the policies inherent in censorship, innuendo versus blatancy, and responsibility for behaviors supported by the purchase of albums and theater tickets. This workshop will share teaching strategies and relevant curriculum for today's youth in such a way as to assist them in discovering their own ability to make right and appropriate decisions about their own purchasing power and those messages with which they identify. Once students have explored the subject matter and the presentation methods used by today's musicians and performers, they are better able to make critical decisions for themselves. Group work that requires students to use a compare/contrast format through multiple generational studies of trends enables them to make predictions about future issues involving censorship.

TUESDAY, 12:15

TCH STR, HS, CC
STEV 3049

Quinn, Victor

Senior Lecturer, College of Leeds University

A Critique of John McPeck, and an Example of Practice as an Alternative Proposal (ID # 236)

My argument presents five examples of points used by McPeck (1990) in opposing general CT. I argue that each of these reveals defective thinking, that the defect is remediable, and that the remediation is in each case an example of teachable CT. He is therefore in contradiction.

I then present a positive proposal of work I have regularly done with children from ages 8-12. This involves them in learning to construct stories which include contradiction. I then tell a story of a world with no language, and people thinking regretfully of the absence of language. My video material shows them engrossed in Piaget/Vygotsky type argumentative alignment.

The session will be interactive, using overhead transparencies of McPeck's views, discussion, and short formal presentations.

SUNDAY, 1:30

CONCEPT, LANG, MID
STEV 3008

Rajabally, Mohamed H.

Professor of Nursing, Okanagan University College

Confirmation of Theories: Problems with Methodology (ID # 154)

Theorizing is a product of our intellect — a rational process, as is critical thinking — and it is supposed to describe, explain, and make sense of the world. Yet, the method we conform to decides the explanatory merit of our theoretical beliefs. Methodology can only provide a guide for the process of theorizing, it is not a substitute for theorizing. If we are to continue to test our theories using the accepted and unquestioned method of operationism as first proposed by Bridgman, then our theorizing is nothing more than what our method tells us it is.

This paper analyzes how confirmation of our thinking by operationism and the logical positivists' view of science has not been very productive in recent years. What is required as a remedy is a dose of creative and critical thinking. This paper, it is hoped, will show how.

MONDAY, 3:15

CONCEPT, ADV
STEV 3038

Reich, Helmut

Research Associate, University of Fribourg

Knowing Why You Know, Better: Developing Epistemic Competence

(ID # 31)

Why do individuals change their (world) views? A recent empirical study based on interviewing children and young people about the reasons for changes in their views brought out seven categorically different reasons, and theory posits a eighth for adults. These reasons can be ordered according to increasing differentiation and eventual presence of critical thinking. We found that usually individuals indicated a mixture of reasons, but that older participants more frequently invoked higher-numbered categories, they displayed critical thinking more prominently.

The workshop sets out by collecting participant's examples of *their* own worldview changes together with their reasons. Collectively, we shall attempt to construct the eight categories. If needed, material from our study will be fed in to complete the types of reasons. Next, the categories involving critical thinking will be analyzed in more detail, including the limits of epistemic cognition, and the criteria for selecting epistemological orientations. Finally, we shall discuss exactly how critical thinking can contribute to the development of epistemic competence *in given cases*, and thereby to more realistic world views.

MONDAY, 1:30

CONCEPT, TCH STR, HS
STEV 3038

Reid, Irvine

President, Montclair State College

Gregory L. Waters

Deputy Provost, Montclair State College

Wendy Oxman-Michelli

Director, Institute for Critical Thinking and Professor of Education, Montclair State College

Weinstein, Mark

Associate Director, Institute for Critical Thinking, Montclair State College

Goodlad's Teacher Education in a Democracy Project: Report from the Field (ID # 266)

Montclair State is one of the eight original sites participating in a national effort to simultaneously renew teacher education and the schools, using Goodlad's postulates, as part of John Goodlad's Center for Educational Renewal. This session is a report on progress made to date to undertake such a renewal,

with particular attention to critical thinking and teacher education. Issues to be discussed include: What does it mean to prepare teachers who can in turn prepare students for life in a political democracy, to join the human conversation, and to be stewards of their schools? How can relations between colleges and schools be strengthened? How does participation in a national network help in local renewal? What do the postulates mean for teacher education programs? Included will be a description of the change process undertaken and of work in an urban professional development school. Participation and suggestions from the audience will be invited throughout.

MONDAY, 1:30

G, STAFF DEV
SU 100

Rickard, Wayne

Consultant and Instructor

Origami and Creative Transformation (ID # 191)

This session addresses the nature of the creative process, using origami as a metaphor. Any act of creative transformation has the potential to transcend the medium, whether that is paint, film, paper, music, or language. The transcendent message is implied rather than stated, and it is this hidden information which is often the target of critical analysis. Using hands-on exercises based on origami models, this session will explore how our minds make sense of the world. Models are used to graphically demonstrate dualistic and continuum thinking, symmetry, complexity, and the evolution of form. The concepts developed in this session will be useful to teachers of language, art, cultural diversity, mathematics, and creativity.

TUESDAY, 8:45

CONCEPT, CREAT, G
IVES 35

Rippy, Ed

School of Education, Associated Students Representative, CSU Hayward

Garbage In, Garbage Out: Thinking Cannot Be Better Than Its Information Sources (ID # 281)

A major obstacle to critical thinking in public affairs is the highly limited base of information from which reasoning starts. A much broader base of information is available but is rarely sought out, so public debate is crippled. The history of the energy crisis from the 1973 OPEC oil shock to the Gulf War is used to illustrate this point. I conclude that critical thinking pedagogy must address the issue of actively seeking out information not supplied by the "mainstream" media, and also motivate people to make the unaccustomed effort.

SUNDAY, 3:15

MEDIA
STEV 3049

Robinson, Jane L.

Fifth Grade Teacher, Locust Grove Elementary School

Anne Bohn

Fifth Grade Teacher, Heard Mixon School

All You Ever Wanted to Know About Critical Thinking Skills, But Were Far Too Afraid to Ask ... (a beginning approach to teaching critical thinking skills) (ID # 212)

This session will examine reasons for teaching critical thinking skills using three novels: *Summer of the Monkeys*, *The Pinballs*, and *Number the Stars*. Discussion will take place, and questions will be answered on how a teacher goes about selecting certain thinking skills, how to adapt a novel for use, and the approach this teacher took in her classroom. Actual student work will be shown in order to give the participants an idea how certain students worked with various activities. Hand-outs and sample lesson plans will be available for the participants in the session.

TCH STR, CREAT, LANG, ELEM
STEV 3046

SUNDAY, 12:15

Roddy, Maria

Director, Family Literacy Project, Alisal Union Elementary District

Michael Roddy

Assistant Director, Salinas Adult School

Critical Thinking in Real Life: A Family Literacy Model (ID # 242)

This presentation will demonstrate how the components of a critical thinking curriculum in adult education programs and family literacy projects can help adults and families gain literacy skills that they can use in problem solving through the social, economic, and political issues of their lives.

G, ADULT ED, ESL
IVES 34

MONDAY, 10:30

Romain, Dianne

Associate Professor of Philosophy, Sonoma State University

Edward F. Mooney

Professor of Philosophy, Sonoma State University

Gender, Emotions, and Critical Thinking (ID # 251)

Are women emotional and men rational? Is a critical thinker rational and not emotional? This participatory workshop takes a critical look at some common myths about men, women, and critical thinking and provides exercises, readings, and class activities designed to replace fantasy with fact.

TCH STR, C/U
STEV 3036

SUNDAY, 10:30

Rosenberg, Ernest

Director, PEMD Education Group Ltd.

World Critical Numerical Data in the Curriculum (ID # 262)

Within the last five years or so a remarkable educational event has occurred. Students can now have a fair share of the world's most accurate and critical numerical data literally on their desktops. In fact, this is some of the very same data used by government planners and business people to address the environmental, demographic, and economic crises we face. What is additionally needed is a data analysis tool enabling a wide range of students without specialized mathematical training to effectively utilize this data. Such a tool would allow for stimulating and highly relevant educational experiences as students work with real data bearing on pivotal social issues. In addition, their education would automatically become more comprehensive, since these issues cut across the boundaries of traditional subject areas.

This session will present software for Macintosh® computers satisfying these educational requirements along with curriculum materials that allow the almost immediate introduction of the data analysis tool into the curriculum.

TCH STR, SCI, SOC STUD

MONDAY, 8:45

STEV 1040

Rosenberger, James

Director of Guidance, Mariān High School

Critical Thinking Applied to Classroom Teaching (ID # 62)

Critical thinking skills are important with regards to the improvement of student academic performance. These skills can, and should, also be used in other educational ways which directly and indirectly influence students.

In this session, participants will work with critical thinking skills as they relate to the solving of classroom problems. The session will be divided into three parts. Firstly, the concepts of critical thinking and their uses in the solving of classroom problems will be presented. Secondly, participants will be placed in small groups and asked to use the skills of critical thinking for the purpose of designing a solution to a presented problem. Thirdly, each small group will present its problem and solution to the large group. Discussion will follow each presentation as time allows.

TEST, K-12, TCH STR

TUESDAY, 12:15

CH 10

Rovinescu, Olivia

Director, Lacolle Centre for Educational Innovation, Concordia University, Loyola Campus

Clifton Ruggles

Head Teacher, Options I High School

Reducing Prejudice: The Role of Critical Thinking (ID # 196)

Multi-cultural education, if it is to be effective in reducing prejudice and diffusing inter-racial conflicts, should have a cognitive component that enables students to respond to relevant reasons and rational considerations. Knowledge and appreciation of different cultures, though important, are not enough to reduce deeply ingrained patterns of thinking. The pedagogy of critical thinking has an important role to play in the reduction of prejudice because prejudice is sustained

and rationalized by faulty reasoning. Prejudice is fundamentally uncritical. It is governed by double standards, inconsistencies, unexamined assumptions, stereotypes, overgeneralization, and just about every category of fallacious reasoning. The workshop will focus on the extent to which powerful world views can interfere with thinking and meaning making and how what counts as a rational argument is determined by the world view to which it is attached. In this hands-on workshop, participants will engage in critical thinking about racism. The primary focus will be on critical examination of the discourse employed in providing accounts and justifications. Participants will be provided with the opportunity to critically analyze newspaper articles and excerpts from literature.

TCH STR, HS, C/U

MONDAY, 1:30

STEV 3076

Ruderman, Renee

Assistant Professor of English and Director, First Year Program, Metropolitan State College of Denver

Like Falling in Dreams: A Metaphorical Exercise to Engage Critical Thinking Across Disciplines (ID # 263)

In this creative and participatory session, metaphors will move from attendee's minds to paper, from paper to workshop, and from there outside the open portals to cross the disciplines. Metaphor has been relegated a lonely place in English departments, and, as Aristotle said, "Metaphorical ability is the mark of intelligence." It is time for the metaphor to do more than passively and proudly be part of figurative language; to be more roundly accepted as a device that heightens the power of language in all disciplines while it simultaneously leads to new possibilities for critical thinking. Participants will experience the power and surprise of metaphor during an experiential session which will lead to intriguing connections, pedagogical questions, and new teaching techniques which promote critical thinking.

CREAT, LANG, TCH STR

MONDAY, 12:15

NICH 166

Ruggiero, Vincent Ryan

Education Consultant

Why Aren't Students Learning? (ID # 15)

Every few months a new study reports the latest decline in students' academic performance and the media commentators once again point the finger of blame at parents and teachers. In doing so, they overlook the fact that the media themselves have a greater influence on young people than the combined influence of parents and teachers. This presentation will examine that influence, identify the harmful attitudes and habits it produces, and probe the ways those attitudes and habits obstruct the learning process. It will also suggest a number of ways in which thinking instruction can be used to combat the media's influence and stimulate enthusiasm for learning.

MEDIA, TCH STR, G

SUNDAY, 10:30

EPT

Ruggiero, Vincent Ryan

Education Consultant

"Ha! Ha! I'm Thinking" (ID # 17)

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, jokes, and witticisms, how the habits of mind used to generate and appreciate humor can help students think more creatively and critically. Giggling and chuckling will be permitted during this presentation, but guffawing will be prohibited.

TCH STR, CREAT, G

MONDAY, 8:45

EPT

Ruggiero, Vincent Ryan

Education Consultant

Thinking Critically About Self-Esteem (ID # 16)

Self-esteem theory is not only the reigning view in developmental psychology; it also is the dominant perspective in educational philosophy. Curiously, it has achieved this status without having been subjected to the searching critical analysis that greets most theories. This presentation will offer such an analysis and argue that the main tenets of self-esteem theory are illogical, that the seed of its error lies in the humanistic psychology from which it derives, and that the contemporary view of self is a contributing factor in our educational and social problems. The presentation will contrast the contemporary view of self with the view of Austrian psychotherapist Viktor Frankl, which enhances rather than undermines the lessons of home and school.

CONCEPT, G

MONDAY, 1:30

EPT

Ruggiero, Vincent Ryan

Education Consultant

"Who's to Say What's Right and Wrong?" (ID # 14)

Among the most interesting exercises in critical thinking are those that involve ethical issues. Unfortunately, many students regard such matters as purely relative and subjective, and as a result they are indisposed to conduct thoughtful inquiry, consider alternative views, and make careful judgments. This presentation will address the question, "How can teachers guide students beyond moral relativism without leading them to the opposite extreme, absolutism?" It will also present a framework for moral judgment that takes little time to teach and can be used in a wide variety of courses. Finally, it will demonstrate how to create challenging exercises in moral judgment.

CONCEPT, TCH STR, G

TUESDAY, 10:30

EPT

Ruggiero, Vincent Ryan*Education Consultant***Teaching Thinking Across the Curriculum (ID # 13)**

Thinking instruction is too important to be confined to a single course or a single department; it should be emphasized across the curriculum. Achieving this objective necessitates transforming faculty hesitancy (or outright resistance) into enthusiastic support. This presentation will suggest how that transformation can be best accomplished. It will also outline a teaching approach that joins creative and critical thinking and incorporates a number of other educational reform ideas, notably, inquiry method, collaborative learning, problem-based education, case study method, and writing across the curriculum.

TCH STR, STAFF DEV, CONCEPT

IVES WA

WEDNESDAY, 10:30

Rundall, Dick*Coodinator, Critical Thinking Exchange, Rock Valley College***Rock Valley College Model of Critical Thinking Across the Curriculum (ID # 64)**

The session will include a presentation of the background of the Critical Thinking Exchange, a low budget, comprehensive staff development effort at Rock Valley College; a description of the evolution of its activities over the past several years; information about its current activities; and discussion about how participants might adapt RVC's model to their schools.

STAFF DEV, C/U

DAR 143

MONDAY, 10:30

Sandeen, Cecile*Resource Specialist, Hope View School***Constructive Controversy: Making the Most Out of Conflict (ID # 176)**

This session will be participatory with a debriefing period following the exercise. Handouts will be provided. Constructive Controversy is a cooperative learning strategy developed by David and Roger Johnson, University of Minnesota. It enables students to research and develop positions, to challenge each other constructively, then to switch and expand positions, and finally to jointly construct new positions. It is very different from debate. This process supports the development of an understanding of multiple perspectives. Schools using peer mediation will be interested in the development of these processes in the classroom.

TCH STR, STAFF DEV, SOC STUD, K-12

IVES 78

MONDAY, 3:15

Schweers, Jr., William*Professor, University of Puerto Rico, Bayamon Campus***Madeleine Hudders***Professor, University of Puerto Rico, Rio Piedras Campus***Teaching Critical Thinking in Second or Foreign Language Instruction (ID # 165)**

After a review of the basic postulates behind current psycholinguistic theory of second language acquisition and the approaches and methodologies these imply, the presenters will explore ways of integrating a critical thinking

perspective into learning and communicative interaction tasks to be used in the second or foreign language classroom. Using a workshop format, the direct teaching of thinking skills will be applied to the creation of activities directed at developing grammatical, pragmatic, and discourse competence in the context of thematic or content-based cooperative learning. The complementary relationship between the strengthening of critical thinking skills and the acquisition of ESL/EFL will be emphasized.

TCH STR, LANG

NICH 166

MONDAY, 3:15

Scott, Stanley*Professor of English and Philosophy, University of Maine — Presque Isle***Teaching Writing as Critical and Creative Thinking (ID # 151)**

Creativity and critical thought are often conceived to be opposites. In discussions of the writing process, the word creativity is often loosely associated with spontaneity or uninhibited self-expression. Yet as we examine creative acts of mind as expressed in writing we see that spontaneity and critical thinking work together in a necessary unity, like freedom and discipline, to generate the creative process. Critical assessment in the teaching of writing sets "limits" to spontaneity. But when internalized by the student, these may become creative limits, like the banks that enable a river to flow. If properly handled in teaching, limits to the writing process take the form of standards that actually generate more, not less, spontaneity, and help to produce the "effective surprise" that Jerome Bruner identifies as the hallmark of any creative enterprise. In the act of writing, as in the teaching of writing, we are negotiating meaning. Understanding more about the making of meaning, and the concept of negotiation from principle, can help teachers nurture both spontaneity and the critical assessment that make up the dual aspects of the creative process in writing. Short presentation in lecture form, accompanied by discussion and brief exercises with participants.

TCH STR, CREAT, U

STEV 1002

TUESDAY, 3:15

Scriven, Michael*Professor, Western Michigan University***Taking Over the Universe: Radical Extensions of the Critical Thinking Curriculum Using the "Mini-Max Approach" (Minimum Jargon/Maximum Impact) (ID # 167)**

I. First, we review examples to remind us how CT can and should play a key role:

- a) Within the conventional disciplines;
- b) In the gaps between them;
- c) In the gap between them and the real world;
- d) In the real world;
- e) In forming attitudes, as well as ...
- f) In investigating, and ...
- g) In reflecting and synthesizing.

That about covers the universe of thought and action — the accessible universe.

II. Next we look at the dimensions of impact, a process which helps focus our efforts in CT. We define impact as a footprint — in the sands of life — with these dimensions:

- a) Depth, corresponding to the maximum extent to which the life of an impacted individual is changed for the better;
- b) Breadth, corresponding to the number of individuals that are affected;
- c) Length, corresponding to the duration of the impact in each individual. We also note the significance of
- d) The number of footprints;
- e) The direction of the footprints; and
- f) Their location. The way in which CT needs to be aimed in order to affect each of these dimensions is illustrated with examples.

III. Turning from the target to the ordinance, we define an approach to CT which maximizes impact while minimizing the "overhead costs". Overhead includes the use of jargon (cost to the students), the effort involved in marking student work (cost to the instructor), and the cost of required materials (a cost to the society).

CONCEPT, G
STEV 3008

SUNDAY, 10:30

Secco, Thomas

Professor of English and Philosophy, Triton College

The Flight of Reason and the Crisis of Knowledge (ID # 65)

For all practical purposes, the established sciences have withdrawn from the realm of public discourse. This is due, in part, to the intractability of the content, forms, and themes of these realms. This requires that the relations between reason, language, and institutions need to be examined in order to clarify those relations and to investigate their uses. Some thinkers have even cited the atrophy of cognition and linguistic skills in our era as a problem of devolution. However it is conceived, there is a crisis that affects the very lifeblood of our intellectual, national, and human community.

The following questions will be considered:

- How is the practice of reason related to the formation of knowledge? To the pursuit of truth? To the recognition of error?
- How is the function of reason related to the structure and practice of informal logic?
- How are both of these related to structure and practice of formal logic?
- How is the actual practice of arguments related to the reconstruction of arguments?
- How does reason (if it can) mediate among knowledge, meaning, and truth?
- What is the relation among the practice of reason, relevance, and the canons of evidence?

CONCEPT, ADV
ART 108

WEDNESDAY, 10:30

Seech, Zachary

Professor of Philosophy, Director, Lincoln Middle School Critical Thinking Project, Palomar College

Teaching Open-Mindedness in Grades 5–12 (ID # 270)

If we teach only technical skills of analysis, young people may use these skills in the service of their own prior bias, just as adults so often do. Thus we must first, or at the same time, teach open-mindedness — a willingness to acknowledge strengths in rival arguments and weaknesses in our own. Open-mindedness shows itself in behaviors that are more reliably nurtured through modeling than by didactic means. Classroom activities that foster open-mindedness (including Philosophical Chairs and scripting) will be demonstrated, and school and curricular structures that buttress this outlook will be explored.

TCH STR, GRADES 5-12

TUESDAY, 10:30

IVES 34

Soghikian (McIntyre), Sandra

ESL Program, University of California Extension

Critical Thinking in ESL (ID # 299)

The purpose of this workshop is to examine the state of critical thinking in the teaching of English as a second language. The presenter will discuss 1) the importance of critical thinking in language teaching as it relates to the need to motivate students to use higher level language/thinking strategies and skills; 2) a "Critical Thinking in ESL" course which has been offered to ESL teachers in the university ESL Certificate program; and 3) the need to develop critical thinking as an integral part of ESL programs. The members of the audience will then be asked to contribute to interactive discussions and activities designed to solicit ideas and information about the manner in which Critical Thinking is incorporated or could be incorporated into ESL classess programs.

The information shared during this workshop will contribute to the development of draft statement of the state of critical thinking in ESL. This statement will be provided to the National Council for Excellence in Critical Thinking Instruction.

TUESDAY, 10:30

NH 166

Spear, Ted

Columbia College

A Philosophical Critique of Student Assessment Practices (ID # 8)

Paper, with opportunity for discussion. This paper explores the ways in which current practices of testing, marking, and grading undermine the educative project and are morally suspect. Moving beyond a technical critique of testing instruments, the approach here is to raise questions about the very defensibility of the enterprise as a whole. A distinction is offered between classificatory assessment and pedagogical assessment, with the former being identified as the source of many of our present difficulties. Preliminary (and tentative) suggestions for improvement are also advanced.

TUESDAY, 10:30

TEST
CH 20

role, Carole

Associate Professor of History, California State University, Los Angeles

Anthony Bernier

Learning Resource Center Study Group Leader, California State University, Los Angeles

History Pedagogy, Language, and Student Hermeneutics: Addressing a Student Audience (ID # 220)

A great deal of current attention focuses on changing student demographics and how those changes impact course content, yet very little consideration has been devoted to how a diverse student audience may also require reformulations of history pedagogy itself. This session inaugurates a theoretical approach toward examining two categories of language typologies commonly inhibiting faculty-student interaction. One category of typologies applies primarily to students whose first language is not English; a second, to students new to academic culture, as well. By adapting eight conventional interactions, faculty can address the student audience and set the stage for higher levels of comprehension and performance.

The workshop presents a toolbox of techniques for introducing students to academic discourses and progressively building skills.

TCH STR, SOC STUD, U

WEDNESDAY, 3:15

STEV 3076

Depien, Bill

Director, Center for Problem-Based Learning, Illinois Mathematics and Science Academy

Problem Based Learning: Integrating Theory with Practice in the K-12 Classroom (ID # 24)

This workshop will begin with a problem-based learning activity from "Science, Society, and the Future", an interdisciplinary high school course that investigates science issues impacting on society and involving conflicting ethical appeals. An instructional model that actively engages students in problem solving around ill-structured problems will be presented that is currently being tested at grades K-12 in traditional classes and in interdisciplinary settings. Preliminary research findings on problem solving and information acquisition comparing traditional classrooms with problem-based settings will be offered. The workshop will close with a look at staff and curriculum development issues related to problem-based instructional episodes.

TCH STR, K-12, SCI

WEDNESDAY, 1:30

DAR 122

Donner, Mark

Associate Professor of Communication Studies, CSU, Sacramento

Wanda Martin

Instructor in Communication Studies, Cal State University, Sacramento

Outcome-Mapping: A Search Model for Pathways to Goal Achievement (ID # 148)

This workshop presents a practical model that participants will be able to use individually or with a peer (coach) to facilitate analysis of barriers to or problems related to achieving teaching goals. Outcome-mapping, as a critical thinking model, facilitates thinking, personal resourcefulness, and precision in

problem analysis, goal-setting, and planning. The outcome-mapping model will be presented, and participants will work extensively with it. Time will be reserved to debrief and discuss possible wider applications of the model as a critical thinking tool. Our goals for participants are: 1) to practice using outcome-mapping skillfully, 2) to visualize its process and its usefulness in their own planning, 3) to speculate on applications of this model outside of the teaching situation, and 4) to begin to internalize the process of outcome-mapping.

CONCEPT, STAFF DEV, TCH STR

TUESDAY, 3:15

IVES 78

Storer, Christopher

Instructor of Philosophy, De Anza College

Thinking About Composition (ID # 98)

The creation of a two-year transfer core curriculum for California's higher education system has created a brouhaha among composition and critical thinking instructors. This suggests that, in spite of the history of the argument that students learn critical thinking in English courses, composition instructors are not confident that they do teach critical thought. Equally, critical thinking instructors do not appear to have turned their critical skills to the problem of composition pedagogy. I suspect that this is not only a California phenomenon. I plan to present a composition model for argumentative essays built on the idea that argumentative writing should primarily be directed to an audience which the author should assume disagrees with the thesis. I will argue that traditional models for composition, mirroring didactic pedagogy by calling for an early statement of the thesis, create an inverted essay form. The model will be presented with Socratic interludes and, I hope, lead to lively discussions.

TCH STR, LANG, CC

WEDNESDAY, 10:30

NICH 173

Strong, Charles William

Associate Professor of English, Cal Poly, San Luis Obispo

Critical Thinking and the Analysis of Language (ID # 110)

All discussion presupposes meaning, but meaning is not found merely in systems of signs (syntax) and their relationship to the things they represent (semantics), but also in the use made of signs by speakers and writers. Pragmatics, the branch of linguistics that deals with speech acts and discourse analysis, has much to say to those concerned with critical thinking.

ADV

TUESDAY, 8:45

STEV 3040

Swartz, Robert

Co-Director, The National Center for Teaching Thinking

Sandra Parks

Co-Director, National Center for Teaching Thinking

Infusing Critical and Creative Thinking in Content Area Instruction (ID # 36)

This presentation will focus on lesson design and instructional strategies for infusing direct instruction in critical and creative thinking into the content areas. Lessons designed for this purpose from K-12 instruction will be demonstrated

d analyzed. A framework for constructing such lessons will be provided. emphasis will be put on how to employ effective questioning techniques, strategies that promote students' reflection on their thinking, and techniques for the transfer and internalization of specific thinking skills in an integrated instructional plan to yield both improvements in the quality of student thinking and enhanced content learning. Special strategies that enhance the effectiveness of such lessons, like the use of graphic organizers and collaborative learning, will be demonstrated. Participants will be provided with samples of the lessons and materials used in the presentation.

TCH STR
DAR 108

NDAY, 10:30

vartz, Robert

Director, The National Center for Teaching Thinking

Assessing the Quality of Student Thinking: Performance Assessment Techniques for Classroom Teachers (ID # 37)

This presentation will demonstrate alternative assessment tasks for students that reveal both how well students are thinking as well as their thoughtful grasp of effective use of content being taught in the subject areas. Tasks that call for extended student responses and active student performance will be illustrated. Participants will be shown ways to construct such assessment tasks as well as how to develop standards of response and performance that can be used to score and grade these. Participants will be provided with samples of the materials used in the demonstrations and copies of back-up lessons that prepare students for this type of assessment.

TEST
EPT

NDAY, 10:30

vris, Carol

Special Psychologist, Writer

The Mismeasure of Woman (ID # 9)

"Man is the measure of all things," wrote the philosopher Protagoras five centuries before Christ, and that has been the problem ever since. How *does* man fit in? This lecture will examine three popular efforts to answer this question. Each of these popular ways of thinking about men and women has its adherents and detractors, and each leads to different consequences for how we live our lives:

- * Men are normal; women, being "opposite", are deficient.
- * Men are normal; women are opposite from men, but superior to them.
- * Men are normal, and women are or should be like them.

We will look at the stories behind the headlines and popular theories of sex differences, traveling the trail of the universal male, showing how the belief in the normalcy guides scientific inquiry, shapes its results, and determines which findings make the news and which findings we live by. For example, the research supports these common ideas:

- that men's and women's brains are specialized for different skills.
- that women are "naturally" more nurturant, moral, peace-loving, and earth-friendly than men.
- that women are uncontrollably affected by their hormones, which cause all sorts of "syndromes" and mood swings.

- that women are sociobiologically programmed to be sexually faithful and responsive to the pursuing male, while the male is designed for promiscuity and pursuit.
- that women are the experts at love and intimacy, whereas men are emotionally repressed and inhibited.

By bringing hidden assumptions into the light, Tavis will consider how our ways of thinking about women and men lead to certain predictable results in law and medicine, in social reforms, in standards of mental health, in the intimacies of sex and love, and in our private reveries of what is possible.

G
EPT

SUNDAY, 3:15

Tetraut, Alma

School Psychologist, Nantucket Public Schools

Transfer of Critical and Creative Thinking Through Development of the Dispositions (ID # 141)

Recent milestones in educational reform include a more deliberate focus on teaching critical thinking. However, the emphasis has been on thinking skills, (such as causal reasoning, predicting, and uncovering assumptions) while critical and creative thinking dispositions, (such as looking for alternatives, openmindedness, and suspending judgement until all evidence is considered) has been ignored. These dispositions, essential to critical thinking, and especially to the transfer of critical thinking skills beyond the classroom to everyday reasoning, are the focus of this workshop. Following a theoretical overview of critical and creative thinking and the role of the dispositions, we will study developmental aspects of the dispositions. Assessment instruments will be explored for evaluating the dispositions in students Pre-K to grade 12. Through an interactive format, group participants will integrate their own experiences with children to generate an understanding of thinking dispositions. Ways of identifying and nurturing them in children will be a prime focus and help with direct classroom application.

CONCEPT, TEST, ADV, K-12

TUESDAY, 10:30

STEV 3040

Tominaga, Thomas

Associate Professor of Philosophy, University of Nevada, Las Vegas

Towards a Confucian Approach to Cultivating the Reasoning Mind for a Social Order (ID # 121)

Confucius, a dedicated Chinese educator, administrator, humanist, and philosopher, and his influential followers (Mencius, Chu Hsi, Wang Yang-ming) were quite concerned with cultivating and applying the reasoning mind to practical matters rather than with idle speculation or abstract generalization. Accordingly it would be misleading to say that within a Confucian framework there is a marked absence of and disregard for critical thinking or some version of it, given the concern to cultivate the reasoning mind for a social order. On the contrary, implicit in the paradigmatic (personal example) style of teaching, reasoning, and living championed by Confucius and his followers is a Confucian approach that is relevant and instrumental to the cultivation of the reasoning mind in a cross-cultural and contemporary context. This process of cultivating the reasoning mind consists of: 1) recognizing a common human nature (benevolence); 2) practice of self-cultivation; 3) rectification of names; 4)

investigation of things; 5) extension of knowledge; and 6) unity of knowledge and action. To discuss and demonstrate this process and to reach some conclusions will be the main objective of my paper.

TCH STR, CREAT, SOC STUD

TUESDAY, 8:45

STEV 3072

Trujillo, Jr, René

Assistant Professor of Philosophy, San Jose State University

Integrating African and Latin American Materials into Critical Thinking

(ID # 283)

There is a clear and insidious myopathy that pervades institutionalized philosophy on our campuses. It fails to recognize contributions that would otherwise broaden and enrich its practice. The ever-growing demands of our increasingly diverse student bodies are making a long overdue reassessment necessary. It is in this spirit that we will look at sources within Latin American and African traditions for critical thinking courses. These materials are increasingly accessible and integratable into existing courses. Strategies for developing new courses that concentrate on such materials will also be investigated. We will discuss the rationale behind appealing to such materials in a multi-ethnic environment and how these materials facilitate the educational process for a diverse student body.

Participants will be encouraged to share their use of other materials, and their experience with these concerns in general. The goal will be a highly interactive workshop.

TCH STR, C/U

TUESDAY, 10:30

STEV 3076

Tursi, James

Social Studies Teacher, Prairie High School

The Question of What Constitutes Authentic Testing in a Typical High School Social Studies Class (ID # 38)

(ID # 38)

A lecture, question and answer session on the use of critical thinking skills in high school American History classes as both a teaching/learning technique and as an evaluation process. The presentation will focus on the philosophy behind the acceptance and use of different methods of assessment, the activities or methods used to monitor progress for growth or to evaluate for grades, and the application of different techniques for particular outcomes. The presentation will also address the differences in assessment for knowledge acquisition, for utilization of critical thinking skills, for demonstration of creative problem solving, and for performance-based activities.

TEST, SOC STUD, HS

TUESDAY, 1:30

CH 20

Unrau, Norman

Lecturer in Education, Saint Mary's College

Fostering Critical Reading in English and Social Studies Through Claim Analysis (ID # 96)

(ID # 96)

This presentation, workshop, and discussion will focus on practical ways in which teachers can help students at the junior and senior high school levels read more critically. While students are frequently able to construct a content

representation of texts which they read, they often have difficulty responding thoughtfully to those text constructions. By learning to identify and classify types of claims in arguments — or in expository texts — students can begin to think creatively and critically about the purposes that writers might have for composing texts and about the evidence that writers provide to substantiate their claims. Strategies to encourage a reader's reflection upon assumptions, values, and ideologies embedded in texts will also be explored.

The approaches presented should be of particular help to teachers of English and social studies.

TCH STR, LANG, SOC STUD

TUESDAY, 1:30

NICH 173

Van Veuren, Pieter

Senior Lecturer, Rand Afrikaans University

"Ideological" Fallacies (ID # 225)

This paper argues that the critique which logic employs against fallacious reasoning may be extended to a critique of ideological argumentation. This procedure poses two problems. The first concerns the criteria for the identification of "ideological" fallacies and calls for a clarification of the concept of ideology. The second problem concerns the place which "ideological" fallacies are to be accorded in a "taxonomy" of fallacies. Following this theoretical discussion two instances of "ideological" fallacies (an "appeal to the public interest" and an "appeal to the will of God") are presented and discussed. In conclusion, I argue that critical thinking can become more critical by making students more aware of the social world in which argumentative discourse sometimes serves to establish, justify, and dissimulate relations of domination and exploitation.

TCH STR, U

MONDAY, 8:45

STEV 3038

Vasquez, Marlen Oliver

Coordinator, Gerontology Program, University of Puerto Rico

Mayra Vega Gerena

Community Outreach Coordinator for the Puerto Rico Cancer Information Service, University of Puerto Rico

Un Modelo de Pensamiento para la Salud, Educafon: Teoría y Practica (A Model of Thinking for Health Education: Theory and Practice) (Presented in Spanish) (ID # 163)

Each discipline represents a particular way of thinking that a person applies, consciously or unconsciously, to the solution of problems related to his or her professional field of work. A model of thought is an abstract representation of a systematic and structured way of thinking that allows us to understand the reality, that is, to organize the information received from the environment and process it in a meaningful way according to our objectives.

The differences between the ways of thinking of a health educator and other professionals is found in the conceptual or epistemological framework that he or she uses to interpret a specific health situation and solve the specific health problem that it poses. The model of thinking for health educators is characterized by the systematic conjunction of fundamental concepts particular to the discipline, a particular approach, or intellectual skills and specific attitudes that

permit us to make a meaningful interpretation of a situation and organize the information received, formulate judgements, and make decisions to solve health education problems.

The model of thinking is an instrument that provides a systematic guide for the development of a health education program in all its phases. As such, it must be taught, explicitly and deliberately, to the health education students. In this way, students will increase their information processing and problem solving skills, using the health education conceptual framework. The development of these intellectual skills in the students will allow them to solve problems in any health situation and in any specific context. The model will be discussed and illustrated with examples from health education teaching and professional practice.

CONCEPT, TCH STR, U

MONDAY, 8:45

CH 14

Veit, Walter

Professor of Social Sciences, Burlington County College

Sociology and the Moral Imperative (ID # 230)

It seems redundant to think in terms of "critical" sociology, since the discipline has been variously regarded either as a banal discovery of the obvious, or a serious threat to the social order, although it seems hard to imagine how it could be both. It has not been a fixture of the academy in the old East Bloc/Soviet states because of its inherent threat to the social order, and yet somewhat ironically, it is often considered to be too left leaning for the capitalist establishment in the west. All of these assessments miss the mark, however, inasmuch as a scholarly, scientific — and therefore critical — perspective, requires an analytical questioning of the obvious regardless of the dominant political ideology. "Who is doing what?" "What is being done?" and "Why?" are core questions.

The special contribution that it makes are in time of great social crises, and in fact, just as the industrial revolution saw its emergence in the need to understand the social dislocations taking place, the present cataclysmic changes also provide a moral requirement that it turn its attention on the "new world order". This session will set forth a rationale for asserting and emphasizing sociology's contributions to the curriculum insofar as such insights may help students cope with the domestic and international political upheavals now shaking the world.

SOC STUD

TUESDAY, 3:15

STEV 2052

Velk, Robert J.

Director of Management Development Center and Executive MBA Program, University of New Mexico

Hot Cognition: Teaching Critical Thinking to Busy, Experienced, Often Cynical Adults — Analyzing Ill-Defined Problems (ID # 142)

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 problem," "the low productivity problem," "a lack of creativity," or "poor morale" constitute an understanding of the situation. Dangerously premature decision-making (usually involving brainstorming) aimed at solving such global conceptions is

often the norm. This presentation will overview a variety of thinking techniques which have proven successful in helping experienced adults throughout the world understand what it really means to define or understand current real-life situations.

TCH STR, STAFF DEV, U

MONDAY, 10:30

STEV 2050

Velk, Robert J.

Director of Management Development Center and Executive MBA Program, University of New Mexico

Hot Cognition: The Problem with the Word Problem (ID # 143)

What is the difference between problem-solving and decision-making? Are they just different kinds of decision situations?

Metacognition involves monitoring your content and your process, selecting the appropriate analytical procedures, and changing strategies when appropriate. Knowing the very real differences between choice problems, cause problems, ill-defined problems, implementation problems, budgeting problems, and strategic planning problems, etc., is critical to selecting the most appropriate method of analysis to use on current, complex, real-life situations.

This presentation will cover heuristics taught to senior executives, technical experts, and government officials worldwide to help them develop a concise statement of the question-at-issue and select the most appropriate method of analysis. A convergent problem-solving (not decision-making) method will also be revealed.

TCH STR, STAFF DEV, U

MONDAY, 3:15

STEV 2050

VerLinden, Jay G.

Assistant Professor of Speech Communication, Humboldt State University

Why Do You Believe That? Backing Evidence in Everyday Argument (ID # 86)

An essential element in critical thinking, reasoning, and argumentation is the use of evidence to support a claim. Texts regularly identify types of evidence and explain how evidence *should* be evaluated, but rarely investigate methods people *do* use to determine the value of evidence. In this workshop the group will explore the possibilities for "backing" grounds in everyday argumentation, identifying potential justifications for accepting or rejecting evidence. To spur discussion participants should try to come to the discussion with some "real life" examples of evidence used to support claims.

HS, C/U, CONCEPT

SUNDAY, 12:15

IVES 34

Villalón, Jose R.

Professor, University of Puerto Rico, Ponce Campus

Pensamiento Crítico y las Dimensiones Afectivas de Cognición y Comportamiento (ID # 152)

(Critical Thinking and the Affective Dimensions of Cognition and Behavior)
(ID # 301)

Understanding the process and use of critical thinking may require new insights on the functions and conditions of emotions on cognition and behavior.

Some critical remarks are made on the views of current cognitive science trends as a basis for the critical thinking approach. The paper offers some reflections on the definition of the affective realm in the frame of the whole human mind. It also discusses the role of reason in controlling our emotions. But emotions are presented as more than just disrupting elements in reasoning. They are filters for attention selection, support for intellectual activity, indices for development, signs of human adaption and evolution, determinants for moral meanings, and a way for human perfectibility in the face of an ever increasing complexity of civilized life. A concluding remark is made in regard to the shifting evaluation of dionysiac and post-modern emotional trends.

CONCEPT, ADV
CH 14

SUNDAY, 3:15

This session will be repeated in English
Monday, at 8:45 am in Darwin 139

Villalón, Jose R.

Professor, University of Puerto Rico, Ponce Campus

Mythical Thinking: A Permanent Thinking Style That Must Be Taken Care of (ID # 153)

It is argued that reasoning is only one thinking style, albeit responsible for splendid developments, especially in science and technology. It is further argued that critical thinking in the strong sense may not be based in reason alone. This paper intends to show that there are sound arguments for "mythical thinking" as an alternative and indispensable way of representing reality, which should not be confused with pre-logical thinking, which is permanent in human civilization and is intimately connected with the genesis of values. The relationships between logical reasoning and mythical thinking are studied, showing that they have mutually irreducible structures, independent rules of validity, dangers of contamination, and areas of legitimate usage. Suggestions are made for productive analysis and utilization of mythical thinking in the teaching/learning situation. Higher order thinking, artistic creation, and religious thought are related to the predominant use of mythical thinking.

CONCEPT, ADV
STEV 3040

MONDAY, 1:30

Villarini, Angel R.

Director, Project for the Development of Thinking Skills, University of Puerto Rico

Understanding and Fostering Intellectual Attitudes (ID # 114)

Concepts, skills and attitudes constitute the three fundamental dimensions of reflective and critical thinking. Educational psychologists and educators have paid a lot of attention to the first two dimensions, but little to the third. In this participatory session we will explore the nature and developmental process of intellectual attitudes and the role that they play in the thinking process. We will work on the formulation of teaching strategies and techniques that can help students to develop those intellectual attitudes that are a necessity for reflective and critical thinking.

CONCEPT, TCH STR, G
CH 10

SUNDAY, 12:15

Villarini, Angel R.

Director, Project for the Development of Thinking Skills, University of Puerto Rico

Dan Weil

Inservice Specialist, Multi-Cultural Education, Research Assistant, Center for Critical Thinking

Judi Hirsch

Resource Specialist, Oakland Public Schools and Instructor, Cal State Hayward

William Schweers

Professor, University of Puerto Rico, Bayamon Campus

Hilda Caputis

Teacher, University of Puerto Rico

Critical Thinking and Critical Consciousness: Ideas for a Critical Thinking and Liberatory Pedagogy of the Hispanic Communities in the United States (ID # 113)

It seems that the critical thinking movement in the USA has not been as successful as it probably could be within the Hispanic community. By using Paolo Freire's liberatory pedagogy theory, and their work experience with Hispanic communities, the participants in this panel will discuss the theoretical and practical reasons for this situation, and consider what strategies and methods can help us to overcome it. The audience will have ample opportunity to participate in the discussion.

CONCEPT, G
DAR 139

MONDAY, 10:30

Vogel, Linda

English Instructor and Reading Specialist, Skyline Community College

Developing Critical Reading and Thinking Skills with "At Risk" Students (ID # 234)

The "at risk" students who are advised to take developmental reading classes need to learn active reading strategies that develop critical reading and thinking skills. The strategies that help students develop these skills are those which require students to re-organize and re-structure the information using their own questions. Skills of summarizing, questioning, evaluating, inferring, and drawing conclusions can be modeled and taught using a variety of teaching techniques. The use of the question paper, tag question, and reciprocal questioning will be discussed as techniques for developing these skills.

LANG, TCH STR
NICH 173

MONDAY, 12:15

Voorhees, Burton

Professor of Mathematics, Athabasca

Developing a Course in Scientific Reasoning (ID # 215)

In 1989 Athabasca University decided that a core course for the B.Sc. degree would be a three credit course in scientific reasoning. Although this topic is covered in traditional philosophy of science courses, the focus in these courses is generally critical, from the point of view of a philosopher. The Athabasca

course, to the contrary, has been conceived as a "how to" course, with the goal of providing students with some introduction to the actual reasoning processes used in the doing of science. This course is due to be offered for the first time in the fall of 1992. In this presentation we will describe the various elements of scientific reasoning covered in the course: (What is Reason? Logics: Aristotelian, dialectical, trialectical; propositional calculus; principles of reasoning; induction and deduction; analysis and synthesis; functional and structural explanation; mathematical reasoning; mathematical modeling; modeling in general; statistical inference; analogical and empathetical reasoning; imagery; symmetries and distinctions; scientific heuristics; and principles of science.)

MATH, SCI, U
DAR 122

TUESDAY, 8:45

Waters, Judith

Fairleigh Dickinson University

Appeal to Authority: A Love-Hate Relationship (ID # 297)

There are two clear, simultaneous, and seemingly antithetical trends in society with respect to attitudes towards authority: deference and defiance. On the one hand, the public, young and old alike, search for charismatic leaders and problem solvers to deal with today's complex issues. They appear happy to abdicate their decision making responsibilities and defer to experts, the masters in many fields ranging from medicine to politics who are supposed to come equipped with the "right answers". Given some of our complex and even life threatening issues and the tendency of experts not to share hard-won knowledge and skills, such behavior is not really surprising. On the other hand, challenges to authority figures in every field, but most especially in the classroom, have almost reached crisis proportions. One viable explanation is that our leaders have demonstrated a lack of skill and a level of moral turpitude that borders on the criminal. Another suggestion is that the bases of authority and power are eroding. In a multi-determined situation both of the above may be "true" or even some other plausible explanations may obtain. Whatever the reasons, society is left with some serious questions to answer such as, "How does one socialize children to recognize and obey legitimate authorities when necessary while still nurturing the sense of rational skepticism that is necessary for mature adults?" and "How does one raise children to become authority figures who will not usurp their powers and respond defensively and with hostility to challenges?" As authority figures ourselves (some people still see faculty as authorities), we must be concerned with the duality of deference and defiance and how the words of an authority influence the critical thinking process.

G

TUESDAY, 3:15

IVES 34

Webster, Yehudi O.

Professor of Pan-African Studies, Cal State University, Los Angeles

Multi-Culturalism and Critical Thinking: Compatibility or Competition?

(Repeat Session)

Multi-culturalism is open to a variety of diverse interpretations, as diverse as the culture-concept itself. But it has been proposed as a solution to some educational and social problems. It promises to reduce stereotyping and prejudiced opinions, increase awareness of and sensitivity to America's cultural diversity, and combat the legacies of racism and ethnocentrism which permeate educational processes, the curriculum, and society. Advocates of critical thinking

make similar promises. This presentation suggests that a critical examination of Multi-culturalism would discover that it is incompatible with critical thinking and cannot deliver on its promises. To mention three incompatibilities: 1) The dominant conception of multi-culturalism downplays the role of reasoning in human behavior and affirms an irrational culture basis of behavior. 2) Cultures cannot be taught or cultivated in schools, but within courses on critical thinking the various conceptions of culture used in anthropological studies can be analyzed, and this would not be called multi-culturalism. 3) Multi-culturalism affirms a relativist ethos in which each individual or group has its own "perspective," which leads to all perspectives being relatively right. The alternative to Multi-culturalism is to foster critical thinking about racial and cultural theories of society.

G

(ID # 210)

MONDAY, 10:30

CH 68

(ID # 211)

WEDNESDAY, 8:45

SU 100

Webster, Yehudi O.

Are There White and Black People? Reasoning About Racial Classification

(ID # 209)

Professor of Pan-African Studies, Cal State University, Los Angeles

Criticisms of racial classification have come from every discipline except philosophy. Yet racial classifications exhibit a multitude of logical flaws, as in the syllogism: "I have white skin. Therefore, I am a white." "People regard themselves as black. Therefore, race is a reality." "Only black people have been enslaved. Therefore, white people cannot appreciate the black experience." This presentation will outline the theoretical-educational source of these and other fallacies, and indicate how critical thinking skills must be integrated with courses on racial and ethnic relations. It will therefore also address hidden (realist and relativist) philosophical inputs in the training of teachers and social scientists.

G, SOC STUD

TUESDAY, 3:15

EPT

Weddle, Perry

Professor of Philosophy, CSU, Sacramento

Cigarette Advertising and the Press: A Critical Thinking Case Study

(ID # 223)

This workshop highlights how real controversy can be used to teach and reinforce fundamental argumentation skills. The controversy — halfway between classroom-artificial and societally gut-wrenching — is over cigarette advertising: What policy should publishers and/or the government adopt? Four positions are outlined, each by a distinguished arguer: "The Novelist", William Styron; "The Civil Libertarian", Ira Glasser; "The Regulator", former FTC head Robert Pertchuk; and "The Law Professor Judge", Sanford Levinson.

In the presenter's opinion the unit works because:

- The topic is nontrivial but unlike, say, abortion, settleable.
- The Symposium exhibits multiple ways to skin a cat.

- c) The styles of arguing differ strikingly.
d) The conclusions, though different, show how an issue may be handled given careful, rational thinking.

Discussion to follow.

TCH STR, MEDIA
STEV 3049

SUNDAY, 10:30

Weddle, Perry

Professor of Philosophy, CSU, Sacramento

Thinking Critically About Images (ID # 222)

This slide presentation invites participants, including the presenter, to refine their skills at visual literacy. A couple dozen cases will be projected for discussion, most of them from art history, but some of them from such banal sources as, say, "Gone With The Wind," Cal Worthington, or last week's *New Yorker* SONY ad. The thesis is that images can be powerful, and so require, as much as does verbal text, careful critical scrutiny.

G

MONDAY, 10:30

STEV 3049

Weddle, Perry

Professor of Philosophy, CSU, Sacramento

The "Aesthetic" Argument (ID # 224)

Most patterns of reasoning taught in informal logic classes end in conclusions stating what is the case: "All men *are* mortal." "All swans *are* white." "The best car in its price category *is* the Mercedes 680 SL." Yet a survey of any 50 arguments from the realms from which critical thinking instruction draws will reveal the vast majority to have conclusions *not* about states of being. Instead they urge action: "Buy my product." "Vote for me." "Boycott X." "Embrace Y." "Mistrust Z." and so on. Arguments ending not, "X *is* the case" but instead, "Do X" are called "practical" (in the "do" sense of the word, as in, "Joe still practices dentistry.") A model of "good" practical argument will be presented for discussion.

The "aesthetic" argument is a variant of the practical. In it one or more premises is contested or subject to irresolvable dispute. Does this make it hopeless? The conclusion can be, "at least *consider* this," something which Philistines, and others, often refuse to do. A handout will help with the (not very technical) technicalities.

ADV

TUESDAY, 10:30

IVES 119

Weil, Dan

Inservice Specialist, Multi-Cultural Education, Research Assistant, Center for Critical Thinking

On the Nature of Prejudice: Cultural Literacy and Fairminded Critical Thinking (ID # 28)

As the United States experiences increased diversity, bigotry and racial prejudice continue to hamper reasoning about social reality. Though laudable in their efforts, most multi-cultural curricula tend to rest their principles and

strategies on the assumption that merely giving students more information about other cultures will reduce racial hatred, bigotry, and intolerance. We disagree. Racist attitudes and assumptions must be confronted with dialogical reasoning. Critical thinking about cultural diversity should be a primary goal of public and private education. This workshop will focus on developing a critical multi-cultural curriculum based on principles and strategies of critical thinking that truly promise to enhance reasoning about diversity in all grade levels.

K-12, SOC STUD

SUNDAY, 3:15

STEV 3076

Weil, Dan

Inservice Specialist, Multi-Cultural Education, Research Assistant, Center for Critical Thinking

Angel Villarini

Director, Project for the Development of Thinking Skills, University of Puerto Rico

Judi Hirsch

Resource Specialist, Oakland Public Schools and Instructor, Cal State Hayward

Yehudi Webster

Professor of Pan-African Studies, California State University, Los Angeles

Judi Bank

Instructor in Language Arts and Reading, Los Medanos College

Olivia Rovinescu

Director, LaColle Centre for Educational Innovation, Concordia University, Loyola Campus

Critical Thinking and the Issue of Multi-Culturalism (ID # 300)

The changing demographics of today's society, coupled with an increase in race related tensions, have called for a demand for a multi-cultural curriculum. This panel will present various viewpoints concerning multi-culturalism, critical thinking, and how we can begin to provide education for all persons regardless of their backgrounds. Audience participation will be strongly encouraged.

G

TUESDAY, 10:30

STEV 3072

Weil, Dan

Inservice Specialist, Multi-Cultural Education, Research Assistant, Center for Critical Thinking

Critical Thinking in Social Studies: Reasoning Multi-Culturally (ID # 29)

Many current trends in multi-cultural education wrongly assume that merely giving students more information about other cultures will increase cultural awareness and tolerance. Instead, students need to *reason their way through* a variety of perspectives of other cultures. This session will illustrate how instruction can be redesigned in such a way as to develop students' understanding of other cultures through developing their critical thinking. Such an approach not

only enables students to develop a deep understanding of other cultural perspectives, but also avoids the danger of multi-cultural education inadvertently promoting relativism.

TCH STR, SOC STUD, MID, HS
CH 68

TUESDAY, 1:30

Weinstein, Mark

Associate Director, Institute for Critical Thinking, Montclair State College

Rationalistic Hopes and Utopian Visions (ID # 158)

The recent critique of enlightenment rationalism evident in post-modernism has brought into question the possibility of rational political change and progressive educational reform. The rejection of socialist projects offers a similar challenge to the advocacy of progressive reform based on Marxist or Neo-Marxist models. Where can we turn? We will examine recent developments in critical thinking in the hope of identifying and justifying a modest rationalism that includes social, historical, and economic perspectives. We will argue that such a modest rationalism is both justifiable and needed if educational reform, in the interest of increasing access to political, social, and economic power, is to be possible.

ADV, G, SOC STUD

STEV 3040

MONDAY, 10:30

Weinstein, Mark

Associate Director, Institute for Critical Thinking, Montclair State College

Critical Thinking Across the College Curriculum: What Faculty Wants and Needs (ID # 161)

Critical thinking across the college curriculum engages with the disciplinary commitments of faculty. Such commitments do not have a clear and compelling relation to typical arrays of general thinking skills or informal logic concepts. Thus, much of the available literature in critical thinking is not helpful to faculty who, nevertheless, accept the critical thinking ideal of autonomous, thoughtful, and reflective students. The experience of faculty development at Montclair State has, however, pointed to a number of general issues that seem to be of relevance to critical thinking across the disciplines. These include concern with the epistemological assumptions of the various fields, argumentation within disciplines, the construction of appropriate academic tasks, educational objectives within particular fields, issues of the canon, and the motivational aspects of learning that inhibit students' accepting critical thinking as an appropriate educational objective.

What we hope to suggest by this presentation is that critical thinking advocates should focus more on these sorts of concerns and less on the standard fare extrapolated from introductory level logic courses.

STAFF DEV, C/U

CH 10

TUESDAY, 10:30

Weinstein, Mark

Associate Director, Institute for Critical Thinking, Montclair State College

Critical Thinking and the Goals of Science Education (ID # 160)

The traditional purpose of science education, especially at the post-secondary level, is to identify and train those few students with the natural ability and motivation to become science professionals. In this presentation, a model for

general science literacy will be offered. The analysis of critical thinking developed by Matthew Lipman, and at the heart of the practice at the Institute for Critical Thinking at Montclair State, will furnish the framework around which the demands of general science literacy will be articulated.

G, SCI

SU 100

TUESDAY, 3:15

Weinstein, Mark

Associate Director, Institute for Critical Thinking, Montclair State College

Critical Thinking: The Great Debate (ID # 159)

Since John McPeck's book *Critical Thinking and Education* was published in 1981, the central issue in the field has been that of general versus domain specific thinking skills. Richard Paul's recently published *Critical Thinking: What Every Person Needs to Survive in a Rapidly Changing World*, presents a model of critical thinking against which McPeck's complaints seem both shallow and ill-conceived. The purpose of this presentation is to develop Paul's model and to subject it to a deeper version of McPeck's challenge. This reconfigures the debate and exposes fundamental philosophical issues that connect critical thinking with perennial issues in the philosophy of language and the recent anti-rationalist, post-modernist debate.

ADV, CONCEPT, G

STEV 2049

WEDNESDAY, 8:45

West, James

Instructor in Philosophy, Leeward Community College, University of Hawaii

What Does Sonoma Have to Do with Athens and Jerusalem? (ID # 63)

This is a presentation/demonstration of an effective way to teach students to distinguish the various "logics" of philosophy, theology, and science. This workshop is based on the belief that "strong sense critical thinking" can best be taught by allowing students to *actively engage in collaborative problem solving exercises*. The workshop will provide participants with effective strategies for introducing the elements and perfections of critical thinking into their courses in the natural sciences, social sciences, philosophy, or theology.

Participants will engage in an actual workshop designed to allow students to conceptually map the terrain of philosophical thinking, scientific thinking, and theological thinking. Suggested methods for the evaluation of students will also be shared with the participants.

TCH STR, SOC STUD, C/U

CH 10

SUNDAY, 10:30

Wiederhold, Chuck

Author, Consultant, The Edgework Institute

Cooperative Learning and Critical Thinking (ID # 85)

This dynamic, interactive workshop will present a fresh approach to fostering critical thinking through cooperative learning structures and materials. The materials include the Question Matrix, as well as a wide-range of question prompts to empower students to produce questions which generate thinking at all

levels of Bloom's taxonomy. Cooperative learning structures will be used in the presentation; participants will experience hands-on use of the manipulatives especially designed to evoke critical thinking across several content areas.

CONCEPT, CREAT, SCI

MONDAY, 10:30

CH 10

Williamson, Jan

Facilitator, Reasoning and Writing Program, Greensboro Public Schools

Carolyn Eller

Facilitator, Reasoning and Writing Program, Greensboro Public Schools

Authentic Assessment: Why and When? (ID # 118)

In moving from teacher-centered, didactic instruction to student-centered, critical teaching, many of us have felt compelled to abandon traditional methods of testing for more flexible forms of assessment. In this participatory workshop, we will explore why and how new theories of instruction necessitate new principles of assessment. Participants will explore a suggested topic for an instructional unit and examine and discuss questions such as: "What would you want students to be able to *do* at the end of this unit? What activities would you plan to help students reach those goals? How would you define (or redefine) the roles of the teacher and the student in planning this unit?" Finally, participants will examine possible ways to assess the unit, focusing on the positive and negative aspects of various forms of assessment.

K-12, TEST, STAFF DEV

MONDAY, 10:30

STEV 1002

Williamson, Jan

Facilitator, Reasoning and Writing Program, Greensboro Public Schools

Carolyn Eller

Facilitator, Reasoning and Writing Program, Greensboro Public Schools

The Greensboro Model for Staff Development (ID # 119)

New paradigms in the classroom necessitate new paradigms in staff development. If we ask teachers to become critical and reflective thinkers and teach their students in a manner which encourages critical and reflective thinking, then instruction and assessment as many know and experience it are forever changed. How can we provide staff development which supports and nurtures teachers as they struggle to make significant changes in the restructuring of their classrooms? This is a question we have been asking and attempting to answer in the Greensboro Public Schools. We will share with participants our model and several of its variations as we have used it with various groups of teachers and administrators; this model is one we use in our efforts to encourage change in both instruction and assessment and one that is appropriate for use with teachers working at all grade levels in all content areas.

STAFF DEV

WEDNESDAY, 10:30

CH 68

Willsen, Jane, MA, JD

Program Developer, Let's Talk Sportsmanship, President, Sports Learning Systems, Inc.

Critical Thinking in the Affective Domain: Character Education (ID # 149)

Historically, critical thinking models and development have centered around the cognitive domain. Let's Talk Sportsmanship is a new critical thinking curriculum program in which children in grades 1-8 identify attitudes and study

their implications for belonging on the various teams of which they are members. (Classroom, family, neighborhood, sports, national, global.)

For example, Accepting Your Mistakes is one of the 22 key attitudes (Arch Blocks). Children learn from stories of their peers how accepting your mistakes can be a factor in their lives. None of the stories have endings; all require brainstorming by the class for possibilities of what might be. The class then votes on the possibilities based on certain criteria. Decision-making after analysis is integral. (Brainstorming is based on successful Odyssey of the Mind model.)

Children then explore proverbs from all over the world that reiterate the basic premise: accepting one's mistakes is an attitude found among people who are effective world-wide. Why is that true? What might it mean for me? How might my life be different if I can develop that attitude? What is difficult about accepting my mistakes? Proverbs are cryptic, abbreviated summaries of cultural wisdom and the children not only learn them, but manipulate them and integrate them into language arts, social science activities, as well as into the visual and performing arts. There are multiple, open-ended cooperative learning/critical thinking activities in each attitude that require children to demonstrate their mastery of the attitude and its implications.

LANG, 1-8 GRADE, SOC STUD

SUNDAY, 1:30

STEV 3044

Wilson, Sallie

Consultant, California Department of Education

Teaching Advanced Skills to Educationally Disadvantaged Children to Implement Critical Thinking Skills on a Day-to-Day Basis (ID # 122)

A basic assumption underlying much of the curriculum in America's schools is that certain skills are "basic" and must be mastered before students receive instruction in more "advanced" skills. One consequence inherent in this assumption, particularly for students deemed low-achieving, is that instruction focuses on the so-called basics to the exclusion of reasoning. This session will focus on approaches that orientate the instruction toward comprehension, communication, and understanding concepts underlying facts, that can be used successfully in teaching advanced skills to students who generally would not be expected to achieve in the regular classroom; or to apply skills to understanding reasoning from the very beginning of their education.

ELEM, MID, TCH STR, STAFF DEV

SUNDAY, 3:15

STEV 3030

Witte, Marlys

Professor of Surgery, Director, Curriculum on Medical Ignorance; Director, Medical Student Research Program, University of Arizona College of Medicine

Charles L. Witte

Professor of Surgery, University of Arizona College of Medicine

Ann Kerwin

Senior Lecturer in Humanities; Philosopher-in-Residence, Surgery, University of Arizona

Education Is That Which Remains ...: Use of Ignorance (ID # 97)

Albert Einstein once noted that "Education is that which remains when everything in school is forgotten." And e. e. Cummings observed that "all ignorance toboggans into know/ and trudges up to ignorance again." If we are alive, our knowns and unknowns will interchange and transform, birth, die, and produce offspring continuously. In living, acting, and deciding — realms not tested by standardized form — black and white notions of knowledge and

ignorance, and default systems of information retrieval, contribute little to "that education which remains", and which we bequeath to future generations. Lewis Thomas suggests that *we are a juvenile species, "only just now beginning the process of learning how to learn."* If so, it behooves us to cultivate imaginatively that vast resource: the unknown, and our powers for allying with it. This participatory session, designed by a physician-researcher/philosopher team from the pioneering Curriculum on Medical Ignorance of The University of Arizona College of Medicine, will highlight ways and testing modules for channeling unknowing into effective critical and creative thinking across disciplines. Their unique experience in the first International Conference on Medical Ignorance in Tucson, November 14-16, 1991 will be analyzed.

CONCEPT, TCH STR, CREAT, SCI
DAR 137

MONDAY, 12:15

Wright, Ian

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

Practical Reasoning (ID # 145)

In this participatory workshop, participants will be introduced to the intellectual and ethical standards for practical reasoning — reasoning about what to do. Through a series of activities, participants will apply these standards to a social problem, suitable for elementary school students.

TCH STR, SOC STUD, ELEM
STEV 3046

MONDAY, 1:30

Wright, Ian

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

Questions of Meaning (ID # 146)

Critical thinkers attempt to use language as precisely as possible. In this participatory workshop, concept attainment strategies will be utilized by participants in order to help develop "definitional accuracy". Concepts will be drawn from the elementary social studies curriculum, but the session would be appropriate for any elementary school teacher.

TCH STR, SOC STUD, ELEM
STEV 3046

TUESDAY, 10:30

Ameen, Deanna L.

Coordinator of Non-Traditional Curriculum and Program Development, Massachusetts Bay Community College

Critical Thinking: Creating a Context for Student Involvement, Curricular Reform, and Institutional Change (ID # 192)

This participatory workshop will allow participants to view critical thinking in a potentially innovative light. There has been much speculation and debate surrounding basing critical thinking in informal logic and/or on what we have learned from assessments such as the Myers-Brigg. There is another way of framing critical thinking so that both of these approaches have their place, but do not limit the scope of critical thinking and all it can offer. Viewing critical thinking through a framework of Literacies (with a capitol L), we open ourselves to a field of study that has a place for the influence of the work of researchers such as Richard Paul and Carol Tavris, and the issues surrounding learning styles.

Session Abstracts

This interactive session is based on the model of collaboration used in Massachusetts Bay Community College's required "Critical Thinking Strategies" course. The session will also be an opportunity to discuss how this course became a campus wide influence on every aspect of the college. It has allowed us to address the use of critical thinking as a conceptual framework for promoting professional development and curricular revision.

CONCEPT, TCH STR, CC
DAR 143

MONDAY, 12:15

Young, Marybeth

Assistant Professor of Maternal Child Nursing, Niehoff School of Nursing, Loyola University, Chicago

Assessments and Teaching Strategies to Stimulate Critical Thinking in Nursing Students (ID # 43)

This presentation will address major concerns of those educators who ask the questions: How can critical thinking abilities of diverse undergraduate nursing students be assessed? What teaching strategies foster classroom and clinical learning of problem finding/problem solving? After sharing personal experiences and insights, dialogue on assessment measures, reflective exercises, and learning activities will tap into participants' expertise. The focus will be on identification of effective approaches that can be applied by nurse-educators across clinical specialties.

TCH STR, C/U, TEST

TUESDAY, 3:15

DAR 137

Zuercher, Nancy T.

Associate Professor of English, Coordinator of Writing Across Curriculum, University of South Dakota

Double Vision: Critical Thinking for Preservice Teachers (ID # 178)

In methods classes students need to see with double vision: as students and as teachers. Although students begin the class with single vision, critical thinking adjusts their lenses for double vision. Preservice teachers use critical thinking for self-growth, for shaping their philosophies of teaching, for assessing teaching techniques, for supporting a position on an issue, and for teaching. This paper delineates some critical thinking strategies integral to an English methods course at the University of South Dakota: strategies for creating a nurturing classroom environment to foster human dignity and critical thinking, an experiential strategy for learning and applying Bloom's Taxonomy, inquiry techniques and prompts, and reflective journals. While examples focus on a course in secondary English methods, they can apply to other classes as well.

TCH STR, LANG, U

TUESDAY, 10:30

STEV 3082

Session Abstracts

181

Presenters' Addresses

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Forging a Nation of Thinkers

National Council for Excellence in Critical Thinking



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Ralph Johnson



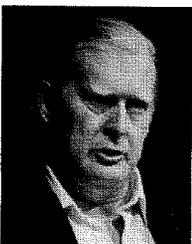
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The Goals of the NCECT

The National Council for Excellence in Critical Thinking Instruction is a national organization of educational professionals with expertise in critical thinking committed to establishing excellence in education through the articulation of high standards for instruction in higher order thinking at all educational levels and within all subjects. More particularly, its general goals are as follows:

- 1) to articulate, preserve, and foster high standards of research, scholarship, and instruction in higher order, critical thinking,
- 2) to articulate the standards upon which "quality" thinking is based and the criteria by means of which thinking, and instruction for thinking, can be appropriately cultivated and assessed,
- 3) to assess programs which claim to foster higher order, critical thinking, and
- 4) to disseminate information that aids educators and others in identifying quality critical thinking programs and approaches which ground the reform and restructuring of education on a systematic cultivation of disciplined domain-specific and interdisciplinary thinking.

Means

The National Council is working to achieve these ends, initially, by:

- 1) establishing regional and state councils and centers for Critical Thinking in each of eight regions of the country (New England, Midwest, South Central, Southeast, Pacific Southwest, Rocky Mountain, Mid-Atlantic, and Northwest), and
- 2) developing a series of national research committees in five basic areas of critical thinking (The Nature and Theory of Critical Thinking, Critical Thinking and Assessment, Critical Thinking and Basic Skills, Critical Thinking in the Disciplines, and Critical Thinking Pedagogy). A list of specific committees in each of these areas can be found on pages ahead.

Background to the Formation of the Council: History and Philosophy

Critical thinking is integral to education and rationality and, as an ideal, is achievable, ultimately, to the teaching practices — and the educational ideal implicit in them — of Socrates of ancient Greece. It has played a seminal role in the emergence of academic disciplines as well as in the work of discovery of those who created them. Knowledge, in other words, has been discovered and verified by the distinguished critical thinkers of intellectual, scientific, and technological history. For the majority of the idea's history, however, critical thinking has been "untried", a conception in practice without an explicit name. Most recently, however, it has undergone something of an awakening, a coming-out, a first major public expression, signaling perhaps a turning point in its history.

This awakening is correlated with a growing awareness that if education is to produce critical thinkers en masse, if it is to globally cultivate nations of skilled thinkers and innovators rather than a scattering of thinkers amid an army of intellectually unskilled, undisciplined, and uncreative followers, then a

renaissance and re-emergence of the idea of critical thinking as integral to knowledge and understanding is necessary. Such a reawakening and recognition began first in the USA in the later 30's and then surfaced in various forms in the 50's, 60's, and 70's, reaching its most public-expression in the 80's and 90's. Nevertheless, despite the scholarship surrounding the ideal, despite the scattered efforts to embody it in educational practice, its educational and social acceptance is still in its infancy, still largely misunderstood, still existing more in stereotype than in substance, more in image than in reality.

The members of the Council — committed as they are to high standards of excellence in critical thinking instruction across the curriculum at all levels of education — are therefore concerned with the proliferation of poorly conceived "thinking skills" programs with their simplistic, often slick, approaches to both thinking and instruction. If the current emphasis on critical thinking is genuinely to take root, if it is to avoid the traditional fate of passing educational fad and "buzz word", it is essential that the deep obstacles to its embodiment in quality education be recognized for what they are, reasonable strategies to combat them formulated by leading scholars in the field, and successful communication of both obstacles and strategies to the educational and broader community achieved. To this end, sound standards of the field of critical thinking research must be made accessible by clear articulation and the means set up for the large-scale dissemination of that articulation. The nature and challenge of critical thinking as an educational ideal must not be allowed to sink into the murky background of educational reform and restructuring efforts, while superficial ideas take its place. Critical thinking must assume its proper place at the hub of educational reform and restructuring. Critical thinking — and intellectual and social development generally — are not well-served when educational discussion is inundated with superficial conceptions of critical thinking and slick merchandizing of "thinking skills" programs while substantial — and necessarily more challenging conceptions and programs — are thrust aside, obscured, or ignored.

Founding Principles

The National Council is committed to the following basic principles:

- 1) There is an intimate interrelation between knowledge and thinking.
- 2) Knowing that something is so is not simply a matter of believing that it is so, it also entails being justified in that belief. (Definition: knowledge is justified true belief.)
- 3) There are general as well as domain-specific standards for the assessment of thinking.
- 4) To achieve knowledge in any domain, it is essential to think critically.
- 5) Critical thinking is based on articulable intellectual standards and hence is intrinsically subject to assessment by those standards.
- 6) Criteria for the assessment of thinking in all domains are based on such general standards as: clarity, precision, accuracy, logicalness, evidentiary support, probability, predictive or explanatory power, relevance, consistency, depth, and breadth. These standards are embedded not only in the history of the intellectual and scientific communities but also in the self-assessing behavior of reasonable persons in everyday life. It is possible to teach all subjects in such a way as to encourage assent to these standards both professionally and personally.

- 7) Instruction in critical thinking should increasingly enable students to assess both their own thought and action and that of others by reference, ultimately, to standards such as those above. It should lead progressively, in other words, to a disciplining of the mind and to a self-chosen commitment to a life of intellectual and moral integrity.
- 8) Instruction in all subject domains should result in the progressive disciplining of the mind with respect to the capacity and disposition to think critically within that domain. Hence, instruction in science should lead to disciplined scientific thinking; instruction in mathematics should lead to disciplined mathematical thinking; instruction in history should lead to disciplined historical thinking; and so forth.
- 9) Disciplined thinking with respect to any subject involves the capacity on the part of the thinker to recognize, analyze, and assess the basic elements of thought: the purpose or goal the thinking attempts to realize; the problem or question at issue addressed; the frame of reference or points of view involved; the assumptions made; the central concepts and ideas at work; the principles or theories used; the evidence, data, or reasons advanced; the claims made or conclusions drawn; the inferences, reasoning, and lines of thought formulated; and the implications and consequences involved.
- 10) Critical reading, writing, speaking, and listening are academically essential modes of learning. To be developed generally they must be systematically cultivated in a variety of subject domains as well as with respect to interdisciplinary issues. Each are modes of thinking which are successful to the extent that they are disciplined and guided by critical thought and reflection.
- 11) The earlier that children develop sensitivity to the standards of sound thought and reasoning, the more likely they will develop desirable intellectual habits and become open-minded persons responsive to reasonable persuasion.
- 12) Education — in contrast to training, socialization, and indoctrination — implies a process conducive to critical thought and judgment. It is intrinsically committed to the cultivation of reasonability and rationality.

Implications for Assessment and Pedagogy

The members of the National Council believe that, to ensure a sound academic foundation, all approaches to the fostering of higher order, critical thinking should make as explicit as feasible:

- 1) their basic philosophy of education including basic assumptions made about such matters as the relation of knowledge to thought, content memorized to content understood, and theory of reading, writing, speaking, and listening to cognition and affect,
- 2) how the thinking fostered is to be assessed — articulable standards to be used in distinguishing “higher” from “lower” quality thinking should be incorporated explicitly, and

- 3) whether it assumes that most educators are already sufficiently possessed of the ability to think critically to teach their students, or whether provision should be made for the fostering of critical thinking in teachers as well as in their students.

Working Definition of Critical Thinking

The National Council advances the following provisional definition of higher order critical thinking:

Critical thinking is the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. In its exemplary form, it is based on universal intellectual values that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and fairness. It entails the examination of those structures or elements of thought implicit in all reasoning: purpose; problem or question-at-issue; assumptions; concepts; empirical grounding; reasoning leading to conclusions; implications and consequences; objections from alternative viewpoints; and frame of reference. Critical thinking — in being responsive to variable subject matter, issues, and purposes — is incorporated in a family of interwoven modes of thinking, among them: scientific thinking, mathematical thinking, historical thinking, anthropological thinking, economic thinking, moral thinking, and philosophical thinking.

Critical thinking can be seen as having two components: 1) a set of information and belief generating and processing skills, and 2) the habit, based on intellectual commitment, of using those skills to guide behavior. It is thus to be contrasted with: 1) the mere acquisition and retention of information alone, because it involves a particular way in which information is sought and treated; 2) the mere possession of a set of skills, because it involves the continual use of them; and 3) the mere use of those skills (“as an exercise”) without acceptance of their results.

Critical thinking varies according to the motivation underlying it. When grounded in selfish motives, it is often manifested in the skillful manipulation of ideas in service of one’s own, or one’s group’s, vested interest. As such it is typically intellectually flawed, however pragmatically successful it might be. When grounded in fairmindedness and intellectual integrity, it is typically of a higher order intellectually, though subject to the charge of “idealism” by those habituated to its selfish use.

Critical thinking of any kind is never universal in any individual; everyone is subject to episodes of undisciplined or irrational thought. Its quality is therefore typically a matter of degree and dependent on, among other things, the quality and depth of experience in a given domain of thinking or with respect to a particular class of questions. No one is a critical thinker through-and-through, but only to such-and-such a degree, with such-and-such insights and blind spots, subject to such-and-such tendencies towards self-delusion. For this reason, the development of critical thinking skills and dispositions is a life-long endeavor.

Standing Research Committees

Membership in the proposed following standing committees is being established. Membership is limited to individuals who have special expertise in the academic area delimited by committee name.

Critical Thinking and Assessment

- Critical Thinking Standards
- Critical Thinking Tests
- Critical Thinking Assessment
- Critical Thinking and the Assessment of Education
- Critical Thinking and the Evaluation of Teaching

Critical Thinking and Basic Skills

- Critical Thinking and Reading
- Critical Thinking and Writing
- Critical Thinking and Listening
- Critical Thinking and Oral Expression
- Critical Thinking and Reasoning
- Critical Thinking and Media Literacy
- Critical Thinking and ESL

Critical Thinking in the Disciplines

- Critical Thinking Across the Disciplines
- Critical Thinking in Mathematics
- Critical Thinking in Science
- Critical Thinking in History
- Critical Thinking in Sociology
- Critical Thinking in Anthropology
- Critical Thinking in Political Science
- Critical Thinking in Social Studies
- Critical Thinking in Language Arts
- Critical Thinking and Rhetoric
- Critical Thinking and Psychology
- Critical Thinking and Cognitive Psychology
- Critical Thinking and Philosophy
- Critical Thinking in Nursing
- Critical Thinking in Home Economics
- Critical Thinking in Vocational Education
- Critical Thinking in Business Education
- Critical Thinking in Communication Studies
- Critical Thinking in Legal Education

- Critical Thinking and the Arts
- Critical Thinking in Religious Education
- Critical Thinking and Food Science and Nutrition
- Critical Thinking and Environmental Studies
- Critical Thinking and Women's Studies
- Critical Thinking and Bibliographic Instruction

The Nature and Theory of Critical Thinking

- Critical Thinking and Informal Logic
- Critical Thinking and Creativity
- Critical Thinking and the Understanding/Assessing of Assertions and Questions
- Critical Thinking and Developmentalism
- The Role of Reasoning in Education and Critical Thinking
- The Role of Affect in Critical Thinking
- Critical Thinking and Moral Education
- Monological and Multilogical Thinking
- Critical Thinking and Epistemology
- Critical Thinking and Practical Reasoning
- The Role of Critical Thinking in Broadening and Assessing Points of View
- Critical Thinking and the Recognition and Understanding of Ignorance
- Critical Thinking and the Recognition of Common Mistakes in Reasoning
- Critical Thinking and Ideology
- Critical Thinking and the Art of Questioning
- The History of Critical Thinking
- Critical Thinking and Self-Esteem
- Critical Thinking and Problem Solving
- Critical Thinking and the New Global Economic Realities

Critical Thinking Pedagogy

- Fostering Critical Thinking in Young Children
- Critical Thinking and Remedial Instruction
- Critical and Multi-Cultural Thinking
- Critical Thinking and Computer Assisted Instruction
- Critical Thinking and Cooperative Learning
- Critical Thinking and Educational Policy
- Critical Thinking in Accreditation and in the Baccalaureate
- Developing a School Environment Conducive to Critical Thinking
- Critical Thinking Staff Development
- Critical Thinking and Learning Centers
- Critical Thinking and Preservice Teacher Education
- Critical Thinking and Minority/Ethnic Issues
- Critical Thinking and Distance Learning

Critical Thinking and Educational Levels

- Critical Thinking in Elementary Education
- Critical Thinking in Middle School
- Critical Thinking in High School
- Critical Thinking in the Community College
- Critical Thinking in the Four-Year College or University
- Critical Thinking in Graduate Programs



National Council for Excellence in Critical Thinking Instruction

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 Grade Level _____ Specialization _____
 Special Interests _____

I am interested in council work on:

Forming Alliances with Associations
 Establishing State and Regional Offices
 Regional Newsletters
 Regional and Local Networks
 Research Committees
 Liaisons with State Departments of Education
 Council Representation
 Dissemination of Council Standards
 Other _____

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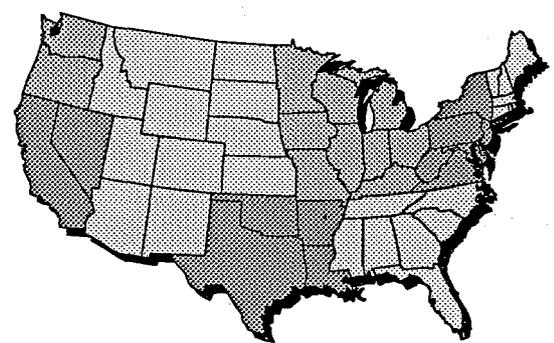
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 Santa Rosa, CA 95404
 phone: (707) 546-0629
 or fax: (707) 546-4718

1992-1993 Regional Council Meetings

This years meetings of the regional councils (for excellence in critical thinking) will be held as follows:

- South Central** Austin, Oct. 17, 1992
 (covering Arkansas, Louisiana, Texas, Oklahoma)
- Southeast** Atlanta, Nov. 14, 1992
 (covering North Carolina, South Carolina, Tennessee, Georgia, Florida, Alabama, and Mississippi)
- New England** Boston, Jan. 16, 1993
 (covering Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut)
- Mid-Atlantic** Philadelphia, Jan. 23, 1993
 (covering New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and West Virginia)
- Pacific Southwest** San Diego, Feb 6, 1993
 (covering California, Nevada, and Hawaii)
- Mid-West/Great Lakes/North Central** Chicago, March 13, 1993
 (covering Kentucky, Ohio, Indiana, Illinois, Michigan, Wisconsin, Missouri, Iowa, Minnesota)
- Northwest** Portland, April 17, 1993
 (covering Washington, Oregon and Alaska)
- Rocky Mountain** Denver, May 15, 1993
 (covering Arizona, Colorado, Idaho, Montana, New Mexico, Utah, N. Dakota, S. Dakota, Nebraska, Kansas, and Wyoming)

All meetings will be held at 7:00pm



Resources and Events



FOUNDATION FOR CRITICAL THINKING

The Foundation for Critical Thinking is a nonprofit public benefit corporation. It works cooperatively with the Center for Critical Thinking and Moral Critique, The National Council for Excellence in Critical Thinking Instruction, PBS Adult Learning Satellite Service, The College Board, and other research centers, institutes, and public institutions, to publish and disseminate a variety of critical thinking resources.

Resources for Instruction

- PBS Videotapes
- Ground-Breaking Books
- Four Grade-Level Critical Thinking Handbooks
- The Leaders of the Critical Thinking Movement on Audio and Videotape
- Audio and Videotapes for Critical Thinking Staff Development
- Eight Regional Workshops on Critical Thinking Teaching Strategies

Regional Workshops on Critical Thinking Instructional Strategies

A Program for University and K-12 Educators

A national staff development program to assist educators in the design and implementation of long-term critical thinking staff development has been established. The program consists of eight weekend workshops, one in each area of the country. They will focus on the development of critical thinking instructional strategies that can be used in teaching any subject matter. Participants will receive foundational training and useful handouts, have access to critical thinking video and audio tapes, and have an opportunity to meet other educators in their area of interest who are concerned with the integration of critical thinking into instruction.

The plan of the two-day workshop is based on two fundamental needs integral to fostering critical thinking: 1) a clear understanding of the basic concepts of critical thinking and 2) a clear understanding of how to use these concepts as tools that simultaneously discipline the mind and master subject matter.

Each workshop consists of eight sessions, four each day. Approximately 70% of the time is spent in hands-on work, with participants grouped by institutional level. The first session explains how the most basic idea embedded in critical thinking is a key not only to the most basic elements involved in all thinking, but also to both mastery of content, on the one hand, and disciplined reading, writing, speaking, and listening, on the other. The rest of the sessions build on the implications of this idea, leading to patterns of instruction embodying practical classroom strategies. Each workshop emphasizes the basic concepts of critical thinking, the establishment of intellectual standards, teaching strategies that discipline the mind, the mastery of content, the art of Socratic questioning, application to student reading and writing, interdisciplinary examples, tactics and strategies for teaching, modes of evaluation and assessment, and redesign of the curriculum and instruction.

Advanced Session

Each participant will choose between a beginning and an advanced session. The beginning session will divide into University and K-12 sub-sessions. All advanced session participants will be sent material to be read prior to the workshop. More information on the distinctions between these sessions is available upon request.

Schedule of Regional Workshops

Austin	October 17-18, 1992
Atlanta	November 14-15, 1992
Boston	January 16-17, 1993
Philadelphia	January 23-24, 1993
San Diego	February 6-7, 1993
Chicago	March 13-14, 1993
Portland	April 17-18, 1993
Denver	May 15-16, 1993

Presenters

Richard W. Paul, a major leader in the international critical thinking movement, has published over 40 articles and five books and organized 11 international conferences on critical thinking. He has lectured and conducted workshops at many major universities and colleges both in the USA and abroad. His recent book is *Critical Thinking: What Every Person Needs to Survive in a Rapidly Changing World*, Revised Edition.

Gerald Nosich, noted authority and scholar on critical thinking, is working on a book on critical thinking across the curriculum. He has given many workshops on critical thinking across the country.

Alec Fisher, a leading British authority on critical thinking, has written widely on the subject, and is developing higher order thinking tests for Cambridge University, to be used in British education and beyond.

Call the Center for Critical Thinking for further information on these events.

707-664-2940

Critical Thinking Forum

A PBS/Center for Critical Thinking
Staff Development Video Series



Part A: Of General Interest

Critical Thinking: The Thinking That Masters the Content

This program investigates why traditional didactic instruction inevitably fails and why critical thinking is essential to in-depth learning.

Transforming Critical Thinking Principles into Teaching Strategies

In this program, a variety of grade levels and subject matter illustrations are used to illustrate how critical thinking principles that are integrated into modes of teaching become modes of learning as well.

Critical Thinking and Mathematical-Problem Solving

Most students do not learn to think mathematically precisely because of the domination of didactic lecture, standard algorithmic practice, and one-dimensional testing that characterize most math classes. When independent critical thinking is the heart of class activity, Schoenfeld says, genuine mathematical thinking emerges for the first time.

Critical Thinking and the Human Emotions

In this program, Carol Tavris, distinguished social psychologist and author of *Anger: The Misunderstood Emotion*, engages in a lively discussion on the relation of disciplined thought to emotions and passions.

Part B: Infusing Critical Thinking into College and University Instruction

Infusing Critical Thinking into the Community College Education

For critical thinking to become a significant force in student learning, it is essential that it permeate instruction across the disciplines. In this program, faculty development leaders from five

diverse community colleges discuss their strategies for making critical thinking central to instruction.

Infusing Critical Thinking into Instruction at Four Year Colleges and Universities

Five faculty development leaders from diverse colleges and universities discuss the problem of infusing critical thinking into instruction.

Part C: How to Infuse Critical Thinking K-12

The Greensboro Plan: Long-Term Critical Thinking Staff Development in an Urban Multi-Racial School District

The Greensboro critical thinking staff development project is a model of quality long-term staff development. Funded by the school board for a minimum of five years, it is based on a comprehensive philosophy of education focused on a clearly articulated concept of critical thinking.

Remodelling Lessons and Redesigning Instruction to Infuse Critical Thinking

This program illustrates how, by learning to think critically about their own instruction, teachers can redesign it by remodelling virtually any lesson or unit. When this occurs, passive students become actively engaged, the teacher's monologue becomes a classroom dialogue, and content becomes something understood, mastered, and used — not just something memorized today and forgotten tomorrow.

PBS ADULT LEARNING
SATELLITE SERVICE

Tapes from This Year's Conference

The "Critical Thinking How to Teach" Series

Nine tapes
by Richard Paul

How to Teach Students to Seek the Logic of Things: (To Dissolve Wholes into Parts, Unite Parts into Wholes, Question, Infer, and Reason to Purposeful and Creative Ends)

We can seek to understand only by assuming that what we try to understand has a logic, some order or coherence, reason or method, structure or pattern that makes sense, and so can be translated by a reasoning mind into ideas effectively grounded in reasoned judgment and expressed in an ordered, rational way. In this, the opening tape in the series, Richard Paul sets out the foundations of a critical approach to teaching and learning. He elucidates how this approach fosters the ability of students to seek and grasp the logic of what they are studying by giving it a logic in their minds. (Video: V301)

How to Teach Students to Listen and Read Well

Listening and reading are effective means to learning only when done skillfully, yet most students lack basic listening and reading abilities. Therefore, educators at all levels must teach explicitly for them. In this tape, Richard Paul explains and models how to teach for excellence in listening and reading. He grounds the session in a conception of the *logic of listening and reading* and demonstrates how that logic can be used as a tool for listener and reader self-improvement. (Video: V302)

How to Teach Students to Write Well

Students cannot develop higher order thinking without developing reasoning abilities, which they cannot develop without frequently engaging in well-disciplined, analytic writing. Present instruction at all levels, however, systematically fails to teach well-disciplined *analytic* writing abilities. In this tape, Richard Paul explains and models how to teach for excellence in analytic writing. He details specific strategies and documents some basic mistakes in writing instruction. (Video: V303)

How to Teach Students to Assess Their Own Work: The Foundation

All thought and behavior, insofar as it aims at knowledge or excellence, entails three dimensions: 1) an *object* we focus on, 2) a *process* we employ, and 3) *standards* we use to assess our work. Few students, unfortunately, have ever thought about "intellectual processes" (e.g., analysis or synthesis), or "intellectual objects" (e.g., conclusion, evidence, or assumption), or "intellectual criteria" (e.g., clarity, accuracy, or consistency). Hence, they do not know what to do when asked, for example, to "analyze a question for clarity". In this tape, Richard Paul explains and models specific strategies for teaching awareness of intellectual processes, objects, and standards. (Video: V304)

How to Teach Students to Assess Their Own Work: The Tactics

Everyone thinks, but to think *well* we must learn *how* to think explicitly about how we are thinking and make corrective adjustments as a result. For example, many students "study" but few think analytically about how they

study and then reshape their study habits as a result. This tape focuses on teaching for excellence in self-assessment, including specific teaching strategies. (Video: V305)

Why Students — and Often Teachers — Don't Reason Well

Much of our reasoning, our intellectual modeling of the world, is done without mindfulness. It is small wonder, then, that often we don't reason well. We expect students to learn to reason well without any mindfulness of the nature of reasoning, the elements of reasoning, or the criteria for assessing reasoning, without any knowledge of the *logic of reasoning*. Not surprisingly our approach doesn't work. In this tape, Richard Paul first documents common problems in student and teacher reasoning and assessment of reasoning. Then he explains some of the fundamental concepts and skills essential to good reasoning and how to teach for it. (Video: V306)

Why Intellectual Standards? Why Teach for Them?

Although we may study many subjects, we don't study them in a way that makes the criteria for assessing our thinking explicit. And though we express our thinking in what we say and do, we don't reflect much on how we get to our beliefs and conclusions, or on the criteria we use in that process. In this tape, Richard Paul demonstrates the importance of making intellectual criteria and standards explicit in instruction. He provides examples of poor reasoning by both students and teachers in the absence of clarity in assessment. (Video: V307)

Reasoning, Critical Thinking, Creativity, Problem-Solving, Communicating, Mastering Content — Putting it All Together

When education is fragmented into parts that appear to students and teachers alike as dissociated, little of quality is done, little of the deep, long-term ends of education are well served. Reasoning, critical thinking, creativity, problem-

solving, communication, the mastery of content — these are not unrelated dimensions of quality education. They are six deeply interwoven, deeply interdependent processes, fostered by the same modes of teaching. In this tape, Richard Paul demonstrates their intimate interconnections, relating them to particular teaching processes and strategies. (Video: V308)

How to Devise Assignments and Activities That Require Reasoning Students Are Capable of Doing

Many assignments and activities in school have only the appearance of requiring reasoning when in fact the student can get by with mere recall. For this and other reasons, most students avoid developing any reasoning of their own and assume that what teachers really want is reiteration. They (and their instructors) often think that accurate recapitulation is equivalent to a demonstration of knowledge. In a well-conceived educational plan, however, virtually all assignments and activities would involve some reasoning, some process of figuring something out, some genuine intellectual work. In this tape, Richard Paul illustrates the art of designing assignments and activities that require reasoning and hold students responsible for that reasoning. (Video: V309)

More Tapes from the 1992 Conference

Richard Paul

Cultivating the Reasoning Mind: Teaching, Testing, Standards, and Assessment.

Richard Paul opens the 1992 Conference by addressing the core idea of educational reform for critical thinking: enabling students to reason within a community of thinkers that is daily engaged in disciplined intellectual work. The abilities needed to do so presuppose not only the internalization of intellectual criteria and standards, but also special modes of teaching, assessment, and student and teacher mindfulness. This talk makes the case that this cultivation of the reasoning mind, this basic reconceptualization of teaching and learning, must become a long-term goal of education. (Video: V310)

John Chaffee

Teaching and Evaluating Critical Thinking in the Disciplines

This tape offers a comprehensive model for teaching and evaluating critical thinking. Based on an interdisciplinary critical thinking program which involves 30 faculty and 800 students annually, this approach integrates an independent Critical Thinking course with an initiative for infusing critical thinking across the disciplines through faculty development and curriculum redesign. (Video: V311)

**Ralph H. Johnson
William Dorman**

Handling News Media: Johnson's and Dorman's Bag of Tricks

It is clear that one important focal point for the critical thinker is the news media. Our students badly need to be sensitized to the inherent limits and dangers (as well as the strengths) of how the news media present news. In

this tape, Professors Johnson and Dorman, each of whom has spent decades teaching students to be more critical in their consumption of news, will open and share their "bags of tricks" — ways of accomplishing this important objective. (Video: V312)

William Dorman

Beyond Reason: The Media, Politics, and Public Discourse

To what degree do the mass media affect public discussion and thought about things that matter? Are there factors inherent in today's media system that make a rational discussion of politics virtually impossible? This talk covers some key problems with the mass media and contemporary public discourse, particularly in terms of how issues are portrayed (e.g., poverty/welfare reform; foreign policy/defense spending; the Savings and Loan bailout, criminal justice, and so on). The context for this analysis is the 1992 presidential campaign. Emphasis is on the need for teaching critical thinking skills about media and politics. (Video: V313)

The Not-So-Odd Couple: Critical Thinking and Global Education

Now, more than ever, the skills embodied in the critical thinking movement are essential to any classroom at any level that has content dealing with world affairs. There simply is no more immediate or crucial task for the teacher of social sciences than to help students acquire the skills necessary for full citizenship in a multipolar world which is as different from Cold War, bipolar thinking as the pre-industrial world was from the industrial. In this tape some ideas are offered about why critical thinking has such an important role to play in global education. In addition, the critical thinking concepts and strategies that might be most useful during this historical period of transition are explored. (Video: V314)

Gerald Nosich

Learning to Think Well: Quality-Control in Teaching

Reasoned judgement, by contrast with both "giving opinions" and "reporting facts", requires that students be able to identify points of view of others; to give plausible interpretations of what they believe, read, and hear; and to judge issues only in the light of context and relevant alternatives. Each of these activities can be performed well or badly, habitually or sporadically, enthusiastically or begrudgingly. This tape focuses on several of the major dimensions of good reasoning, and on how to teach for them. (Video: V315)

Motivating Students to Think Critically by Teaching for Discovery

Teaching strategies that foster students' ability to engage in genuine discovery about the subject-matter are unique in their capacity for generating student interest both in the content of courses and in the activity of engaging in informed, skillful thinking about significant issues. This tape offers four strategies for getting students to engage in discovery by thinking their way through the material: 1) re-creating historical discoveries, 2) discovering naive misconceptions, 3) searching for ignorance, and 4) discovering alternative explanations. (Video: V316)

A Sense of the Past, a Sense of the Present

Professor Nosich discusses how we find out about the past and how we use the past to illuminate the present. The focus throughout will be on strategies to get students (including ourselves) to think critically about history. What distortions are introduced by viewing events in the past? How, and to what extent, can we be accurate, objective, unbiased? To what extent does knowing about the past change our perspective on the present (and future)? The tape is relevant to any course that has a history-based component: history proper, most literature or art courses, history of

science, archaeology, historical anthropology. (Video: V317)

Yehudi O. Webster

Multi-Culturalism and Critical Thinking: Compatibility or Competition?

Multi-Culturalism is open to a variety of diverse interpretations, as diverse as the culture-concept itself. But it has been proposed as a solution to some educational and social problems. It promises to reduce stereotyping and prejudiced opinions, increase awareness of and sensitivity to America's cultural diversity, and combat the legacies of racism and ethnocentrism which permeate educational processes, the curriculum, and society. Advocates of critical thinking make similar promises. This speaker suggests that a critical examination of Multi-Culturalism would discover that it is incompatible with critical thinking and cannot deliver on its promises. To mention three incompatibilities: 1) The dominant conception of Multi-Culturalism downplays the role of reasoning in human behavior and affirms an irrational cultural basis of behavior. 2) Cultures cannot be taught or cultivated in schools, but within courses on critical thinking the various conceptions of culture used in anthropological studies can be analyzed, and this would not be called Multi-culturalism. 3) Multi-culturalism affirms a relativist ethos in which each individual or group has its own "perspective," which leads to all perspectives being relatively right. The alternative to Multi-culturalism wrongly conceived is to foster critical thinking about racial and cultural theories of society. (Video: V318)

Dan Weil

Critical Thinking in Social Studies: Reasoning Multi-Culturally

Many current trends in multi-cultural education wrongly assume that merely giving students more information about

other cultures will increase cultural awareness and tolerance. Instead, students need to reason their way through a variety of perspectives of other cultures. This tape illustrates how instruction can be redesigned in such a way as to develop students' understanding of other cultures through developing their critical thinking. Such an approach not only enables students to develop a deep understanding of other cultural perspectives, but also avoids the danger of multi-cultural education inadvertently promoting relativism. (Video: V319)

Videotapes from Previous Conferences

Richard Paul

Critical Thinking: The Thinking That Masters the Content

Richard Paul explains how and why critical thinking is essential to the acquisition of knowledge. (V170)

How to Help Students Develop Intellectual Standards (that they apply to everyday life)

Richard Paul describes a variety of ways by which students can be helped to develop explicit intellectual standards. (V204)

Teaching Critical Thinking in the Strong Sense in Elementary, Secondary, and Higher Education

Richard Paul argues that it is inadequate to conceive of critical thinking simply as a body of discrete academic skills. (V34)

Workshop on the Art of Teaching Critical Thinking in the Strong Sense

Richard Paul demonstrates how one can use the macro-abilities of critical thinking (Socratic questioning, reciprocity, and dialogical reasoning) to orchestrate micro-skills in achieving 'strong sense' objectives. (V35)

Critical Thinking Staff Development: Developing Faculty Critical Thinking and Critical Teaching Skills

Richard Paul presents a general model for staff development and ways of adapting it to different educational levels: elementary, secondary, and university. (V66)

Teaching Critical Thinking: Skill, Commitment and the Critical Spirit, Kindergarten through Graduate School

Richard Paul explains how and why critical thinking represents not only a set of skills but also a set of commitments and mental traits. (V68)

Infusing Critical Thinking into Subject Matter Instruction: The Problem of Restructuring Instruction

Richard Paul argues for school-wide or college-wide articulations of a philosophy of education that makes clear how the basic critical thinking objectives are harmonized with each other and infused into all subject matter instruction. (V91)

Why Is It Imperative to Distinguish Weak Sense from Strong Sense Critical Thinking? A Challenge to All Comers

Various reasons have been advanced for abandoning Richard Paul's distinction between weak sense and strong sense critical thinking. Paul responds to these concerns and explains why the distinction is essential to the field. (V114)

Cultural Literacy and Critical Thinking: Where E. D. Hirsch Is Right and Wrong

E.D. Hirsch's recent best seller, *Cultural Literacy*, makes the case that the fundamental reason why students are poor readers is that they lack the background information presupposed in what they read. Richard Paul spells out where Hirsch's analysis is misleading and apt to reinforce more "trivial pursuit" in the classroom. (V128)

Beyond the Superficial: Long-term Strategies for Infusing Critical Thinking Across the Curriculum

Richard Paul makes the case that we must take the long view and work for educational change over five to ten year periods. (V134)

Richard Paul's Bag of Tricks: Practical Strategies and Tactics for Getting Students Involved in their Learning

Richard Paul discusses a host of techniques for getting his students involved in their own learning. (V144)

How to Teach for the Intellectual Virtues

Richard Paul clarifies intellectual humility, intellectual perseverance, and intellectual integrity, and explains how they can be cultivated in the classroom. (V164)

Art Costa

The School as a Home for the Mind

Art Costa explains why school should be a home for the mind where the intellects of all its inhabitants are nurtured, mediated, and developed. (V176)

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

Art Costa describes behaviors indicative of efficient, effective problem solving, and just what human beings do when they behave intelligently. (V135)

Vincent Ruggiero

The Attitude Factor: A Serious Obstacle to Thinking Instruction

Vincent Ruggiero describes a number of practical approaches teachers can use to develop positive attitudes in students. (V184)

Dispositions: The Neglected Aspect of Critical Thinking

Vincent Ruggiero identifies creative thinking dispositions and suggests ways

for instructors to assist students in developing them. (V60)

The Administrator's Role in Thinking Instruction

Vincent Ruggiero identifies numerous ways in which administrators can promote and facilitate thinking instruction in their schools or colleges. (V75)

Robert Ennis

A Conception of Critical Thinking

Starting with the idea that thinking critically is reflectively and reasonably going about deciding what to believe or do, Bob Ennis suggests a number of dispositions and abilities that constitute a set of goals for the schools, Kindergarten through University. (V26)

How To Write Critical Thinking Test Questions

Bob Ennis offers suggestions on how to frame questions that test critical thinking skills. (V27)

Ralph Johnson

Thinking Critically about Subliminal Advertising

Ralph Johnson discusses how the topic of subliminal advertising — if there is such a thing — might be dealt with from the viewpoint of a critical thinker. (V182)

Information and the Mass Media

Ralph Johnson explains how the critical thinker deals with information and the mass media. He outlines a reflective and aggressive consumer of the news. (V57)

Mini-Critical Thinking Course: Critical Thinking and Advertising

The premise of the video is that advertising is a territory rich in materials for the student of critical thinking. (Video: V119)

Alan Schoenfeld

On Mathematics, Sense-making, and Critical Thinking

Alan Schoenfeld argues that the proper use of mathematical thinking is entirely consonant with the ideas of "critical thinking." (V150)

David Perkins

Coaching Teachers Who Teach Critical Thinking

David Perkins demonstrates a model coaching process and relates it to research on staff development, teacher growth, metacognition and achievement motivation. (V17)

Knowledge as Design in the Classroom

David Perkins introduces participants to the basic strategies of "knowledge as design," a systematic approach to integrating the teaching of critical and creative thinking into subject-matter instruction. (V37)

What Makes Science Concepts Hard to Understand?

David Perkins explores through examples some of the factors that lead to deeply rooted misunderstandings of scientific concepts and examines some of the educational strategies that might serve to help students toward real comprehension. (V71)

Candide in Education Land:

Confronting School Realities

David Perkins explains how we can design more mindful education by taking advantage of school realities rather than working against them. (V141)

Intelligence and Good Thinking

In the last twenty years, a new debate has arisen regarding the relationship of intelligence to good thinking. Perkins and Paul review this debate and discuss their respective interpretations of the implications of the debate for the design of teaching and learning. (V158)

Gerald Nosich

Learning the Material: Teaching Students to Think in Subject-Matter Courses

Gerald Nosich concentrates on a number of practical strategies for helping students to learn the material through teaching them to think about it critically and creatively. (V180)

Some Problems in Teaching Critical Thinking in Subject Matter Courses

(1) How context-dependent (and field-dependent) is critical thinking? (2) How can we reasonably approach actual important inferences in multi-logical fields. (V200)

Teaching Critical Thinking Across the Curriculum: An Approach Through Specific Courses

Professor Nosich offers some specific and practical methods for teaching critical thinking in that particular discipline. (V107)

Thinking About the Past

Gerald Nosich's aim in this presentation is to help students to develop a critical sense of the past. (V21)

John Chaffee

Critical and Creative Problem-Solving

John Chaffee introduces a versatile problem-solving approach which is useful for analyzing complex problems in a creative and organized fashion. (V53)

Teaching Critical Thinking Across the Curriculum

Professor John Chaffee explores an established interdisciplinary program which teaches and reinforces fundamental thinking skills and critical attitudes across the curriculum. The course has been integrated into the curriculum through an NEH-funded project of faculty training and curriculum re-design. (V23)

Critical Literacy and Critical Thinking: Partners in Education
Chaffee tries to show that the development of sophisticated thinking abilities is closely tied to the development of complex language abilities — and vice versa. (V146)

Robert Swartz

Combining Techniques for Direct Instruction in Critical Thinking Skills with the Infusion of Critical Thinking into Content Area Instruction

Three basic techniques are distinguished and have been used for instruction in critical thinking. (V181)

Michael Scriven

Critical Evaluation: The Last Frontier for Informal Logic?
Michael Scriven provides the outline of an approach to evaluation based on the latest research. (V187)

Critical Thinking About Educational Evaluation

Michael Scriven offers insightful comments on: 1) Student Assessment, 2) Teacher Evaluation, and 3) Accreditation, and how we can improve them. (V196)

Matthew Lipman

Higher-Order Complex Thinking
Matthew Lipman explains why it is that classroom communities of inquiry foster higher-order complex thinking. (V192)

Critical Thinking in Concept and Application

Matthew Lipman explains why one needs a clear conception of what such thinking involves in order to have a sense of direction in the practice of teaching for critical thinking. (V152)



Anthology on Critical Thinking and Educational Reform

Critical Thinking: What Every Person Needs to Survive in a Rapidly Changing World

Revised Second Edition

The Best of the First Edition

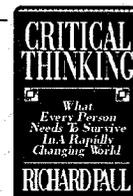
What is Critical Thinking? What Are Its Component Parts? Its
Essential Features? Its Theoretical Underpinnings?

Why Is Critical Thinking Essential to Education? To Citizenship,
To Business, To ...?

How Can Educators Teach for (and through) Critical Thinking ...
in a Variety of Subjects and at All Educational Levels?

What Are the Relationships Between Paul's Unique, Well-
Developed Approach to Critical Thinking and ...

- History Instruction
- Science Instruction
- Ethics
- Media Literacy
- Eradicating Bias and Prejudice
- Citizenship in a Free Society
- Bloom's Taxonomy
- "Cultural Literacy"
- Other Approaches to Thinking, Critical Thinking, Higher
Order Learning, ...?



What's New About the Second Edition?

- ★ An Essay on the Relationship Between Critical
and Creative Thinking
- ★ An Interview for *Think Magazine*
- ★ An Entirely New Section: "Intellectual Standards and
Assessment: The Foundation for Critical Thought"
It Includes:
 - ✓ "A Model for the National Assessment of
Higher Order Thinking" with:
 - a detailed, specific description of what
testers should be testing for and why
 - examples of specific test formats and items
 - ✓ "Using Intellectual Standards to Assess Student
Reasoning" with:
 - how the standards of reasoning apply to the
elements of reasoning
 - detailed descriptions of ways students
reason well or poorly
 - examples of specific feedback teachers can
give to students
 - ✓ "Why Students — and Teachers — Don't
Reason Well" with:
 - detailed and specific analysis of a student
essay
 - poor and weak commentaries on student
reasoning
 - weak and strong examples of student
reasoning (with commentary)

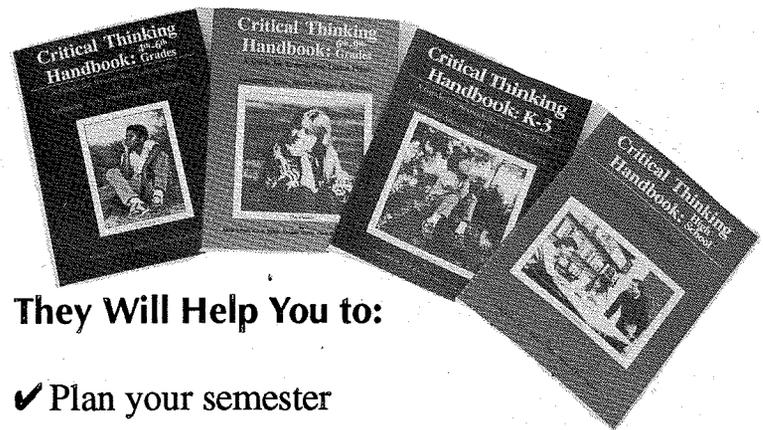
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Handbooks for Redesigning Instruction

Four Handbooks: K–3rd Grades, 4th–6th Grades, 6th–9th Grades, and High School

What They Include:

- ▮ Detailed explanations of the **concept of critical thinking**: the whole and its parts
- ▮ **Specific suggestions** for teaching subject matter content through critical thought
- ▮ **Instructional practice** at all grade levels analyzed, critiqued, and improved
- ▮ **Socratic questioning** explained and illustrated in transcripts
- ▮ **Universal standards** for assessing thinking in all domains
- ▮ **The affective features of thinking** — including intellectual independence, fairness, courage, perseverance, and integrity — explanations and teaching suggestions offered
- ▮ The features that **distinguish didactic from critical teaching** systematically laid out
- ▮ **The common mistakes** made in teaching explained and illustrated
- ▮ A thorough **analytic glossary** of critical thinking terms and concepts



They Will Help You to:

- ✓ Plan your semester
- ✓ Progressively infuse new dimensions of critical thought into content-based instruction
- ✓ Redesign instruction by rethinking instruction a unit, a lesson, an activity, or a question at a time
- ✓ Relate curriculum to student experience
- ✓ Structure lessons for transferable skills
- ✓ Prime the pump with a variety of practical ideas
- ✓ Develop a long-term, systematic professional development program
- ✓ Design inservice activities and workshops
- ✓ Develop a foundation for professional, collaborative instructional redesign

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A Guide to Critical Thinking Staff Development



THE GREENSBORO PLAN:

Infusing Reasoning & Writing into the K-12 Curriculum

How to:

- Develop facilitators and nucleus teachers
- Put theory deeply into practice
- Get teachers involved
- Infuse reasoning and writing into all subjects
- Promote peer coaching and collaboration
- Design practical, immediately useful workshops
- Inform and involve parents

Teachers Teaching Teachers

What participants say:

"It is the most worthwhile project the central office has ever offered ... not a one-shot deal ... but continuing support and information."

"For the first time, I have developed a professional voice."

"The sharing with colleagues has fulfilled needs I didn't know I had."

- "The techniques and strategies have helped me design my own lessons for *my* particular students with *their* particular needs."
- "It has helped me go beyond the textbooks."
- "Now my students choose *what* information they need and learn *how* to acquire it."
- "I now see how writing can be used to improve thinking in all curriculum areas."
- "The results have been encouraging: class discussions are more animated, students offer ideas freely, criticism is constructive, helpful, and results in better ideas."
- "The project is doing a service for education essential for the survival of teachers.... We feel more connected and engaged."
- "We found out that the importance of a consistent and sound theoretical basis is not empty educational jargon."
- "When teachers remodel lessons, we begin to evaluate our own work, discover our standards, and become more articulate about them."
- "... we began the project at two demonstration sites where we could slowly develop a strategy for the program. It worked so well we progressively expanded it city-wide. Now, four years later, the enthusiasm continues to grow on all sides — teachers, parents, administrators, and school board."



Jan Williamson, Author, Greensboro Project Facilitator

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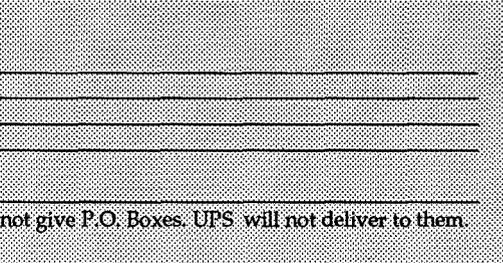
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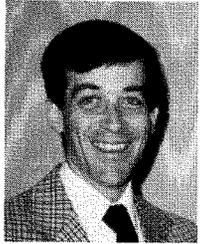
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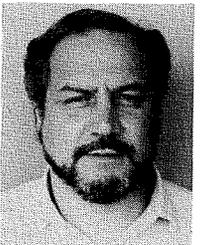
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Kevin O'Reilly



Ellen O'Connor

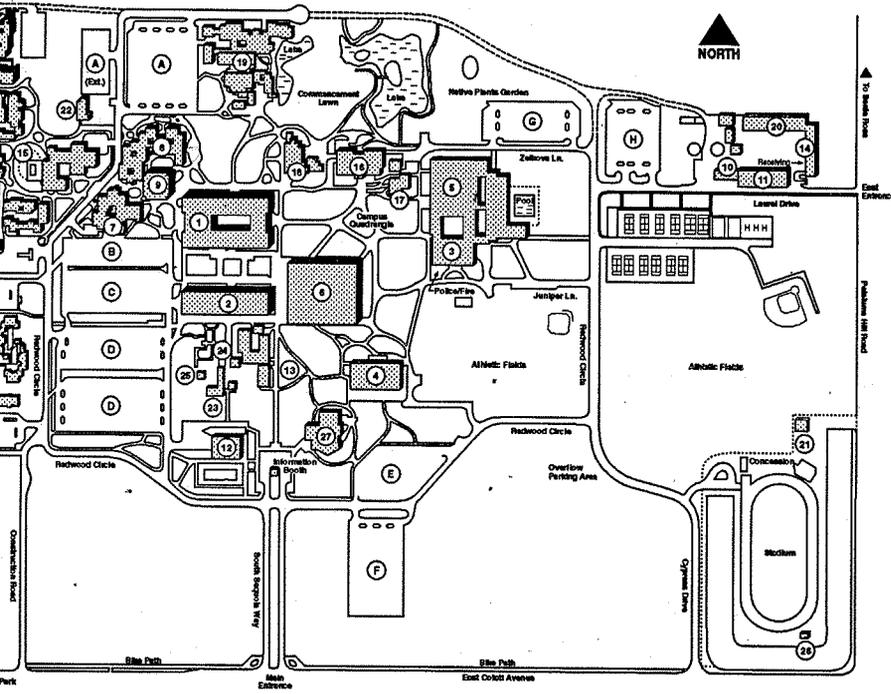


James Tursi



Carol Brigham

SSU Campus Map



- 1 Stevenson Hall (STEV)
 - 2 Darwin Hall (DAR)
 - 3 Field House
 - 4 Ives Hall; Warren Auditorium
 - 5 Physical Education; Main Gym
 - 6 Ruben Salazar Library
 - 7 Student Health Center
 - 8 Rachel Hall (CH)
 - 9 Nichols Hall (NICH)
 - 10 Plant Operations
 - 11 Corporation Yard Shops
 - 12 Boiler Plant
 - 13 The Village
 - 14 Supporting Services
 - 15 Residence Halls
 - 16 Commons (cafeteria)
 - 17 Bookstore
 - 18 Student Union
 - 19 Art Complex
 - 20 Warehouses
 - 21 P.E. Storage
 - 22 Children's School
 - 23 Greenhouse
 - 24 Animals House
 - 25 Solar Lab
 - 26 Observatory
 - 27 Evert B. Person Theatre (EPT)
- Bldg.1 Admissions and Records
 Bldg.3 Police and Fire Services
 A thru H Parking Lot Areas

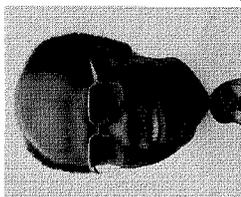
Robert Vaik



Diane Halpern



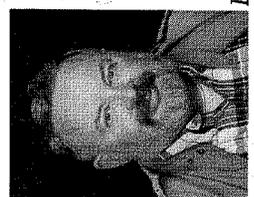
Hollibert Phillips



Richard Pope



Lewis Bright



Audience Codes

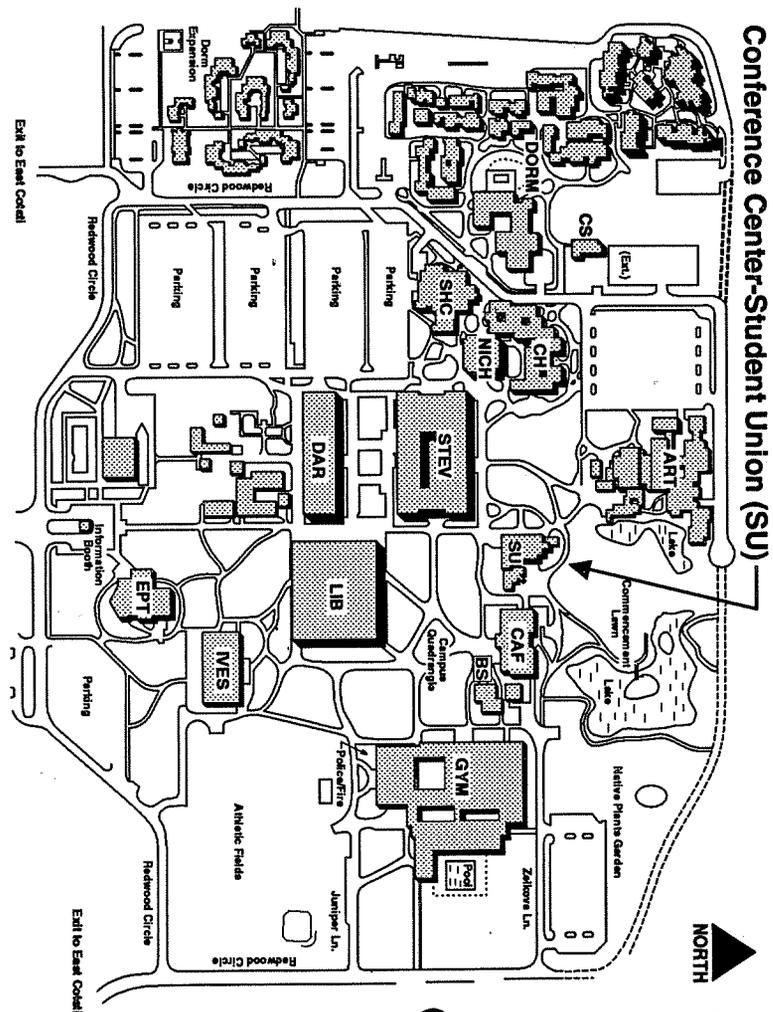
ADV	advanced level session*
CC	community college
CONCEPT	concept of critical thinking
CREAT	creative thinking
ELEM	elementary school
G	general
HS	high school
K-12	kindergarten- 12 th Grade
LANG	language arts, English
MATH	math
MEDIA	media, media literacy
MID	middle school, junior high
SCI	science
SOC STUD	social studies
STAFF DEV	staff development
TCH STR	teaching strategies
TEST	testing and assessment
U	college/university

* indicates that beginners in the field may find the session especially challenging or that some level of preparation is presupposed.

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Public Safety (Campus Police) 664-2143	Field House
Lost and found, Parking information 664-2143	
Emergency Only 664-2911	
Shuttle Information 664-2940	Student Union
Academic Credit, Office of Extended Education 664-2394	Stevenson 1045



SSU Central Area Legend

(ART)	Art Complex
(BS)	Bookstore
(CAF)	Commons (Cafeteria)
(CH)	Rachel Carson Hall
(CS)	Children's School
(DAR)	Darwin Hall
(DORM)	Residence Halls
(EPT)	Evert B. Person Theatre
(GYM)	Gymnasium
(IVES)	Ives Hall; Warren Auditorium
(LIB)	Ruben Slatzar Library
(NICH)	Nichols Hall
(SHC)	Student Health Center
(STEV)	Stevenson Hall
(SU)	Student Union



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