

THE 14TH INTERNATIONAL CONFERENCE ON

Critical Thinking & Educational Reform

**SPONSORED BY THE CENTER FOR CRITICAL
THINKING AND MORAL CRITIQUE
SONOMA STATE UNIVERSITY**



PROCEEDINGS OF
**THE
FOURTEENTH ANNUAL
INTERNATIONAL CONFERENCE
ON
CRITICAL THINKING AND
EDUCATIONAL REFORM**

**Critical Thinking Tactics
That Work in the Classroom & on the Job**

JULY 31 - AUGUST 3, 1994



UNDER THE AUSPICES OF THE
Center for Critical Thinking and Moral Critique
SONOMA STATE UNIVERSITY
(707) 664-2940



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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 California State Department of Education, the College Board, the Association for Supervision and Curriculum Development, the National Education Association, the U.S. Department of Education and numerous school districts to facilitate implementation of high standards of critical thinking instruction from kindergarten through college. Its major works include the International Conference on Critical Thinking and the Staff Development Series.

ABOUT THE FOUNDATION FOR CRITICAL THINKING:

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

ABOUT THE NATIONAL COUNCIL FOR EXCELLENCE IN CRITICAL THINKING:

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

PHILOSOPHY

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

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

PRINCIPLES

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



- We all learn best by working with others, dialogically, and generating mutually supportive debate.
- Critical thinking requires that we recognize the limitations of our own point of view and seek truth above advocacy of our positions.
- We need intellectual criteria and standards by which to guide and evaluate our thinking as we construct meaning from our world.
- There are numerous pseudo critical thinking approaches being generated by textbook publishers and others. It is important to have criteria for the assessment of such approaches.

PLEASE CALL ...

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

Trish Taylor	Director of Operations
Renee Denise	Coordinator, Center for Critical Thinking
John Pruess	Coordinator, Foundation for Critical Thinking
Jessie Foster	Inservice Coordinator
Jon Pappas	Conference Presenter Representative
Annalise O'Brien	Registration Coordinator
David Grady	Assistant Conference Coordinator
Charles Evans	Foundation Shipping Manager
Emiko Lewis	Resource Order Coordinator
Mike Lanham	Accountant
Karin Shaw	Assistant to Chair, NCECT

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Foundation for Critical Thinking
 4655 Sonoma Mountain Road
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What is Critical Thinking?

A Unique Kind of Purposeful Thinking

In any subject area or topic, whether academic or practical, requiring intellectual fitness training for the mind akin to physical fitness training for the body

In Which the Thinker Systematically and Habitually

Actively develops traits such as intellectual integrity, intellectual humility, fairmindedness, intellectual empathy, and intellectual courage

Imposes Criteria and Intellectual Standards Upon the Thinking

Identifies the criteria of solid reasoning, such as precision, relevance, depth, accuracy, sufficiency, and establishes a clear standard by which the effectiveness of the thinking will be finally assessed

Taking Charge of the Construction of Thinking

Awareness of the elements of thought such as assumptions and point of view, that are present in all well-reasoned thinking; a conscious, active and disciplined effort to address each element is displayed

Guiding the Construction of the Thinking According to the Standards

Continually assessing the course of construction during the process, adjusting, adapting, improving, using the candles of criteria and standards to light the way

Assessing the Effectiveness of the Thinking According to the Purpose, the Criteria, and the Standards.

Deliberately assessing the thinking to determine its strengths and limitations, according to the defining purpose, criteria and standards, studying the implications for further thinking and improvement.

BUSINESS AND ECONOMIC EXPERTS CALL FOR CRITICAL THINKING

John Sculley, CEO and Chair of Apple Computer:

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

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

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

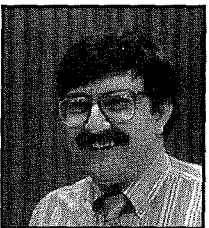
Robert Reich, Secretary of Labor

"... mastery of old domains of knowledge isn't nearly enough to guarantee a good income.... What is more valuable is the capacity to effectively and creatively use the knowledge." (Reich, Robert. *The Work of Nations*, Vintage Books, NY, NY. 1992, p. 182)

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 50 articles published on the subject. Professor Paul has given lectures on critical thinking at many universities in both the United States and abroad, including Harvard, the University of Chicago, the University of Illinois, and the universities of Puerto Rico, Costa Rica, and Amsterdam. He has been regularly teaching beginning and advanced courses in critical thinking at the university for over 14 years. His workshops have been attended by thousands of educators, both K-12 and university.



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



LINDA ELDER, an educational psychologist, has extensive experience in designing and executing instructional curricula for a wide variety of groups from elementary to higher education. Currently serving as a vice president at State Technical Institute at Memphis, Tennessee's largest public two-year college, and having taught psychology, Dr. Elder has gained valuable experience and knowledge in the academic problems facing higher education. Dr. Elder has also done significant work with K-12 institutions and those serving young adults, designing and implementing instruction programs which focus on the development of basic academic skills, independent living skills, employability and parenting skills. She has lead numerous critical thinking workshops for educators and other non-profit agencies in topics such as thinking critically in the classroom, critical thinking and leadership, and critical thinking and moral development.



YEHUDI O. WEBSTER is an expert in critical thinking and social problems. He provides workshops on infusing critical thinking into instruction, but is especially concerned with a critical thinking approach to multi-culturalism and the "classification" of people into ethnic and racial groups. He emphasizes the transferability of critical thinking abilities and traits across disciplines and the significance of reasoning in everyday communication and action. Dr. Webster teaches in the Sociology Department at CSU, Los Angeles, and is the author of *The Racialization of America*.

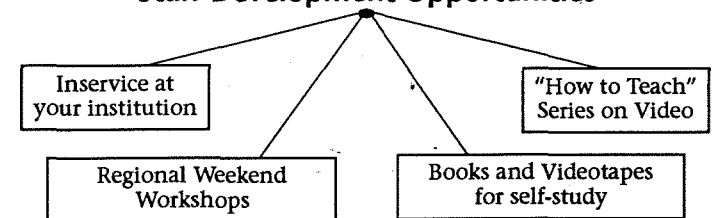
STAFF DEVELOPMENT

THE CENTER FOR Critical Thinking (in cooperation with its sister organization, the Foundation for Critical Thinking) offers four avenues for continuing professional development:

- **Inservice** at your school or district: For one day, two days, or longer we come to your institution to offer a seminar designed to meet your individual needs.
- **Regional Workshops**: Two exciting, interactive days that focus on the design of instruction. One unit of academic credit is available.
- **"How to Teach" Video Series** (9 videocassettes): This study course can be used alone, with a colleague or with a team of people.
- **Resource Materials**: We offer several books on critical thinking as well as video presentations by a variety of presenters that can be used for self-study. (See the summary of selections on page 14.)

"DEMONSTRATION TEACHING" is used as a main tool of presentation in both inservices and regional workshops.

Staff Development Opportunities



REGIONAL WORKSHOPS

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

HOW WE DESIGN OUR WORKSHOPS:

WE INTRODUCE YOU TO:

- 1) the basic components of critical thinking,
- 2) ways to build those components into the design of what you teach and
- 3) ways to make that design effective.

We do not understand critical thinking as something additional to content, but rather as something integral to it. We focus, therefore, on illustrating how students can come to see what they are learning, not as random bits and pieces of information to be memorized, but as a system with a definite set of logical relationships, an organized structure of concepts, principles and understandings that they must think their way through.

DEMONSTRATION TEACHING: WE MODEL WHAT WE PREACH

All of the workshop is organized on the basis of the assumption that one learns critical thinking by doing critical thinking. We have designed the workshop so that you can observe the effectiveness of what we are recommending by seeing how we facilitate your learning. You will role-play students and the content of the sessions will be presented using tactics applicable to virtually any content domain. Teaching tactics will be used that literally force students to actually think through content and take responsibility for their learning. You will be able to use (in your classroom) many of the structures and tactics we are using by adapting them to your content and the format of your classes.

ACTIVITY CENTERED DESIGN

The workshop is divided into 8 sections. In each section, new ideas are presented in short segments followed by tasks which help you to internalize the ideas.

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

Regional Workshop Registration Form

Name: _____

Title: _____

Grade Level or Area of Specialization: _____

Address: Work Home _____

City, State, Zip: _____

School District or Institution: _____

Home Phone: _____ Work Phone _____

I would like to attend the Regional Workshop in:

- Toronto, Nov, 12-13, 1994, at Toronto Hilton
- San Francisco, Jan. 14-15, 1995, at Holiday Inn Union Sq.
- Charlotte, Jan. 21-22, 1995, at The Park Hotel
- Houston, Feb 18-19, 1995, at The Ritz-Carlton Hotel
- Chicago, March 4-5, 1995, at Hyatt Regency Chicago
- Denver, March 25-26, 1995, at Stouffer Concourse Hotel
- Seattle, May 6-7, 1995, at Seattle Marriot-Seatac Airport

I teach: (please check one)

- K-6 _____
- Middle School _____
- High School _____
- University _____
- Community College _____
- Technical College _____
- Graduate School _____
- Nursing _____
- Other (please specify) _____

Number in Party _____

- \$225 single
- \$195 each/group of 2-3
- \$175 each/group of 4 or more

Amount Enclosed \$ _____

Make checks payable and mail to:

Foundation for Critical Thinking

4655 Sonoma Mountain Road, Santa Rosa, CA 95404

phone: (800) 833-3645, fax: (707) 546-4718

INSERVICE

As in our regional workshops, the inservices are organized on the basis of the assumption that one learns critical thinking by doing critical thinking. We design the workshop so that you can observe the effectiveness of what we are recommending by seeing how we facilitate your learning. You will role-play students and the content of the inservice will be presented using tactics applicable to virtually any content domain. Teaching tactics will be used that literally force students to actually think through content and take responsibility for their learning. The inservices are designed so that new ideas are presented in short segments followed by tasks which help you to internalize the ideas. You will be able to use (in your classroom) many of the structures and tactics we use by adapting them to your content and the format of your classes.

Below is a sampling of the themes of some of our staff development inservice programs. The inservice team is experienced in working with a wide range of audiences, from standard academic disciplines to specific and innovative fields. Inquiries regarding presenters, session-breakdowns, costs, and alternative emphases or themes are available upon request from the Center for Critical Thinking.

KINDERGARTEN THROUGH HIGH SCHOOL

- How to Infuse Critical Thinking Across the K-12 Curriculum
- Critical Thinking: The Role of the Administration
- Questioning Students, and Teaching Students to Question: K-12
- How to Establish Intellectual Standards Across K-12 Curriculum
- Reading and Writing as Modes of Thinking
- Remodeling Lessons in the K-12 Curriculum to Foster Thinking
- Critical Thinking About Historical and Contemporary Issues of Social Concern
- Ethics Without Indoctrination: Moral Reasoning Across the K-12 Curriculum

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

AT THE COLLEGE LEVEL

- Infusing Critical Thinking into College and University Instruction
- Ethics Without Indoctrination: Moral Reasoning Across the College/University Curriculum
- Using Questioning Strategies to Teach College and University Students to Reason Persuasively, Master Content, and Discipline Their Minds
- College Reading and Writing as Modes of Thinking
- How to Establish Intellectual Standards Across College/University Curriculum
- Critical Thinking: The Role of Administration
- Remodeling Courses to Foster Critical Thinking
- Thinking Within a Discipline and Teaching Thinking Within a Discipline
- Thinking in a Unified Way Across the Disciplines
- How to Generate Appreciation of the Subject Matter and Make Knowledge Memorable to Students Through the Concept of Discovery and Critical Thinking
- Critical Thinking in Nursing Education

RESOURCES

The Foundation for Critical Thinking

Ground Floor of The Student Union
Saturday through Wednesday

The Foundation for Critical Thinking, sister organization of the Center for Critical Thinking, will have an extensive exhibit of resources available for participants during the 14th International Conference. It will be located on the ground floor of the Student Union. On display will be:

Books

- ☛ Critical Thinking: What Every Person Needs to Survive in a Rapidly Changing World, by Richard Paul (designed for the general public)
- ☛ Critical Thinking: How to Prepare Students to Survive in a Rapidly Changing World, by Richard Paul (tailored to the needs of educators)
- ☛ K-3 Critical Thinking Handbook
- ☛ 4-6 Critical Thinking Handbook
- ☛ 6-9 Critical Thinking Handbook
- ☛ High School Critical Thinking Handbook
- ☛ The Greensboro Plan (a K-12, district-wide staff development model)

Video Tapes

- ☛ The How to Teach Series, by Richard Paul (a nine video series)
- ☛ The Heilbroner-Paul Series (a six video series)
Excerpts from dialogues between Robert Heilbroner and Richard Paul discussing critical thinking and the new global economic change at last year's conference.
- ☛ Critical Thinking about Current Educational Issues, includes:
 - Critical Thinking and Intuition in Nursing Practice by Richard Paul and Penny Heaslip
 - Learning to Think Well: Quality Control in Teaching by Gerald Nosich
 - Multi-Culturalism and Critical Thinking: Compatibility or Competition, by Yehudi Webster

Micro Publications

- ☛ Pseudo Critical Thinking in the Educational Establishment: A Case Study in Educational malpractice, by Richard Paul
- ☛ Critical Thoughts: The Goose and the Fox: Introducing Thinking Behaviors for Elementary Students Through Narratives, by Jane Willson
- ☛ Accelerating Change, the Complexity of Problems and the Quality of our Thinking, by Richard Paul and Jane Willson
- ☛ Critical Thinking; Identifying the Targets, by Richard Paul
- ☛ A model for the National Assessment of Higher Order Thinking, by Richard Paul and Gerald Nosich
- ☛ Why Students—and Often Teachers Don't Reason Well, by Richard Paul

Other

- ☛ Tee-Shirts
- ☛ Sweat Shirts
- ☛ Discounted Merchandise

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

Exhibitors

Ground Floor of The Student Union
Sunday through Wednesday

Various exhibitors will display educational and critical thinking products.

Sonoma State Bookstore

At Far End of Central Quad Area (past Commons)
Sunday through Wednesday

Each year, the bookstore orders books focusing on Critical Thinking. These books either appear on the Center's bibliography or have been recommended by presenters. Many books written by this year's presenters will be available at the bookstore.

CONFERENCE HISTORY

THE 1994 CONFERENCE on Critical Thinking and Educational Reform reflects the development implicit in the thirteen annual conferences which have preceded it. From the beginning, the First National Conference on Critical Thinking, Moral Education, and Rationality (1981), the concept of critical thinking we have fostered has been a comprehensive and deep one supported by intellectual standards and an emphasis on self-assessment, while remaining linked to broadly-based ethical concerns.

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

Subsequent conferences have expanded progressively, growing to include more emphasis on students' crucial early years and on the forces and factors affecting the realities of teaching. We have sought to augment and unfold sound theory with models of sound practice — hence our growing emphasis on workshops and video-tapes modeling instruction which are offered by our sister organization, The Foundation for Critical Thinking. An exhibit of the resources of the Foundation will be located in

the Student Union. This year, over 200 presenters will join us at Sonoma State University for lively discussions, intense intellectual growth, and opportunities to see how far-reaching the growth in the critical thinking movement has become. The global pressures we face, given the accelerating change of our world and the increasing complexity of our problems, supports our earlier perceptions: critical thinking is an imperative for all, not a luxury for the few. More and more national leaders in every field are sounding the echo. The question is how we can help educators and business people to respond effectively.

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

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



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

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

At the same time, we realize that special interest groups exist within the critical thinking movement and need to develop along a manifold of directions. We will be accommodating this need in numerous ways: 1) by classifying all presentations with a label that indicates possible special interest concerns (see audience code chart on page 29 and facing the inside back cover), 2) by listing sessions according to selected audience codes (see page 57), and 3) by setting up a meeting time on Sunday evening (8:00 pm) for groups to organize themselves into networks (see the section entitled Special Interest Groups, page 54, for more information on these special interest meetings).

The evening social hours are intended to be an integral part of the conference. We are encouraging all of the presenters to make themselves available for the social hours in order to facilitate exchanges which are rarely possible in question and answer periods. We welcome you to this feast for the mind!

CONFERENCE THEME

CRITICAL THINKING TACTICS THAT WORK

THE MOST IMPORTANT CHARACTERISTIC of critical thinking is that it works! When we think critically we think better. We identify our problems more accurately and precisely. We discover information relevant to our problems more quickly and thoroughly. We are able to figure out appropriate solutions to our problems more readily. We see implications more insightfully and truly. We are able to shift our point of view more adroitly. We see more, learn more, achieve more. It works.

Yet few people effectively use it. Few students. Few teachers. Few workers. Most are content to think as others before them thought. Most leave thinking to itself, assuming that it will automatically correct itself. There is, in other words, a tremendous amount of self-deception in everyday human thought. We are largely unaware of the low quality of much of our thinking. We think what we want to think, what we have been taught to think, what is approved of, what is common, what is pleasurable, what is easy.... And we do this

unknowingly. The notion of disciplining thinking, of learning to make the improvement of our thinking a conscious object, is rare indeed.

The sessions of the 14th Annual Conference on Critical Thinking are dedicated to making the improvement of thinking a conscious object, especially to becoming sensitive to the power of critical thinking tactics.

In education, critical thinking tactics are related to a deep understanding of both the content of education and the manner in which we structure it. Consider..

THE CONTENT, STRUCTURE, & TACTICS OF EDUCATION

The content for a course includes everything we want students to learn as a result of our instruction. The structure of a course includes everything we design into a course when we plan out exactly how we will teach it. The tactics of a course include everything we do to minimize problems that emerge as a result of student reaction to our instruction.

When we apply critical thinking to instruction, we more consciously and skillfully take charge of the content, structure, and tactics embedded in our teaching. We make the design of instruction our conscious object. We trouble-shoot the problems inherent in teaching and learning. Our structural design, then, reflects our tactical insights into the problems of education.

A critical thinker, in other words, anticipates problems and designs "solutions" into the structure of behavior. Of course, it is not possible to pre-design all "solutions" to problems of learning into the structure of our classes, no more than it is possible to "design" our behavior so that we experience no problems. The result is that as educational tacticians we must develop a repertoire of tactics which we keep in the wings to allow us to make needed adjustments as a result of our day-by-day assessment of how well our students are learning. The tactical dimension of redesigning instruction, then, is the development of ways and means to minimize problems that emerge in instruction within any given structural plan. It is always a form of

day-by-day problem-solving. It always involves making adjustments in our instruction that result from the fact that something needs correction in the classroom. We can be best prepared for these problems if we have a repertoire of tactics available to us.

The sessions of the 14th International Conference on Critical Thinking and Educational Reform are dedicated to fostering our awareness of this important dimension of critical thinking in education.

PROBLEM	IDEAL	TACTIC
1. The students read the textbook poorly. They get little out of it.	1. I want every student to get the basic meanings out of the textbook. I want them all to basically understand it.	1. I will teach them how to read the textbook by modeling how to read it and giving them opportunities to compare their reading with mine.
2. When working in groups that will have to report, some students will leave it to someone else to report and won't really pay much attention.	2. I want everyone in a group to participate actively in group work.	2. I will choose who the "reporter" will be and I will choose that person right before the report is due.
3. Students often ignore what other students say. That is, they don't listen to what other students have to say.	3. I want everyone to be carefully listening to anyone who speaks.	3. I often call on students to summarize in their own words what another student has said: "Judy, would you summarize what Jack just said."
4. Students often speak in vague terms and don't seem to know how to make their points clearly.	4. I want every student to understand how they can maximize the clarity of what he/she is saying.	4. I often ask students to elaborate what they have said in other words and to give us an example or illustration to help us.

WARNING! PSEUDO CRITICAL THINKING IS COMING

Taken From: "Pseudo Critical Thinking in the Educational Establishment", by Richard Paul. It is published by the Foundation for Critical Thinking in micro-publication form and as a chapter in both *Critical Thinking: What Every Person Needs To Survive in a Rapidly Changing World* and *Critical Thinking: How to Prepare Students to Survive in a Rapidly Changing World*, both authored by Richard Paul.

Sometimes when people think poorly, they do so out of simple ignorance. They are making mistakes, they don't know they are making mistakes, but they would willingly correct their mistakes if they were pointed out to them. Often mistakes in thinking are quite humble. No one is apt to take them for models of how to think.

Such thinking may be quite uncritical, but is not pseudo critical thinking. Pseudo critical thinking is a form of intellectual arrogance masked in self-delusion or deception, in which thinking which is deeply flawed is not only presented as a model of excellence of thought, but is also, at the same time, sophisticated enough to take many people in. No one takes a rock to be a counterfeit diamond. It is simply other than diamond. But a zircon mimics a diamond and is easily taken for one and hence can be said to be a pseudo diamond.

There is much "sophisticated" but deeply flawed thinking which is presented as a model for thought. This is nothing new in the history of thought and knowledge. Medieval philosophy and theology, for example, was used as a sophisticated tool to resist, quite unknowingly of course, the advance of science. When deeply flawed thinking is embedded in teaching, then the development of thought and knowl-

edge in the student is retarded or arrested. Teachers at every level of education, for example, tell students how to think. They point out thinking which they in effect encourage students to emulate. When what they point out as a model is deeply flawed, and yet sophisticated enough to take many in, it is a form of destructive pseudo critical thinking.

When deeply flawed thinking is embedded in teaching, then the development of thought and knowledge in the student is retarded or arrested.

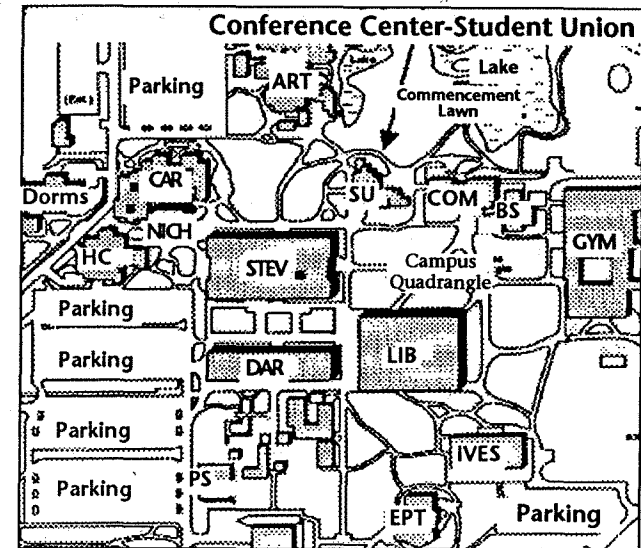
Pseudo critical thinking is everywhere in the world, for everywhere there are people who take themselves to be models of good thinking and who are engaged in influencing others by their model. Sometimes they foster an approach to thinking quite explicitly — by, for example, designing a program that purports to foster critical thinking. But more often they simply implicitly propagandize for a form of flawed thinking, not aware of the thinking that they are modeling. In any case, it is a rare person, one who really does think critically, who recognizes fundamental flaws in his or her own thinking. Most people are victims of their bad thinking. They do not know how to analyze and assess thinking. Consequently, most believe that their thinking is instinctively and naturally of good quality. Most believe, in other words, that his or her own thinking is that of a fairminded person who judges persons and events in an impartial and accurate way. Often people, then, inadvertently buy into one or more kinds of pseudo critical thinking: in business, in politics, and, of course, in personal, emotional, and family life. The International Conference On Critical Thinking and Educational Reform, in conjunction with the National Council for Excellence in Critical Thinking, is committed to exposing pseudo critical thinking in all domains.

HOW TO FIND THE SESSIONS YOU WANT TO ATTEND

DUE TO THE large number of sessions, we have designed the Conference Schedule with a number of special sections, each of which lists the sessions in a unique way: chronologically, by presenter name, and some sessions listed by selected audience codes (see page 57). The following recommendations may make planning your conference attendance easier.

- Each session has audience codes which indicate areas addressed. Most of these codes are assigned by the presenter. The key to these codes is located on page 29, as well as on the last page of the program. Please notice the new audience code entitled Demonstration Teaching (coded "Dem Teach"). In these sessions, participants will role-play students, thereby experiencing firsthand teaching strategies and tactics.
- The conference schedule section is best used to view the schedule as a whole. It lists the sessions chronologically, giving the presenter name(s), session title, location, and audience codes. The abstracts can be located by referencing the presenter's name.
- The abstracts are listed alphabetically by presenter's name. If there are some speakers you especially want to see, you can find out what talks they will give and when.

- There is also a listing of some sessions by selected audience codes. This section is not intended to give a complete list of every session addressing that category, but rather to highlight some that have especially strong emphasis in those areas. Again, the abstracts can be found by referencing the presenter's name.
- If you're especially interested in hands-on sessions, check the abstract. Many abstracts describe the nature of the session, as well as more detail about the content. If the abstract is unclear, arrive early and ask the presenter if the session is hands-on.
- For your convenience, we've included a planning guide on page 30. This worksheet can be used to list the sessions you plan to attend, as well as back up options.
- Some sessions will inevitably attract many attendees. Because this is difficult to predict, you should always have one or two back-up sessions selected just in case your first and second selections are already filled.
- Mark all changes from the Special Announcements and Changes Sheet (included in the conference handouts picked up at registration) in your schedule.



AUDIENCE CODES

ELEM.....	elementary school
MID/HIGH	middle/high school
K-12	kindergarten-12th grade
COLL	post-secondary education
ADV	advance session
BEG	beginners in critical thinking
DEM TEACH	demonstration teaching
BUS	business
COMP AID	computer assisted instruction
ENV	environment
FEM	feminism
G	general
HEALTH.....	health sciences
H CON	human conflicts
LANG	language arts/English
MATH/SCI.....	math/science
MEDIA	media, media literacy
MUL-CULT	multi-culturalism
POL	politics, political science
PSYCH	psychology
SOC STUD.....	social studies
SOCIOL.....	sociology
STAFF DEV	staff development
TEST	testing and assessment

CONFERENCE SCHEDULE

SUNDAY

9:00 AM – 10:15 AM

RICHARD PAUL COMMENCEMENT AREA
 Welcoming Address: Critical Thinking Tactics That Work
 in the Classroom and on the Job.

10:30 AM – 12:00 PM

GERALD M. NOSICH IVES (WARREN)
 An Introduction To Critical Thinking: What Is It? Why
 Should I Teach For It? How Can I Teach For It? Coll,
 K-12, Beg

LINDA ELDER CAR 68
 Socratic Teaching: Using It Effectively With High School
 Students Mid/High

BARBARA J. NICOLL DAR 108
 Active Learning vs. Critical Thinking: Making Sure We
 Get All the Way to Critical Thinking Coll, Beg, Psych, Sociol

RICHARD POPE SU 100
 Restructuring Your Class To Make 'Em Think! Elem, Beg,
 Staff Dev

WILLIAM A. DORMAN IVES 119
 Mass Media in the Critical Thinking Curriculum Media,
 Coll

PAUL TANNER STEV 2049
 Methodology Based Writing as a First Step to Critical
 Thinking for Late High School and Early College
 Students Mid/High, Coll, Lang, Inf Logic

SUNDAY

10:30 AM - 12:00 PM

Continued

- MERLE R. KATAOKA-YAHIRO ART 108
A Critical Thinking Model for Nursing Judgment Nurs
- MARVIN BROWN STEV 3072
The Ethical Process: A Strategy for Making Good Decisions Coll, Bus/Econ, Inf Logic, H Con
- JON AVERY IVES 34
A Possible Solution to the Transfer-Problem Coll, Mid/High, Lang, Inf Logic, Teach Tactic
- JACKIE A. GIULIANO DAR 139
Gender and Science: The Impact of the Absence of a Feminist Voice - Putting the Human Spirit Back Into Science and Science Education Env, Fem, Math/Sci, Mul-Cult
- BARBARA S. WILSON, ALICE J. MCFARLANE IVES 78
How Can Nursing Educators Define Critical Thinking for Themselves and Their Students? Nurs, Health, Staff Dev, Beg
- WAYNE R. MORGAN, JR. DAR 122
Techniques and Tools: Using Elements of Classroom Assessment and Total Quality Management to Enhance and Assess Critical Thinking Instruction in the Classroom Coll, Math/Sci, Test, Staff Dev, Teach Tactic
- SANDRA A. MOSCOVIC, DAVID B. PORTER STEV 3046
Enhancing Critical Thinking in a College Course Coll, Beg, H Con, Psych
- YORAM HARPAZ DAR 137
Conflicting Theories of Education Towards Critical Thinking Beg, Coll, Adv, Soc Stud
- PERRY WEDDLE NICH 173
Causal Reasoning Mid/High, Coll, Inf Logic, Math/Sci
- MARTHA M. WOOD STEV 3040
Cognitive Enrichment in Developmental Mathematics Coll, Math/Sci
- SUE Y. LUCKEY STEV 3036
Creative and Critical Thinking Instructional Strategies for Business Courses Bus/Econ, Coll, Staff Dev, Teach Tactic

12:00 PM - 1:30 PM

LUNCH BARBECUE OR STUDENT UNION
 Residence Dining Hall open for C.T. residents from 12:00-1:30

1:30 PM - 3:15 PM

- RICHARD W. PAUL SU 100
On Helping Students to Think More Clearly Beg, Teach Tactic, Dem Teach
- YEHUDI O. WEBSTER IVES (WARREN)
Are There White and Black People? Reasoning About Racial Classification G, Soc Stud, Mul-Cult
- CHARLES V. BLATZ IVES 119
Critical Thinking and the 21st Century: Teaching Critical Thinking Through the Development of Individual Student Portfolios Centered on Global Problems Coll, Env, H Con, Mul-Cult, Pol, Test
- JOHN R. FEARE CAR 68
Beyond Speechmaking and the Marketplace of Ideas: A Radical Transformation in Communication H Con
- HARRY MAYO, M.A., JANE LORAND, 15 STUDENTS FROM MR. MAYO'S FALL, 1993 CLASS IN CRITICAL READING ... STEV 3008
Why Hasn't Anyone Taught Us to Reason Before Now? Community College Students Become Educated Consumers of Their Own Education (Part One) Gen, Staff Dev, Beg, Nurs, Parents
- LYNN J. LOFTHOUSE STEV 2049
A Workshop to Train Teachers to Infuse Critical Thinking Skills in Students Through Self-Evaluation Mid/High, Coll, Psych
- LESLEY ORR ART 108
Across the Curriculum: Writing, Thinking, and Learning K-12, Lang
- RENATE OTTERBACH STEV 3040
Accurate Problem Definition: The Key to Effective Problem Solving Adv, Mid/High, Coll
- ELEANOR VANETZIAN, BARBARA CORRIGAN IVES 35
Designing Case Studies That Stimulate Inquisitiveness to Acquire Nursing Knowledge Nurs
- WILLIAM FRAYER IVES 34
Teaching Critical Thinking at the Two-Year Technical College Coll, Beg, Nurs

SUNDAY

1:30 PM - 3:15 PM

Continued

- JERRY FLUELLEN.....IVES 78
Third Millennium Mathematics *Elem, Beg, Test, Mul-Cult*
- DIANNE ROMAIN DAR 139
Thinking in Another's Shoes: Role Playing and Critical Decision Making *Coll, H Con, Env, Fem*
- JO ANN CARTER-WELLS, JAMES L. RATCLIFF, ELIZABETH JONES, PETER A. FACIONE..... DAR 122
Update on Goal 5.5 of Goals 2000: Results of a National Delphi Study Linking Critical Thinking and Communication Goals/Outcomes (part 1) *Coll, Pol, Test, Staff Dev*
- NORMAN J. UNRAU DAR 137
The Role of Critical Thinking in Teacher Education Programs *Coll, Staff Dev, K-12*
- WILLIAM J. PANKRATIUS..... STEV 3036
Empowering Students to Think Critically About Their Own Learning: Constructing Knowledge Holistically Through Concept Mapping *Mid/High, Sci, Lang, Beg, Soc Stud*
- MARIO GALVAN STEV 3028
Thinking Critically about the Zapatista Revolution in Mexico *Gen, H Con, Mul-Cult, Pol, Peace, Soc Stud*
- DIXON WRAGG DAR 143
Critical Thinking and Social Responsibility: From the Classroom to the World *H Con, Sociol, Beg*

3:15 PM - 4:45 PM

- RICHARD W. PAUL SU 100
On Helping Students to Think More Deeply *Beg, Teach Tactic, Dem Teach*
- M. NEIL BROWNE, STUART M. KEELEY IVES (WARREN)
Getting Started As A Teacher of Critical Thinking: Classroom Behavior and Assignments *Mid/High, Coll, Soc Stud*
- LINDA ELDER..... CAR 68
Socratic Teaching: Using It Effectively With College/University Students *Coll, Dem Teach*

- DONALD HATCHER, LUCY PRICE IVES 119
Critical Thinking, Written Composition, and Primary Texts *Mid/High, Coll, Staff Dev, Test*
- HARRY MAYO, M.A., JANE LORAND, 15 STUDENTS FROM MR. MAYO'S FALL, 1993 CLASS IN CRITICAL READING ... STEV 3008
Why Hasn't Anyone Taught Us to Reason Before Now? Community College Students Become Educated Consumers of Their Own Education (part 2) *Gen, Staff Dev, Beg, Nurs, Parents*
- OGDEN MORSE STEV 2049
Literature, History, and What We Believe *Mid/High, Lang, Teach Tactic*
- PERRY WEDDLE ART 108
Critical Thinking Diagrams *Mid/High, Coll, Inf Logic*
- NAWANG PHUNTSOG STEV 3072
Renewal of Tibetan School Curriculum in Exile: A Tibetan-centric Approach *Mul-Cult, H Con, Elem, Sociol*
- JULIA Y. PORTER, WAYNE C. PORTER IVES 34
Meeting the Challenge of Effectively Assessing Critical Thinking Skills *Test, Coll, Staff Dev, Beg, Teach Tactic*
- CHRISTINE D. STEVENS IVES 35
Flowcharting As a Tool for Critical Thinking in the Health Sciences *Health, Math/Sci, Nurs, Coll, Teach Tactic*
- T. EDWARD DAMER IVES 78
How to Distinguish "Good" Arguments from "Bad" Ones *Mid/High, Coll, Beg, Inf Logic*
- STANLEY SCOTT DAR 139
Creativity and Critical Thinking: A New Model of Learning as the Making of Meaning *Coll, Adv, Env*
- JO ANN CARTER-WELLS, PETER A. FACIONE, NANCY CLOVER GLOCK, WILLIAM JOHNSON, ELIZABETH A. JONES, BOB PUTMAN, JAMES L. RATCLIFF, CHARLES WOODSON DAR 122
An Intersegmental Dialogue on the Policy Implications for California of Goal 5.5 of the Goals 2000: Educate America Act (part 2) *Coll, Pol, Test, Staff Dev*
- JACKIE A. GIULIANO..... DAR 137
The Development of Social Responsibility and Environmental Awareness Through Techniques in Critical Teaching - A Community Involvement Approach *Beg, Env, Test, Teach Tactic*
- RIKA YOSHII, ALASTAIR MILNE, JAMES CHOU NICH 173
Critical Analysis and Problem Solving Through Debugging *Mid/High, Coll, Math/Sci*

SUNDAY

3:15 PM – 4:45 PM

Continued

- THOMAS J. SCHEFF. STEV 3046
Alienation in Families and Classrooms: Repairing the Bond *Adv, H Con, Sociol, Psych*
- HELEN E. R. DITZHAZY STEV 3040
Moral Reasoning, Province of the Schools: Teaching Values, Province of the Home *H Con, K-12, Inf Logic*
- TERRY R. MORRIS STEV 3028
Teaching History as Argument *Beg, Soc Stud, Coll, Inf Logic, Teach Tactic*
- PATRICIA K. LACEFIELD, RUTH R. VOIGNIER STEV 1040
Critical Thinking: Client with AIDS, An Interactive Video *Comp Aid, Nurs, Health, Coll*

8:00 PM – 11:00 PM

SPECIAL INTEREST GROUPS AT EVENING SOCIAL..... STUDENT UNION (PUB)
 Please see page 54 for details.

MONDAY

8:45 AM – 10:15 AM

- RICHARD W. PAUL SU 100
How To Get An Angle on a Question: And Say Something Worth Saying *Beg, Teach Tactic, Dem Teach*
- M. NEIL BROWNE, STUART M. KEELEY IVES (WARREN)
Lessons Learned from Two Decades of Teaching Critical Thinking *Mid/High, Coll, Beg, Soc Stud*
- LINDA ELDER. CAR 68
Socratic Teaching: Using It Effectively With K-6 Students *Elem, Dem Teach*
- JANE LORAND, M.A., J.D. DAR 108
Self Assessment at the High School and College Level: Peer Editing, Group and Individual Assessment in Speaking and Writing *Mid, High, Univ, Staff Dev*

- EILEEN M. ROCHE IVES 119
Promoting Critical Thinking in Nursing Students Through Concept Mapping and Cooperative Learning Strategies *Nurs, Coll, Test, Health*
- ANN KERWIN, MARLYS WITTE, CHARLES WITTE STEV 3008
Ignorance, Passion, and Mess: Ingredients for Success in Education and Business *Mid/High, Coll, Beg, Staff Dev*
- HAROLD L. HAYES. STEV 2049
Critical Thinking and Cognition: The Essential Interaction *Beg, Staff Dev, Math/Sci, Soc Stud*
- PETER A. FACIONE, NOREEN C. FACIONE. ART 108
Classroom Assessment of Higher Order Thinking *Test, Beg, Coll*
- LORRAINE WALLACE, JANET SUTORIUS STEV 3072
A Shot in the Dark? or Rubric? *Test, Lang, K-12*
- CHARLENE PEARSON, BOB PUTMAN, JEANNE KERALLAH, GEORGE WRIGHT IVES 34
Implementing Critical Thinking into District Curriculum *Coll, Staff Dev, Test*
- CHRIS ELESER IVES 35
Nuts and Bolts of Designing and Implementing A Critical Thinking Course for College Freshmen *Beg, Coll, Staff Dev*
- JACKIE A. GIULIANO. DAR 139
The Environmental Studies Curriculum as a Vehicle for the Introduction of Feminist Philosophies and Spirituality into the Classroom *Env, Fem, H Con, Mul-Cult*
- WILLIAM L. HOOPER IVES 78
Teaching Critical Thinking in the Fine Arts *Arts, Coll, Beg*
- RUBY L. TROW, MARILYNN FILBECK DAR 122
Using Student Portfolios to Assess Student Critical Thinking Skills *Test, Mid/High, Coll, Teach Tactic*
- JUDITH K. WHITEHEAD STEV 3046
Training the Workforce: New Tactics Required *Bus/Econ, Coll, Mid/High, Beg, Teach Tactic*
- ROBERT GREENSTREET. DAR 137
Critical Thinking and the Required Course in Speech: Engaging Students Through Active Learning *Lang, Beg, Coll, Mid/High*
- DAVID B. PORTER, SANDRA A. MOSCOVIC. NICH 173
Thinking Critically About Eyewitness Testimony *Coll, Psych, Soc Stud, Test*

MONDAY

8:45 AM - 10:15 AM

Continued

- EDNA MAYE LOVELESS.....STEV 3040
Metaphorical Thinking, Evidentials, and the Believing Game *Lang, Media, Coll, Mid/High*
- PATRICIA ALLEN STEV 3036
Teaching for Critical Thinking in the Career Programs of a Community College *Coll*
- GEORGE RADDUE, JOANN RADDUE STEV 2065
Critical Thinking Smorgasbord: Showcase of Project-Based Learning Activities *Elem, Staff Dev, Math/Sci, Env*
- JEFFREY REED..... DAR 143
Analyzing Historical Images: Using Illustrations to Stimulate Critical Thinking *Soc Stud, Mid/High, Lang, Test*
- MARIA PACINO STEV 1040
Critical Thinking and Multicultural Education *Beg, Mul-Cult, Media, Staff Dev*
- JOEL RUDINOW, ROB R. BRADY..... CAR 1
Tutorial Cybernetics: Interactive Tutorial Software for Critical Thinking (part 1) *Mid/High, Coll, Staff Dev, Comp Aid*

10:30 AM - 12:00 PM

- RICHARD W. PAUL SU 100
Is There Such a Thing as a Fit Mind? *Beg, Gen*
- GERALD M. NOSICH..... IVES (WARREN)
Learning to Ask Good Questions *Coll, K-12, Beg*
- SANDY FRITZ-KELLY CAR 68
Developing Teaching Strategies That Enhance Critical Thinking in Nursing Students *Nurs, Health, Coll*
- MARLYS MAYFIELD..... STEV 2049
How About a Global Curriculum for Critical Thinking Instruction? Can We Do It? *Coll, Lang, Mul-Cult, Soc Stud*
- FLORENCE FAY PRITCHARD..... ART 108
Teaching Thinking Across the Curriculum with the Concept Attainment Model *K-12, Staff Dev, Coll, Teach Tactic*
- GEORGE H. HANFORD STEV 3008
Critical Thinking and the New SAT *Mid/High, Test*
- KENNETH ANDERSON..... STEV 3072
Critical Thinking Made Simple *Beg, Coll, Mid/High, Inf Logic*

- M. STAR MAHARA..... IVES 34
Active Engagement and the Construction of Knowledge *Nurs, Coll, Health*
- A.J.L. SINCLAIR, J.H.C. OLIVIER..... IVES 35
The Whole-Mind Development of the Young Learner in a New Society: Rethinking the South African Classroom *Lang, Math/Sci, Mul-Cult, Elem*
- NORMAN BETZ..... DAR 139
Using the MBTI to Prepare for Critical Thinking *Coll, Beg, Lang, Test*
- RENATE OTTERBACH..... IVES 78
Integrating Thinking Skills and Teamwork to Prepare Students for a Changing World *Adv, Staff Dev, Coll, Mid/High*
- WEBSTER E. COTTON..... DAR 122
Ideas, Concept Maps and the Human Project: Re-Thinking the Meaning/Significance of the Educational Process *Coll, Psych, Sociol, Soc Stud*
- FRANCINE MALDER JAMIN..... STEV 3046
Forging the Ring and Crafting the Book: Interactive Techniques of Teaching Writing and Reasoning *Lang, Coll, Mid/High*
- ROBERT L. MCCONNELL, DANIEL C. ABEL..... DAR 137
Environmental Issues by the Numbers *Env, Mid/High, Math/Sci, Coll, Teach Tactic*
- DIXON WRAGG..... NICH 173
Nonrational Determinants of Thinking, and Implications for Critical Thinking Pedagogy *Psych, Sociol, Mul-Cult, Beg*
- JIM POLLARD..... STEV 3028
The Learning Environment Workplace and Critical Thinking *Adv, Bus*
- JENNIE S. CONN, ANDREW O. HILL, CHASTITY B. CONN... DAR 143
Redefining Cheating Through Collaborative Learning and Test Taking Methods *Coll, Test*
- LAWRENCE A. PARKER, SUSAN PARKER..... STEV 1040
Strategies for Implementing Critical Thinking *Staff Dev, Coll, Adv, Bus/Econ, Teach Tactic*
- JOEL RUDINOW, ROB R. BRADY..... CAR 1
Tutorial Cybernetics: Interactive Tutorial Software for Critical Thinking (part 2) *Mid/High, Coll, Staff Dev, Comp Aid*

CONFERENCE SCHEDULE

12:00 PM – 1:30 PM

LUNCH BARBECUE OR STUDENT UNION
Residence Dining Hall open for C.T. residents from
12:00-1:30

MONDAY

1:30 PM – 3:15 PM

- RICHARD W. PAUL SU 100
Transforming the Character of Our Students:
Cultivating Intellectual Traits *Beg, Teach Tactic, Dem Teach*
- YEHUDI O. WEBSTER IVES (WARREN)
On Becoming a (Better?) Critical Thinking Instructor:
The Elements of Thought *G*
- SUSAN HALES DAR 108
Understanding the Interdependent Relationships
Among Critical Thinking, Moral Integrity, and Student
Learning Part I *G, Psych*
- T. EDWARD DAMER IVES 119
How to Resolve Disagreements on Controversial Issues:
A Code of Conduct for Effective Rational Discussion
Beg, Coll, Mid/High, H Con
- JOHN R. FEARE CAR 68
Critical Thinking Within a Theological Dimension *Env*
- WILLIAM A. DORMAN, RALPH JOHNSON STEV 3008
A Way of Seeing: Teaching Mass Media Analysis
Media, Coll, Mid/High
- JULIE A. COON, MARY J. CAIRY STEV 2049
The Use of Problem-Based Learning Groups to Foster
Critical Thinking Skills in Associate Degree Nursing
Students *Nurs, Beg, Health, Coll, Teach Tactic*
- PETER A. FACIONE, CAROL A. SANCHEZ ART 108
The Disposition Toward Critical Thinking *Beg, Coll,
Mid/High*
- PERRY WEDDLE STEV 3072
Stereotyping *Gen, Beg, Media, Psych, Soc Stud, Inf Logic*
- IAN WRIGHT IVES 34
Critically Deciding What To Do *Beg, Elem, Soc Stud, Teach
Tactic*

CONFERENCE SCHEDULE

- CHARLES V. BLATZ IVES 35
The Spirit of Critical Thinking and the Possibility of
Cross Cultural Criticism *Adv, Mul-Cult*
- TRISH TAYLOR STEV 3040
A Critical Thinking Road Map to Problem Solving:
Avoiding the Pitfalls *Bus, Gen*
- KAREN L. HEILMEIER-RANKIN, CAROL B. WILSON DAR 139
"Mary, Mary, Quite Contrary, How Does Your Garden
Grow?" Does Caring and Holism Promote Personal
Growth and Create a Framework for Critical Thinking in
Nursing Education? *Nurs, Psych, Health, Coll*
- C. GRANT LUCKHARDT IVES 78
Criteria For Assessing Appeals to Authority *Inf Logic,
Lang, Psych, Coll*
- CARINE V. ALMA DAR 122
A Strategy for the Acquisition of Problem-Solving
Expertise in Humans: A Systems Approach *Psych*
- ALBERT H. GARDNER DAR 137
Conceptual Levels of Students and Teachers:
Questioning Techniques and Critical Thinking *Coll, K-
12, Psych, Teach Tactic*
- HARRIET CHAMBERLAIN, PH.D. NICH 173
Creating Thinking Space for Survival *Coll, Adv*
- SINAH GOODE, RON FRENCH STEV 3046
First Steps for Building Critical Thinking Into Classes
Coll, Beg, Health, Inf Logic
- THOMAS SECCO STEV 3036
The Reign of the Faculties *Adv*
- SHIRETTA OWNBEY DAR 143
Reforming Education for Designers and Merchandisers:
Critical Thinking Through Team Learning *Beg, Coll,
Mid/High, Bus/Econ*
- STEPHEN JOHN ADAMS STEV 3028
Critical Thinking Tactics for the American Studies
Classroom *Mid/High, Coll, Soc Stud, Pol*
- JAMES MAYLIN ERDMAN STEV 1040
The Eau Claire Plan: The Genesis of a K-12 Staff
Development Program in Critical Thinking *K-12, Beg,
Staff Dev*

3:15 PM – 4:45 PM

- RICHARD W. PAUL SU 100
Content! Content! Content!: Oh, How Often We
Counterfeit Knowledge! *Beg, Teach Tactic, Dem Teach*

MONDAY

3:15 PM – 4:45 PM

Continued

- GERALD M. NOSICH IVES (WARREN)
Helping Students Become Critical Thinkers *Coll, K-12, Beg*
- LINDA ELDER CAR 68
Socratic Teaching: Using It Effectively With Middle School Students *Mid/High, Dem Teach*
- SUSAN HALES DAR 108
Understanding the Interdependent Relationships Among Critical Thinking, Moral Integrity, and Student Learning Part II *G, Psych*
- OGDEN MORSE STEV 2049
Making Meaning in the Classroom: Skills, Perspectives, and Subject Matter *Mid/High, Lang, Teach Tactic*
- MARLYS MAYFIELD STEV 3008
Getting to One Fundamental of Critical Thinking: Teaching the Difference Between Observing and Interpreting *Coll, Lang, Mul-Cult, Soc Stud*
- JANE LORAND, M.A., J.D. STEV 3072
Helping Our Adolescent Children Develop Sound Judgment: Critical Thinking: An Integral Part of Parent Education *Gen, Counselors, Parents*
- GLENN D. EARLEY IVES 34
The Revenge of Relativism—Dealing Critically with Holocaust Denial *Mid/High, Coll, Gen, Soc Stud, H Con*
- PENNY HEASLIP STEV 1040
Surfing the Net: Globalization of Dialogue and Argumentation in Nursing *Coll, Test, Comp Aid, Nurs, Teach Tactic*
- GEORGE RADDUE, JOANN RADDUE STEV 2065
Hand-To-Mind: Project-Based Learning: Making Microscopes *Math/Sci, K-12, Staff Dev, Env*
- MARK A. WILCOX IVES 35
Creative Thinking: A Relevant Tool for Today and the Future *Bus, Mid/High, Coll, Staff Dev*
- KRISTAN CAVINA IVES 78
Teaching Critical Thinking in the Writing Class *Lang, Coll*

- MARION N. FAY DAR 139
Hostages of Popular Culture: Can Students (and Teachers) Ever Get Free? *Coll, Lang, Env, Mid/High, Media*
- BURTON VOORHEES DAR 122
Some Basic Principles of Reason and of Complex Systems and Their Relevance to Critical Thinking *Coll, Math/Sci, Inf Logic, Adv*
- JOSÉ ALEJANDRO RAMÍREZ STEV 3046
Quality of Education and Critical Thinking in Mexican Elementary Schools *Elem*
- MARYBETH YOUNG DAR 137
Fostering Critical Thinking in Novice Nurses *Nurs, Health, Coll, Teach Tactic*
- KAY KYLE LUTER NICH 173
Euphoria and Creativity: Is There a Feeling Akin to Euphoria in the Experience of Creativity? *K-12, Inf Logic, Psych*
- JACKIE A. GIULIANO STEV 3040
Critical Textbook Selection - A Fundamental Prerequisite for Critical Teaching *Beg, Psych, Soc Stud, Test*
- KATHLEEN M. HERSCHELMANN STEV 3036
Critical Thinking in an Interdisciplinary High School/College International Curriculum Package *Bus/Econ, Mid/High, Coll, Staff Dev*

5:30 PM – 8:00 PM

- CASUAL DINNER AND VOLLEY BALL GAMES PATIO OF DINING COMMONS

8:00 PM – 11:00 PM

- EVENING SOCIAL STUDENT UNION

TUESDAY

8:45 AM – 10:15 AM

- RICHARD W. PAUL SU 100
How I Develop My Thinking *Beg*
- M. NEIL BROWNE IVES (WARREN)
Guided Dialogue: An Effective Alternative to Lectures or Discussion as Avenues Toward Critical Thinking *Mid/High, Coll, Beg, Soc Stud*

TUESDAY

8:45 AM - 10:15 AM

Continued

- LINDA ELDER CAR 68
Using the Elements of Reasoning as the Foundation for Teaching: K-6 *Elem, Dem Teach*
- EILEEN GAMBRILL, RAFAEL HERRERA DAR 108
Practical Strategies for Enhancing Critical Thinking in Environments that Favor Fuzzy Thoughts *Coll, Health, Staff Dev, Nurs, Teach Tactic*
- KENNETH R. BAIN STEV 3008
Integrating Critical Thinking and Motivational Theory in the Disciplines *Coll, Adv, Inf Logic, Soc Stud*
- WILLIAM J. HISKER, FRANCES MURPHY ZAUHAR STEV 2049
Velcro Education: Cultural Studies and Popular Media *Media, Coll, Soc Stud, Beg*
- ELISA DE LA ROCHE, WENDY OXMAN ART 108
Walking in New Shoes: Critical Thinking Through Improvisational Drama *Arts, Beg, H Con, Teach Tactic*
- DONALD HATCHER STEV 3072
Grading the Ennis-Weir Critical Thinking Essay Test *Mid/High, Coll, Staff Dev, Test*
- GORDON LEON BLACK IVES 34
Emotion and Reason: Describing Disputes *Inf Logic, Lang, H Con*
- LYN FREEMAN IVES 35
Critical Thinking as Clinical Intervention *Psych, Nurs, Test, Health*
- FRANK MYERS IVES 78
Assessing Critical Thinking Programs: The Research Design Issue
- SURINDER SINGH ATTARIWALA STEV 3028
A Critique of: Bilingualism, Mother Tongue, Community Languages *Mul-Cult, H Con, Lang*
- JOEL RUDINOW, ROB R. BRADY CAR 1
Tutorial Cybernetics: Interactive Tutorial Software for Critical Thinking (part 1) *Mid/High, Coll, Staff Dev, Comp Aid*
- CAROL A. SANCHEZ, NOREEN C. FACIONE DAR 139
Critical Thinking Dispositions and Skills Among Junior and Senior High Students *Mid/High, Test, Psych*
- JEAN ANN FOLEY DAR 137
Critical Thinking: Transforming Teacher Perspective *Staff Dev, Sci, Elem, Teach Tactic*

- RAYMOND S. PFEIFFER NICH 173
Thinking Critically with the Resolved Strategy of Ethical Decision-Making *Coll, Beg, Mid/High, Teach Tactic*
- JOHN C. BOST STEV 3046
Critical Thinking in the Legal Environment Course: Application to a Content Driven Course *Bus/Econ, Coll, Teach Tactic*
- JANE LORAND, M.A., J.D. DAR 122
Bringing Discipline to the Team with the Elements of Reasoning
How to Enhance Productivity in Staff Meetings *G, Staff Dev, Counselors, Bus*
- CORRINNE BEDECARRÉ STEV 3040
Community, Criticism, and the Problems of Non-Adversarial Methodology *Fem, Adv*
- PETER WINCHELL, VICTORIA ALLEN, STEV 3036
Socratic Seminars — Learning How To Learn *Staff Dev, K-12, Beg*

10:30 AM - 12:00 PM

- RICHARD W. PAUL SU 100
What Are Concepts? Why Do We Need Them? *Beg, Teach Tactic, Dem Teach*
- YEHUDI O. WEBSTER IVES (WARREN)
Multi-Culturalism and Critical Thinking: Compatibility or Competition? *G, Mul-Cult*
- JOHN LANGREHR IVES 119
Clarifying Key Elements of Better Thinking For Educators *K-12, Lang, Psych*
- ANN KERWIN STEV 3008
Not Enough Nothing Nowadays *Mid/High, Coll, Beg, Staff Dev*
- JIM POLLARD STEV 2049
100% Mastery (A Self-Assessment Workshop) *Test, Adv, Bus/Econ, Teach Tactic*
- PENNY HEASLIP ART 108
NLN Criterion 20: Mandate for Curriculum Reform in Nursing Education *Coll, Beg, Staff Dev, Nurs*
- YUN JA LASSEK STEV 3072
Visual Imagery and Its Relation to Critical Thinking *K-12, Coll, Media, Psych, Arts, Teach Tactic*
- MARY A. MILLER, DOROTHY E. BABCOCK IVES 35
Promoting Critical and Creative Thinking in Nursing Curricula *Nurs, Health, Teach Tactic*

TUESDAY

10:30 AM - 12:00 PM

Continued

- SALLIE L. WILSON IVES 34
Teacher + Theory + Students = Math Quality Learning!
Math, K-12, Staff Dev
- GAIL HUGHES, M.J. ABHISHAKER, RICHARD KUSS,
 COLLEEN TRACY DAR 139
Constructing an Adaptive Interview to Assess Thinking Skills: Demonstration and Discussion of a Work in Progress *Test, Coll*
- JOEL RUDINOW, ROB R. BRADY CAR 1
Tutorial Cybernetics: Interactive Tutorial Software for Critical Thinking (part 2) *Mid/High, Coll, Staff Dev, Comp Aid*
- JEFFREY REED IVES 78
The Story Behind Cinco de Mayo: A Study in Different Points of View *Mul-Cult, Mid/High, Soc Stud, Coll*
- LES GOTTESMAN DAR 122
What Is Hermeneutics and How Is It Critical? *Coll*
- M. NEIL BROWNE DAR 137
Three Divergent Forms of Critical Thinking: Their Implications for Our Teaching *Coll, Soc Stud, Adv*
- BARBARA J. HITCHKO, DAN BURRITT STEV 3046
Interweaving Traits of Mind, as Values, and Creative Critical Thinking Skills into a Practical Program for Educators *Elem, Mid/High, Beg, Sociol*
- DIXON WRAGG NICH 173
Reasoning with Irrational Persons *Psych, H Con, Beg*
- PHILLIP W. PAYTON STEV 3040
Adult Learning and Critical Thinking in Business Education, With Staff Development Implications
Bus/Econ, Coll, Staff Dev, Test
- CLARENCE WELLS STEV 3028
Understanding Human Thinking Behavior: The Impact of Contemporary Brain Research Findings *Psych, Staff Dev, Test, Elem*
- KIM SKOOG STEV 1040
Towards a Holistic Model of Knowledge: Understanding the Interplay Between Reason, Revelation, and Realization *Adv, Mul-Cult, Arts*

12:00 PM - 1:30 PM

LUNCH BARBECUE OR STUDENT UNION
 Residence Dining Hall open for C.T. residents from 12:00-1:30

1:30 PM - 3:00 PM

- RICHARD W. PAUL SU 100
Free Your Time — Help Your Students: Teach Students to Assess Students *Beg, Test, Teach Tactic, Dem Teach*
- CHARLES V. BLATZ IVES (WARREN)
Education and the Construction of Societies: Developing and Teaching an Interdisciplinary, Cross-College Course on Leading Modes of Analysis of Current Global Problems, and How to Modify Education to Equip Students to Use These Tools of Analysis *Coll, Env, H Con, Mul-Cult, Pol, Test*
- LINDA ELDER CAR 68
Using the Elements of Reasoning as the Foundation for Teaching: Middle/High School *Mid/High, Dem Teach*
- T. EDWARD DAMER DAR 108
How to Construct Effective Moral Arguments *Coll, Mid/High, H Con, Inf Logic*
- NOREEN C. FACIONE, PETER A. FACIONE IVES 119
Program Assessment: Responding to Accreditation Mandates *Nurs, Test, Coll, Health*
- VIRGINIA O'KEEFE STEV 3008
Meaningful Assessment: A Look at Process *Test, Beg, Mid/High, Coll, Lang*
- JOEL PETERSON, CONSTANCE STACK STEV 2049
Teaching Thinking in Four Dimensions: Affirming What is Strong, Strengthening What is Undeveloped *Coll, K-12, Mul-Cult, Staff Dev*
- BRUCE W. DAVIDSON STEV 3072
Obstacles and Opportunities for Critical Thinking in Japan *Coll, Psych, Sociol, Inf Logic*
- MICHAEL MCLAIN-MIDKIFF IVES 34
Working Toward A Meaning Centered Thinking Curriculum at the K-5 Level: Change and Thoughtfulness *Elem, Staff Dev, Beg **
- JAY G. VERLINDEN IVES 35
Everyday Argumentation, Ethics, and Critical Thinking
Lang, Coll, Mid/High, Beg

TUESDAY

1:30 PM – 3:00 PM

Continued

- JANET MAY SUTORIUS, LORRAINE WALLACE.....DAR 139
Teaching Mathematics Through Children's Literature
Elem, Beg, Math/Sci
- OGDEN MORSE STEV 3046
Literature and Problem Solving: The Integration of Thinking Skills and Subject Matter *Mid/High, Lang, Teach Tactic*
- DAVID SPEAK, THOMAS M. COOPER NICH 173
Place of Democracy in Education/School *K-12, Pol*
- ANNIE K. KOSHI DAR 137
Expository Writing Through Socratic Text Analysis
Mid/High, Coll, Lang
- LINDA Q. SMITH STEV 3028
Reading Into the Knight *Spec Ed, K-12, Beg*
- SUSAN MCGURY, KATHLEEN TAYLOR, JANIS BRADLEY DAR 143
Story as Bridge: The Link Between Personal Narrative and Critical Thinking *Coll, Lang, Beg*
- BRADFORD A. MORGAN, SARA BECKER STEV 1040
The Internet and Critical Thinking *Lang, Comp Aid, Beg, Math/Sci*

3:15 PM – 4:45 PM

- RICHARD W. PAUL SU 100
On Helping Students to Use, Process, and Assess Information *Teach Tactic, Beg, Dem Teach*
- STUART M. KEELEY IVES (WARREN)
Coping with Student Resistance to Critical Thinking
Beg, Coll, Teach Tactic
- SUSAN E. HANNAM, JANE L. WETZEL, ANNE M. GRIFFITHS, LEONA C. PARASCENZO CAR 68
Case Study: Overcoming Faculty Resistance to Assessing Critical Thinking *Coll, Beg, Test, Health*
- JOANN C. ABEGGLEN, CYNTHIA O'NEILL CONGER STEV 3008
Critical Thinking in Nursing: Classroom Tactics that Work *Nurs, Health, Beg, Fem, Teach Tactic*
- GEORGE M. LUCKEY, JR. STEV 2049
Transforming Teacher Education *Staff Dev, Coll, Beg*

- JANE LORAND, M.A., J.D. DAR 108
How Do I Know if My Thinking is Good Thinking? Teaching Intellectual Standards to Middle School and High School Students *Mid, High, Staff Dev*
- RALPH H. JOHNSON ART 108
Principles of Argument Criticism *Adv, Inf Logic*
- JARED HAYNES STEV 3072
Designing Writing Assignments that Foster Critical Thinking *Coll, Lang*
- MARK A. WILCOX IVES 35
Whole-Brain Teaming: A Critical Thinking Tactic That Works *Staff Dev, Bus/Econ, Mid/High, Coll*
- JOHN ARUL PHILLIPS DAR 139
Developing Critical, Creative and Content Thinking in the Malaysian Classroom: Approaches and Methods
K-12, Beg
- JAMES B. BAXTER IVES 78
Thinking Critically About Math Computation—An Oxymoron? *Elem, Beg, Math/Sci, Test*
- TIMOTHY L. JORDAN, STEVEN WALTERS DAR 122
Adult Education Through Contract-Mentored Study
Coll, Psych, Env, Soc Stud
- CAROL KOEHLER DAR 137
Supplemental Instruction: A Critical Model for Killer Courses *Coll, Inf Logic, Test*
- KATHRINE BRAKE, LYNN A. BRAKE NICH 173
Critical Literacy: Constructions of Animals in Children's Literature *Elem, Lang, Env, Coll*
- RENÉE RUDERMAN, JOSÉ RODRIGUEZ STEV 3046
Diversity Training Within the First Year Program: A Model for Empathy Development *Coll, H Con, Psych*
- ROBERT N. GILBERT STEV 3028
50 Minutes, the Student Magazine of the Social Sciences, a Model for Achieving Critical Thinking in Every Department *Coll, Mid/High, Soc Stud, Psych*

8:00 PM – 11:00 PM

EVENING SOCIAL STUDENT UNION

WEDNESDAY

8:45 AM – 10:15 AM

- RICHARD W. PAUL SU 100
Why Testing and Assessment Are Weak At All Levels
Teach Tactic, Test, G, Beg
- LINDA ELDER CAR 68
Critical Thinking Development in Adulthood: A Stage Theory Based on Resistance *Psych, Adv*
- SHARON PRESLEY STEV 3008
Questioning Authority: How to Encourage Students and Others to Have a More Critical Attitude Toward Authority *Psych, Pol, Coll, H Con, Teach Tactic*
- JANE LORAND, M.A., J.D. STEV 2049
If 95% of Our Time Is Spent Listening, How Important Are Critical Listening Abilities? Critical Listening in the Workplace, Critical Thinking in the Classroom *Gen, Counselors, Bus, Parents*
- WILLIA L. NWA IVES 35
Culturally Diverse Students: How Should Educators Enrich Their Environment? *Mul-Cult, Mid/High, Coll, Beg, Teach Tactic*
- MICHELE M. YOUNG DAR 139
Cognitive Reengineering: A Process for Cultivating Critical Thinking Skills in RN's *Coll, Fem, Nurs*
- JOE M. STEELE IVES 78
Assessing Critical Thinking Outcomes of College General Education Programs *Coll, Test, Beg, Staff Dev*
- SUZANNE METZ, ROSEMARY KELLER, MARTI GRIFFIN DAR 122
Arrest that Code: A Hospital Based Critical Thinking Program *Health, Staff Dev, Nurs*
- RICHARD B. LEWIS DAR 137
Using Critical Thinking in Every Area of Life *Coll, Beg, Teach Tactic*
- DOUG BRENNER STEV 3046
Watching Videotapes Is More Than a Spectator Sport: Using C-Span Resources to Develop Critical Thinking Skills *Media, Coll, Beg, Mid/High*
- PAUL I. JACOBS, MARCO MEIROVITZ, NORMA BECH LEVINE STEV 3036
ThinkAbility—A Program to Improve Thinking Skills
Inf Logic, G

10:30 AM – 12:00 PM

- JARED HAYNES CAR 68
Cultivating Critical Thinking in Classroom Discussions
Coll
- JANE AFFELDT STEV 3008
Developing Clinical Reasoning With Cognitive Strategies *Health, Nurs, Coll, Beg, Teach Tactic*
- GWYNETH EVANS ART 108
Visual Literacy and Critical Thinking: An Approach to Picture Books *Elem, Lang, Arts*
- CAROL LA BAR STEV 3072
Critical Thinking and Moral Issues *Mid/High, Soc Stud, H Con*
- MICHAEL JURIC, JEFFREY REED, KEN MOULTON IVES 35
Restructuring a School and District for Critical Thinking
Staff Dev, Beg, K-12
- JAMES A. LAVITA, WILLIAM S. DORN DAR 139
Mathematical Critical Thinking for Non-Science Students *Math/Sci, Coll, Mid/High*
- NANCY KUBASEK DAR 122
Assignments to Foster Critical Thinking *Coll, Env, Bus/Econ*
- ROSE MARIE PADOVANO STEV 3046
Critical Thinking Applied to Religious Education *K-12, Beg*
- WILLIAM K. MAREK STEV 3028
The Cognitive Perspective on Illegality, Harm, and Society *Psych, Pol, Sociol, Inf Logic*

12:00 PM – 1:30 PM

LUNCH BARBECUE OR STUDENT UNION
 Residence Dining Hall open for C.T. residents from 12:00-1:30

1:30 PM – 3:00 PM

WRAP-UP SESSION WITH RICHARD PAUL DAR 108

SPECIAL INTEREST GROUPS

SUNDAY, 8:00 PM

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

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

CRITICAL THINKING IN THE DISCIPLINES

- Critical Thinking in the Arts
- Critical Thinking in Business and Management
- Critical Thinking and Education
- Critical Thinking and Gifted Education
- Critical Thinking and Informal Logic
- Critical Thinking and Language Arts
- Critical Thinking and Mathematics

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

CRITICAL THINKING PEDAGOGY

- Critical Thinking and Feminism
- Critical and Multi-Cultural Thinking
- Critical Thinking Staff Development

CRITICAL THINKING AND EDUCATIONAL LEVELS

- Critical Thinking and Elementary School
- Critical Thinking and Middle School
- Critical Thinking and High School
- Critical Thinking and the Community College
- Critical Thinking and the University

SELECTED SESSIONS

LISTED BY AUDIENCE CODE

ADVANCED

- RENATE OTTERBACH Sun 1:30; STEV 3040
**Accurate Problem Definition: The Key to
 Effective Problem Solving** *Adv, Mid/High, Coll*
- STANLEY SCOTT Sun 3:15; DAR 139
**Creativity and Critical Thinking: A New Model
 of Learning as the Making of Meaning** *Coll,
 Adv, Env*
- CHARLES V. BLATZ Mon 1:30; IVES 35
**The Spirit of Critical Thinking and the
 Possibility of Cross Cultural Criticism** *Adv,
 Mul-Cult*
- THOMAS SECCO Mon 1:30; STEV 3036
The Reign of the Faculties *Adv*
- BURTON VOORHEES Mon 3:15; DAR 122
**Some Basic Principles of Reason and of
 Complex Systems and Their Relevance to
 Critical Thinking** *Coll, Math/Sci, Inf Logic, Adv*
- M. NEIL BROWNE Tues 10:30; DAR 137
**Three Divergent Forms of Critical Thinking:
 Their Implications for Our Teaching** *Coll, Soc
 Stud, Adv*
- KIM SKOOG Tues 10:30; STEV 1040
**Towards a Holistic Model of Knowledge:
 Understanding the Interplay Between Reason,
 Revelation, and Realization** *Adv, Mul-Cult, Arts*
- RALPH H. JOHNSON Tues 3:15; ART 108
Principles of Argument Criticism *Adv, Inf Logic*

SELECTED SESSIONS

ADVANCED

Continued

LINDA ELDER Wed 8:45; CAR 68
**Critical Thinking Development in Adulthood: A
 Stage Theory Based on Resistance** *Psych, Adv*

ARTS

WILLIAM L. HOOPER Mon 8:45; IVES 78
Teaching Critical Thinking in the Fine Arts
Arts, Coll, Beg

ELISA DE LA ROCHE, WENDY OXMAN Tues 8:45; ART 108
**Walking in New Shoes: Critical Thinking
 Through Improvisational Drama** *Arts, Beg, H
 Con, Teach Tactic*

YUN JA LASSEK Tues 10:30; STEV 3072
**Visual Imagery and Its Relation to Critical
 Thinking** *K-12, Coll, Media, Psych, Arts, Teach Tactic*

GWYNETH EVANS Wed 10:30; ART 108
**Visual Literacy and Critical Thinking: An
 Approach to Picture Books** *Elem, Lang, Arts*

BEGINNERS

LINDA ELDER Sun 10:30; CAR 68
**Socratic Teaching: Using It Effectively With High
 School Students** *Mid/High, Dem Teach*

RICHARD POPE Sun 10:30; SU 100
Restructuring Your Class To Make 'Em Think!
Elem, Beg, Staff Dev

GERALD M. NOSICH Sun 10:30; IVES (WARREN)
**An Introduction To Critical Thinking: What Is It?
 Why Should I Teach For It? How Can I Teach For
 It?** *Coll, K-12, Beg*

BARBARA J. NICOLL Sun 10:30; DAR 108
**Active Learning vs. Critical Thinking: Making
 Sure We Get All the Way to Critical Thinking**
Coll, Beg, Psych, Sociol

JERRY FLUELLEN Sun 1:30; IVES 78
Third Millennium Mathematics *Elem, Beg, Test,
 Mul-Cult*

WILLIAM J. PANKRATIUS Sun 1:30; STEV 3036
**Empowering Students to Think Critically About
 Their Own Learning: Constructing Knowledge
 Holistically Through Concept Mapping**
Mid/High, Sci, Lang, Beg, Soc Stud

SELECTED SESSIONS

RICHARD W. PAUL Sun 1:30; SU 100
On Helping Students to Think More Clearly
Beg, Teach Tactic, Dem Teach

WILLIAM FRAYER Sun 1:30; IVES 34
**Teaching Critical Thinking at the Two-Year
 Technical College** *Coll, Beg, Nurs*

TERRY R. MORRIS Sun 3:15; STEV 3028
Teaching History as Argument *Beg, Soc Stud,
 Coll, Inf Logic, Teach Tactic*

LINDA ELDER Sun 3:15; CAR 68
**Socratic Teaching: Using It Effectively With
 College/University Students** *Coll, Dem Teach*

T. EDWARD DAMER Sun 3:15; IVES 78
**How to Distinguish "Good" Arguments from
 "Bad" Ones** *Mid/High, Coll, Beg, Inf Logic*

RICHARD W. PAUL Sun 3:15; SU 100
On Helping Students to Think More Deeply
Beg, Teach Tactic, Dem Teach

LINDA ELDER Mon 8:45; CAR 68
**Socratic Teaching: Using It Effectively With K-6
 Students** *Elem, Dem Teach*

ROBERT GREENSTREET Mon 8:45; DAR 137
**Critical Thinking and the Required Course in
 Speech: Engaging Students Through Active
 Learning** *Lang, Beg, Coll, Mid/High*

M. NEIL BROWNE, STUART M. KEELEY Mon 8:45; IVES (WARREN)
**Lessons Learned from Two Decades of Teaching
 Critical Thinking** *Mid/High, Coll, Beg, Soc Stud*

ANN KERWIN, MARLYS WITTE, CHARLES WITTE Mon 8:45; STEV 3008
**Ignorance, Passion, and Mess: Ingredients for
 Success in Education and Business** *Mid/High,
 Coll, Beg, Staff Dev*

HAROLD L. HAYES Mon 8:45; STEV 2049
**Critical Thinking and Cognition: The Essential
 Interaction** *Beg, Staff Dev, Math/Sci, Soc Stud*

RICHARD W. PAUL Mon 8:45; SU 100
**How To Get An Angle on a Question: And Say
 Something Worth Saying** *Beg, Teach Tactic, Dem
 Teach*

GERALD M. NOSICH Mon 10:30; IVES (WARREN)
Learning to Ask Good Questions *Coll, K-12, Beg*

KENNETH ANDERSON Mon 10:30; STEV 3072
Critical Thinking Made Simple *Beg, Coll,
 Mid/High, Inf Logic*

BEGINNERS

Continued

- RICHARD W. PAUL Mon 10:30; SU 100
Is There Such a Thing as a Fit Mind? *Beg*
- IAN WRIGHT Mon 1:30; IVES 34
Critically Deciding What To Do *Beg, Elem, Soc Stud, Teach Tactic*
- T. EDWARD DAMER Mon 1:30; IVES 119
How to Resolve Disagreements on Controversial Issues: A Code of Conduct for Effective Rational Discussion *Beg, Coll, Mid/High, H Con*
- RICHARD W. PAUL Mon 1:30; SU 100
Transforming the Character of Our Students: Cultivating Intellectual Traits *Beg, Teach Tactic, Dem Teach*
- SINAH GOODE, RON FRENCH Mon 1:30; STEV 3046
First Steps for Building Critical Thinking Into Classes *Coll, Beg, Health, Inf Logic*
- PETER A. FACIONE, CAROL A. SANCHEZ Mon 1:30; ART 108
The Disposition Toward Critical Thinking *Beg, Coll, Mid/High*
- LINDA ELDER Mon 3:15; CAR 68
Socratic Teaching: Using It Effectively With Middle School Students *Mid/High, Dem Teach*
- JACKIE A. GIULIANO Mon 3:15; STEV 3040
Critical Textbook Selection - A Fundamental Prerequisite for Critical Teaching *Beg, Psych, Soc Stud, Test*
- GERALD M. NOSICH Mon 3:15; IVES (WARREN)
Helping Students Become Critical Thinkers *Coll, K-12, Beg*
- RICHARD W. PAUL Mon 3:15; SU 100
Content! Content! Content!: Oh, How Often We Counterfeit Knowledge! *Beg, Teach Tactic, Dem Teach*
- RAYMOND S. PFEIFFER Tues 8:45; NICH 173
Thinking Critically with the Resolved Strategy of Ethical Decision-Making *Coll, Beg, Mid/High, Teach Tactic*
- LINDA ELDER Tues 8:45; CAR 68
Using the Elements of Reasoning as the Foundation for Teaching: K-6 *Elem, Dem Teach*

- WILLIAM J. HISKER, FRANCES MURPHY ZAUHAR Tues 8:45; STEV 2049
Velcro Education: Cultural Studies and Popular Media *Media, Coll, Soc Stud, Beg*
- M. NEIL BROWNE Tues 8:45; IVES (WARREN)
Guided Dialogue: An Effective Alternative to Lectures or Discussion as Avenues Toward Critical Thinking. *Mid/High, Coll, Beg, Soc Stud*
- PETER WINCHELL, VICTORIA ALLEN, Tues 8:45; STEV 3036
Socratic Seminars — Learning How To Learn *Staff Dev, K-12, Beg*
- RICHARD W. PAUL Tues 8:45; SU 100
How I Develop My Thinking *Beg*
- JOHN LANGREHR Tues 10:30; IVES 119
Clarifying Key Elements of Better Thinking For Educators *K-12, Lang, Psych*
- ANN KERWIN Tues 10:30; STEV 3008
Not Enough Nothing Nowadays *Mid/High, Coll, Beg, Staff Dev*
- RICHARD W. PAUL Tues 10:30; SU 100
What Are Concepts? Why Do We Need Them? *Beg, Teach Tactic, Dem Teach*
- LINDA ELDER Tues 1:30; CAR 68
Using the Elements of Reasoning as the Foundation for Teaching: Middle/High School *Mid/High, Dem Teach*
- JAY G. VERLINDEN Tues 1:30; IVES 35
Everyday Argumentation, Ethics, and Critical Thinking *Lang, Coll, Mid/High, Beg*
- SUSAN MCGURY, KATHLEEN TAYLOR, JANIS BRADLEY Tues 1:30; DAR 143
Story as Bridge: The Link Between Personal Narrative and Critical Thinking *Coll, Lang, Beg*
- RICHARD W. PAUL Tues 1:30; SU 100
Free Your Time — Help Your Students: Teach Students to Assess Students *Beg, Test, Teach Tactic, Dem Teach*
- STUART M. KEELEY Tues 3:15; IVES (WARREN)
Coping with Student Resistance to Critical Thinking *Beg, Coll, Teach Tactic*
- GEORGE M. LUCKEY, JR. Tues 3:15; STEV 2049
Transforming Teacher Education *Staff Dev, Coll, Beg*
- RICHARD W. PAUL Tues 3:15; SU 100
On Helping Students to Use, Process, and Assess Information *Teach Tactic, Beg, Dem Teach*

BEGINNERS

Continued

- JANE LORAND, M.A., J.D. Tues 3:15; DAR 108
How Do I Know if My Thinking is Good Thinking?
 Teaching Intellectual Standards to Middle
 School and High School Students *Mid, High,*
Staff Dev
- RICHARD B. LEWIS Wed 8:45; DAR 137
Using Critical Thinking in Every Area of Life
Coll, Beg, Teach Tactic
- JOE M. STEELE Wed 8:45; IVES 78
**Assessing Critical Thinking Outcomes of College
 General Education Programs** *Coll, Test, Beg, Staff*
Dev
- RICHARD W. PAUL Wed 8:45; SU 100
**Why Testing and Assessment Are Weak At All
 Levels** *Teach Tactic, Test, G, Beg*

BUSINESS

- MARVIN BROWN Sun 10:30; STEV 3072
**The Ethical Process: A Strategy for Making
 Good Decisions** *Coll, Bus/Econ, Inf Logic, H Con*
- SUE Y. LUCKEY Sun 10:30; STEV 3036
**Creative and Critical Thinking Instructional
 Strategies for Business Courses** *Bus/Econ, Coll,*
Staff Dev, Teach Tactic
- JUDITH K. WHITEHEAD Mon 8:45; STEV 3046
Training the Workforce: New Tactics Required
Bus/Econ, Coll, Mid/High, Beg, Teach Tactic
- ANN KERWIN, MARLYS WITTE, CHARLES WITTE
 Mon 8:45; STEV 3008
**Ignorance, Passion, and Mess: Ingredients for
 Success in Education and Business** *Mid/High,*
Coll, Beg, Staff Dev
- JIM POLLARD Mon 10:30; STEV 3028
**The Learning Environment Workplace and
 Critical Thinking** *Adv, Bus*
- SHIRETTA OWNBEY Mon 1:30; DAR 143
**Reforming Education for Designers and
 Merchandisers: Critical Thinking Through Team
 Learning** *Beg, Coll, Mid/High, Bus/Econ*
- TRISH TAYLOR Mon 1:30; STEV 3040
**A Critical Thinking Road Map to Problem
 Solving: Avoiding the Pitfalls** *Bus, Gen*

- KATHLEEN M. HERSCHELMANN Mon 3:15; STEV 3036
**Critical Thinking in an Interdisciplinary High
 School/College International Curriculum
 Package** *Bus/Econ, Mid/High, Coll, Staff Dev*
- MARK A. WILCOX Mon 3:15; IVES 35
**Creative Thinking: A Relevant Tool for Today
 and the Future** *Bus, Mid/High, Coll, Staff Dev*
- JOHN C. BOST Tues 8:45; STEV 3046
**Critical Thinking in the Legal Environment
 Course: Application to a Content Driven Course**
Bus/Econ, Coll, Teach Tactic
- JANE LORAND, M.A., J.D. Tues 8:45; DAR 122
**Bringing Discipline to the Team with the
 Elements of Reasoning
 How to Enhance Productivity in Staff Meetings**
Gen, Staff Dev, Counselors, Bus
- JIM POLLARD Tues 10:30; STEV 2049
100% Mastery (A Self-Assessment Workshop)
Test, Adv, Bus/Econ, Teach Tactic
- PHILLIP W. PAYTON Tues 10:30; STEV 3040
**Adult Learning and Critical Thinking in Business
 Education, With Staff Development Implications**
Bus/Econ, Coll, Staff Dev, Test
- MARK A. WILCOX Tues 3:15; IVES 35
**Whole-Brain Teaming: A Critical Thinking Tactic
 That Works** *Staff Dev, Bus/Econ, Mid/High, Coll*
- JANE LORAND, M.A., J.D. Wed 8:45; STEV 2049
**If 95% of Our Time Is Spent Listening, How
 Important Are Critical Listening Abilities?
 Critical Listening in the Workplace, Critical
 Thinking in the Classroom** *Gen, Counselors, Bus,*
Parents
- NANCY KUBASEK Wed 10:30; DAR 122
Assignments to Foster Critical Thinking *Coll,*
Env, Bus/Econ

COLLEGE

- PAUL TANNER Sun 10:30; STEV 2049
**Methodology Based Writing as a First Step to
 Critical Thinking for Late High School and Early
 College Students** *Mid/High, Coll, Lang, Inf Logic*
- JON AVERY Sun 10:30; IVES 34
A Possible Solution to the Transfer-Problem
Coll, Mid/High, Lang, Inf Logic, Teach Tactic

COLLEGE

Continued

- SANDRA A. MOSCOVIC, DAVID B. PORTER . . . Sun 10:30; STEV 3046
Enhancing Critical Thinking in a College Course
Coll, Beg, H Con, Psych
- NORMAN J. UNRAU . . . Sun 1:30; DAR 137
The Role of Critical Thinking in Teacher Education Programs *Coll, Staff Dev, K-12*
- DIANNE ROMAIN . . . Sun 1:30; DAR 139
Thinking in Another's Shoes: Role Playing and Critical Decision Making *Coll, H Con, Env, Fem*
- CHARLES V. BLATZ . . . Sun 1:30; IVES 119
Critical Thinking and the 21st Century: Teaching Critical Thinking Through the Development of Individual Student Portfolios Centered on Global Problems *Coll, Env, H Con, Mul-Cult, Pol, Test*
- WILLIAM FRAYER . . . Sun 1:30; IVES 34
Teaching Critical Thinking at the Two-Year Technical College *Coll, Beg, Nurs*
- LINDA ELDER . . . Sun 3:15; CAR 68
Socratic Teaching: Using It Effectively With College/University Students *Coll, Dem Teach*
- M. NEIL BROWNE, STUART M. KEELEY . . . Sun 3:15; IVES (WARREN)
Getting Started As A Teacher of Critical Thinking: Classroom Behavior and Assignments
Mid/High, Coll, Soc Stud
- STANLEY SCOTT . . . Sun 3:15; DAR 139
Creativity and Critical Thinking: A New Model of Learning as the Making of Meaning *Coll, Adv, Env*
- M. NEIL BROWNE, STUART M. KEELEY . . . Mon 8:45; IVES (WARREN)
Lessons Learned from Two Decades of Teaching Critical Thinking *Mid/High, Coll, Beg, Soc Stud*
- PATRICIA ALLEN . . . Mon 8:45; STEV 3036
Teaching for Critical Thinking in the Career Programs of a Community College *Coll*
- CHRIS ELESER . . . Mon 8:45; IVES 35
Nuts and Bolts of Designing and Implementing A Critical Thinking Course for College Freshmen
Beg, Coll, Staff Dev

- JANE LORAND, M.A., J.D. . . . Mon 8:45; DAR 108
Self Assessment at the High School and College Level: Peer Editing, Group and Individual Assessment in Speaking and Writing *Mid, High, Univ, Staff Dev*
- WEBSTER E. COTTON . . . Mon 10:30; DAR 122
Ideas, Conceptual Maps and the Human Project: Re-Thinking the Meaning/Significance of the Educational Process *Coll, Psych, Sociol, Soc Stud*
- JENNIE S. CONN, ANDREW O. HILL, CHASTITY B. CONN . . . Mon 10:30; DAR 143
Redefining Cheating Through Collaborative Learning and Test Taking Methods *Coll, Test*
- SHIRETTA OWNBEY . . . Mon 1:30; DAR 143
Reforming Education for Designers and Merchandisers: Critical Thinking Through Team Learning *Beg, Coll, Mid/High, Bus/Econ*
- MARLYS MAYFIELD . . . Mon 3:15; STEV 3008
Getting to One Fundamental of Critical Thinking: Teaching the Difference Between Observing and Interpreting *Coll, Lang, Mul-Cult, Soc Stud*
- JOHN C. BOST . . . Tues 8:45; STEV 3046
Critical Thinking in the Legal Environment Course: Application to a Content Driven Course
Bus/Econ, Coll, Teach Tactic
- EILEEN GAMBRILL, RAFAEL HERRERA . . . Tues 8:45; DAR 108
Practical Strategies for Enhancing Critical Thinking in Environments that Favor Fuzzy Thoughts *Coll, Health, Staff Dev, Nurs, Teach Tactic*
- KENNETH R. BAIN . . . Tues 8:45; STEV 3008
Integrating Critical Thinking and Motivational Theory in the Disciplines *Coll, Adv, Inf Logic, Soc Stud*
- M. NEIL BROWNE . . . Tues 10:30; DAR 137
Three Divergent Forms of Critical Thinking: Their Implications for Our Teaching *Coll, Soc Stud, Adv*
- CHARLES V. BLATZ . . . Tues 1:30; IVES (WARREN)
Education and the Construction of Societies: Developing and Teaching an Interdisciplinary, Cross-College Course on Leading Modes of Analysis of Current Global Problems, and How to Modify Education to Equip Students to Use These Tools of Analysis *Coll, Env, H Con, Mul-Cult, Pol, Test*

COLLEGE

Continued

- CAROL KOEHLER Tues 3:15; DAR 137
**Supplemental Instruction: A Critical Model for
 Killer Courses** *Coll, Inf Logic, Test*
- TIMOTHY L. JORDAN, STEVEN WALTERS. Tues 3:15; DAR 122
**Adult Education Through Contract-Mentored
 Study** *Coll, Psych, Env, Soc Stud*
- SUSAN E. HANNAM, JANE L. WETZEL, ANNE M. GRIFFITHS, LEONA
 C. PARASCENZO Tues 3:15; CAR 68
**Case Study: Overcoming Faculty Resistance to
 Assessing Critical Thinking** *Coll, Beg, Test, Health*
- RENÉE RUDERMAN, JOSÉ RODRIGUEZ. Tues 3:15; STEV 3046
**Diversity Training Within the First Year
 Program: A Model for Empathy Development**
Coll, H Con, Psych
- RICHARD B. LEWIS Wed 8:45; DAR 137
Using Critical Thinking in Every Area of Life
Coll, Beg, Teach Tactic
- JOE M. STEELE Wed 8:45; IVES 78
**Assessing Critical Thinking Outcomes of College
 General Education Programs** *Coll, Test, Beg, Staff
 Dev*
- NANCY KUBASEK Wed 10:30; DAR 122
Assignments to Foster Critical Thinking *Coll,
 Env, Bus/Econ*

COMPUTER ASSISTED

- RIKA YOSHII, ALASTAIR MILNE, JAMES CHOU . . . Sun 3:15; NICH 173
**Critical Analysis and Problem Solving Through
 Debugging** *Mid/High, Coll, Math/Sci*
- JOEL RUDINOW, ROB R. BRADY Mon 8:45; CAR 1
**Tutorial Cybernetics: Interactive Tutorial
 Software for Critical Thinking (part 1)**
Mid/High, Coll, Staff Dev, Comp Aid
- JOEL RUDINOW, ROB R. BRADY. Mon 10:30; CAR 1
**Tutorial Cybernetics: Interactive Tutorial
 Software for Critical Thinking (part 2)**
Mid/High, Coll, Staff Dev, Comp Aid
- PENNY HEASLIP Mon 3:15; STEV 1040
**Surfing the Net: Globalization of Dialogue and
 Argumentation in Nursing** *Coll, Test, Comp Aid,
 Nurs, Teach Tactic*

- LINDA ELDER Tues 8:45; CAR 68
**Using the Elements of Reasoning as the
 Foundation for Teaching: K-6** *Elem, Dem Teach*
- MICHAEL McLAIN-MIDKIFF Tues 1:30; IVES 34
**Working Toward A Meaning Centered Thinking
 Curriculum at the K-5 Level: Change and
 Thoughtfulness** *Elem, Staff Dev, Beg*
- KATHRINE BRAKE, LYNN A. BRAKE Tues 3:15; NICH 173
**Critical Literacy: Constructions of Animals in
 Children's Literature** *Elem, Lang, Env, Coll*
- JAMES B. BAXTER Tues 3:15; IVES 78
**Thinking Critically About Math Computation—
 An Oxymoron?** *Elem, Beg, Math/Sci, Test*
- GWYNETH EVANS. Wed 10:30; ART 108
**Visual Literacy and Critical Thinking: An
 Approach to Picture Books** *Elem, Lang, Arts*

ENVIRONMENT

- JACKIE A. GIULIANO Sun 10:30; DAR 139
**Gender and Science: The Impact of the Absence
 of a Feminist Voice - Putting the Human Spirit
 Back Into Science and Science Education** *Env,
 Fem, Math/Sci, Mul-Cult*
- DIANNE ROMAIN Sun 1:30; DAR 139
**Thinking in Another's Shoes: Role Playing and
 Critical Decision Making** *Coll, H Con, Env, Fem*
- JACKIE A. GIULIANO Sun 3:15; DAR 137
**The Development of Social Responsibility and
 Environmental Awareness Through Techniques
 in Critical Teaching - A Community Involvement
 Approach** *Beg, Env, Test, Teach Tactic*
- JACKIE A. GIULIANO Mon 8:45; DAR 139
**The Environmental Studies Curriculum as a
 Vehicle for the Introduction of Feminist
 Philosophies and Spirituality into the Classroom**
Env, Fem, H Con, Mul-Cult
- ROBERT L. MCCONNELL, DANIEL C. ABEL Mon 10:30; DAR 137
Environmental Issues by the Numbers *Env,
 Mid/High, Math/Sci, Coll, Teach Tactic*
- JOHN R. FEARE Mon 1:30; CAR 68
**Critical Thinking Within a Theological
 Dimension** *Env*
- KATHRINE BRAKE, LYNN A. BRAKE Tues 3:15; NICH 173
**Critical Literacy: Constructions of Animals in
 Children's Literature** *Elem, Lang, Env, Coll*

FEMINIST ISSUES

JACKIE A. GIULIANO Sun 10:30; DAR 139
Gender and Science: The Impact of the Absence of a Feminist Voice - Putting the Human Spirit Back Into Science and Science Education
Fem, Math/Sci, Mul-Cult

DIANNE ROMAIN Sun 1:30; DAR 139
Thinking in Another's Shoes: Role Playing and Critical Decision Making
Coll, H Con, Env, Fem

JACKIE A. GIULIANO Mon 8:45; DAR 139
The Environmental Studies Curriculum as a Vehicle for the Introduction of Feminist Philosophies and Spirituality into the Classroom
Env, Fem, H Con, Mul-Cult

CORRINNE BEDECARRÉ Tues 8:45; STEV 3040
Community, Criticism, and the Problems of Non-Adversarial Methodology
Fem, Adv

HEALTH/NURSING

BARBARA S. WILSON, ALICE J. MCFARLANE Sun 10:30; IVES 78
How Can Nursing Educators Define Critical Thinking for Themselves and Their Students?
Nurs, Health, Staff Dev, Beg

MERLE R. KATAOKA-YAHIRO Sun 10:30; ART 108
A Critical Thinking Model for Nursing Judgment
Nurs

ELEANOR VANETZIAN, BARBARA CORRIGAN Sun 1:30; IVES 35
Designing Case Studies That Stimulate Inquisitiveness to Acquire Nursing Knowledge
Nurs

WILLIAM FRAYER Sun 1:30; IVES 34
Teaching Critical Thinking at the Two-Year Technical College
Coll, Beg, Nurs

CHRISTINE D. STEVENS Sun 3:15; IVES 35
Flowcharting As a Tool for Critical Thinking in the Health Sciences
Health, Math/Sci, Nurs, Coll
Teach Tactic

PATRICIA K. LIACEFIELD, RUTH R. VOIGNIER Sun 3:15; STEV 1040
Critical Thinking: Client with AIDS; An Interactive Video
Comp Aid, Nurs, Health, Coll

DEMONSTRATION TEACH

BRADFORD A. MORGAN, SARA BECKER Tues 1:30; STEV 1040
The Internet and Critical Thinking
Lang, Comp
Aid, Beg, Math/Sci

LINDA ELDER Sun 10:30; CAR 68
Socratic Teaching: Using It Effectively With High School Students
Mid/High, Dem Teach

RICHARD W. PAUL Sun 1:30; SU 100
On Helping Students to Think More Clearly
Beg, Teach Tactic, Dem Teach

LINDA ELDER Sun 3:15; CAR 68
Socratic Teaching: Using It Effectively With College/University Students
Coll, Dem Teach

RICHARD W. PAUL Sun 3:15; SU 100
On Helping Students to Think More Deeply
Beg, Teach Tactic, Dem Teach

LINDA ELDER Mon 8:45; CAR 68
Socratic Teaching: Using It Effectively With K-6 Students
Elem, Dem Teach

RICHARD W. PAUL Mon 8:45; SU 100
How To Get An Angle on a Question: And Say Something Worth Saying
Beg, Teach Tactic, Dem Teach

RICHARD W. PAUL Mon 10:30; SU 100
Is There Such a Thing as a Fit Mind?
Beg

RICHARD W. PAUL Mon 1:30; SU 100
Transforming the Character of Our Students: Cultivating Intellectual Traits
Beg, Teach Tactic, Dem Teach

LINDA ELDER Mon 3:15; CAR 68
Socratic Teaching: Using It Effectively With Middle School Students
Mid/High, Dem Teach

RICHARD W. PAUL Mon 3:15; SU 100
Content! Content! Content! Oh, How Often We Counterfeit Knowledge!
Beg, Teach Tactic, Dem Teach

LINDA ELDER Tues 8:45; CAR 68
Using the Elements of Reasoning as the Foundation for Teaching K-6
Elem, Dem Teach

RICHARD W. PAUL Tues 10:30; SU 100
What Are Concepts? Why Do We Need Them?
Beg, Teach Tactic, Dem Teach

DEMONSTRATION TEACH

Continued

- LINDA ELDER Tues 1:30; CAR 68
Using the Elements of Reasoning as the Foundation for Teaching: Middle/High School
Mid/High, Dem Teach
- RICHARD W. PAUL Tues 1:30; SU 100
Free Your Time — Help Your Students: Teach Students to Assess Students *Beg, Test, Teach Tactic, Dem Teach*
- RICHARD W. PAUL Tues 3:15; SU 100
On Helping Students to Use, Process, and Assess Information *Teach Tactic, Beg, Dem Teach*

ELEMENTARY

- RICHARD POPE Sun 10:30; SU 100
Restructuring Your Class To Make 'Em Think!
Elem, Beg, Staff Dev
- JERRY FLUELLEN Sun 1:30; IVES 78
Third Millennium Mathematics *Elem, Beg, Test, Mul-Cult*
- HELEN E. R. DITZHAZY Sun 3:15; STEV 3040
Moral Reasoning, Province of the Schools: Teaching Values, Province of the Home *H Con, K-12, Inf Logic*
- LINDA ELDER Mon 8:45; CAR 68
Socratic Teaching: Using It Effectively With K-6 Students *Elem, Dem Teach*
- A.J.L. SINCLAIR, J.H.C. OLIVIER Mon 10:30; IVES 35
The Whole-Mind Development of the Young Learner in a New Society: Rethinking the South African Classroom *Lang, Math/Sci, Mul-Cult, Elem*
- IAN WRIGHT Mon 1:30; IVES 34
Critically Deciding What To Do *Beg, Elem, Soc Stud, Teach Tactic*
- JOSÉ ALEJANDRO RAMIREZ Mon 3:15; STEV 3046
Quality of Education and Critical Thinking in Mexican Elementary Schools *Elem*
- GEORGE RADDUE, JOANN RADDUE Mon 3:15; STEV 2065
Hand-To-Mind: Project-Based Learning: Making Microscopes *Math/Sci, K-12, Staff Dev, Env*
- JEAN ANN FOLEY Tues 8:45; DAR 137
Critical Thinking: Transforming Teacher Perspective *Staff Dev, Sci, Elem, Teach Tactic*

- MARIO GALVAN Sun 1:30; STEV 3028
Thinking Critically about the Zapatista Revolution in Mexico *Gen, H Con, Mul-Cult, Pol, Peace, Soc Stud*
- DIXON WRAGG Sun 1:30; DAR 143
Critical Thinking and Social Responsibility: From the Classroom to the World *H Con, Sociol, Beg*
- HELEN E. R. DITZHAZY Sun 3:15; STEV 3040
Moral Reasoning, Province of the Schools: Teaching Values, Province of the Home *H Con, K-12, Inf Logic*
- THOMAS J. SCHEFF Sun 3:15; STEV 3046
Alienation in Families and Classrooms: Repairing the Bond *Adv, H Con, Sociol, Psych*
- NAWANG PHUNTSOG Sun 3:15; STEV 3072
Renewal of Tibetan School Curriculum in Exile: A Tibetan-centric Approach *Mul-Cult, H Con, Elem, Sociol*
- DIXON WRAGG Mon 10:30; NICH 173
Nonrational Determinants of Thinking, and Implications for Critical Thinking Pedagogy *Psych, Sociol, Mul-Cult, Beg*
- T. EDWARD DAMER Mon 1:30; IVES 119
How to Resolve Disagreements on Controversial Issues: A Code of Conduct for Effective Rational Discussion *Beg, Coll, Mid/High, H Con*
- PERRY WEDDLE Mon 1:30; STEV 3072
Stereotyping *Gen, Beg, Media, Psych, Soc Stud, Inf Logic*
- GLENN D. EARLEY Mon 3:15; IVES 34
The Revenge of Relativism—Dealing Critically with Holocaust Denial *Mid/High, Coll, Gen, Soc Stud, H Con*
- SURINDER SINGH ATTARIWALA Tues 8:45; STEV 3028
A Critique of: Bilingualism, Mother Tongue, Community Languages *Mul-Cult, H Con, Lang*
- GORDON LEON BLACK Tues 8:45; IVES 34
Emotion and Reason: Describing Disputes *Inf Logic, Lang, H Con*
- DIXON WRAGG Tues 10:30; NICH 173
Reasoning with Irrational Persons *Psych, H Con, Beg*

HUMAN CONFLICTS

Continued

- JAY G. VERLINDEN Tues 1:30; IVES 35
Everyday Argumentation, Ethics, and Critical Thinking
Lang, Coll, Mid/High, Beg
- T. EDWARD DAMER Tues 1:30; DAR 108
How to Construct Effective Moral Arguments
Coll, Mid/High, H Con, Inf Logic
- RENÉE RUDERMAN, JOSÉ RODRIGUEZ Tues 3:15; STEV 3046
Diversity Training Within the First Year Program: A Model for Empathy Development
Coll, H Con, Psych
- SHARON PRESLEY Wed 8:45; STEV 3008
Questioning Authority: How to Encourage Students and Others to Have a More Critical Attitude Toward Authority
Psych, Pol, Coll, H Con
Teach Tactic
- CAROL LA BAR Wed 10:30; STEV 3072
Critical Thinking and Moral Issues
Soc Stud, H Con

INFORMAL LOGIC

- JON AVERY Sun 10:30; IVES 34
A Possible Solution to the Transfer Problem
Coll, Mid/High, Lang, Inf Logic, Teach Tactic
- PERRY WEDDLE Sun 10:30; NICH 173
Causal Reasoning
Mid/High, Coll, Inf Logic, Math/Sci
- T. EDWARD DAMER Sun 3:15; IVES 78
How to Distinguish "Good" Arguments from "Bad" Ones
Mid/High, Coll, Beg, Inf Logic
- PERRY WEDDLE Sun 3:15; ART 108
Critical Thinking Diagrams
Mid/High, Coll, Inf Logic
- KENNETH ANDERSON Mon 10:30; STEV/3072
Critical Thinking Made Simple
Mid/High, Inf Logic
- C. GRANT LUCKHARDT Mon 10:30; IVES 78
Criteria For Assessing Appeals to Authority
Inf Logic, Lang, Psych, Coll
- BURTON VOORHEES Mon 3:15; DAR 122
Some Basic Principles of Reason and of Complex Systems and Their Relevance to Critical Thinking
Coll, Math/Sci, Inf Logic, Adv

- EILEEN M. ROCHE Mon 8:45; IVES 119
Promoting Critical Thinking in Nursing Students Through Concept Mapping and Cooperative Learning Strategies
Nurs, Coll, Test, Health
- M. STAR MAHARA Mon 10:30; IVES 34
Active Engagement and the Construction of Knowledge
Nurs, Coll, Health
- SANDY FRITZ-KELLY Mon 10:30; CAR 68
Developing Teaching Strategies That Enhance Critical Thinking in Nursing Students
Nurs, Health, Coll
- JULIE A. COON, MARY J. CAIRY Mon 1:30; STEV 2049
The Use of Problem-Based Learning Groups to Foster Critical Thinking Skills in Associate Degree Nursing Students
Nurs, Beg, Health, Coll, Teach, Tactic
- KAREN L. HEILMEIER-RANKIN, CAROL B. WILSON Mon 1:30; DAR 139
"Mary, Mary, Quite Contrary, How Does Your Garden Grow?" Does Caring and Holism Promote Personal Growth and Create a Framework for Critical Thinking in Nursing Education?
Nurs, Psych, Health, Coll
- MARYBETH YOUNG Mon 3:15; DAR 137
Fostering Critical Thinking in Novice Nurses
Nurs, Health, Coll, Teach Tactic
- PENNY HEASLIP Mon 3:15; STEV 1040
Surfing the Net: Globalization of Dialogue and Argumentation in Nursing
Coll, Test, Comp Aid, Nurs, Teach Tactic
- EILEEN GAMBRILL, RAFAEL HERRERA Tues 8:45; DAR 108
Practical Strategies for Enhancing Critical Thinking in Environments that Favor Fuzzy Thoughts
Coll, Health, Staff Dev, Nurs, Teach Tactic
- LYN FREEMAN Tues 8:45; IVES 35
Critical Thinking as Clinical Intervention
Psych, Nurs, Test, Health
- PENNY HEASLIP Tues 10:30; ART 108
NLN Criterion 20: Mandate for Curriculum Reform in Nursing Education
Coll, Beg, Staff Dev
- MARY A. MILLER, DOROTHY E. BABCOCK Tues 10:30; IVES 35
Promoting Critical and Creative Thinking in Nursing Curricula
Nurs, Health, Teach Tactic

HEALTH/NURSING

Continued

NOREEN C. FACIONE, PETER A. FACIONE Tues 1:30; IVES 119
Program Assessment: Responding to Accreditation Mandates *Nurs, Test, Coll, Health*

JOANN C. ABEGGLEN, CYNTHIA O'NEILL CONGER. . Tues 3:15; STEV 3008
Critical Thinking in Nursing: Classroom Tactics that Work *Nurs, Health, Beg, Fem, Teach Tactic*

MICHELE M. YOUNG. Wed 8:45; DAR 139
Cognitive Reengineering: A Process for Cultivating Critical Thinking Skills in RN's *Coll, Fem, Nurs*

SUZANNE METZ, ROSEMARY KELLER, MARTI GRIFFIN Wed 8:45; DAR 122
Arrest that Code: A Hospital Based Critical Thinking Program *Health, Staff Dev, Nurs*

JANE AFFELDT. Wed 10:30; STEV 3008
Developing Clinical Reasoning With Cognitive Strategies *Health, Nurs, Coll, Beg, Teach Tactic*

HIGH SCHOOL

LINDA ELDER Sun 10:30; CAR 68
Socratic Teaching: Using It Effectively With High School Students *Mid/High, Dem Teach*

JANE LORAND, M.A., J.D. Mon 8:45; DAR 108
Self Assessment at the High School and College Level: Peer Editing, Group and Individual Assessment in Speaking and Writing *Mid, High, Univ, Staff Dev*

KATHLEEN M. HERSCHELMANN. Mon 3:15; STEV 3036
Critical Thinking in an Interdisciplinary High School/College International Curriculum Package *Bus/Econ, Mid/High, Coll, Staff Dev*

HUMAN CONFLICTS

JOHN R. FEARE. Sun 1:30; CAR 68
Beyond Speechmaking and the Marketplace of Ideas: A Radical Transformation in Communication *H Con*

GORDON LEON BLACK. Tues 8:45; IVES 34
Emotion and Reason: Describing Disputes *Inf Logic, Lang, H Con*

T. EDWARD DAMER Tues 1:30; DAR 108
How to Construct Effective Moral Arguments *Coll, Mid/High, H Con, Inf Logic*

RALPH H. JOHNSON Tues 3:15; ART 108
Principles of Argument Criticism *Adv, Inf Logic*

PAUL I. JACOBS, MARCO MEIROVITZ, NORMA BECH LEVINE Wed 8:45; STEV 3036
ThinkAbility—A Program to Improve Thinking Skills *Inf Logic, G*

LANGUAGE ARTS, ENGLISH

PAUL TANNER Sun 10:30; STEV 2049
Methodology Based Writing as a First Step to Critical Thinking for Late High School and Early College Students *Mid/High, Coll, Lang, Inf Logic*

LESLEY ORR Sun 1:30; ART 108
Across the Curriculum: Writing, Thinking, and Learning *K-12, Lang*

OGDEN MORSE Sun 3:15; STEV 2049
Literature, History, and What We Believe *Mid/High, Lang, Teach Tactic*

ROBERT GREENSTREET Mon 8:45; DAR 137
Critical Thinking and the Required Course in Speech: Engaging Students Through Active Learning *Lang, Beg, Coll, Mid/High*

EDNA MAYE LOVELESS. Mon 8:45; STEV 3040
Metaphorical Thinking, Evidentials, and the Believing Game *Lang, Media, Coll, Mid/High*

FRANCINE MALDER JAMIN Mon 10:30; STEV 3046
Forging the Ring and Crafting the Book: Interactive Techniques of Teaching Writing and Reasoning *Lang, Coll, Mid/High*

NORMAN BETZ Mon 10:30; DAR 139
Using the MBTI to Prepare for Critical Thinking *Coll, Beg, Lang, Test*

OGDEN MORSE Mon 3:15; STEV 2049
Making Meaning in the Classroom: Skills, Perspectives, and Subject Matter *Mid/High, Lang, Teach Tactic*

LANGUAGE ARTS, ENGLISH

Continued

- KRISTAN CAVINA Mon 3:15; IVES 78
Teaching Critical Thinking in the Writing Class
Lang, Coll
- SURINDER SINGH ATTARIWALA Tues 8:45; STEV 3028
**A Critique of: Bilingualism, Mother Tongue,
 Community Languages** *Mul-Cult, H Con, Lang*
- OGDEN MORSE Tues 1:30; STEV 3046
**Literature and Problem Solving: The Integration
 of Thinking Skills and Subject Matter**
Mid/High, Lang, Teach Tactic
- ANNIE K. KOSHI Tues 1:30; DAR 137
**Expository Writing Through Socratic Text
 Analysis** *Mid/High, Coll, Lang*
- SUSAN MCGURY, KATHLEEN TAYLOR, JANIS BRADLEY
 Tues 1:30; DAR 143
**Story as Bridge: The Link Between Personal
 Narrative and Critical Thinking** *Coll, Lang, Beg*
- JARED HAYNES Tues 3:15; STEV 3072
**Designing Writing Assignments that Foster
 Critical Thinking** *Coll, Lang*
- KATHRINE BRAKE, LYNN A. BRAKE Tues 3:15; NICH 173
**Critical Literacy: Constructions of Animals in
 Children's Literature** *Elem, Lang, Env, Coll*

MATH

- MARTHA M. WOOD Sun 10:30; STEV 3040
**Cognitive Enrichment in Developmental
 Mathematics** *Coll, Math/Sci*
- ROBERT L. MCCONNELL, DANIEL C. ABEL Mon 10:30; DAR 137
Environmental Issues by the Numbers *Env,
 Mid/High, Math/Sci, Coll, Teach Tactic*
- SALLIE L. WILSON Tues 10:30; IVES 34
**Teacher + Theory + Students = Math Quality
 Learning!** *Math, K-12, Staff Dev*
- JANET MAY SUTORIUS, LORRAINE WALLACE Tues 1:30; DAR 139
**Teaching Mathematics Through Children's
 Literature** *Elem, Beg, Math/Sci*
- JAMES B. BAXTER Tues 3:15; IVES 78
**Thinking Critically About Math Computation—
 An Oxymoron?** *Elem, Beg, Math/Sci, Test*

- JAMES A. LAVITA, WILLIAM S. DORN Wed 10:30; DAR 139
**Mathematical Critical Thinking for Non-Science
 Students** *Math/Sci, Coll, Mid/High*

MEDIA

- WILLIAM A. DORMAN Sun 10:30; IVES 119
Mass Media in the Critical Thinking Curriculum
Media, Coll
- EDNA MAYE LOVELESS Mon 8:45; STEV 3040
**Metaphorical Thinking, Evidentials, and the
 Believing Game** *Lang, Media, Coll, Mid/High*
- WILLIAM A. DORMAN, RALPH JOHNSON Mon 1:30; STEV 3008
A Way of Seeing: Teaching Mass Media Analysis
Media, Coll, Mid/High
- MARION N. FAY Mon 3:15; DAR 139
**Hostages of Popular Culture: Can Students (and
 Teachers) Ever Get Free?** *Coll, Lang, Env, Mid/High,
 Media*
- WILLIAM J. HISKER, FRANCES MURPHY ZAUHAR
 Tues 8:45; STEV 2049
**Velcro Education: Cultural Studies and Popular
 Media** *Media, Coll, Soc Stud, Beg*
- DOUG BRENNER Wed 8:45; STEV 3046
**Watching Videotapes Is More Than a Spectator
 Sport: Using C-Span Resources to Develop
 Critical Thinking Skills** *Media, Coll, Beg, Mid/High*

MIDDLE SCHOOL

- PAUL TANNER Sun 10:30; STEV 2049
**Methodology Based Writing as a First Step to
 Critical Thinking for Late High School and Early
 College Students** *Mid/High, Coll, Lang, Inf Logic*
- WILLIAM J. PANKRATTUS Sun 1:30; STEV 3036
**Empowering Students to Think Critically About
 Their Own Learning: Constructing Knowledge
 Holistically Through Concept Mapping**
Mid/High, Sci, Lang, Beg, Soc Stud
- HELEN E. R. DITZHAZY Sun 3:15; STEV 3040
**Moral Reasoning, Province of the Schools:
 Teaching Values, Province of the Home** *H Con,
 K-12, Inf Logic*
- GEORGE H. HANFORD Mon 10:30; STEV 3008
Critical Thinking and the New SAT *Mid/High,
 Test*

MIDDLE SCHOOL

Continued

- LINDA ELDER Mon 3:15; CAR 68
**Socratic Teaching: Using It Effectively With
 Middle School Students** *Mid/High, Dem Teach*
- GEORGE RADDUE, JOANN RADDUE Mon 3:15; STEV 2065
**Hand-To-Mind: Project-Based Learning: Making
 Microscopes** *Math/Sci, K-12, Staff Dev, Env*
- CAROL A. SANCHEZ, NOREEN C. FACIONE. Tues 8:45; DAR 139
**Critical Thinking Dispositions and Skills Among
 Junior and Senior High Students** *Mid/High, Test,
 Psych*
- LINDA ELDER Tues 1:30; CAR 68
**Using the Elements of Reasoning as the
 Foundation for Teaching: Middle/High School**
Mid/High, Dem Teach
- JANE LORAND, M.A., J.D. Tues 3:15; DAR 108
**How Do I Know if My Thinking is Good
 Thinking?
 Teaching Intellectual Standards to Middle
 School
 and High School Students** *Mid, High, Staff Dev*
- CAROL LA BAR Wed 10:30; STEV 3072
Critical Thinking and Moral Issues *Mid/High, Soc
 Stud, H Con*

MULTI-CULTURAL

- YEHUDI O. WEBSTER. Sun 1:30; IVES (WARREN)
**Are There White and Black People? Reasoning
 About Racial Classification** *G, Soc Stud, Mul-Cult*
- MARIO GALVAN Sun 1:30; STEV 3028
**Thinking Critically about the Zapatista
 Revolution in Mexico** *Gen, H Con, Mul-Cult, Pol,
 Peace, Soc Stud*
- NAWANG PHUNTSOG Sun 3:15; STEV 3072
**Renewal of Tibetan School Curriculum in Exile:
 A Tibetan-centric Approach** *Mul-Cult, H Con,
 Elem, Sociol*
- MARIA PACINO. Mon 8:45; STEV 1040
Critical Thinking and Multicultural Education
Beg, Mul-Cult, Media, Staff Dev

- MARLYS MAYFIELD Mon 10:30; STEV 2049
**How About a Global Curriculum for Critical
 Thinking Instruction? Can We Do It?** *Coll, Lang,
 Mul-Cult, Soc Stud*
- A.J.-L. SINCLAIR, J.H.C. OLIVIER. Mon 10:30; IVES 35
**The Whole-Mind Development of the Young
 Learner in a New Society: Rethinking the South
 African Classroom** *Lang, Math/Sci, Mul-Cult, Elem*
- CHARLES V. BLATZ Mon 1:30; IVES 35
**The Spirit of Critical Thinking and the
 Possibility of Cross Cultural Criticism** *Adv, Mul-
 Cult*
- JOSÉ ALEJANDRO RAMIREZ Mon 3:15; STEV 3046
**Quality of Education and Critical Thinking in
 Mexican Elementary Schools** *Elem*
- SURINDER SINGH ATTARIWALA Tues 8:45; STEV 3028
**A Critique of: Bilingualism, Mother Tongue,
 Community Languages** *Mul-Cult, H Con, Lang*
- KIM SKOOG. Tues 10:30; STEV 1040
**Towards a Holistic Model of Knowledge:
 Understanding the Interplay Between Reason,
 Revelation, and Realization** *Adv, Mul-Cult, Arts*
- JEFFREY REED Tues 10:30; IVES 78
**The Story Behind Cinco de Mayo: A Study in
 Different Points of View** *Mul-Cult, Mid/High, Soc
 Stud, Coll*
- YEHUDI O. WEBSTER Tues 10:30; IVES (WARREN)
**Multi-Culturalism and Critical Thinking:
 Compatibility or Competition?** *G, Mul-Cult*
- CHARLES V. BLATZ Tues 1:30; IVES (WARREN)
**Education and the Construction of Societies:
 Developing and Teaching an Interdisciplinary,
 Cross-College Course on Leading Modes of
 Analysis of Current Global Problems, and How
 to Modify Education to Equip Students to Use
 These Tools of Analysis** *Coll, Env, H Con, Mul-Cult,
 Pol, Test*
- JOHN ARUL PHILLIPS Tues 3:15; DAR 139
**Developing Critical, Creative and Content
 Thinking in the Malaysian Classroom:
 Approaches and Methods** *K-12, Beg*
- WILLIA L. NWA Wed 8:45; IVES 35
**Culturally Diverse Students: How Should
 Educators Enrich Their Environment?** *Mul-Cult,
 Mid/High, Coll, Beg, Teach Tactic*

POLITICS

- JO ANN CARTER-WELLS, JAMES L. RATCLIFF, ELIZABETH JONES, PETER A. FACIONE. Sun 1:30; DAR 122
Update on Goal 5.5 of Goals 2000: Results of a National Delphi Study Linking Critical Thinking and Communication Goals/Outcomes (part 1)
Coll, Pol, Test, Staff Dev
- MARIO GALVAN. Sun 1:30; STEV 3028
Thinking Critically about the Zapatista Revolution in Mexico *Gen, H Con, Mul-Cult, Pol, Peace, Soc Stud*
- JO ANN CARTER-WELLS, PETER A. FACIONE, NANCY CLOVER GLOCK, WILLIAM JOHNSON, ELIZABETH A. JONES, BOB PUTMAN, JAMES L. RATCLIFF, CHARLES WOODSON Sun 3:15; DAR 122
An Intersegmental Dialogue on the Policy Implications for California of Goal 5.5 of the Goals 2000: Educate America Act (part 2) *Coll, Pol, Test, Staff Dev*
- DAVID SPEAK, THOMAS M. COOPER. Tues 1:30; NICH 173
Place of Democracy in Education/School *K-12, Pol*
- SHARON PRESLEY Wed 8:45; STEV 3008
Questioning Authority: How to Encourage Students and Others to Have a More Critical Attitude Toward Authority *Psych, Pol, Coll, H Con, Teach Tactic*
- WILLIAM K. MAREK Wed 10:30; STEV 3028
The Cognitive Perspective on Illegality, Harm, and Society *Psych, Pol, Sociol, Inf Logic*

PSYCHOLOGY

- SANDRA A. MOSCOVIC, DAVID B. PORTER. . . . Sun 10:30; STEV 3046
Enhancing Critical Thinking in a College Course
Coll, Beg, H Con, Psych
- LYNN J. LOFTHOUSE Sun 1:30; STEV 2049
A Workshop to Train Teachers to Infuse Critical Thinking Skills in Students Through Self-Evaluation *Mid/High, Coll, Psych*
- THOMAS J. SCHEFF. Sun 3:15; STEV 3046
Alienation in Families and Classrooms: Repairing the Bond *Adv, H Con, Sociol, Psych*
- DAVID B. PORTER, SANDRA A. MOSCOVIC Mon 8:45; NICH 173
Thinking Critically About Eyewitness Testimony
Coll, Psych, Soc Stud, Test

- WEBSTER E. COTTON. Mon 10:30; DAR 122
Ideas, Conceptual Maps and the Human Project: Re-Thinking the Meaning/Significance of the Educational Process *Coll, Psych, Sociol, Soc Stud*
- CARINE V. ALMA. Mon 1:30; DAR 122
A Strategy for the Acquisition of Problem-Solving Expertise in Humans: A Systems Approach *Psych*
- KAREN L. HEILMEIER-RANKIN, CAROL B. WILSON Mon 1:30; DAR 139
"Mary, Mary, Quite Contrary, How Does Your Garden Grow?" Does Caring and Holism Promote Personal Growth and Create a Framework for Critical Thinking in Nursing Education? *Nurs, Psych, Health, Coll*
- SUSAN HALES Mon 1:30; DAR 108
Understanding the Interdependent Relationships Among Critical Thinking, Moral Integrity, and Student Learning Part I *G, Psych*
- SUSAN HALES Mon 3:15; DAR 108
Understanding the Interdependent Relationships Among Critical Thinking, Moral Integrity, and Student Learning Part II *G, Psych*
- LYN FREEMAN. Tues 8:45; IVES 35
Critical Thinking as Clinical Intervention
Psych, Nurs, Test, Health
- CLARENCE WELLS Tues 10:30; STEV 3028
Understanding Human Thinking Behavior: The Impact of Contemporary Brain Research Findings *Psych, Staff Dev, Test, Elem*
- BRUCE W. DAVIDSON Tues 1:30; STEV 3072
Obstacles and Opportunities for Critical Thinking in Japan *Coll, Psych, Sociol, Inf Logic*
- ROBERT N. GILBERT Tues 3:15; STEV 3028
50 Minutes, the Student Magazine of the Social Sciences, a Model for Achieving Critical Thinking in Every Department *Coll, Mid/High, Soc Stud, Psych*
- RENÉE RUDERMAN, JOSÉ RODRIGUEZ. Tues 3:15; STEV 3046
Diversity Training Within the First Year Program: A Model for Empathy Development
Coll, H Con, Psych
- LINDA ELDER Wed 8:45; CAR 68
Critical Thinking Development in Adulthood: A Stage Theory Based on Resistance *Psych, Adv*

PSYCHOLOGY

Continued

- SHARON PRESLEY Wed 8:45; STEV 3008
Questioning Authority: How to Encourage Students and Others to Have a More Critical Attitude Toward Authority *Psych, Pol, Coll, H Con, Teach Tactic*
- WILLIAM K. MAREK Wed 10:30; STEV 3028
The Cognitive Perspective on Illegality, Harm, and Society *Psych, Pol, Sociol, Inf Logic*

SCIENCE

- JACKIE A. GIULIANO Sun 10:30; DAR 139
Gender and Science: The Impact of the Absence of a Feminist Voice - Putting the Human Spirit Back Into Science and Science Education *Env, Fem, Math/Sci, Mul-Cult*
- GEORGE RADDUE, JOANN RADDUE Mon 8:45; STEV 2065
Critical Thinking Smorgasbord: Showcase of Project-Based Learning Activities *Elem, Staff Dev, Math/Sci, Env*
- GEORGE RADDUE, JOANN RADDUE Mon 3:15; STEV 2065
Hand-To-Mind: Project-Based Learning: Making Microscopes *Math/Sci, K-12, Staff Dev, Env*
- JEAN ANN FOLEY Tues 8:45; DAR 137
Critical Thinking: Transforming Teacher Perspective *Staff Dev, Sci, Elem, Teach Tactic*

SOCIAL STUDIES

- MARIO GALVAN Sun 1:30; STEV 3028
Thinking Critically about the Zapatista Revolution in Mexico *Gen, H Con, Mul-Cult, Pol, Peace, Soc Stud*
- TERRY R. MORRIS Sun 3:15; STEV 3028
Teaching History as Argument *Beg, Soc Stud, Coll, Inf Logic, Teach Tactic*
- STEPHEN JOHN ADAMS Mon 1:30; STEV 3028
Critical Thinking Tactics for the American Studies Classroom *Mid/High, Coll, Soc Stud, Pol*
- KENNETH R. BAIN Tues 8:45; STEV 3008
Integrating Critical Thinking and Motivational Theory in the Disciplines *Coll, Adv, Inf Logic, Soc Stud*

- JEFFREY REED Tues 10:30; IVES 78
The Story Behind Cinco de Mayo: A Study in Different Points of View *Mul-Cult, Mid/High, Soc Stud, Coll*
- BRUCE W. DAVIDSON Tues 1:30; STEV 3072
Obstacles and Opportunities for Critical Thinking in Japan *Coll, Psych, Sociol, Inf Logic*
- ROBERT N. GILBERT Tues 3:15; STEV 3028
50 Minutes, the Student Magazine of the Social Sciences, a Model for Achieving Critical Thinking in Every Department *Coll, Mid/High, Soc Stud, Psych*
- WILLIAM K. MAREK Wed 10:30; STEV 3028
The Cognitive Perspective on Illegality, Harm, and Society *Psych, Pol, Sociol, Inf Logic*

STAFF DEVELOPMENT

- RICHARD POPE Sun 10:30; SU 100
Restructuring Your Class To Make 'Em Think! *Elem, Beg, Staff Dev*
- NORMAN J. UNRAU Sun 1:30; DAR 137
The Role of Critical Thinking in Teacher Education Programs *Coll, Staff Dev, K-12*
- DONALD HATCHER, LUCY PRICE Sun 3:15; IVES 119
Critical Thinking, Written Composition, and Primary Texts *Mid/High, Coll, Staff Dev, Test*
- CHARLENE PEARSON, BOB PUTMAN, JEANNE KERALLAH, GEORGE WRIGHT Mon 8:45; IVES 34
Implementing Critical Thinking into District Curriculum *Coll, Staff Dev, Test*
- CHRIS ELESER Mon 8:45; IVES 35
Nuts and Bolts of Designing and Implementing A Critical Thinking Course for College Freshmen *Beg, Coll, Staff Dev*
- LAWRENCE A. PARKER, SUSAN PARKER Mon 10:30; STEV 1040
Strategies for Implementing Critical Thinking *Staff Dev, Coll, Adv, Bus/Econ, Teach Tactic*
- FLORENCE FAY PRITCHARD Mon 10:30; ART 108
Teaching Thinking Across the Curriculum with the Concept Attainment Model *K-12, Staff Dev, Coll, Teach Tactic*
- RENATE OTTERBACH Mon 10:30; IVES 78
Integrating Thinking Skills and Teamwork to Prepare Students for a Changing World *Adv, Staff Dev, Coll, Mid/High*

STAFF DEVELOPMENT

Continued

- JAMES MAYLIN ERDMAN Mon 1:30; STEV 1040
 The Eau Claire Plan: The Genesis of a K-12 Staff
 Development Program in Critical Thinking K-
 12, Beg, Staff Dev
- JOSÉ ALEJANDRO RAMIREZ Mon 3:15; STEV 3046
 Quality of Education and Critical Thinking in
 Mexican Elementary Schools Elem
- MARK A. WILCOX Mon 3:15; IVES 35
 Creative Thinking: A Relevant Tool for Today
 and the Future Bus, Mid/High, Coll, Staff Dev
- JEAN ANN FOLEY Tues 8:45; DAR 137
 Critical Thinking: Transforming Teacher
 Perspective Staff Dev, Sci, Elem, Teach Tactic
- PHILLIP W. PAYTON Tues 10:30; STEV 3040
 Adult Learning and Critical Thinking in Business
 Education, With Staff Development Implications
 Bus/Econ, Coll, Staff Dev, Test
- MICHAEL MCLAIN-MIDKIFF Tues 1:30; IVES 34
 Working Toward A Meaning Centered Thinking
 Curriculum at the K-5 Level: Change and
 Thoughtfulness Elem, Staff Dev, Beg
- GEORGE M. LUCKEY, JR. Tues 3:15; STEV 2049
 Transforming Teacher Education Staff Dev, Coll,
 Beg
- MARK A. WILCOX Tues 3:15; IVES 35
 Whole-Brain Teaming: A Critical Thinking Tactic
 That Works Staff Dev, Bus/Econ, Mid/High, Coll
- JOHN ARUL PHILLIPS Tues 3:15; DAR 139
 Developing Critical, Creative and Content
 Thinking in the Malaysian Classroom:
 Approaches and Methods K-12, Beg
- MICHAEL JURIC, JEFFREY REED, KEN MOULTON. . Wed 10:30; IVES 35
 Restructuring a School and District for Critical
 Thinking Staff Dev, Beg, K-12

TESTING AND ASSESSMENT

- WAYNE R. MORGAN, JR. Sun 10:30; DAR 122
 Techniques and Tools: Using Elements of
 Classroom Assessment and Total Quality
 Management to Enhance and Assess Critical
 Thinking Instruction in the Classroom Coll,
 Math/Sci, Test, Staff Dev, Teach Tactic

- JO ANN CARTER-WELLS, JAMES L. RATCLIFF, ELIZABETH JONES, PETER
 A. FACIONE. Sun 1:30; DAR 122
 Update on Goal 5.5 of Goals 2000: Results of a
 National Delphi Study Linking Critical Thinking
 and Communication Goals/Outcomes (part 1)
 Coll, Pol, Test, Staff Dev
- CHARLES V. BLATZ Sun 1:30; IVES 119
 Critical Thinking and the 21st Century:
 Teaching Critical Thinking Through the
 Development of Individual Student Portfolios
 Centered on Global Problems Coll, Env, H Con,
 Mul-Cult, Pol, Test
- JULIA Y. PORTER, WAYNE C. PORTER Sun 3:15; IVES 34
 Meeting the Challenge of Effectively Assessing
 Critical Thinking Skills Test, Coll, Staff Dev, Beg,
 Teach Tactic
- JO ANN CARTER-WELLS, PETER A. FACIONE, NANCY CLOVER GLOCK,
 WILLIAM JOHNSON, ELIZABETH A. JONES, BOB PUTMAN, JAMES L.
 RATCLIFF, CHARLES WOODSON Sun 3:15; DAR 122
 An Intersegmental Dialogue on the Policy
 Implications for California of Goal 5.5 of the
 Goals 2000: Educate America Act (part 2) Coll,
 Pol, Test, Staff Dev
- RUBY L. TROW, MARILYNN FILBECK. Mon 8:45; DAR 122
 Using Student Portfolios to Assess Student
 Critical Thinking Skills Test, Mid/High, Coll, Teach
 Tactic
- PETER A. FACIONE, NOREEN C. FACIONE Mon 8:45; ART 108
 Classroom Assessment of Higher Order
 Thinking Test, Beg, Coll
- GEORGE H. HANFORD Mon 10:30; STEV 3008
 Critical Thinking and the New SAT Mid/High,
 Test
- NORMAN BETZ Mon 10:30; DAR 139
 Using the MBTI to Prepare for Critical Thinking
 Coll, Beg, Lang, Test
- JENNIE S. CONN, ANDREW O. HILL, CHASTITY B. CONN
 Mon 10:30; DAR 143
 Redefining Cheating Through Collaborative
 Learning and Test Taking Methods Coll, Test
- FRANK MYERS. Tues 8:45; IVES 78
 Assessing Critical Thinking Programs: The
 Research Design Issue
- DONALD HATCHER. Tues 8:45; STEV 3072
 Grading the Ennis-Weir Critical Thinking Essay
 Test Mid/High, Coll, Staff Dev, Test

TESTING AND ASSESSMENT

Continued

- CAROL A. SANCHEZ, NOREEN C. FACIONE Tues 8:45; DAR 139
**Critical Thinking Dispositions and Skills Among
Junior and Senior High Students** *Mid/High, Test,
Psych*
- JIM POLLARD Tues 10:30; STEV 2049
100% Mastery (A Self-Assessment Workshop)
Test, Adv, Bus/Econ, Teach Tactic
- GAIL HUGHES, M.J. ABHISHAKER, RICHARD KUSS, COLLEEN TRACY
. Tues 10:30; DAR 139
**Constructing an Adaptive Interview to Assess
Thinking Skills: Demonstration and Discussion
of a Work in Progress** *Test, Coll*
- VIRGINIA O'KEEFE Tues 1:30; STEV 3008
Meaningful Assessment: A Look at Process
Test, Beg, Mid/High, Coll, Lang
- RICHARD W. PAUL. Tues 1:30; SU 100
**Free Your Time — Help Your Students: Teach
Students to Assess Students** *Beg, Test, Teach
Tactic, Dem Teach*
- NOREEN C. FACIONE, PETER A. FACIONE Tues 1:30; IVES 119
**Program Assessment: Responding to
Accreditation Mandates** *Nurs, Test, Coll, Health*
- CAROL KOEHLER Tues 3:15; DAR 137
**Supplemental Instruction: A Critical Model for
Killer Courses** *Coll, Inf Logic, Test*
- SUSAN E. HANNAM, JANE L. WETZEL, ANNE M. GRIFFITHS, LEONA
C. PARASCENZO Tues 3:15; CAR 68
**Case Study: Overcoming Faculty Resistance to
Assessing Critical Thinking** *Coll, Beg, Test, Health*
- JOE M. STEELE Wed 8:45; IVES 78
**Assessing Critical Thinking Outcomes of College
General Education Programs** *Coll, Test, Beg, Staff
Dev*
- RICHARD W. PAUL. Wed 8:45; SU 100
**Why Testing and Assessment Are Weak At All
Levels** *Teach Tactic, Test, G, Beg*

CONFERENCE ABSTRACTS

ABEGGLEN, JOANN C.

Instructor of Nursing, Brigham Young University

TUES 3:15; STEV 3008

CYNTHIA O'NEILL CONGER

Instructor of Nursing, Brigham Young University

Critical Thinking in Nursing: Classroom Tactics that Work

NURS, HEALTH,

BEG, FEM, TEACH TACTIC

Literature on critical thinking is full of theoretical considerations and risks/benefits of incorporating critical thinking into a baccalaureate curriculum. In addition, a few articles examine pragmatic issues and tactical approaches (methods). While we found these articles helpful, we needed an example describing how a course was actually changed that could serve as a model for our attempts to reframe a senior-level nursing course. The intent of this paper presentation/workshop session is to walk you through our experiences in changing the community health nursing course from a traditional didactic approach to a critical thinking one. We hope that by taking you through our "lived experience," we might answer some of your concerns and questions regarding implementation.

ADAMS, STEPHEN JOHN

Chair, American Studies, Lake Tahoe Community College

MON 1:30; STEV 3028

Critical Thinking Tactics for the American Studies Classroom

MID/HIGH,

COLL, SOC STUD, POL

The purpose of this session will be to pose and address the basic question: What can we do in the American History and American Government classroom to foster quality reasoning and problem solving? My presentation will not only focus on what to do to instill quality reasoning and problem-solving in the American Studies classroom but will also concentrate on what not to do. This session will be for the instructor in American Studies, at both the High School and College level, who truly wishes to "restructure"

the future in education. A central theme for this session will be what we must do to alter, change, or in some cases eliminate, what we are currently doing in our classrooms. As educators we must make our classrooms a bastion of excitement, stimulating thought and relevancy. "If we build it, they will come."

When possible, participants in this session will, through the use of critical thinking, come to their own conclusions about what needs to be changed, altered or eliminated. I will not only help to develop fundamental exercises in student thinking abilities and skills for the American Studies classroom, but I will facilitate the use of those same abilities and skills by teachers to accomplish the stated goal of the session.

AFFELDT, JANE WED 10:30; STEV 3008
Associate Professor, Mount Mary College

Developing Clinical Reasoning With Cognitive Strategies HEALTH, NURS, COLL, BEG, TEACH TACTIC

This workshop teaches participants to use cognitive strategies to develop students' clinical reasoning skills in fieldwork. Cognitive strategies guide the "how to" of clinical reasoning, helping students make sense of their experiences and helping bridge the gap between student and supervisor. Participants will use cognitive strategies to discuss videotaped treatment sessions and to analyze supervisory interactions in a way that facilitates the students' development of procedural, interactive and conditional clinical reasoning.

ALLEN, PATRICIA MON 8:45; STEV 3036
Coordinator of Alternative Instruction, Massachusetts Bay Community College

Teaching for Critical Thinking in the Career Programs of a Community College COLL

This interactive workshop addresses methods of teaching critical thinking within the academic discourses of several career programs at the community college level. Multi-modal activities highlight the importance of developing a clarity of purpose, a depth and breadth of learning outcomes, and a precise and well-articulated criteria for assessment. Discipline-specific materials engage participants in the formation of thinking strategies, instructional tools, and evaluation methodologies.

ALMA, CARINE V. MON 1:30; DAR 122
Graduate Student, Department of Psychology, University of Connecticut, at Storrs

A Strategy for the Acquisition of Problem-Solving Expertise in Humans: A Systems Approach PSYCH

The acquisition of expertise involves the adoption of a between-systems problem-solving approach. A between-systems problem-solving approach involves (1) category re-structuring, (2) analogy formation and (3) solution

construction using symmetrical and asymmetrical mapping information. Category re-structuring permits the expert to re-frame the initial problem state. Re-framing the problem leads to the formation of analogical functional and complementary connections between category members. The identification of symmetrical and asymmetrical mappings determines the extent to which information from an analogous system can be borrowed with or without modification, and subsequently incorporated into a problem solution.

ANDERSON, KENNETH MON 10:30; STEV 3072
Teacher of Social Science, College of the Sequoias

Critical Thinking Made Simple BEG, COLL, MID/HIGH, INF LOGIC

Critical thinking is, of course, an incredibly complex discipline of great depth and imprecise edges. But for the beginner, depth and imprecision are often a quagmire of technical specificity and esoteric debates.

I propose that critical thinking can be tentatively simplified to two ingredients: how we think and the accuracy of what we think about. Approximately half the time will be spent on a definition and discussion of logic and the remaining half on three different standards for determining the accuracy or truth of what is said. Time permitting, other topics normally included in a course on critical thinking may be discussed at the desire of the participants.

ATTARIWALA, SURINDER SINGH TUES 8:45; STEV 3028
Cordinator, South Asian Languages, Haringey Professional Development Centre

A Critique of: Bilingualism, Mother Tongue, Community Languages MUL-CULT, H CON, LANG

How do you compare (or contrast, for that matter) terms that belong to different categories? Bilingualism goes with monolingualism, multilingualism etc. Mother tongue is a term which goes with foreign language, second language etc. We equate community languages with the languages used by recent arrivals in the U.K. What can be more idiotic than that? Is not English a community language?

Asians settled in this country want to see their languages taught in schools because, like English (or the Welsh or Scots, for that matter), they are citizens of the country, they pay rates and taxes and the call for proper recognition of their languages by the education system is an assertion of their rights rather than a request for favour. The 1944 Education Act, coupled with the 1980 Education Act, and the Swann Report of 1985, clearly adjoins upon the LEAs to serve the educational needs of the community they serve. But the LEAs have been taking an ostrich-like view and concentrating on English language and demanding complete linguistic integration from others.

Now for strategies. Before devising these, one has to become aware of and identify the nature of opposition. Some of the resistance comes from ignorance and stupidity. Some white parents in a school became very agitated when they learnt that their children were going to be taught Panjabi. This reaction is an example of sheer ignorance. Learning of another language only enriches one's own language. But the real source of this ignorance lies in the ingrained attitude of teachers and the society which grades European languages as superior and other languages as inferior. Such an obstacle is countered not by words and resolutions but by a sustained public campaign by professionals and community groups alike.

AVERY, JON SUN 10:30; IVES 34
Lecturer in Philosophy, Lamar University

A Possible Solution to the Transfer-Problem COLL, MID/HIGH, LANG, INF LOGIC, TEACH TACTIC

One of the main issues today in critical thinking pedagogy is determining effective methods for solving the "transfer-problem." I argue that the use of a model argumentative essay on the practical applications of a course in critical thinking is an effective method for transferring critical thinking skills to other areas. After arguing that there are general thinking skills that can be taught in a critical thinking course, I argue that they may be transferred to other areas by requiring students to write an essay on "Logic and My Major." Then, I provide historical precedents for using writing examples in learning to write well, which I apply by analogy to learning to think critically. Last, I provide several examples from contemporary professors' classroom experiences that the imitation of writing examples is a useful way to solve the "transfer problem."

BAIN, KENNETH R. TUES 8:45; STEV 3008
Director of Searle Center for Teaching Excellence, Northwestern University

Integrating Critical Thinking and Motivational Theory in the Disciplines COLL, ADV, INF LOGIC, SOC STUD

How can we make a sustained and substantial difference in the way students think and act? Can that difference include the ability and inclination to make choices based on "critical thinking?" It can if we offer students a chance to judge conflicting claims they care about and systematically help them to develop rational and reasonable ways to make those judgments. This workshop will help participants explore ways to develop such "critical thinking" courses in various disciplines. It will look, as an example, at a college U.S. history course that utilizes a logic textbook and carefully crafted questions designed to stimulate interest. That course helps and encourages students to learn how to identify arguments, how to recognize the ways in which people agree and disagree, and how to assess evidence, among other skills. It also makes a deliberate effort to foster the habits of rational thought, to make a sustained difference in the way students make decisions

about history. The course utilizes methods and structures that other disciplines can use with similar results.

BAXTER, JAMES B. TUES 3:15; IVES 78
Evaluation Coordinator and Teacher, Lassen Elementary School

Thinking Critically About Math Computation—An Oxymoron? ELEM, BEG, MATH/SCI, TEST

Developing critical thinking skills while emphasizing basic elementary computational math skills may sound like an oxymoronic statement. However, teaching not only how to do it but also why it is done that way allows for a critical examination of math procedures and student thinking. Additionally the focus upon why a procedure works allows for multiple solutions, the development of a self-checking process and the development of a vocabulary which enables the student to express his or her ideas about math procedures. This workshop will examine the process of thinking critically about math computation, and its connection with developing an enabling math vocabulary. Focus will be on the first through the fifth grade with some beginning connections to sixth grade or middle school pre-algebraic skills.

BEDECARRÉ, CORRINNE TUES 8:45; STEV 3040
Visiting Instructor of Philosophy, Gustavus Adolphus College

Community, Criticism, and the Problems of Non-Adversarial Methodology FEM, ADV

Feminist theorists assert that the community provides the information and the context of living and thinking whereby the individual creates meaning. To think critically as a feminist one needs to be able to participate in the community discussions as a semantic authority. Lynn Tirrell writes that the project for feminists is the assertion of oneself as a knower *with* authority and power and *without* privilege and domination. I will reflect upon the processes of self-assessment and criticism possible in diverse, pluralistic communities and in diverse, separatist communities. The adversarial method has been soundly rejected by many progressive educators yet the heir apparent to this process has yet to be fully conceptualized. I will begin to examine what is lost and what should not be lost in the rejection of the adversarial method of criticism. My paper will be read with plenty of time for discussion.

BETZ, NORMAN MON 10:30; DAR 139
Associate Professor of English and Philosophy, Central Missouri State University

Using the MBTI to Prepare for Critical Thinking COLL, BEG, LANG, TEST

This session will apply the Meyers-Briggs to the classroom as a means of creating the environment for beginning critical thinking. The session will demonstrate how the M-B affects student-teacher conferences, how it

affects teacher pre-writing instruction, how it provides a vocabulary for articulating student needs, how it affects tests and in-class activities.

The first part of the session will be a presentation: some class data confirms the value of beginning with personal writing and moving toward more abstract "thought" papers; warm-up exercises help prepare introverted students for classroom thought activities; students with differing personality types define "thinking" differently—and this may affect teachers' choice of assignments.

The second part will focus on actual examples of student work. Participants will try to induce learning styles from students' papers. We will try to see if student evaluations, of their own work and of student-teacher conferences, shows the MBTI helping to prepare for critical thinking.

BLACK, GORDON LEON

Instructor of Philosophy, Santa Rosa Junior College

TUES 8:45; IVES 34

Emotion and Reason: Describing Disputes INF LOGIC, LANG, H CON

Emotive language may be identified as approving or disapproving. This reading of attitudes, combined with a more usual reading of cognitive belief, enables description of a position.

The method may be useful as early as in K-3 metacognition, distinguishing factual observation from "likes" and "don't likes."

Logic and critical thinking texts introduce this analysis, but with some misplaced typology. Rudinow's suggested type, "Interpretive Disputes," seems better placed as a subtype of C.L. Stevenson's factual "Belief," linking Freeman's scheme for judging assertions by Descriptive/Interpretive/Evaluative aspects — the last of the trio congruent with Stevenson's "Attitude," the first two, subtypes of "Belief." But Barry's "Theoretical Disputes" dissolves in the given typology.

The presenter won't labor that critique, but will offer grounds while demonstrating introductory applications.

BLATZ, CHARLES V.

Associate Professor and Chair of Philosophy, University of Toledo

MON 1:30; IVES 35

The Spirit of Critical Thinking and the Possibility of Cross Cultural Criticism ADV, MUL-CULT

Is it possible to exercise critical thinking across cultures or standpoints? Can a Quaker evaluate the reasoning in "war games" exercises; an industrialist who relies upon interchangeable parts and standardization striving for maximum profit evaluate holistic, regenerative agriculture aimed at indefinite sustainability; or a Christian modernist evaluate traditional Islamic practices with respect to women? Such evaluations would be relativistic endorsements of whatever the other perspective calls for, ethnocentric misunder-

standings, else insincere role playing. None of these is in the spirit of critical thinking. In this paper presentation and discussion, we will explore seven principles defining part of the spirit of critical thinking. These both will explain the dilemma of cross-perspective critical reasoning and suggest how to avoid that dilemma by appeal to perspective neutral goals for critical thinking.

BLATZ, CHARLES V.

Associate Professor and Chair of Philosophy, University of Toledo

TUES 1:30; IVES (WARREN)

Education and the Construction of Societies: Developing and Teaching an Interdisciplinary, Cross-College Course on Leading Modes of Analysis of Current Global Problems, and How to Modify Education to Equip Students to Use These Tools of Analysis COLL, ENV, H CON, MUL-CULT, POL, TEST

This session will describe the development and piloting of the first half of an inter-disciplinary (Education and Philosophy) college course devoted to education and the construction of societies. The course aims at understanding seven major approaches to analyzing the occurrence and significance of contemporary and historic events, and at student plans for field-based research or action employing some of these approaches. Paradigms, polarity analysis, systems analysis, economic analysis, sociobiological analysis, and a consideration of socially constructed ethical communities are included. One emphasis of this informal presentation and discussion will be the student portfolios. These include analysis of several of the conceptual approaches in question, a research paper on a local problem with global dimensions, and a field research or action project proposal.

BLATZ, CHARLES V.

Associate Professor and Chair of Philosophy, University of Toledo

SUN 1:30; IVES 119

Critical Thinking and the 21st Century: Teaching Critical Thinking Through the Development of Individual Student Portfolios Centered on Global Problems COLL, ENV, H CON, MUL-CULT, POL, TEST

This informal session will describe the evolution and teaching of a 100-plus student, Introduction to Critical Thinking, which uses the portfolio method of assessment. The bulk of the session, will cover a) the class requirements, b) the organization of the class into working groups concerned with a single issue over the entire quarter, and c) the student development of portfolios out of both cassette-tape reviewed exercises and a policy development (or policy critique) paper focused on the issue of their choice. The options for class discussion issues are all topical and include such matters as U.S. immigration and jobs, the far east's rejection of U.S. culture, or the multi-faceted and multi-cultural struggle over pristine old growth forest around Clay-quot Sound, Vancouver Is. As one major goal the session seeks to review portfolio assessment in large classes.

BOST, JOHN C.

TUES 8:45; STEV 3046

Associate Professor, Department of Finance, San Diego State University

Critical Thinking in the Legal Environment Course: Application to a Content Driven Course BUS/ECON, COLL, TEACH TACTIC

Professor Bost will share his experience in changing an introductory business law course from one taught primarily by lecture to one with much greater student involvement in discussion, group activities, and group and individual writing assignments. This session should be valuable to anyone teaching business law courses, courses in the social sciences, and in the humanities. The session will cover how to develop a course guide booklet, how to efficiently facilitate group formation and activities, how to improve student writing skills, and how to motivate students and greatly improve their level of preparedness for class. There will be time for participants to ask questions and to share ideas and experiences in developing thinking and writing skills for students in content driven courses.

BRAKE, KATHRINE

TUES 3:15; NICH 173

Lecturer of Education, University of South Australia

LYNN A. BRAKE

Senior Lecturer of Environmental Management, University of South Australia

Critical Literacy: Constructions of Animals in Children's Literature

ELEM, LANG, ENV, COLL

Young children are taught to love animals. In children's literature authors portray animals with human characteristics to demonstrate social models which help children to develop an understanding of human relationships.

We all know that as children mature they learn the difference between real animals and those anthropocentric characterizations of their favorite story book characters; or do they? Too often people value animals only in terms of how they relate to humans, and perceive ecosystems as functioning with the same sets of needs and values as human society. These perceptions lead to selective effectiveness in nature conservation and may contribute to the extinction of species.

This paper explores the relationship between some of the animal representations presented in children's literature and popular misunderstandings about wildlife. The paper encourages teachers to ensure that children develop skills of critical literacy in order to interrogate authors' intended readings so that they are not disempowered by insidious messages in regard to natural processes and the role of humans in conserving wildlife.

BRENNER, DOUG

WED 8:45; STEV 3046

Assistant Professor of Speech Communication, University of South Dakota

Watching Videotapes Is More Than a Spectator Sport: Using C-Span Resources to Develop Critical Thinking Skills MEDIA, COLL, BEG, MID/HIGH

Watching videotapes in the classroom should NOT be a spectator sport! This program discusses ways to utilize videotapes in the classroom more effectively to foster more enduring and "deeper" critical thinking skills. Various activities prompting students to cognitively engage with important, ongoing real-world political and social events illustrated in videotaped examples will be emphasized. It argues that C-SPAN programming provides rich and largely untapped resources which can be adapted to a variety of disciplines in developing students' critical thinking skills.

BROWN, MARVIN

SUN 10:30; STEV 3072

Lecturer of Philosophy, University of San Francisco

The Ethical Process: A Strategy for Making Good Decisions COLL, BUS/ECON, INF LOGIC, H CON

Suppose you are at a group meeting where the members must decide what to do, and they disagree. This session will present a method for such situations that develops and evaluates the group's resources so they can make the best decision possible through the use of "argumentative dialogues." Beginning with different proposals, the participants will construct supporting observations, and then learn how to uncover the implicit value judgments and hidden assumptions on which the proposal and observation rely. When people with different views work together in this process of discovery, they also learn how differences and diversity enhance the decision making process. During the session, participants will be guided through a series of worksheets that will enable them to experience the effectiveness of the process.

BROWNE, M. NEIL

MON 8:45; IVES (WARREN)

Distinguished Teaching Professor of Economics, Bowling Green State University

STUART M. KEELEY

Professor of Psychology, Bowling Green State University

Lessons Learned from Two Decades of Teaching Critical Thinking

MID/HIGH, COLL, BEG, SOC STUD

The premise of this participatory workshop is that those who attend this conference have an enormous accumulated experience that can be useful. The workshop leaders, the authors of *Asking the Right Questions: A Guide to Critical Thinking*, have both taught critical thinking for more than 20 years. The first third of the workshop will be the presentation of what they think they have learned from that experience.

The bulk of the workshop will consist of a structured sharing session in which we will question one another and pass along hints, focusing on

improving our critical thinking efforts as teachers. The workshop will close with the generation by the group of continuing dilemmas faced by those of us teaching critical thinking. By ending in this way we will provide one another with a structure for ongoing thought and study about our joint project of encouraging critical reading and listening.

BROWNE, M. NEIL TUES 8:45; IVES (WARREN)
Distinguished Teaching Professor of Economics, Bowling Green State University

Guided Dialogue: An Effective Alternative to Lectures or Discussion as Avenues Toward Critical Thinking MID/HIGH, COLL, BEG, SOC STUD

Lectures have certain obvious problems as a dominant pedagogy aimed at critical thinking. However, discussion-oriented teaching is not necessarily superior for this purpose. To approach critical thinking pedagogy in this fashion is overly dichotomous. Many faculty perhaps almost all faculty members, are hesitant to permit the latitude required for broad involvement in a discussion format. And after all, in a course like critical thinking, where is the essential element of evaluation in a free-flowing discussion? Will not critical thinking stymie a discussion rapidly except among the unusually self-confident?

This presentation will suggest a classroom format that builds on the strengths of lectures and discussions to facilitate critical thinking. The method will be modeled for those attending the presentation. The objective is to see that we are not limited to lectures and discussions as we plan our teaching approaches.

BROWNE, M. NEIL TUES 10:30; DAR 137
Distinguished Teaching Professor of Economics, Bowling Green State University

Three Divergent Forms of Critical Thinking: Their Implications for Our Teaching COLL, SOC STUD, ADV

Three distinct groups of educators use the term critical thinking to describe their intentions in their classrooms. Yet the starting assumptions and purpose of these divergent forms of critical thought have not received adequate attention in designing thinking skills curricula and pedagogy. This presentation will be in discussion form representing a conversation between a critical theorist drawing primarily on Jurgen Habermans' work, a critical thinker in the sense reflected in the recent volume *Conversation with Critical Thinkers* (Sonoma Style), and someone who uses Paulo Freire as a model.

The conversation will be a practical one discussing construction of the syllabus, assignments, classroom practice, and evaluation. The objective will be improved understanding of these promising modes of thinking, rather than a victory of one mode over the other.

BROWNE, M. NEIL SUN 3:15; IVES (WARREN)
Distinguished Teaching Professor of Economics, Bowling Green State University

STUART M. KEELEY
Professor of Psychology, Bowling Green State University

Getting Started As A Teacher of Critical Thinking: Classroom Behavior and Assignments MID/HIGH, COLL, SOC STUD

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 assignments and appropriate classroom behavior.

Emphasis on 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.

CARTER-WELLS, JO ANN SUN 1:30; DAR 122
Coordinator of the Undergraduate Reading Program, California State University, Fullerton

JAMES L. RATCLIFF
Director and Professor, Center for the Study of Higher Education, The Pennsylvania State University

ELIZABETH JONES
Research Associate, National Center on Postsecondary Teaching, Learning, and Assessment, Pennsylvania State University

PETER A. FACIONE
Dean of Arts and Sciences, Santa Clara University

Update on Goal 5.5 of Goals 2000: Results of a National Delphi Study Linking Critical Thinking and Communication Goals/Outcomes (part 1) COLL, POL, TEST, STAFF DEV

This session will explore the background and current status of Goal 5.5 of *Goals 2000: Educate America Act*. Specifically, this goal states that "the proportion of college graduates who demonstrate an advanced ability to think critically, communicate effectively, and solve problems will increase substantially." Particular emphasis will be placed on the results of a national Delphi study of 72 postsecondary institutions (selected faculty, policy makers, and employers) related to the relevant critical thinking, writing, and speech communication outcomes/goals linking the components of Goal 5.5. This study was conducted by the National Center on Postsecondary Teaching, Learning and Assessment and was funded by the U.S. Department of Education's Office of Educational Research and Improvement (OERI). Two discussants will react to the key results of this study. Open discussion

on the institution/classroom/workplace implications and further research issues will provide for networking opportunities beyond the conference.

CARTER-WELLS, JO ANN

SUN 3:15; DAR 122

Coordinator of the Undergraduate Reading Program, California State University, Fullerton

PETER A. FACIONE

Dean of Arts and Sciences, Santa Clara University

NANCY CLOVER GLOCK

Specialist in Curriculum and Academic Planning, California Community Colleges

WILLIAM JOHNSON

Chair, California State University Critical Thinking Council, California State University, Long Beach

ELIZABETH A. JONES

Research Associate, National Center on Postsecondary Teaching, Learning, and Assessment, Pennsylvania State University

BOB PUTMAN

Instructor of Philosophy, Rancho Santiago College

JAMES L. RATCLIFF

Director and Professor, Center for the Study of Higher Education, The Pennsylvania State University

CHARLES WOODSON

Professor of Educational Psychology, University of California, Berkeley

An Intersegmental Dialogue on the Policy Implications for California of Goal 5.5 of the Goals 2000: Educate America Act (part 2) COLL, POL, TEST, STAFF DEV

The recently enacted *Goals 2000: Educate America Act* includes an objective for higher education under Goal 5-Adult Literacy and Lifelong Learning. Specifically, Goal 5.5 focuses on students' ability to think critically, solve problems, and communicate effectively. *Goals 2000* promotes "bottom-up" reform and is built upon the principles of consensus-based educational standards, voluntarism, and broad-based involvement. In this spirit, a roundtable of interested faculty and administrators representing all segments of postsecondary education within California will establish a framework for dialogue/conversation related to this goal. Some of the relevant issues/topics include assessment methods and measures, curriculum emphases, entry and exit skill identification, employer and workplace links, K-12 partnerships, teacher preparation and training, relevant research, etc. Small group and open discussion will extend this dialogue and provide the basis for future public forums. (Attendance at the earlier session related to Goal 5.5-Part 1-would be helpful in establishing additional background for this session.)

CAVINA, KRISTAN

Instructor of English/ESL, Fullerton College

MON 3:15; IVES 78

Teaching Critical Thinking in the Writing Class LANG, COLL

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 generalizations 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.

CHAMBERLAIN, HARRIET, PH.D

Educational Consultant, Lecturer, Founder of Thinking Possibilities, Thinking Possibilities

MON 1:30; NICH 173

Creating Thinking Space for Survival COLL, ADV

Our reasoning minds, historically, have created the conditions that label us as an "endangered species." We now need a change in consciousness in thinkers in every walk of life who will improve the chances of human survival. This participatory lecture/workshop will focus on: theories of homo sapiens' evolutionary development; gaining insight into the physiological and psychological necessity for developing "internal and external space" for improving learning and supporting positive change; participant involvement in creative activities for providing "thought space" for enhanced learning, perspective building, and empathy development. Workbook provided.

CONN, JENNIE S.

Assistant Professor of Business Law and Ethics, Clark Atlanta University

MON 10:30; DAR 143

ANDREW O. HILL

Assistant Professor of Management, Clark Atlanta University

CHASTITY B. CONN

Student at Spelman College, Clark Atlanta University

Redefining Cheating Through Collaborative Learning and Test Taking Methods COLL, TEST

Academic dishonesty is a widespread problem against which no college campus is immune. However, in all honesty, have we as educators lost focus on the true purpose for exams? Have we elevated the importance of an exam to the point that it is the sole indicator of a student's ability, effort, and time invested into to course? If the previous statements are answered affirmatively, does it then follow that we have backed our students into a

corner where they feel justified having "insurance" against failure on an exam? This workshop will explore alternative uses of exams, and methods to restructure test taking which drastically reduce cheating, and increase dramatically continuous learning by students.

COON, JULIE A. MON 1:30; STEV 2049
Associate Professor of Nursing, Ferris State University

MARY J. CAIRY
Associate Professor of Nursing, Ferris State University

The Use of Problem-Based Learning Groups to Foster Critical Thinking Skills in Associate Degree Nursing Students NURS, BEG, HEALTH, COLL, TEACH TACTIC

This workshop will provide an overview of strategies utilized in the didactic setting to stimulate critical thinking skills in associate degree nursing (ADN) students. These strategies were recently implemented in the maternity and pediatric specialty nursing courses at Ferris State University with very positive outcomes in terms of performance on objective exams, critical thinking skills as measured on the Watson Glaser Critical Thinking Appraisal, critical decision making in the clinical setting, and the development of collegial peer relationships. Specific strategies to be presented and discussed in this session will include the use of problem-based learning within cooperative learning groups, and how to identify "essential" content.

COTTON, WEBSTER E. MON 10:30; DAR 122
Professor of Educational Foundations, California State University, Los Angeles

Ideas, Conceptual Maps and the Human Project: Re-Thinking the Meaning/Significance of the Educational Process COLL, PSYCH, SOCIOL, SOC STUD

The Existentialists remind us that we are "thrown into the world" and need to get our human bearings. The way we choose to respond to this challenge is our unique Human Project. In developing our Human Project, we are dependent on ideas - it is through our ideas that we *orient* ourselves in the world. A key idea in this process is *education*. However, a key idea like education is really a complex of ideas (e.g., thinking, language, knowledge, reason, logic, etc.). This complex of ideas I refer to as a *conceptual map*. Education becomes the process of creating those conceptual maps that enable us to find our path through the "territory" (life, existence, the world) in a meaningful way. My analysis draws upon the perspective of Existential Phenomenology (Heidegger, Buber, Marcel) as well as the thinking of Plato, John Dewey, and Paulo Friere. This session will be in seminar format, with an initial 20-25 minute presentation.

DAMER, T. EDWARD TUES 1:30; DAR 108
Professor of Philosophy, Emory and Henry College
How to Construct Effective Moral Arguments COLL, MID/HIGH, H CON, INF LOGIC

It is primarily moral issues that engage our most serious intellectual 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 suggest a model for constructing persuasive moral arguments, with particular attention given to the task of formulating clear moral premises. Participants will construct and share their own moral arguments that deal directly with the controversial issues that disturb and divide us.

DAMER, T. EDWARD MON 1:30; IVES 119
Professor of Philosophy, Emory and Henry College

How to Resolve Disagreements on Controversial Issues: A Code of Conduct for Effective Rational Discussion BEG, COLL, MID/HIGH, H CON

This session will focus upon the rules of intellectual behavior that critically-minded persons would be expected to follow in a serious discussion of a divisive issue. Since fair-mindedness demands a commitment to the same minimal standards of intellectual behavior, these rules clearly take on an ethical dimension. But the rules also reflect the behavior of participants in those discussions which work, that is, actually resolve conflicts. A handout of a Code of Conduct from the new edition of the workshop leader's *Attacking Faulty Reasoning* will be distributed to workshop participants. Part of the workshop will be devoted to demonstrating the effectiveness of the principles by attempting to "resolve" a social or ideological conflict found between workshop participants.

DAMER, T. EDWARD SUN 3:15; IVES 78
Professor of Philosophy, Emory and Henry College

How to Distinguish "Good" Arguments from "Bad" Ones MID/HIGH, COLL, BEG, INF LOGIC

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 new edition of the workshop leader's will be distributed to workshop participants. Sample arguments that deal with current issues will be evaluated as a part of the workshop.

DAVIDSON, BRUCE W.

Lecturer, General Education, Osaka Jogakuin Junior College

TUES 1:30; STEV 3072

Obstacles and Opportunities for Critical Thinking in Japan COLL, PSYCH, SOCIO, INF LOGIC

Paradoxically, Japan presents both a difficult and a promising setting for the advancement of critical thinking skills. One deep-rooted obstacle stems from anti-rational ideological traditions and prejudices. Another comes from the rigidly hierarchical, conformist nature of Japanese society, which does not encourage divergent opinions or their expression. Probably most significant are the impediments created by the educational system, based as it is on rote-memorization entrance examinations and controlled in many respects by the recalcitrant Education Ministry. On the other hand, reasons for optimism can be seen in the basic rationality of the Japanese people, recent moves to reform the education system and promote reasoning, and the responsiveness of students to a critical thinking approach. The author presents conclusions based on personal experience and research to assess the prospects for critical thinking in Japan.

DE LA ROCHE, ELISA

Assistant Professor, Montclair State College

TUES 8:45; ART 108

WENDY OXMAN

Director of the Institute for Critical Thinking, Montclair State College

Walking in New Shoes: Critical Thinking Through Improvisational

Drama ARTS, BEG, H CON, TEACH TACTIC

The players of improvisational drama develop critical thinking actively and holistically. Drama in the classroom supports cooperative learning, develops emotional awareness and sensitivity to thoughts underlying feelings and feelings underlying thoughts, and fosters reciprocity and problem solving, engaging both the cognitive and affective domains. The players, both teachers and students, have the opportunity to experiment, discover, communicate, argue, express, and share.

This interactive workshop will provide an opportunity to explore several exercises using improvisational drama related to various curriculum areas, age, and experience levels. The theory and practice of critical thinking through experiential learning will be addressed. Workshop participants will be invited to analyze the process and discuss possibilities for its curricular-related application in their own classrooms.

DITZHAZY, HELEN E. R.

Professor of Educational Leadership, Eastern Michigan University

SUN 3:15; STEV 3040

Moral Reasoning, Province of the Schools: Teaching Values, Province of the Home H CON, K-12, INF LOGIC

Parents have the responsibility for teaching their children family values. These values should include trustworthiness, respect, responsibility, fair-

ness, caring and citizenship. In today's society, many would add, that by abdication of this duty to teach, parents permit society to teach their children violence, theft, lying, cheating and drunk driving. In line with these value considerations, the schools should be teaching moral reasoning which broadens and enhances students' abilities to reflect on the decisions they may have to make in relation to their individual value orientations. This moral reasoning involves using critical thinking tactics in the classroom as students examine good, better and best arguments for their positions. Sound ethical decisions are not relative; and good moral reasoning and critical/analytical thinking aids students in seeing that this is so.

DORMAN, WILLIAM A.

Professor of Journalism and Government, CSU Sacramento

SUN 10:30; IVES 119

Mass Media in the Critical Thinking Curriculum MEDIA, COLL

This presentation is based on my experiences over the past five years teaching a Mass Media and Critical Thinking Course. Essentially, my goal has been to remake the traditional mass media and society course into a media literacy course that puts the student at the center of the learning process. This session should be of interest whether you are teaching or planning to teach a media studies course, or merely want to get some ideas about how to incorporate mass media concerns into a critical thinking course with a broader scope. Participation is sought, particularly if you have successful strategies of your own to contribute.

DORMAN, WILLIAM A.

Professor of Journalism and Government, CSU Sacramento

MON 1:30; STEV 3008

RALPH JOHNSON

Professor of Philosophy, University of Windsor

A Way of Seeing: Teaching Mass Media Analysis MEDIA, COLL, MID/HIGH

The power of mass media resides in their ability to represent happenings in the world as "real" and the extent to which these representations can affect a person's beliefs about the world. Students need ways in which they can analyze the content of media to constantly remind them that what they "learn" from media isn't necessarily so. This workshop will focus on classroom strategies for teaching frame analysis, a technique emphasizing critical thinking in our everyday experience with news. Each presenter will discuss the approach he takes to frame analysis. The workshop will include hands-on experience and will include time for others to share their perspectives and strategies. This workshop is intended for a general audience, and university and college level instructors.

EARLEY, GLENN D.

MON 3:15; IVES 34

Coordinator of Interreligious Relations and Holocaust Studies for The National Conference of Christians and Jews, Santa Clara University

The Revenge of Relativism—Dealing Critically with Holocaust Denial

MID/HIGH, COLL, GEN, SOC STUD, H CON

How should critical thinking — methodologically and educationally — best address the claims of irrational, but clever sophists extremist such as Holocaust revisionists/deniers (whether the American Nazis or Louis Farrakhan)?

This session will explore and analyze this question as well as address issues such as these: 1) historical-critical, hermeneutical issues in Holocaust historiography (causation); 2) deconstructing prejudice and stereotypes through study of fallacies and Venn diagrams. I will be drawing upon the scholarship of Dr. Deborah Lipstadt (Emory University) and her important and insightful book *Denying the Holocaust: The Growing Assault On Truth and Memory*.

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.

ELDER, LINDA

WED 8:45; CAR 68

Vice President for Development and Community Relations, State Technical Institute at Memphis

Critical Thinking Development in Adulthood: A Stage Theory Based on Resistance

PSYCH, ADV

Critical thinking development involves complex psychological processes. In this paper, a stage theory of critical thinking development in adulthood is presented, based on the psychological phenomenon of resistance. Five stages are included in this theory. These are labeled the pre-critical thinker which includes a substage: the mono-thinker, the naked thinker, the beginning thinker, the practiced thinker, and the master thinker. The basic premise of this theory is that by the time humans reach adulthood, because they are generally not taught critical thinking skills during childhood, they have generally become inflexible and rigid in thought. As a direct result, the possibility of most adults becoming critical thinkers is extremely remote. Because they have become rigid thinkers, they resist the mental work necessary to become deep critical thinkers. By understanding the psychological phenomenon of resistance as outlined in this stage theory, adults may gain valuable insight which will help eliminate the mental barriers to true critical thinking development.

ELDER, LINDA

MON 8:45; CAR 68

Vice President for Development and Community Relations, State Technical Institute at Memphis

Socratic Teaching: Using It Effectively With K-6 Students

ELEM

Socratic Teaching, one of the most powerful critical thinking tactics, will be the focus of this session. The fundamentals of Socratic teaching will be covered, including the basic Socratic questioning procedure. Special emphasis will be placed on how teachers can effectively use Socratic teaching with kindergarten through sixth grade students. Participants will be involved in a Socratic questioning exercise which will provide useful practice with this teaching tactic and illustrate its effectiveness.

ELDER, LINDA

TUES 8:45; CAR 68

Vice President for Development and Community Relations, State Technical Institute at Memphis

Using the Elements of Reasoning as the Foundation for Teaching: K-6

ELEM

The elements of reasoning will be the focus of this session, with special emphasis on teaching students to become more critical in their thinking and more responsible for their learning. The elements - purpose, question/issue/problem, information, assumptions, point of view, concepts, consequences/implications, and conclusions - will be discussed. An effective method for introducing and enmeshing the elements of reasoning into the K-6 teaching process will be provided.

ELDER, LINDA

SUN 10:30; CAR 68

Vice President for Development and Community Relations, State Technical Institute at Memphis

Socratic Teaching: Using It Effectively With High School Students

MID/HIGH

Socratic Teaching, one of the most powerful critical thinking tactics, will be the focus of this session. The fundamentals of Socratic teaching will be covered, including the basic Socratic questioning procedure. Special emphasis will be placed on how teachers can effectively use Socratic teaching with high school students. Participants will be involved in a Socratic questioning exercise which will provide useful practice with this teaching tactic and illustrate its effectiveness.

ELDER, LINDA

TUES 1:30; CAR 68

Vice President for Development and Community Relations, State Technical Institute at Memphis

Using the Elements of Reasoning as the Foundation for Teaching:

Middle/High School MID/HIGH

The elements of reasoning will be the focus of this session, with special emphasis on teaching students to become more critical in their thinking

and more responsible for their learning. The elements - purpose, question/issue/problem, information, assumptions, point of view, concepts, consequences/implications, and conclusions - will be discussed. An effective method for introducing and enmeshing the elements of reasoning into the middle/high school teaching process will be provided.

ELDER, LINDA **SUN 3:15; CAR 68**
Vice President for Development and Community Relations, State Technical Institute at Memphis

Socratic Teaching: Using It Effectively With College/University Students
 COLL

Socratic Teaching, one of the most powerful critical thinking tactics, will be the focus of this session. The fundamentals of Socratic teaching will be covered, including the basic Socratic questioning procedure. Special emphasis will be placed on how teachers can effectively use Socratic teaching with college and university students. Participants will be involved in a Socratic questioning exercise which will provide useful practice with this teaching tactic and illustrate its effectiveness.

ELDER, LINDA **MON 3:15; CAR 68**
Vice President for Development and Community Relations, State Technical Institute at Memphis

Socratic Teaching: Using It Effectively With Middle School Students
 MID/HIGH

Socratic Teaching, one of the most powerful critical thinking tactics, will be the focus of this session. The fundamentals of Socratic teaching will be covered, including the basic Socratic questioning procedure. Special emphasis will be placed on how teachers can effectively use Socratic teaching with middle school students. Participants will be involved in a Socratic questioning exercise which will provide useful practice with this teaching tactic and illustrate its effectiveness.

ELESER, CHRIS **MON 8:45; IVES 35**
Assistant Professor of Developmental Education, Southeastern Louisiana University

Nuts and Bolts of Designing and Implementing A Critical Thinking Course for College Freshmen BEG, COLL, STAFF DEV

Our four year open-enrollment university recently felt the need to require beginning freshmen with an ACT score of 17 or below to enroll in a critical thinking course. This session will focus on the steps used in curriculum development, course design, piloting and refinement of the critical thinking freshman level course. Discussion will focus on the step-by-step process used by the six faculty members who developed the course. The presenter will share results of students perceptions from an informal survey, and provide examples of the initial implementation of the course. Participants will

receive and review copies of the course contract, syllabus, and classroom activities.

ERDMAN, JAMES MAYLIN **MON 1:30; STEV 1040**
Secondary Gifted and Talented Coordinator, Eau Claire Area School District

The Eau Claire Plan: The Genesis of a K-12 Staff Development Program in Critical Thinking K-12, BEG, STAFF DEV

The workshop is intended to provide an overview of the planning, development and implementation of a staff development program in critical thinking for a K-12 public school system. The presentation will include: 1) a description of the community-based strategic planning process, 2) a short history of the development of the Critical Thinking Leadership Team, 3) a summary of the research process and creation of the plan, 4) an examination and discussion of the specifics of the staff development document, 5) a progress report regarding the success of our implementation and evaluation strategies to date. A copy of the staff development plan will be given to each participant for analysis, discussion and evaluation.

EVANS, GWYNETH **WED 10:30; ART 108**
Professor in Liberal Studies, Malaspina University College

Visual Literacy and Critical Thinking: An Approach to Picture Books
 ELEM, LANG, ARTS

Illustrations in children's books are often more than simply decorative embellishments of the text: they may offer an interpretation which leads the reader/viewer to re-evaluate the literal meaning of the words of the story. An illustrator who designs his pictures to cast an unexpected light on the verbal narrative helps the young reader to see that there may be more than one explanation of a series of events, and to investigate the validity of the narrator's version of the story. Such an investigation is an early and important encounter with critical thinking. The sense of insight and wider knowledge achieved by the child who after studying the pictures now "knows" more than the narrator of the story apparently does, supplies not only the pleasure of humor but also a real encouragement to question and look for further meaning and explanations.

FACIONE, NOREEN C. **TUES 1:30; IVES 119**
Research Associate, Nursing, University of California, San Francisco

PETER A. FACIONE
Dean of Arts and Sciences, Santa Clara University

Program Assessment: Responding to Accreditation Mandates NURS, TEST, COLL, HEALTH

The National League for Nursing and other professional associations have joined some States and many regional accreditation associations, such as WASC and North Central, in mandating the assessment of critical thinking

as a program outcome. This workshop focuses on realistic ways to respond to these requirements and to initiate campus assessment activities. This workshop outlines the steps involved in designing and initiating a program assessment project. We will consider the full range of possible assessment strategies one might employ to gather useful assessment data about student learning outcomes. Participants, individually or in teams, will identify their specific assessment projects and work in collaboration with others and with the presenters on troubleshooting those projects.

FACIONE, PETER A. **MON 8:45; ART 108**
Dean of Arts and Sciences, Santa Clara University

NOREN C. FACIONE
Research Associate, Nursing, University of California, San Francisco

Classroom Assessment of Higher Order Thinking TEST, BEG, COLL

Faculty across the spectrum of disciplines regard the development of higher order thinking as an essential educational goal. In this workshop the focus is on ways faculty can measure students' development of these critical thinking abilities and habits of mind. Participants will experiment with different types of critical thinking classroom assessment strategies, such as team testing, self-reports, commercial tools, group projects, and active performance measures. Hands-on experience with samples of assessment tools, sample critical thinking assessment exercises, and other assessment modalities characterize this interactive workshop. With the focus on the classroom, participants can tailor assessment strategies to fit their course goals.

FACIONE, PETER A. **MON 1:30; ART 108**
Dean of Arts and Sciences, Santa Clara University

CAROL A. SANCHEZ
Doctoral Candidate, Psychology, University of California, Riverside

The Disposition Toward Critical Thinking BEG, COLL, MID/HIGH

There is a set of characterological attributes thought to be associated with developing success at critical thinking (CT). This presentation explores the disposition toward critical thinking theoretically, and then as it appears to be manifest in college students. Conceptual and empirical research has led to the identification and description of seven aspects of the overall disposition toward CT: truth-seeking, open-mindedness, analyticity, systematicity, CT-confidence, inquisitiveness, and cognitive maturity. Graduate students, undergraduates, high school, and junior high school students have been studied to determine the extent to which they manifest these seven characteristics. Profiles of these groups are presented with attention to how an understanding of a student's disposition toward CT can influence curriculum development, instruction, and advising.

FAY, MARION N. **MON 3:15; DAR 139**
Instructor of English, The College of Alameda

Hostages of Popular Culture: Can Students (and Teachers) Ever Get Free? COLL, LANG, ENV, MID/HIGH, MEDIA

Is it too much to ask that students write essays based on reasons and empirical data instead of feelings and preferences? Or that they undertake lengthy reading assignments containing multisyllabic words? My answer is "NO," yet not without reservation. This paper explores why students—and educators—are stymied and burdened in this undertaking. We have before us students whose very orientation fails to equip them for grappling with intellectually challenging ideas and for sustained hard work. I see popular culture as a major culprit but not in isolation. Looking at Pop necessarily involves looking at the social-techno cohorts that buttress Pop's reign while inducing similar results, ranging from self-preoccupation to quasi-illiteracy. Although I reject the uncritical and/or exclusive use of popular culture in the classroom, I believe it can be employed, not to stir up opinion-based discussion about current events, but to get to the concepts and dilemmas behind the headlines so as to develop students cognitive and language skills. Minds are at stake here... and more: the common good, the transmission of culture, perhaps the survival of our planet, which is itself a hostage of popular culture's most dangerous ways and means.

FEARE, JOHN R. **SUN 1:30; CAR 68**
Fellow, Center for Critical Thinking and Moral Critique, Sonoma State University

Beyond Speechmaking and the Marketplace of Ideas: A Radical Transformation in Communication H CON

Much communication, public and private, amounts to little more than people making speeches at one another. In whatever setting (e.g., classrooms, offices, media) and in whatever form (meetings, forums, hearings) participants take turns proclaiming what they think and the encounter ends without any meeting of hearts and minds.

Based on the principles and practices of critical thinking, a method will be demonstrated which would restructure the future by substantially improving the quality of discussions of all kinds, thus enhancing the pursuit of truth, the fundamental purpose of critical thinking. The argument will be presented also that the presumption that individuals can formulate informed opinions and judgments and make intelligent decisions after assessing information, claims, and ideas in the "marketplace of ideas" is faulty.

FEARE, JOHN R. MON 1:30; CAR 68
Fellow, Center for Critical Thinking and Moral Critique, Sonoma State University

Critical Thinking Within a Theological Dimension ENV

The future would be fundamentally restructured by acceptance of the argument that human life exists for the noble purpose of "helping out the birth throes of creation and the continuation of life...furthering the life pulse of the universe itself" (E. Becker). This purpose, the ultimate referent against which all human behavior is evaluated, originates in the creative spirit (or God, life force...), the source of all life and meaning. Implementation of this theological perspective would necessitate the development of a communitarian society dedicated to the protection, unification, and enhancement of life. In any case, the absolutely serious question of the meaning of life must be raised at all levels of education, and that inquiry must be grounded in individual experience informed by soul-searching and rational and empirical criticism, i.e., critical thinking.

FLUELLEN, JERRY SUN 1:30; IVES 78
Teacher Consultant (Philadelphia Writing Project), University of Pennsylvania

Third Millennium Mathematics ELEM, BEG, TEST, MUL-CULT

This 90 minute presentation is designed to give participants the experience of critical thinking as well as an interactive discussion of Third Millennium Mathematics, a thematic unit that combines David Perkins' knowledge as design, the NCECT framework for critical thinking, Lytle and Botel's PA framework for Reading, Writing, and Talking, and Gardner's theory of multiple intelligences.

FOLEY, JEAN ANN TUES 8:45; DAR 137
Research Associate in Education, University of Tulsa

Critical Thinking: Transforming Teacher Perspective STAFF DEV, SCI, ELEM, TEACH TACTIC

Science education reformers suggest that by taking teachers out of the textbook and supplying them with well thought out hands-on science activities, the teachers will better understand the developmental nature of science and pass it on to their students. However, many science teachers continue to omit the logic of science and teach science as a body of facts dressed up in fun science activities. Science education reform requires a change in teacher perspective that includes critical thinking. This workshop will discuss a strategy to transform teacher perspective. For two years (1993-94) this strategy has been piloted in a critical thinking institute for elementary teachers who teach science. The workshop session includes a presentation that explains the four components of the strategy, interactive exercises that engage critical thinking, and a group participation analysis of the strategy with a discussion for improvements.

FRAYER, WILLIAM SUN 1:30; IVES 34
*Chairperson, Communication Department
 Central Maine Technical College*

Teaching Critical Thinking at the Two-Year Technical College COLL, BEG, NURS

Teaching a thinking course for students enrolled in a two-year technical college presents unique opportunities and challenges. On one level, the students deal with problem solving and critical thinking strategies in their lab and clinical settings, giving them a practical orientation which generates a natural interest in the thinking process. At the same time, they often have little confidence in their ability to function in an intellectual environment. This workshop presents a model which has worked successfully with these students since 1989. Presentation will include an overview of the course content and provide examples of some interactive class assignments.

FREEMAN, LYN TUES 8:45; IVES 35
Owner, Intuitive Solutions, Consulting and Training

Critical Thinking as Clinical Intervention PSYCH, NURS, TEST, HEALTH

This participatory workshop presents the findings of phenomenological research into the effects of critical thinking as clinical intervention. A ten week, 40 hour critical thinking class was offered in a hospital setting for emotionally disturbed adolescents and their parents. World views and background beliefs, Paul's elements of reasoning, problem solving, long range planning, and interpersonal and social critical thinking were emphasized. Self-assessment occurred through the utilization of intellectual standards. Post-class phenomenological interviews showed implications for teaching critical thinking and for clinical intervention. Adults and adolescents were able to immediately apply their new thinking skills to the resolution of crisis situations. Attendees will practice class exercises.

FRITZ-KELLY, SANDY MON 10:30; CAR 68
Associate Professor of Nursing, Delta College

Developing Teaching Strategies That Enhance Critical Thinking in Nursing Students NURS, HEALTH, COLL

This interactive session is designed to provide nursing educators with some teaching strategies to promote critical thinking within their curricula. Acceptance and understanding of the concept of critical thinking often does not easily transfer into teaching strategies nor into effective learning.

This model infuses components of critical thinking over a four semester nursing program. Recognizing that nursing uses the nursing process as the basis for problem-solving, the model encourages students to develop skills that help them to understand, validate and evaluate their usage of the nursing process. It allows them to critically reflect decisions that a nurse may conclude before they become actions.

GALVAN, MARIO

Co-chair, Zapatista Solidarity Coalition

SUN 1:30; STEV 3028

Thinking Critically about the Zapatista Revolution in Mexico GEN, H

CON, MUL-CULT, POL, PEACE, SOC STUD

Even as the Critical Thinking Conference meets, a social revolution is brewing in Mexico. Next month's presidential elections will be a watershed, inaugurating either a new era in Mexican political history or possible civil war. This presentation will offer a critical analysis and discussion of the revolution and its historic background, examining the purposes, perspectives, concepts, evidence, inferences, and implications of the situation.

The session will begin with a brief slide presentation and overview, then move to a discussion of the critical thinking elements mentioned above. Informational handouts and maps will be available.

GAMBRILL, EILEEN

Professor of Social Welfare, University of California at Berkeley

TUES 8:45; DAR 108

RAFAEL HERRERA

Lecturer/Field Consultant, School of Social Welfare, University of California at Berkeley

Practical Strategies for Enhancing Critical Thinking in Environments that Favor Fuzzy Thoughts COLL, HEALTH, STAFF DEV, NURS, TEACH TACTIC

One important environment in professional training programs for nurses, social workers, physicians and psychologists is that of the internship or field experience. For example, in social work, graduate students spend two days a week in the field under the supervision of a field instructor in their first year and three days in their second year. These field settings differ in the extent to which they embrace a culture of thoughtfulness (a spirit of inquiry) (Lipman, 1991; Perkins, 1992). Students' learning is affected by the quality of supervisors critical thinking skills. Our experiences as teachers and field work consultants suggests that critical thinking on the part of students is not valued by some supervisors, and in fact may be punished. What can students do in such circumstances given their unequal power relationship? The purpose of this workshop is to illustrate practical strategies that students can use to enhance a culture of thoughtfulness and to maintain critical thinking skills.

GARDNER, ALBERT H.

Associate Professor, University of Maryland

MON 1:30; DAR 137

Conceptual Levels of Students and Teachers: Questioning Techniques and Critical Thinking COLL, K-12, PSYCH, TEACH TACTIC

A participatory workshop in which the presenter and participants will explore classroom questioning techniques and their relationship to conceptual levels of students and teachers. The focus is primarily on higher education and secondary education, but the process has application to upper elementary levels as well. The work of David Hunt and Benjamin Bloom

provides the base for this activity which will feature demonstrations of effective questioning and attention to the characteristics of classroom atmospheres most conducive to the development of critical thinking. The guiding thesis of the session is that enrichment in critical thinking occurs in individuals with both low and moderate conceptual levels.

GILBERT, ROBERT N.

Instructor, Social Science Department, Palatine High School

TUES 3:15; STEV 3028

50 Minutes, the Student Magazine of the Social Sciences, a Model for Achieving Critical Thinking in Every Department COLL, MID/HIGH, SOC STUD, PSYCH

PSYCH

50 Minutes, The Student Magazine of The Social Sciences is a student written intellectual department magazine. Unlike the obligatory school paper, *the magazine format* is the perfect vehicle for the 21st Century to promote in-depth critical thinking and the application of knowledge and intellect. When student written, such critical thinking applications tend to be of high interest and relevance to fellow students. The philosophy, process, product, benefits, and organizational model of one such magazine is presented. Such a magazine has the potential to demonstrate to larger audiences the power, fun, and relevance inherent in student centered applications of critical thinking. Indeed, student written articles synergistically become a vehicle for teaching fellow students. Students benefit from the exponential growth of leadership and editorial positions which in turn pull students deeper into the subject matters they are studying. A copy of the May 1994 issue of *50 Minutes* will be made available (134 pages). Topics include: The Mosh (Punk Slam Dance), Rollerblading, NAFTA, The Deficit, Generation X, Nirvana, Beavis and Buttthead, Social and Asocial Computer Games, College Social Science, Seinfeld, Love, and more.

GIULIANO, JACKIE A.

Adjunct Professor of Environmental Studies, Antioch University, L.A.

MON 8:45; DAR 139

The Environmental Studies Curriculum as a Vehicle for the Introduction of Feminist Philosophies and Spirituality into the Classroom ENV, FEM, H

CON, MUL-CULT

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 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. The author is exploring these principles and developing environmental studies curricula sensitive to these issues as part of a doctoral program.

GIULIANO, JACKIE A. SUN 10:30; DAR 139
Adjunct Professor of Environmental Studies, Antioch University, L.A.

Gender and Science: The Impact of the Absence of a Feminist Voice - Putting the Human Spirit Back Into Science and Science Education

ENV, FEM, MATH/SCI, MUL-CULT

What began for many as an effort to elevate the status of women in the workplace and to attain for them equal pay and the same considerations as is afforded their male counterparts, has evolved into an awareness of biases and denials that affects the very fabric of how we as a society have gathered, learned, and taught knowledge. Key themes in this awakening are the concepts of non-linear thinking, interdisciplinarity, multi-culturalism, and an awakening to the notion that how we define the concept of power has dramatically affected how we have been taught to think.

In this workshop, we will examine the question of whether or not successful women scientists have developed approaches and theories different from those used by traditional male scientists and the importance of developing and using inclusionary theories and methods to involve more women in science.

GIULIANO, JACKIE A. SUN 3:15; DAR 137
Adjunct Professor of Environmental Studies, Antioch University, L.A.

The Development of Social Responsibility and Environmental Awareness Through Techniques in Critical Teaching - A Community Involvement Approach

BEG, ENV, TEST, TEACH TACTIC

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 "Community Action and Social Responsibility," the students' concept 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 students' project has to include a thorough discussion of the issue, including other points of view, a precise statement of their position on the issue, and a campaign for action that included their objectives, how they would solicit support, their information dissemination plan, media utilization plan, and follow-through actions. Everyone carries out as many of their actions as feasible within the time frame of the quarter.

Participants in the session will be asked to develop an action oriented project of their own, thus identifying with the process and excitement experienced by the student. Techniques will be shared to help the instructors to develop the framework for the course project and to help explore techniques for the implementation of this approach in the classroom.

GIULIANO, JACKIE A. MON 3:15; STEV 3040
Adjunct Professor of Environmental Studies, Antioch University, L.A.

Critical Textbook Selection - A Fundamental Prerequisite for Critical Teaching

BEG, PSYCH, SOC STUD, TEST

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 a "standard" 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 criterion and the importance that each of the criterion play in teaching critically. Participants will be asked to speculate on how they would "remodel" their current textbook according to the criterion presented.

GOODE, SINAH MON 1:30; STEV 3046
Assistant Professor, Kinesiology, Texas Women's University

RON FRENCH
Professor, Kinesiology, Texas Women's University

First Steps for Building Critical Thinking Into Classes COLL, BEG, HEALTH, INF LOGIC

Many students enter higher education with no understanding of the critical thinking process. This is particularly true of physical education students who primarily use lower levels of thinking in learning. The purpose of this participatory workshop is to demonstrate an approach used in an introductory Kinesiology course to infuse introductory metacognition with the content of the class. These techniques, which emphasize activities in learning to think, include a) introducing and testing students on their own thinking,

b) identifying and practicing different levels of cognitive processing, and c) applying and evaluating the use of levels of cognition in a variety of settings within the content of the class (e.g., history, philosophy, teaching).

GOTTESMAN, LES TUES 10:30; DAR 122
Chair, English and Communications Department, Golden Gate University

What Is Hermeneutics and How Is It Critical? COLL

Hermeneutics tries to answer the question, what does it mean to say "I understand"? Once an arcane sub-specialty of Biblical studies and philology, hermeneutics in the last 30 years has quietly influenced theories and practices in anthropology, sociology, history, literary studies, science, politics, and even business. Should critical thinkers "do" hermeneutics? Can hermeneutics—which "rehabilitates" concepts of "authority" and "prejudice"—expose ideology, unmask deception, and challenge oppressive inequality? Or bring the persuasive power of images, metaphors, narrative, and symbolic action into critical focus? Let's consider these issues with little jargon and lots of examples.

GREENSTREET, ROBERT MON 8:45; DAR 137
Assistant Professor of Speech Communication, East Central University

Critical Thinking and the Required Course in Speech: Engaging Students Through Active Learning LANG, BEG, COLL, MID/HIGH

This participatory session focuses on ways to encourage critical thinking in required speech communication courses. The presenter shares exercises he uses in basic public speaking and business/professional communication courses. Theoretical underpinnings for the exercises are also discussed. The session is appropriate for both secondary and post-secondary educators concerned with helping their students learn to think well as they learn to speak well.

HALES, SUSAN MON 1:30; DAR 108
Associate Professor of Psychology, Saybrook Institute

Understanding the Interdependent Relationships Among Critical Thinking, Moral Integrity, and Student Learning Part I G, PSYCH

In Part I, theory and research in psychology, sociology, and philosophy are used to show the interdependent relationships among critical thinking, self-esteem, moral integrity and student learning. 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 if self-esteem; it generates feelings of self-efficacy; it allows autonomous, rational self-evaluation; and it is the mechanism through which individuals can change themselves, their lives, and thus

their self-esteem. Understanding why and how critical thinking is an effective treatment intervention for low self-esteem will assist teachers in motivating their students to learn.

HALES, SUSAN MON 3:15; DAR 108
Associate Professor of Psychology, Saybrook Institute

Understanding the Interdependent Relationships Among Critical Thinking, Moral Integrity, and Student Learning Part II G, PSYCH

Part II focuses on the early childhood experiences and parental socialization practices associated with the development of critical thinking capabilities, self-esteem and moral behavior. The processes through which children develop critical thinking competencies and an internal 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 a major obstacle to student learning and self-esteem. Currently popular self-esteem enhancement strategies are critically examined in terms of whether they are helpful or harmful to self-esteem. Knowledge of the nature and dynamics of self-esteem covered in Part I is necessary for the understanding and successful application of the material covered in Part II.

HANFORD, GEORGE H. MON 10:30; STEV 3008
President Emeritus, The College Board

Critical Thinking and the New SAT MID/HIGH, TEST

The past academic year has seen the introduction of a new SAT, with a new name and a new emphasis. No longer the Scholastic Aptitude Test, it is now "SAT-I, Reasoning Test," where SAT stands for Scholastic Assessment Test. Considerations related to critical thinking played important roles in this development. This session, one third presentation and two thirds discussion, will explore how this change came about and why competence in critical thinking is now of even greater importance in performing well on the new instrument.

HANNAM, SUSAN E. TUES 3:15; CAR 68
Coordinator of College Assessment Center and Associate Professor, Allied Health Department, Slippery Rock University

JANE L. WETZEL
Associate Professor, School of Physical Therapy, Slippery Rock University

ANNE M. GRIFFITHS
Dean, College of Health and Human Services, Slippery Rock University

LEONA C. PARASCENZO
Associate Dean of Health and Human Services, Slippery Rock University

Case Study: Overcoming Faculty Resistance to Assessing Critical Thinking COLL, BEG, TEST, HEALTH

This is an interactive discussion session exploring strategies that are successfully being employed as part of a critical thinking assessment project at a

public comprehensive university. The College Assessment Committee agrees with the robust definition of critical thinking developed by Richard Paul, Bob Ennis, and Matthew Lipman as defined in the National Consensus Statement. Central to the discussion is the use of the California Critical Thinking Dispositions Inventory and the California Critical Thinking Skills Inventory. Specifically, a team of faculty and administration will illustrate strategies to engage faculty, to capture support for assessing critical thinking, and to effectively incorporate critical thinking pedagogy in the classroom.

HARPAZ, YORAM SUN 10:30; DAR 137
Colleague, School for Educational Leadership

Conflicting Theories of Education Towards Critical Thinking BEG, COLL, ADV, SOC STUD

My lecture will attempt to grapple with two fundamental questions: What is critical thinking, or, more specifically, to which category does critical thinking relate (knowledge, skill, tendency, character trait, structure of personality, etc.)? And how is it possible to teach it or educate towards it? I will attempt to deal with these two questions using "the cognitive map of instruction" which Zvi Lamm suggested in his book *Conflicting Theories of Instruction*: (1976).

HATCHER, DONALD TUES 8:45; STEV 3072
Director, Center for Critical Thinking, Baker University

Grading the Ennis-Weir Critical Thinking Essay Test MID/HIGH, COLL, STAFF DEV, TEST

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

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

HATCHER, DONALD SUN 3:15; IVES 119
Director, Center for Critical Thinking, Baker University

LUCY PRICE
Chair, Department of English, Baker University

Critical Thinking, Written Composition, and Primary Texts MID/HIGH, COLL, STAFF DEV, TEST

Baker faculty will discuss and share assessment results of Baker University's two-semester freshman sequence that integrates instruction in critical thinking and written composition with the study of primary texts. The idea behind the new sequence is that students can become better writers if they first are better thinkers and readers. The presentation will focus on the genesis of the new program. The development of the textbook and selected readings, how critical thinking skills enhance student writing, faculty development, the effects of the new requirement on undergraduate education, and problems that institutions who adopt such programs can expect to confront. Because the program was developed through two grants from the U.S. Department of Education's Fund for the Improvement of Post-Secondary Education (FIPSE), and enhanced through a grant from the Hall Family Foundation, the panel members will make suggestions on ways to enhance one's odds for getting grants.

HAYES, HAROLD L. MON 8:45; STEV 2049
Professor of Psychology and Human Development, Walters State Community College

Critical Thinking and Cognition: The Essential Interaction BEG, STAFF DEV, MATH, SCI, SOC STUD

The purpose of this workshop is to explore the relationships between critical thinking and cognition which can limit or enhance thinking power and outcomes for the thinker in the real world and across the curriculum.

The format is workshop/presentation. First, key terms and critical thinking standards will be defined. Second, the processes of cognition and critical thinking relevant to the essential interaction will be clarified. Third, the essential interaction will be developed. This interaction can be viewed as a cause-effect relationship between critical thinking and cognition.

Participation involves solving a four piece puzzle by each participant. Finally, participants will analyze their solutions, critique workshop content and suggest refinements. Theoretical foundations are drawn from Paul, Piaget, Hughes, and Hayes.

HAYNES, JARED WED 10:30; CAR 68
Lecturer, Department of English, University of California, Davis

Cultivating Critical Thinking in Classroom Discussions COLL

In any classroom, students display a variety of levels of cognitive development and, therefore, different abilities to think critically. Such disparities

can mean that some students participate more and get more out of class discussions 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; however, the tasks given to these small groups must be constructed carefully to keep students thinking about the object of discussion and to ensure that several levels of cognitive development are challenged.

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

HAYNES, JARED TUES 3:15; STEV 3072
Lecturer, Department of English, University of California, Davis

Designing Writing Assignments that Foster Critical Thinking COLL, LANG

Students move through recognizable stages of cognitive development as they mature, confront new ideas, learn how to gain knowledge, and develop standards for reasoning. Teachers often work against this development by assigning writing tasks that serve only to evaluate, not to teach. However, writing assignments can be designed to foster critical thinking by building carefully considered tasks into the assignments that challenge students' abilities to process information and see it in new ways.

This participatory workshop will first generate a picture of the ideal student critical thinker. Next we will discuss some approaches to breaking papers down into tasks. Then participants will work in small groups to design an assignment that uses one of these approaches. Finally, we will share these assignments with the entire group.

HEASLIP, PENNY TUES 10:30; ART 108
Instructor, University College of the Cariboo

NLN Criterion 20: Mandate for Curriculum Reform in Nursing Education COLL, BEG, STAFF DEV, NURS

Nursing curricula have been driven by a behavioristic model which assumed that learning occurred when it could be observed as performance. This approach to nursing education discounted the multilogic nature of nursing and the inherent contradictions that practice situations present to students. The mandate to infuse critical thinking in nursing curricula has created a need to re-examine how we can best prepare practitioners for the realities of practice. What do we give up and what do we keep as essential content in our efforts to integrate critical thinking educational approaches

into nursing's content dense curricula. This paper will explore alternatives for curricula design, course delivery, classroom and clinical teaching strategies by focusing on critical thinking as the essence of the learning process. Staff development experiences are considered as the key factor in achieving this goal.

HEASLIP, PENNY MON 3:15; STEV 1040
Instructor, University College of the Cariboo

Surfing the Net: Globalization of Dialogue and Argumentation in Nursing COLL, TEST, COMP AID, NURS, TEACH TACTIC

Nursing practice is shaped by nurses who have the ability to access accurate, relevant data related to current issues, to engage in dialogue and argumentation on issues from varying points of view, to judge the logic and quality of reasons offered as evidential support for issues as well as to make sense of and come to reasoned judgments about what to believe or how to act on practice issues. These are essential abilities for informed nursing practice. This session presents successful teaching strategies and student learning activities used in developing students' abilities to critically examine practice issues. Students' readiness to engage in the complexities of nurse's work issues are enhanced through learning experiences which foster a skill set of computer technologic "know how" for accessing information, an ability to present structured arguments and the application of intellectual standards for peer critique. Meaningful engagement to reason critically about nursing issues becomes a global learning experience when students use their skills to surf the net.

HEILMEIER-RANKIN, KAREN L. MON 1:30; DAR 139
Assistant Professor of Nursing, West Georgia College

CAROL B. WILSON
Associate Professor of Nursing, West Georgia College

"Mary, Mary, Quite Contrary, How Does Your Garden Grow?" Does Caring and Holism Promote Personal Growth and Create a Framework for Critical Thinking in Nursing Education? NURS, PSYCH, HEALTH, COLL

Nursing education is currently engaged in a curriculum revolution. This change in thinking is based on the tenets of the curriculum reconceptualists in the field of education and theoretical work related to the concepts of critical thinking, caring, and holism. This revolution is essential if educational programs are to be designed to prepare nurses able to function as critical thinkers who consider holism and caring in planning for the needs of the future healthcare consumer. A philosophy to promote critical thinking supports the teaching and learning of caring and holism and promotes self-understanding.

HERSCHELMANN, KATHLEEN M. MON 3:15; STEV 3036
Associate Professor of Business, Madonna University

Critical Thinking in an Interdisciplinary High School/College International Curriculum Package BUS/ECON, MID/HIGH, COLL, STAFF DEV

Critical thinking coupled with outcomes based education is used as the foundation in developing a package on the basics of international trade. This package will be piloted in the '94-'95 school year at secondary and post-secondary levels in Michigan under a Title VI grant. The package is constructed as modules so that it may be used in an interdisciplinary manner in academic and technical subjects at the eleventh and twelfth grades in high school and at the freshman and sophomore levels in college. Richard Paul is the chief consultant on the project.

HISKER, WILLIAM J. TUES 8:45; STEV 2049
Professor of Sociology, Saint Vincent College

FRANCES MURPHY ZAUHAR
Associate Professor of English, Saint Vincent College

Velcro Education: Cultural Studies and Popular Media MEDIA, COLL, SOC STUD, BEG

This session will present and analyze the format for a multi-disciplinary course the presenters teach on the relationship between media and the construction of values in contemporary culture. In the session we will present the framework and foundational premises for the course, demonstrate the actual process of the course, and assess the outcome of student participation in this kind of project. The course examines ways that television works within contemporary culture to reflect, influence, and create cultural meanings. The class reads classic and traditional texts and watches episodes of the television series Star Trek: The Next Generation. The readings and episodes address various issues which students examine in order to consider whether and to what extent the show represents viewpoints of the mainstream culture or of minority perspectives. Students also consider the flow of influence. They work in small groups of six or seven that meet and discuss individual's ideas, prepare questions for other groups in the class to consider, reflect upon questions raised by the other groups, and share their consensus on issues with the entire class. Students also work on two individual projects, relating particular readings to particular episodes; both assignments require that students examine text and episode according to traditional standards of critical thinking; these standards are contained implicitly in the required readings and selected episodes, and they are made explicit through our use of the College's "Standards for Good Writing" which directly reflect and value purpose, support, insight, organization, coherence, and clarity. Student work, both written and situational, is also assessed according to these standards.

HITCHKO, BARBARA J. TUES 10:30; STEV 3046
Co-Director, C.A.R.E., Children at Risk in Education

DAN BURRITT
Co-Director, C.A.R.E., Children at Risk in Education

Interweaving Traits of Mind, as Values, and Creative Critical Thinking Skills into a Practical Program for Educators ELEM, MID/HIGH, BEG, SOCIOL

Using Richard Paul's 'Traits of Mind' (Empathy, Integrity, Responsibility, Fairmindedness, to name just a few) as a basis for teaching values we will offer classroom tested strategies that actively engage students to become responsible participants in their thinking and learning.

Many youngsters come to school with their physical, emotional and mental needs unmet. We will address why these youngsters are unprepared to learn in an environment that requires them to *ACTIVELY* participate at any level of thinking.

By weaving 'Traits of Mind' into the classroom curriculum educators will utilize many of the areas of creative critical thinking such as problem identification, problem solving, reasoning and analysis. A hands on activity will be provided to illustrate this approach. As youngsters apply these traits to their academic lives, the traits will influence their peer, family and community lives which will eventually enhance their work lives in the global economic work place.

HOOPER, WILLIAM L. MON 8:45; IVES 78
Professor of Music and Director, Research and Planning, Southwest Baptist University

Teaching Critical Thinking in the Fine Arts ARTS, COLL, BEG

This session explores ways of teaching critical thinking to freshmen university students through a required general education course in the fine arts. Topics covered include course objectives, course requirements, homework assignments, written projects, testing, and grading. Session participants will work through typical assignments and critical thinking exercises. Materials used in the actual course will be available for inspection.

HUGHES, GAIL TUES 10:30; DAR 139
Coordinator of Program Evaluation, Minnesota Community College System

M.J. ABHISHAKER
Instructor of Philosophy and English, Normandale Community College

RICHARD KUSS
English Instructor, Lakewood Community College

COLLEEN TRACY
Nursing Instructor, Minneapolis Community College

Constructing an Adaptive Interview to Assess Thinking Skills: Demonstration and Discussion of a Work in Progress TEST, COLL

Although there are a number of multiple choice tests available to assess critical thinking skills, these exams focus on only a few discrete skills such as induction and deduction. There is a need for "authentic assessments"

which examine students' ability to integrate and apply their thinking skills to "real world" contexts. This session will describe a project in the Minnesota Community College System to develop a valid, reliable, and useful adaptive interview procedure to assess students' critical thinking proficiency as applied to academic subject matter relevant to personal life, citizenship, and career contexts. Groups of faculty are constructing interviews for Biology, English, nursing, developmental education, and interdisciplinary subject areas. Although the topics addressed vary according to discipline, the interviews will be rated according to a common, cross-disciplinary scoring guide. Robert Ennis serves as external evaluator to this Critical Thinking Interview Project, which is funded by the Archibald Bush Foundation.

The first half-hour of the session will provide an overview of the Project, the interview plans for each discipline, and the cross-disciplinary scoring guide. This will be followed by a half-hour demonstration, during which time the audience will listen to a tape-recorded interview and rate the student's performance according to the scoring guide. The remainder of the session will involve audience discussion of the student's responses, the interviewer's procedure and technique, and the project in general. Since it relates to a work in progress, the session will emphasize the procedure for development of Project components, and will solicit feedback for revision. The interview plans and scoring guide will undergo formal piloting during the 1994-'95 academic year.

JACOBS, PAUL I.
Consultant

WED 8:45; STEV 3036

MARCO MEIROVITZ
Inventor

NORMA BECH LEVINE

Director, Teaching Excellence Center, De Vry Technical Institute

ThinkAbility—A Program to Improve Thinking Skills INF LOGIC, G

ThinkAbility is a program for teaching children and adults the thinking skills most commonly used in everyday life. Games are presented at several levels to motivate the students, who are then shown how principles from the games can be applied to new situations at school, home and work.

In this session participants first play a simple card game, then apply the principles they have learned concerning inference, inquiry, and adequacy of evidence to novel and apparently unrelated situations in language arts.

JAMIN, FRANCINE MALDER
Professor, English/ESL, Montgomery College

MON 10:30; STEV 3046

Forging the Ring and Crafting the Book: Interactive Techniques of Teaching Writing and Reasoning LANG, COLL, MID/HIGH

In his poetic masterpiece *The Ring and the Book*, Robert Browning developed a circle metaphor to suggest that truth emerges through a contemplation of

events from multiple perspectives. This presentation describes and models procedures for crafting "truth" in the writing class much as Browning forged his ring and fashioned his book. Using interactive techniques, student writers learn to generate, shape, and evaluate ideas. Thus they focus first on the "invention" stage of the composing process. Students sit in circles and participate in carefully structured dialogues. The "rings" they forge are arenas in which ideas emerge, evolve, and are tested in encounters with alternative viewpoints. The circle (ring) provides a supportive environment that fosters legitimate consensus but also encourages honest dissent. By the time they come to write expository prose, students have had an opportunity to explore ideas thoroughly and rigorously.

JOHNSON, RALPH H.

TUES 3:15; ART 108

Professor of Philosophy, University of Windsor

Principles of Argument Criticism ADV, INF LOGIC

In this paper, I begin by distinguishing criticism from evaluation. Then using a pragmatic conception of argument, I show that criticism is internal to the practice of argumentation and out of that discussion I generate basic principles of argument criticism. These are: the principle of discrimination, the principle of logical neutrality, the principle of parity, the principle of novelty and the principle of vulnerability.

JORDAN, TIMOTHY L.

TUES 3:15; DAR 122

Faculty of the Adult Degree Program, Prescott College

Adult Education Through Contract-Mentored Study COLL, PSYCH, ENV, SOC STUD

At Prescott College, the Adult Degree Program recognizes the unique strengths and life circumstances of adult learners. Adult learners seek a balance between self-directed learning and prescribed academic structure. First, students work with their faculty advisors to develop overall proposals for course work, their individualized B.A. degree-completion plans. Then they begin their contract-mentored study by locating qualified professionals in their field to serve as mentors for each course. Thus, these adult learners are able to complete the B.A. degree in their home communities rather than altering their entire lives to attend school elsewhere. The mentors are hired by the college to work one-on-one with each student. Together, the students and the mentors negotiate the content and structure for each course in an individually tailored Study Contract. This arrangement fosters critical thinking more than traditional classroom-based course work. Participants in this session develop an actual Study Contract to get first-hand experience using the method.

JURIC, MICHAEL
Director of Curriculum, Windsor Unified School District

WED 10:30; IVES 35

JEFFREY REED
Teacher of History-Social Sciences, Windsor Unified School District

KEN MOULTON
Principal of Windsor Middle School, Windsor Unified School District

Restructuring a School and District for Critical Thinking STAFF DEV, BEG, K-12

This participatory workshop will explore how one district is restructuring its academic program to emphasize critical thinking. Three individuals; a classroom teacher, a school principal, and district director of curriculum; will share their individual struggle to answer a common question, "How can I implement critical thinking in the academic program of my classroom, school, or district?". Workshop participants will assess the effectiveness of these approaches, followed by an open discussion in which the full group will identify and share common concerns. Finally, participants will join with presenters in identifying common themes, consistent with current research on implementing educational change.

KATAOKA-YAHIRO, MERLE R.
Assistant Professor of Nursing, San Jose State University

SUN 10:30; ART 108

A Critical Thinking Model for Nursing Judgment NURS

This article proposes the Critical Thinking Model for Nursing Judgment which specifies five components: specific knowledge base, experience, competencies, attitudes, and standards. The model has three levels of critical thinking: basic, complex, and commitment. It provides a definition and conceptualization of critical thinking based on a review of the literature and input from nurses and nurse educators. The model provides a first step for development of further research and educational strategies to promote critical thinking as an essential part of autonomous, excellent nursing practice.

KEELEY, STUART M.
Professor of Psychology, Bowling Green State University

TUES 3:15; IVES (WARREN)

Coping with Student Resistance to Critical Thinking BEG, COLL, TEACH TACTIC

Teachers embracing critical thinking as a classroom objective must face a major obstacle—student resistance to change. The typical learner feels the need for change, yet wishes to remain as is when faced with a learning approach that threatens his/her present attitudes and behavior. How can teachers overcome student resistance? The psychotherapy literature gives us some important insights, because therapists must address analogous kinds of resistance and have written extensively about efforts to do so. This workshop illustrates how insights borrowed from the psychotherapy literature can help teachers overcome student resistance to critical thinking. Work-

shop participants will be asked to generate kinds of resistance they have encountered in their own classrooms. I will then share a list of ideas about how to overcome resistance; which is stimulated by investigating the psychotherapy literature on resistance. Participants will also be asked to share anti-resistance strategies that they have found to be helpful.

KERWIN, ANN

Philosopher-in-Residence, Curriculum on Medical Ignorance, University of Arizona

MON 8:45; STEV 3008

MARLYS WITTE

Professor of Surgery, University of Arizona College of Medicine

CHARLES WITTE

Professor of Surgery, University of Arizona College of Medicine

Ignorance, Passion, and Mess: Ingredients for Success in Education and Business MID/HIGH, COLL, BEG, STAFF DEV

Management guru Tom Peters recently penned this memorandum to managers: "The mess is the message." To produce, "disorganize." George Will suggest: "Much of the messiness in American life is not mere inefficiency, it is yeastiness. It is creative fermentation." The unknown is always messy. And it is there, always. Nevertheless, while forward-looking companies now strive to do what educators have done so well and passionately—to encourage others to find, to be, their best—educators are increasingly fettered by passion-less bureaucracy, education as "business" à la Gradgrind. This participatory workshop on ignorance, passion and mess will engage your passions, harvest your ignorance, and catalyze creative disorganization. The results will not be charted and graphed; but they should be spectacular.

KERWIN, ANN

Philosopher-in-Residence, Curriculum on Medical Ignorance, University of Arizona

TUES 10:30; STEV 3008

Not Enough Nothing Nowadays MID/HIGH, COLL, BEG, STAFF DEV

According to cognitive psychologists, we human beings are biased toward "positive information;" consequently, we neglect or underestimate "negatives"—empty intervals, nonoccurrences—which are essential for thinking effectively. At the same time, many of us grapple daily with concerns others dismiss as "nothing." Astronomers, for example, talk of "stuff" and *non-stuff*. Architects and planners design *space* as well as objects. Counselors detect *lacks* of communication, support, self-esteem, or intimacy. Sherlock Holmes' fans recall the clue of the dog who did *not* bark in the night while social critics note the *gaps* in American history where minorities, workers, the poor, women, gays and others have lived. Some *silences* reverberate. In this participatory workshop for educators at all levels, we will explore "pregnant nothings;" ponder where nothing is when we need it; and plan to use it to enhance teaching and learning. If you've found yourself missing nothing, save some space for this workshop.

KOEHLER, CAROL

Assistant Professor of Communication Studies, University of Missouri-Kansas City

TUES 3:15; DAR 137

Supplemental Instruction: A Critical Model for Killer Courses COLL, INF LOGIC, TEST

Supplemental Instruction (SI) is a peer-collaborative academic assistance program that targets historically difficult academic courses. SI offers to all enrolled students regularly scheduled, out-of-class, peer facilitated study sessions. The goal of SI is to transform students from passive receivers to active processors of information by engaging them in discussions about course content among their peers. In SI, students compare notes, discuss readings, develop organizational tools, predict test items, and learn how to integrate course content and reasoning skills. The SI leader, a student who has previously taken the course, acts as leader and "model student" of the discipline. Peer facilitated discussions, as opposed to faculty facilitated discussions, provide a non-threatening environment for students to interact about overall direction of the course, as well as specific material presented in lectures. National research studies over the past decade from 146 institutions, 2,875 college courses, and 298,000 students document the following benefits for SI attendees: higher course grades (one-half to one full letter grade), a lower percentage of course withdrawals (30-50 per cent), higher semester re-enrollment rates, and higher graduation rates.

KOSHI, ANNIE K.

Associate Professor of E.S.L Department, The City College of New York

TUES 1:30; DAR 137

Expository Writing Through Socratic Text Analysis MID/HIGH, COLL, LANG

Socratic text analysis, a critical thinking approach to teach academically bound advanced level ESL students, involves critical analysis of text models by having learners ask and answer Socratic questions with selective attention to specific features of expository writing. The inductive process of answering problem solving questions induce learners to "discover" the rules and conventions of expository writing. This inductive process of deriving the "rules" by discovery procedures helps learners retain their "declarative knowledge" in long term memory, which will be triggered into "procedural knowledge" by learners' repeated exposure to reading and writing.

The presenter, after discussing the theoretical background of this approach with specific reference to recent second language learning theories and learning strategies, will explain (by means of a sample lesson), the different procedures and steps involved in using it in the classroom.

KUBASEK, NANCY

Professor of Legal Studies, Bowling Green State University

WED 10:30; DAR 122

Assignments to Foster Critical Thinking COLL, ENV, BUS/ECON

The session will begin with a brief discussion of the critical thinking skills that I have chosen to emphasize in my legal studies classes and my reasons

for emphasizing those skills. I will then share with the participants a number of assignments that I have used in my classes. We will discuss the purpose of each assignment as well as ways the assignments could be modified. There will also be an opportunity for faculty to share some of their most affective assignments with the group.

LA BAR, CAROL

Fellow of Association for Values Education and Research, University of British Columbia

WED 10:30; STEV 3072

Critical Thinking and Moral Issues MID/HIGH, SOC STUD, H CON

The recent revival of interest in character education may pose new challenges to educators concerned with developing critical thinking abilities and dispositions. While it is important for students to learn moral rules and principles, it is just as important that they learn that these rules and principles are not exceptionless guides to conduct. New situations frequently arise in which two moral principles conflict or in which it is not clear what moral principle is appropriate. To teach students how to think critically about moral issues requires teaching them to use various strategies, concepts and standards. In this workshop, participants will be introduced to some of these.

LACEFIELD, PATRICIA K.

Associate Professor of Nursing, University of Louisville

SUN 3:15; STEV 1040

RUTH R. VOIGNIER

Associate Professor of Nursing, University of Louisville

Critical Thinking: Client with AIDS, An Interactive Video COMP AID, NURS, HEALTH, COLL

This project demonstrates selected parts of an interactive video designed to enhance undergraduate nursing student's critical thinking skills. The computer and video scripts were designed using the American Philosophical Association's definition of critical thinking as well as their cognitive skills and affective dispositions. Students using the interactive video respond to computer generated questions using electronic mail. Students discuss vignettes designed to stimulate critical thinking in small groups or anonymously on electronic mail. This project required two years to design and develop and is ready for pilot testing and beginning evaluation.

LANGREHR, JOHN

Senior Lecturer, Education Faculty, University of South Australia

TUES 10:30; IVES 119

Clarifying Key Elements of Better Thinking For Educators K-12, LANG, PSYCH

Many teachers and educational decision makers still do not have a clear picture as to the basic elements and requirements for better student thinking. This is partly due to the specialized terminology and types of thinking that

various academics have "pushed" in their speeches and papers. Key elements for better thinking such as the brain, our multiple and changing intelligences, a positive disposition, pattern recognition, self-questioning, mental mapping, thinking styles, different frameworks for question design, pattern breaking and connecting, and the features of the Thinking Curriculum all need to be clarified and understood. I have tried to do this in my latest book *Becoming A Better Thinker*. These ideas will be discussed in this session.

LASSEK, YUN JA
Rosemont College

TUES 10:30; STEV 3072

Visual Imagery and Its Relation to Critical Thinking K-12, COLL, MEDIA, PSYCH, ARTS, TEACH TACTIC

The role of visual imagery in the process of cognition takes center stage once again following a recent explosion of publications and heated debates in the field of cognitive science and neurophilosophy. Cognition is an active, constructive, and judgmental process handling a multitude of information simultaneously and that ability of visual imagery and pattern recognition plays a significant role in creative and critical thinking. Visual arts education is important in promoting critical thinking. I will conduct an open discussion on several key issues: 1) What is actually happening in our brain or mind when we say we are thinking or perceiving? 2) How is critical thinking different from thinking? 3) What is the connection between visual imagery and cognition? 4) How can visual arts education promote critical thinking? 5) Through what kinds of specific classroom strategies?

LAVITA, JAMES A.

Professor and Chairman, Mathematics/CS, University of Denver

WED 10:30; DAR 139

WILLIAM S. DORN

Professor of Mathematics/CS, University of Denver

Mathematical Critical Thinking for Non-Science Students MATH/SCI, COLL, MID/HIGH

Funded by FIPSE, William Dorn and James LaVita, of the Department of Mathematics and Computer Science, University of Denver, have developed materials and a program for teaching mathematical critical thinking to non-science students at the college and university level. They are distinguished by being *case-study driven*, by stressing *mathematical critical thought* as a fundamental tool in life, and by stressing the social and ethical aspects involved in problem situations.

At this session, Dorn and LaVita will describe the materials, and their classroom activities and experiences using them. Then, other interested participants may describe similarly situated courses, materials, and approaches, and then the session will be opened to a discussion of any issues arising from the presentations.

LEWIS, RICHARD B.

Associate Professor, Civil Engineering Department, Louisiana Tech University

WED 8:45; DAR 137

Using Critical Thinking in Every Area of Life COLL, BEG, TEACH TACTIC

The Conference Theme will be examined by answering four basic questions:

1. What critical thinking techniques (tactics) work both in the classroom and on the job?
2. How do I, as a critical thinker, take this message to heart and ensure that everything I do enhances high-quality reasoning and problem-solving?
3. What habits must I develop in myself, my students, and my colleagues, that effectively demonstrate self-assessment? What is self-assessment?
4. To continue to grow as a sound (critical) thinker, what "redesign" tools do I need to learn, for the classroom, for other aspects of my professional career, and for my own personal life?

Answers to the four questions above will be based upon critical thinking principles, fruitful participant discussions, and the personal experiences of those who have already met the challenges described. In particular, Socratic questioning; critical reading, listening, speaking, and writing; problem-solving techniques; the five stages of teaching and learning; the elements of thought and intellectual standards; and, finally, being creative (a critical thinking partner) in how we approach teaching, people, and life; will all be entered into the equation for "restructuring the future."

LOFTHOUSE, LYNN J.

Assistant Professor of Communications, Wesley College

SUN 1:30; STEV 2049

A Workshop to Train Teachers to Infuse Critical Thinking Skills in Students Through Self-Evaluation MID/HIGH, COLL, PSYCH

The objective of this training is to infuse critical thinking skills in students through self-evaluation. Self-evaluation is a proven method of improving performance, and is supported by objective self-awareness theory and self-perception theory. In this training, participants will experience the following: first, background information about setting up the exercise will be given. Next, roleplays using self-evaluation to improve critical thought will be engaged. Third, directions for utilizing the written critique will be given. This session is expected to last 90 minutes.

LORAND, JANE, M.A., J.D.

Former Asst. Director for Center for Critical Thinking, Independent Consultant

MON 8:45; DAR 108

Self Assessment at the High School and College Level: Peer Editing, Group and Individual Assessment in Speaking and Writing

MID, HIGH, UNIV, STAFF DEV

The amount of writing and speaking students need to do far exceeds the amount of reading and listening teachers can provide. Thus far, teachers

have logically responded to this reality by limiting the writing and speaking assignments they give. There is an alternative model that works!

Students need to learn how to assess their own work and the work of others. "Is this a clearly stated question?" "Is the purpose of this essay significant?" "Is this point consistent with the first part of the paper?" Students report that they learn more through looking carefully at the work of their peers, comparing and assessing it according to standards that they have been taught, than they learn in any other aspect of their courses. And, of course, self-assessment abilities and insights build from course to course, and students carry substantial tools out into the world of work.

Self-assessment is fundamental to developing judgment, and this session provides not only a framework, but strategies, such as phasing and direct instruction in intellectual standards, to support teachers and administrators who see the potential and the need for self-assessment.

LORAND, JANE, M.A., J.D. TUES 8:45; DAR 122
Former Asst. Director for Center for Critical Thinking, Independent Consultant

Bringing Discipline to the Team with the Elements of Reasoning: How to Enhance Productivity in Staff Meetings GEN, STAFF DEV, COUNSELORS, BUS

We come to meetings. Someone (usually the leader) identifies a problem. Some of us contribute our perceptions, ideas, associations, connections. We churn, making little headway, and often move further and further from the problem. Time runs out. Frustration builds. Some decision is made (usually by the leader) and everyone leaves with a strong sense of *deja vu* and relief that it is over. Little comes of the session, and what does come usually is carried by one person (again, usually the leader).

Good intentions and hard work are not enough to bring effective action and contribution from all involved. The discipline of a Critical Thinking model can keep us moving forward, purposefully, shoulder to shoulder as we strive toward effectiveness. We must discipline ourselves to seek clarity in identifying and holding to the PURPOSE of the discussion, to the QUESTION AT ISSUE, unearthing the ASSUMPTIONS each of us is carrying, the INFORMATION needed, the POINTS OF VIEW, the INFERENCES, INTERPRETATIONS, CONCLUSIONS, and IMPLICATIONS. Leaders can help us develop this discipline if they see how the model can work. We must understand the elements of reasoning if we are ever to learn to "Come and Reason Together."

A practical, hands-on session to bring insight and guidance to those who are weary from seemingly endless, fruitless meetings.

LORAND, JANE, M.A., J.D. WED 8:45; STEV 2049
Former Asst. Director for Center for Critical Thinking, Independent Consultant

If 95% of Our Time Is Spent Listening, How Important Are Critical Listening Abilities?

Critical Listening in the Workplace, Critical Thinking in the Classroom GEN, COUNSELORS, BUS, PARENTS

Critical listening is the most challenging core of abilities in communication. It asks us to reconstruct the logic of the speaker by decoding language and non-verbal messages. "What could the speaker be thinking (... perceiving, feeling) that these words make sense? What kind of sense does this make?"

This practical workshop will explore what critical listeners need to be able to do in *the logic of reconstruction and language area*, if they are effectively listening. We will practice and self-assess our own skills and concentration levels. We will explore obstacles to perseverance. We will also explore the implications of listening critically to each other as we strive to heal our society.

Handouts and activity cards will be available to enable you to bring models of effective listening habits to your colleagues and perhaps, to your students.

LORAND, JANE, M.A., J.D. MON 3:15; STEV 3072
Former Asst. Director for Center for Critical Thinking, Independent Consultant

Helping Our Adolescent Children Develop Sound Judgment: Critical Thinking: An Integral Part of Parent Education GEN, COUNSELORS, PARENTS

As parents, our dream is that our adolescents are actively developing good judgment. We can see that sound, independent judgment offers them the most protection against the dangers in our world. How can we help them when they cling to "My opinion versus your opinion." So often they observe that what we adults consider "well-reasoned" is our own opinion. They do not see that judgment can be evaluated according to some independent criteria. How can we manage effective reasoning sessions with our preteens and teenagers? What is asked of us? How can we help our children unravel their own reasoning and explore it for strengths and limitations?

Critical thinking helps us see that there are elements that lie embedded in every well-reasoned judgment. There are criteria and standards to help children and parents decide if they have fairly "covered all the bases" as they struggle with the problems facing them.

This practical workshop is for parents, teachers, and administrators to help them use tool such as elements and standards to support the budding judgment of the adolescent child. Expansive handouts are available that can be used for a critical thinking component to a parent education program.

LORAND, JANE, M.A., J.D. TUES 3:15; DAR 108
Former Asst. Director for Center for Critical Thinking, Independent Consultant

**How Do I Know if My Thinking is Good Thinking?
 Teaching Intellectual Standards to Middle School and High School
 Students** MID, HIGH, STAFF DEV

Students tell us that their papers are good papers when the teacher likes them. How can they use INTELLECTUAL STANDARDS (Clarity, Depth, Relevance, Accurate, etc.) to help them during the process of their thinking and writing, and also have them to guide them as they self-assessment of their work?

If students do not know enough to recognize if their work product is poor, good, or excellent, they do not have on board the background, reference points, language and insight to do the assignment in the first place. They need to have direct instruction in the language of intellectual standards. They need to be brought from the concrete to the abstract. They need examples and models they can imitate, and then use independently. Without standards, students will continue to be dependent, ineffective, and lack confidence in their own thinking. Teachers need help and this workshop provides hands-on strategies for this direct instruction.

LOVELESS, EDNA MAYE MON 8:45; STEV 3040
Professor of English and Communications, La Sierra University

Metaphorical Thinking, Evidentials, and the Believing Game LANG, MEDIA, COLL, MID/HIGH

Check out your skills in academic disagreements, your sensitivity to dissonance (hypersensitivity can be destructive), your skills in the believing game--"seeing the truth in diverse and contradictory propositions"--creating metaphors, and building novel models. Metaphors play a role in the construction of reality--and in guessing what "might be." Evidentials exhibit our attitudes toward knowledge and modes of knowing--belief, inference, sensory evidence, hearsay, and deduction.

We will identify evidentials, create metaphors related to our disciplines, analyze some academic disagreements and cases from a marriage and family counselor talk show to probe devices used (appropriately and inappropriately) to establish and support one's positions with diverse audiences.

LUCKEY, SUE Y. SUN 10:30; STEV 3036
Professor of Information Sciences, Morehead State University

**Creative and Critical Thinking Instructional Strategies for Business
 Courses** BUS/ECON, COLL, STAFF DEV, TEACH TACTIC

Many students lack thinking behaviors required for bridging the gap between business classrooms and the business workplace. This presentation will consider teaching strategies: 1) to foster better listening; 2) to enhance understanding of international concepts necessary for adapting to an

interdependent world economy; and 3) to develop cooperative learning techniques which increase student motivation and improve creative and critical thinking skills. Handouts will be distributed and session participants will be invited to suggest additional strategies.

LUCKEY, JR., GEORGE M. TUES 3:15; STEV 2049
Director, Center For Critical Thinking, Morehead State University

Transforming Teacher Education STAFF DEV, COLL, BEG

Morehead State University (MSU) is transforming its teacher education program over a period of three years using a critical thinking-active learning model. The project will prepare future teachers for service under the Kentucky Education Reform Act (KERA) of 1990. The KERA Curriculum Framework is of particular interest since its components are based on clusters of thinking skills and dispositions. In this presentation, the activities planned to transform teacher education at MSU will be described. Special emphasis will be given to the questioning strategies and writing activities recommended for infusion into teacher education courses during the project's initial year. Handouts will be provided and session participants will be invited to critique the transformation model.

LUCKHARDT, C. GRANT MON 1:30; IVES 78
Professor of Philosophy, Georgia State University

Criteria For Assessing Appeals to Authority INF LOGIC, LANG, PSYCH, COLL

Appealing to an authority in an argument is often necessary and is something we all do, often well. There is a form of fallacious argument, however, usually referred to as "the fallacy of appeal to authority," that we need to guard against. In this session we will examine some 25 criteria for assessing appeals to authorities. We will examine these criteria, discuss why they are justified, and practice applying them to examples of appeals to authority.

LUTER, KAY KYLE MON 3:15; NICH 173
Gifted and Talented Supervisor, Crowley's Ridge ESC

**Euphoria and Creativity: Is There a Feeling Akin to Euphoria in the
 Experience of Creativity?** K-12, INF LOGIC, PSYCH

Using the work of Graham Wallas on the stages of the creative process, we will explore whether there is a feeling of euphoria connected with the creative process. At what point in Graham's process does it occur, if indeed it is present and can this euphoria be developed or encouraged in individuals? Prior to this presentation surveys will be distributed to "creative persons" in the state of Arkansas. Their input will be a starting point for the group discussion and the majority of the session will be interactive. Participants must feel free to express their own experiences.

MAHARA, M. STAR **MON 10:30; IVES 34**
Instructor of Nursing Programs, University College of the Cariboo

Active Engagement and the Construction of Knowledge NURS, COLL,
HEALTH

The Collaborative Baccalaureate in Nursing Curriculum developed by four British Columbia colleges/university-colleges and the University of Victoria is based on a new paradigm for education wherein the curriculum is driven by critical reflection, praxis, and transformative learning. The focus of teaching in this educative-caring curriculum is on strategies that engage students in the development of meaningful ways of thinking and knowing.

Research in education suggests that effective learning involves both the acquisition of new information and experience (content) and the individual's personal discovery of the meaning of experience (understanding). The University-College of the Cariboo curriculum stresses active engagement as an essential process in the acquisition of knowledge, a process through which an understanding of the content under study is developed and information is not merely memorized. It is through interaction of the self with ideas and information that one comes to understand the learning experience with increased clarity and a broader perspective, to discover the relationship of the event to the self and to construct new meaning.

The Patterson-Mahara Framework for Understanding guides educators and learners in comprehending the role of active engagement in the construction of knowledge and offers new potential for effective teaching strategies that promote deeper understanding of course content and themselves as thinkers and learners.

MAREK, WILLIAM K. **WED 10:30; STEV 3028**
Drug Abuse Psychologist, FCI-Dublin

The Cognitive Perspective on Illegality, Harm, and Society PSYCH, POL,
SOCIOLOG, INF LOGIC

This paper will present cognitive perspective on the relationship among illegality, harm, and society. Why are certain activities (or substances) against the law...or not against the law? What makes a behavior harmful? Why are laws obeyed? Are there certain immutable laws of mankind such that certain activities ought always to be punished? Is there societal harm in selling a fairly benign substance like marijuana to eager consumers? This paper will address these issues, and more.

MAYFIELD, MARLYS **MON 10:30; STEV 2049**
Adjunct Professor, Golden Gate University

How About a Global Curriculum for Critical Thinking Instruction? Can We Do It? COLL, LANG, MUL-CULT, SOC STUD

Can we envision an international textbook for critical thinking instruction equally useful to the peoples of India, Israel, China, Mexico, and Finland?

Are there universal standards for critical thinking? What form of instruction would be understandable to all peoples? What about countries that emphasize "we-ness" over "I-ness"? Can we extricate Western critical thinking instruction from its value assumptions about the final authority of the individual?

Marlys Mayfield will share her perspective from over 30 years of teaching in the international zone of Oakland, California, with travel study in Austria, Egypt, Israel, India, Sweden, Mexico, Spain, China, Thailand, and Nepal. This is a forum workshop for all those interested in contributing on this occasion or by Internet throughout 1994 towards the objective of planning or producing a print or multi-media text in 1995.

MAYFIELD, MARLYS **MON 3:15; STEV 3008**
Adjunct Professor, Golden Gate University

Getting to One Fundamental of Critical Thinking: Teaching the Difference Between Observing and Interpreting COLL, LANG, MUL-CULT, SOC
STUD

During my fourteen years' experience in teaching critical thinking, I have always been struck in each new class by how readily and glibly my students interpret and how reluctantly and superficially they observe. And indeed, why should they even know the difference, when the "news" magazines they read and the TV pundits they hear either blur the distinction or exploit their audience's confusion about the same. This workshop will introduce a gradient series of exercises designed to teach students the skills of conscious neutral observing as a foundation for learning how to make sound—rather than facile and stereotypical—interpretations. It will then be shown how the descriptive habit not only forms the basis for sane and sound reasoning, but also for a style of respectful communication that does not provoke defensiveness or violence.

MAYO, HARRY, M.A. **PART 1: SUN 1:30; STEV 3008**
Instructor, American River College **PART 2: SUN 3:15**

JANE LORAND
Former Asst. Director for Center for Critical Thinking, Independent Consultant

FIFTEEN STUDENTS FROM MR. MAYO'S FALL, 1993 CLASS IN CRITICAL READING

Why Hasn't Anyone Taught Us to Reason Before Now? Community College Students Become Educated Consumers of Their Own Education (A Two Part Session) GEN, STAFF DEV, BEG, NURS, PARENTS

When these students joined Mr. Mayo's class, they had no idea that they would emerge as revolutionaries for Critical Thinking. Even though these students have been successful in the regurgitation model of traditional lecture classes, they have some very insightful judgments to make and back up about the quality of their education, both before and after one semester of

Critical Thinking. These students are paying for something they had not been getting, and they have come to see how education can be. They will never be satisfied with less than a critical thinking approach to learning.

So often success stories have to do with the charisma of the instructor. Harry taught for twenty-nine years without anything like these results. The change students experienced came when he changed to a Critical Thinking model. Come and hear their story and share in a discussion of how Mr. Mayo taught the Elements of Reasoning and Intellectual Standards, (aligning with Richard Paul's theory), to set these students on fire.

MCCONNELL, ROBERT L. MON 10:30; DAR 137
Professor of Environmental Science and Geology, Mary Washington College

DANIEL C. ABEL
Faculty of the Marine Science Department, Coastal Carolina University

Environmental Issues by the Numbers ENV, MID/HIGH, MATH/SCI, COLL, TEACH TACTIC

According to Scriven and Paul, an essence of critical thinking is the acquisition and development of information-generating-and-processing skills. We propose to show, using simple step-by-step examples, how student confidence in their own abilities to accurately evaluate environmental issues and quantify problems, can be enhanced. For example, to understand the impact of pollution students need an easy way to calculate the volume of water bodies, as well as the ability to accurately use the units in the metric system. Calculations cannot be carried out with confidence without a firm understanding of how to structure simple mathematical problems. Students often give very little thought to understanding the parameters of, or even units involved in, a problem, before attempting to solve it.

To this end we will distribute a packet consisting of real-world illustrations featuring, whenever necessary, step by step instructions for pocket calculators, to quantify 1) the impact of air pollution, 2) the impact of pollution on the marine environment, 3) the impact of rising living standards on the global ecosystem, 4) the issue of global population growth and 5) the extent to which small rates of degradation produce major impacts over time.

MCGURY, SUSAN TUES 1:30; DAR 143
De Paul University

KATHLEEN TAYLOR
Chair, Department of Portfolio Development, St. Mary's College of California

JANIS BRADLEY
Chair, Department of Portfolio Evaluation, St. Mary's College of California

Story as Bridge: The Link Between Personal Narrative and Critical Thinking COLL, LANG, BEG

This workshop will focus on the connection between reflective writing and the development and assessment of critical thinking skills.

Participants will examine excerpts from student narratives which demonstrate the evolution from "storytelling" to critical self-examination. Drawing on writing examples from adult learners from two institutions, the workshop will consider various ways in which reflective writing on life experience can be a bridge to analytic thinking and writing.

Models such as David Kolb's and Paolo Freire's will be presented as possible guides in the process of taking students from personal conviction to academic argument.

MCLAIN-MIDKIFF, MICHAEL TUES 1:30; IVES 34
Principal, Tracy School District

Working Toward A Meaning Centered Thinking Curriculum at the K-5 Level: Change and Thoughtfulness ELEM, STAFF DEV, BEG

The lack of practical assistance to the classroom teacher in the area of higher level thinking prompted this small scale, exploratory research effort in the area of classroom thoughtfulness. A practical model (Newmann, 1990) was used to discriminate between more and less successful subjects in the establishment of classroom thoughtfulness in history/social science lessons at the fifth grade level. Successful teacher practices were identified. After explanation and dialogue regarding the research, a brief scenario will be shared in the area of personal practical knowledge as related to the management of change in a school site setting. Specifically, the topic will be the change from a lecture-recitation format to a more thoughtful and effective educational style.

METZ, SUZANNE WED 8:45; DAR 122
Clinical Nurse Specialist, St. Joseph's Hospital

ROSEMARY KELLER
Education Specialist, Patient Education, St. Joseph's Hospital

MARTI GRIFFIN
Education Specialist/Development, St. Joseph's Hospital

Arrest that Code: A Hospital Based Critical Thinking Program HEALTH, STAFF DEV, NURS

This session is designed to be an interactive experiential learning experience requiring participants to work in small groups. The presentation will demonstrate how nursing educators can use a patient centered case study as an effective teaching strategy to elicit critical thinking skills. The session will begin with a brief overview of the major principles and concepts which form the knowledge base for analyzing the case study. The facilitators will then present the case study and guide the participants through the analysis utilizing specific questions designed to elicit critical thinking processes. The participants will have an opportunity to observe the modeling of this strategy and to practice applying these skills.

MILLER, MARY A. TUES 10:30; IVES 35
Associate Dean, School of Professional Studies, Metropolitan State College of Denver

DOROTHY E. BABCOCK
Professor of Nursing and Health Care Management, Metropolitan State College of Denver

Promoting Critical and Creative Thinking in Nursing Curricula NURS, HEALTH, TEACH TACTIC

Critical thinking is a dynamic interaction among teachers, learners, curricula and the environment within which these interactions occur. The theoretical base for our presentation is a model for evaluating critical thinking in the curriculum using Watson and Glaser's definition of critical thinking. It takes into consideration faculty and student characteristics and teaching strategies as important interacting components. We intend to share with the participants some of the strategies we have developed for promoting critical thinking in students who must function in the real situation of today's health care industry within the hospital, the home, and the community health arenas. To perform effectively, nurses must be able to think both creatively and critically.

MORGAN, BRADFORD A. TUES 1:30; STEV 1040
Professor of English, South Dakota School of Mines and Technology

SARA BECKER
Instructor of Nursing, South Dakota State University

The Internet and Critical Thinking LANG, COMP AID, BEG, MATH/SCI

A writer's renaissance is underway because of the ascii-based Internet, with students writing more than ever in this globally defined Information Age. But e-mail can be untutored and lawless if the influence of critical thinking is weak. Faculty in every discipline should take advantage of the new medium to teach the criteria and standards of critical thinking, both in terms of what students write and in what they read. This workshop will make available curricular experiences in the classroom which have been developed with over a thousand students since the summer of 1992, in a variety of academic disciplines, to encourage critical thinking as defined by the NCBCT's founding principles and its pedagogical implications involving assessment strategies.

MORGAN, JR., WAYNE R. SUN 10:30; DAR 122
Chemistry Instructor, Dept of Natural Sciences, Hutchinson Community College

Techniques and Tools: Using Elements of Classroom Assessment and Total Quality Management to Enhance and Assess Critical Thinking Instruction in the Classroom COLL, MATH/SCI, TEST, STAFF DEV, TEACH TACTIC

This session will introduce the participants to a number of techniques from classroom assessment and total quality management. Participants will get

the opportunity to practice one tool/technique during the session. The session will start with an overview of these strategies. The theoretical bases for using them will be given briefly. Participants will then get an opportunity to explore one of these strategies in detail and practice it. Time will be allotted for the discussion of how these tools/techniques can be used for both the instruction and assessment of critical thinking.

MORRIS, TERRY R. SUN 3:15; STEV 3028
Professor of History, Shorter College

Teaching History as Argument BEG, SOC STUD, COLL, INF LOGIC, TEACH TACTIC

"History as Argument" builds on the natural compatibility of history (not a collection of facts but of arguments) and critical thinking (techniques for assessing the truth value of arguments). In this session I will present ways in which I have been fusing the two in class work, student research, and examinations. After a brief formal presentation, I will circulate materials used to teach fundamental critical thinking concepts in the light of history (Writing these was necessary). We will discuss methods to integrate these materials in classes (without sacrificing content), and ways to test using this approach which can be a surprisingly valuable aid to learning. Also, as part of the session, either as individuals or in groups, participants will develop specific ways in which they might apply techniques I am using or that occur to them to particular courses they are teaching. It is my objective that participants who find "History as Argument" valuable will take away a specific plan for implementing it in their own classes.

MORSE, OGDEN TUES 1:30; STEV 3046
Director, The Lyceum Institute

Literature and Problem Solving: The Integration of Thinking Skills and Subject Matter MID/HIGH, LANG, TEACH TACTIC

The solving of problems is a major part of a student's academic life, but most students associate this skill with mathematics or the sciences. Although students reading works of fiction recognize that the characters struggle to find solutions to complex problems, they fail to recognize any application of the text and its problems to their own lives. How is it possible to get students to understand that classroom activities have real life applications?

The purpose of this 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.

MORSE, OGDEN SUN 3:15; STEV 2049
Director, The Lyceum Institute

Literature, History, and What We Believe MID/HIGH, LANG, TEACH TACTIC

Consider the following "truths": "The sky is blue because it reflects the color of the sea." "The speaker in the poem is the author." "Species adapt in order to survive." "The law of averages and the law of probability govern the results of a coin flip." "William the Conqueror was destined to defeat Harold at the Battle of Hastings."

How did we arrive at these "truths"? Have we examined them lately? Do they affect the way we conduct our lives? This workshop is designed to show how material from the English and history disciplines may be integrated at the secondary level. This lesson will model classroom strategies that ask students first to analyze their own beliefs, misconceptions, and the manner by which they acquired them. Then they explore the relationship between the facts of history and the fiction of literature, the inevitability of the past and the possibilities of the future. They use standard texts, but the emphasis is on the application of critical thinking skills to deeply held and personal beliefs. Participants will be engaged in all activities. Handouts will include the plan for this lesson, student responses to the work, and examples of assessment methods.

MORSE, OGDEN MON 3:15; STEV 2049
Director, The Lyceum Institute

Making Meaning in the Classroom: Skills, Perspectives, and Subject Matter MID/HIGH, LANG, TEACH TACTIC

What is the curriculum for the courses we teach today? Is it the subject matter in which most of us were trained, the text, the laws, the traditions that were the canon of four 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 series of exercises which illustrate conceptual and prac-

tical 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.

MOSCOVIC, SANDRA A. SUN 10:30; STEV 3046
Assistant Professor of Behavioral Sciences & Leadership, United States Air Force Academy

DAVID B. PORTER
Senior Military Professor of Behavioral Sciences & Leadership, United States Air Force Academy

Enhancing Critical Thinking in a College Course COLL, BEG, H CON, PSYCH

Several teachers collaborated to explore alternatives to traditional pedagogies and curricula within a single course. The course, Cognitive Psychology, allowed general assessment of the effects of these alternative approaches on a variety of student outcomes including critical thinking. The workshop will begin with a brief characterization of the educational system at the Air Force Academy via demographic information about the students and faculty. A working definition of critical thinking will be described. Subsequently, three particular alternative pedagogies will be presented: (1) incorporation of student critical thought papers which were reproduced and distributed to the class as discussion starters; (2) allowing student groups to re-accomplish multiple choice exams; and (3) having students design and conduct applications projects involving a personally relevant skill or hobby. Finally, the quantitative and qualitative assessment of critical thinking in the course will be discussed including performance measurement, attitudinal survey information, and video tape-recording.

MYERS, FRANK TUES 8:45; IVES 78
Director, Oklahoma Center for Critical Thinking and Associate Professor of Political Science, Cameron University

Assessing Critical Thinking Programs: The Research Design Issue

Program assessment is the order of the day in modern education and a major contemporary issue in critical thinking (CT) is the assessment of CT programs. The central question in program assessment is "does the program work?" In other words, can we really say our CT program "caused" the results we see in student performance on CT tasks? This is a difficult question, and a major part of the problem lies in the inherent difficulty in making the statement that X "caused" Y. This session will be devoted to the necessary and sufficient conditions to establish "causation," and to the relative strengths and weaknesses of the classical experimental design vs. the ex-post facto design with regard to the issue of causation. Participants at this

session should be better able to assess their own CT assessment programs and to make sound improvements therein.

NICOLL, BARBARA J. SUN 10:30; DAR 108
Chair, Child Development Program, University of LaVerne

Active Learning vs. Critical Thinking: Making Sure We Get All the Way to Critical Thinking COLL, BEG, PSYCH, SOCIOL

Active learning strategies are frequently presented as critical thinking strategies. This workshop will differentiate between active learning strategies and critical thinking, and discuss methods of expanding active learning strategies toward critical thinking. Participants will be given a variety of classroom activities which can be used to develop critical thinking in students, and will be challenged to evaluate their own teaching methods for actual critical thinking expectations of students.

NOSICH, GERALD M. SUN 10:30; IVES (WARREN)
Professor of Philosophy, University of New Orleans

An Introduction To Critical Thinking: What Is It? Why Should I Teach For It? How Can I Teach For It? COLL, K-12, BEG

The session will provide a working, practical idea of what critical thinking is. The aim is not to provide a strict definition, but to describe it in a way that is usable — especially in the classroom — and to give a sense of how deep and robust the concept of Critical Thinking is.

Second, the session will make a case for how profoundly needed critical thinking is and — particularly when it is understood as the deep and robust notion it is — how profoundly lacking it is in education in general.

Finally, the session will provide some examples of how to teach for it and a basic model of how to rethink one's teaching to foster critical thinking for all educational levels.

A question period will follow the presentation.

NOSICH, GERALD M. MON 10:30; IVES (WARREN)
Professor of Philosophy, University of New Orleans

Learning to Ask Good Questions COLL, K-12, BEG

Though problem solving is an important part of thinking critically, critical thinking involves a lot more than problem solving. For one thing, critical thinking requires not just that we figure out solutions to problems and answers to questions, but that we figure out what the problems *are* that need to be posed, what the questions *are* that need to be asked.

This is a workshop centering on ways to get students (and ourselves) to take facts (or alleged facts) and generate key questions out of them, questions that are important in thinking things through and in acting on our thinking. We will begin by working our way through some topics of general

interest selected by participants, generating questions out of "facts." Participants will also have the opportunity of applying the same methods to generating questions in the subject-matter areas or disciplines they teach.

NOSICH, GERALD M. MON 3:15; IVES (WARREN)
Professor of Philosophy, University of New Orleans

Helping Students Become Critical Thinkers COLL, K-12, BEG

This workshop will present a model of what a critical thinker is in terms of four "senses." Critical thinkers are persons who, in their thinking, have a sense of perspective, a sense of proportion, a sense of strengths and limitations, and a sense of cooperation with others. That is, critical thinkers can reason through things from multiple perspectives, both personal and global; they accurately distinguish what is central from what is peripheral, what is feasible and realistic from what is not; they can critically evaluate their own thinking and that of others; and they work cooperatively with other thinkers (both those who are there in the flesh and those who are there only in their writings). This model has some far-reaching educational consequences. For one thing it shifts the direction of critical thinking education away from merely acquiring skills toward becoming a certain kind of person. Participants will work on activities of applying these senses in the context of their own classroom.

NWA, WILLIA L. WED 8:45; IVES 35
Educator, Canton City Schools

Culturally Diverse Students: How Should Educators Enrich Their Environment? MUL-CULT, MID/HIGH, COLL, BEG, TEACH TACTIC

Multicultural education involves an interdisciplinary approach that stresses teaching strategies that affirm the right of students to be different and the responsibility of students to appreciate and respect the differences of others. For multicultural education to be effective, an holistic, transformation approach must be instituted. This approach enables the learners to view concepts, ideas, issues, themes, and problems from various ethnic perspectives and points of view. In addition to critical thinking of solutions that foster multiculturalism, this presentation will discuss and brainstorm activities educators can implement in the classroom. The rationale for recognizing cultural diversity and the impact of changes that have evolved in our society and in our schools will also be discussed.

O'KEEFE, VIRGINIA TUES 1:30; STEV 3008
Adjunct Assistant Professor of Communication

Meaningful Assessment: A Look at Process TEST, BEG, MID/HIGH, COLL, LANG

Traditional assessment is separate from instruction, emphasizing products of the mind, not an assessment of the process involved in thinking about and with knowledge. This session is designed to look at the classroom use of

assessment as part of the instructional method. The focus is on authentic assessment that is meaningful to the learners in language arts or communication classroom. Particularly valuable is a candid appraisal of alternative forms of assessment and their potential merit or pitfalls. The concern is that speaking and listening, while vital to critical thinking, are often ignored or mistreated with assessment instruments. Participants in this session will have an opportunity to review instruments, practice peer and self-assessment methods, and learn of practical ways to achieve meaningful evaluations of process.

ORR, LESLEY SUN 1:30; ART 108
Communication Skills Educator, Education k-12, Nantahala School

Across the Curriculum: Writing, Thinking, and Learning K-12, LANG

This session will include methods of critical thinking skills developed by the Bay Area/National Writing Project. It will also include strategies implied by current research and focus on increasing the quality and amount of student writing without increasing teachers' paper load.

OTTERBACH, RENATE MON 10:30; IVES 78
Education Consultant for The Educational Service Center

Integrating Thinking Skills and Teamwork to Prepare Students for a Changing World ADV, STAFF DEV, COLL, MID/HIGH

Research tells us that cooperative skills and creative and critical thinking skills are essential to success in business and the importance of these skills is steadily increasing. It seems therefore logical that the higher the competence level of students in those areas the better adapted they will be to the economic market when they graduate. This seems to imply that teaching strategies should focus on those skills and that the teaching of those skills must become an integrated part of the curriculum.

In this session I would like to present one strategy that might be used to accomplish this without sacrificing content. Participants will work in groups of four to five people. Questioning techniques and mini-teaches will be used to assist participants (if needed) as they clarify the problem and develop methods for solving it in their groups. Participants will use their problem statement to identify criteria for evaluation and to create their own rubric.

OTTERBACH, RENATE SUN 1:30; STEV 3040
Education Consultant for The Educational Service Center

Accurate Problem Definition: The Key to Effective Problem Solving ADV, MID/HIGH, COLL

Often in real life situations the apparent problem is not always the real problem. Therefore the first step in problem solving is to clearly and accurately identify the essence of the problem. In this session we will explore

how the *Elements of Reasoning* can be used to identify the root of any problem, as well as, enable us to find better solutions.

The format for this session will consist of small and large group discussions, interspersed with short lectures and summaries. Participants will also have the opportunity to apply what they have learned to a given problem.

OWNBEY, SHIRETTA MON 1:30; DAR 143
Assistant Professor, Department of Design, Housing and Merchandising, Oklahoma State University

Reforming Education for Designers and Merchandisers: Critical Thinking Through Team Learning BEG, COLL, MID/HIGH, BUS/ECON

Employers frequently identify "problem-solving skills" and "team orientation" as priority requirements for undergraduates entering the professions of apparel and interior design and merchandising. This workshop engages participants in team activities that are problem oriented to facilitate critical thinking, as implemented in two required undergraduate courses. Team activities included are: a) formation of permanent teams based on heterogeneity; b) use of mini-quizzes to help individuals and teams assess their mastery of knowledge and develop "appeals;" c) introduction of industry problems to teams for their solution as consulting groups; d) critical assessment by individuals of other teams' oral presentations; e) class decision-making regarding weighting of grade points for team projects; and f) decision-making in industry-specific ethical dilemmas.

PACINO, MARIA MON 8:45; STEV 1040
Associate Professor of Education, Azusa Pacific University

Critical Thinking and Multicultural Education BEG, MUL-CULT, MEDIA, STAFF DEV

Effective educational reform requires awareness and respect for cultural diversity and implementation of intercultural/multicultural programs throughout societal institutions. Schools in pluralistic democracies have a responsibility to educate all citizens to function effectively in an interdependent world. Active, responsible citizenship requires that individuals become proficient, not only in the 3 R's, but are informed critical thinkers capable of making decisions in a complex society.

One of the most effective means of promoting critical thinking is through problem solving of authentic case studies. The purpose of this demonstration / workshop is to engage participants in active roles as decision makers, not necessarily in seeking solutions, but in developing a questioning rationale throughout the thinking process. Interactive media and written examples will be used during the session. Participants will be asked to work in groups to aid in achieving a multiple perspective.

PADOVANO, ROSE MARIE*Professor of Education, College of Saint Elizabeth***WED 10:30; STEV 3046****Critical Thinking Applied to Religious Education** K-12, BEG

The world we face today is complex. No one person or group has a monopoly on truth or what is right or wrong for all times for all people. As we advance, new insights are brought to bear on life and life situations, on understanding of religious practices and ideas and on spirituality. Definitions have not yet been completely formed. Critical thinking can enable students to become leaders of tomorrow. We need to integrate religious education and rationality. This session will provide participants with a theoretical base for a remodeled lesson on the notion of presence. Media, reflection, input, sharing and print materials will be used.

PANKRATIUS, WILLIAM J.*Assistant Professor of Science Education, University of Nevada, Las Vegas***SUN 1:30; STEV 3036****Empowering Students to Think Critically About Their Own Learning: Constructing Knowledge Holistically Through Concept Mapping**

MID/HIGH, SCI, LANG, BEG, SOC STUD

Concept mapping is an effective metacognitive device to look at one's knowledge base on a particular topic. As a critical thinking strategy, has its roots at the crossroads of constructivist philosophy and cognitive psychology. Concept mapping invites creativity, stimulates imagination, and supports higher order educational objectives. It encourages and promotes critical thinking. An important feature of concept mapping is that it empowers students to examine their own learning and induces them to investigate the process of knowledge production — it provides them with a greater depth of understanding. This interactive workshop will examine how to introduce the use of concepts maps in your classroom. You will participate in constructing several maps and critique several others. A package of materials to be used in your classroom will be disseminated.

PARKER, LAWRENCE A.*Co-Director, The Ohio Center for Critical Thinking, Inc.***MON 10:30; STEV 1040****SUSAN PARKER***Co-Director, The Ohio Center for Critical Thinking Instruction, Inc.***Strategies for Implementing Critical Thinking** STAFF DEV, COLL, ADV, BUS/ECON, TEACH TACTIC

Goals relating to the abilities of students to think critically are being included in the mission statements of educational institutions across the nation in growing numbers. Yet strategies for implementing critical thinking in these (and other) institutions are not being addressed with the same intensity, nor are they being addressed on a societal level: in business, politics, parenting, administrating and managing. These implementation tactics have gained more urgency since President Clinton's signing of the Goals

2000 Act, which provides a means for the introduction of critical thinking methodologies on the state level.

This session is an opportunity for participants to explore the role of critical thinking in their own lives and how to transfer these skills to others, both formally in the classroom and informally through their interactions with others. Specific strategies will be developed and compiled for distribution. The session will close with the exploration of the need for and methods of establishing support centers, and how to utilize a BBS.

PAUL, RICHARD W.*Director, Center for Critical Thinking and Moral Critique, Sonoma State University***WED 8:45; SU 100****Why Testing and Assessment Are Weak At All Levels** TEACH TACTIC, TEST, C, BEG

Though we are a nation of tests, we are weak in assessment. This is not the result of some cabal of conspirators. It is the result of how little we were taught about how to ask a clear and worthy question and assess suggested answers. This skill goes to the heart of (higher order) teaching and learning. It goes to the heart of how we think and assess our own thinking. We don't assess well because we don't think well. We don't think well because we don't assess well. We are trapped in a vicious circle. Richard Paul will lay out the conditions for breaking out of the circle and forming a "virtuous" circle in its place.

PAUL, RICHARD W.*Director, Center for Critical Thinking and Moral Critique, Sonoma State University***TUES 8:45; SU 100****How I Develop My Thinking** BEG

It is impossible to teach students to think critically unless we are thinking critically. Yet to think critically is continually to develop one's thinking. In this session Richard Paul will explain some of the ways that he develops his own thinking, and participants will share ideas on how they develop their thinking. Participants will leave with a host of practical ideas for their own self-development.

PAUL, RICHARD W.*Director, Center for Critical Thinking and Moral Critique, Sonoma State University***MON 8:45; SU 100****How To Get An Angle on a Question: And Say Something Worth Saying** BEG, TEACH TACTIC

All serious thinking is problem-centered. We have some question that needs answering. And no immediately available answer seems adequate. We need, therefore, to get our thinking going in a productive manner. We need, in other words, an "angle" on the question. In this session, Richard Paul demonstrates how to get more than one angle on a question and how to make significant discoveries as a result. In this session, Richard Paul models

critical thinking instruction. The participants will be treated as students, and Richard Paul will demonstrate how critical thinking tactics can be applied in a "lecture" setting. The teaching tactics modeled are applicable to virtually every subject and most grade levels, from grade three through graduate school.

PAUL, RICHARD W. **TUES 10:30; SU 100**
Director, Center for Critical Thinking and Moral Critique, Sonoma State University

What Are Concepts? Why Do We Need Them? BEG, TEACH TACTIC

Though much instruction purports to help students to attain "concepts", many educators do not have a clear concept of what a concept is. Paul believes that the failure to understand what concepts are plays a significant role in the poor job we do in teaching for them. In this session, Paul shares some basic theory on what concepts are and are not, and then suggests some of the practical do's and don'ts that follow from understanding that theory. In this session, Richard Paul models critical thinking instruction. The participants will be treated as students, and Richard Paul will demonstrate how critical thinking tactics can be applied in a "lecture" setting. The teaching tactics modeled are applicable to virtually every subject and most grade levels, from grade three through graduate school.

PAUL, RICHARD W. **MON 10:30; SU 100**
Director, Center for Critical Thinking and Moral Critique, Sonoma State University

Is There Such a Thing as a Fit Mind? BEG

"Mens Sano in Corpore Sano" ("A Fit Mind in a Fit Body"). This ancient Roman saying presupposes the idea that there is such a thing as having, or failing to have, a "fit" mind. Once we truly understand what a fit mind is, we can then set out to teach for it. At present the concept is not widely understood and hence the phenomenon is rare. We are all losers because of this fact. In this session, Paul defends the notion as an educational ideal and practical guide for instruction. In this session, Richard Paul models critical thinking instruction. The participants will be treated as students, and Richard Paul will demonstrate how critical thinking tactics can be applied in a "lecture" setting. The teaching tactics modeled are applicable to virtually every subject and most grade levels, from grade three through graduate school.

PAUL, RICHARD W. **TUES 1:30; SU 100**
Director, Center for Critical Thinking and Moral Critique, Sonoma State University

Free Your Time — Help Your Students: Teach Students to Assess Students BEG, TEST, TEACH TACTIC

To know that something is so is to know how to check to verify whether it actually is. Testing, checking, trying out, and finding out... are interrelated ingredients in real learning. If we want students to be knowers, we must

teach them to be "checkers", testers, verifiers. Yet much of what we "learn" in school is not real knowledge but merely "information recalled". What can we do to change this? How can we teach students to critically assess what they are learning? How can we help students to gain real knowledge and not just its facsimile? In this session, Richard Paul models critical thinking instruction. The participants will be treated as students, and Richard Paul will demonstrate how critical thinking tactics can be applied in a "lecture" setting. The teaching tactics modeled are applicable to virtually every subject and most grade levels, from grade three through graduate school.

PAUL, RICHARD W. **SUN 1:30; SU 100**
Director, Center for Critical Thinking and Moral Critique, Sonoma State University

On Helping Students to Think More Clearly BEG, TEACH TACTIC

Most student thinking is notoriously unclear. Students are not only operating in an intellectual fog bank, but they are not even clear enough to know that they are and have been given little or no training in how to take an unclear or vague thought and transform it into something clear and intelligible. This transformative act of clarification is an act of both critical and creative thinking. It is critical in that clarification requires an intellectual goal and question in mind against which to measure our success. It is creative in that, once we clarify our thoughts, we have in effect "created" a new thought, one that literally did not exist before in our minds.

In this session, Richard Paul will introduce the theory behind clear and unclear thinking and then illustrate some techniques that can be used in the classroom for getting students to increase the clarity of their thought. In this session, Richard Paul models critical thinking instruction. The participants will be treated as students, and Richard Paul will demonstrate how critical thinking tactics can be applied in a "lecture" setting. The teaching tactics modeled are applicable to virtually every subject and most grade levels, from grade three through graduate school.

PAUL, RICHARD W. **MON 1:30; SU 100**
Director, Center for Critical Thinking and Moral Critique, Sonoma State University

Transforming the Character of Our Students: Cultivating Intellectual Traits BEG, TEACH TACTIC

Whatever is habitually in our behavior defines our "traits", that is, the "kind of person" we are. A person who learns to reason well habitually develops traits entailed by those habits. Persons who habitually give serious consideration to the thinking of those who defend opposite points of view become "intellectually empathic" persons. Those who habitually defend unpopular points of view (when those points of view are rational) become persons of "intellectual courage". And when persons learn to work long and hard on complex problems without being discouraged by the frustration and confusion inherent in such tasks, they develop the trait of "intellectual persistence". In this session, we shall consider possible classroom structures and

tactics for contributing to transforming the intellectual "character" of our students. In this session, Richard Paul models critical thinking instruction. The participants will be treated as students, and Richard Paul will demonstrate how critical thinking tactics can be applied in a "lecture" setting. The teaching tactics modeled are applicable to virtually every subject and most grade levels, from grade three through graduate school.

PAUL, RICHARD W. **TUES 3:15; SU 100**
Director, Center for Critical Thinking and Moral Critique, Sonoma State University

On Helping Students to Use, Process, and Assess Information TEACH TACTIC, BEG

Your class is filled with information. But are the students learning how to use, process, and assess it? Probably not, if you use standard teaching methods. After a brief analysis of the differences between information and knowledge, we will do some activities that help solidify those differences, and shed light on how to aid students in using, processing, and assessing information. In this session, Richard Paul models critical thinking instruction. The participants will be treated as students, and Richard Paul will demonstrate how critical thinking tactics can be applied in a "lecture" setting. The teaching tactics modeled are applicable to virtually every subject and most grade levels, from grade three through graduate school.

PAUL, RICHARD W. **SUN 3:15; SU 100**
Director, Center for Critical Thinking and Moral Critique, Sonoma State University

On Helping Students to Think More Deeply BEG, TEACH TACTIC

Most student thinking is very shallow. What is more, most students have so little sense of how to assess the depth of thinking that they have no idea that their own is shallow and superficial. Richard Paul believes that it is possible to teach students how to deepen the quality of their thought. He will present first a theory of how to do this and then exemplify it in a "minds-on" exercise, using the audience as a hypothetical "student" population. In this session, Richard Paul models critical thinking instruction. The participants will be treated as students, and Richard Paul will demonstrate how critical thinking tactics can be applied in a "lecture" setting. The teaching tactics modeled are applicable to virtually every subject and most grade levels, from grade three through graduate school.

PAUL, RICHARD W. **MON 3:15; SU 100**
Director, Center for Critical Thinking and Moral Critique, Sonoma State University

Content! Content! Content!: Oh, How Often We Counterfeit Knowledge! BEG, TEACH TACTIC

Knowledge is a high, not a low word. We cannot "give" students knowledge. We can only help them acquire it through their own intellectual work. How can we deal with the problem of exposing students to extensive

content, while not sacrificing the students' need to acquire real knowledge through the exercise of real intellectual discipline? In this session, Richard Paul models critical thinking instruction. The participants will be treated as students, and Richard Paul will demonstrate how critical thinking tactics can be applied in a "lecture" setting. The teaching tactics modeled are applicable to virtually every subject and most grade levels, from grade three through graduate school.

PAYTON, PHILLIP W. **TUES 10:30; STEV 3040**
Director, Business Programs, Lincoln University, San Francisco

Adult Learning and Critical Thinking in Business Education, With Staff Development Implications BUS/ECON, COLL, STAFF DEV, TEST

The initial phase of this workshop will look at some of the research regarding the nature of the adult learner and post-secondary adult, on what are adult student and faculty objectives, case methods, and the relation of these to critical thinking. It will compare the traditional learner, American adult learner, and international student.

Because of the importance of critical thinking in business education, the interactive portion involving the participants will focus on a series of discussion and assessment questions. These will be on international business and trade policies. For example, what can be done to help "have-not" nations? How do we deal with centrally-planned economies who are converting to capitalism? How much power do multinational corporations have and how much do nation-states? How do businesses adapt to international marketing and labor problems?

The last phase will be a discussion of the implications for staff development among college and university faculties of use of critical thinking and assessment approaches such as illustrated in this session.

PEARSON, CHARLENE **MON 8:45; IVES 34**
Instructor, of Counseling and Psychology, Rancho Santiago College

BOB PUTMAN
Instructor of Philosophy, Rancho Santiago College

JEANNE KERALLAH
Department of Nursing, Rancho Santiago College

GEORGE WRIGHT
Instructor, Criminal Justice, Rancho Santiago College

Implementing Critical Thinking into District Curriculum COLL, STAFF DEV, TEST

Through interdisciplinary cooperation among faculty, several critical thinking projects have been implemented - specifically in vocational education areas. A faculty team (nursing, psychology, criminal justice, philosophy, counseling) will present information on their successes and problem areas in determining student critical thinking development needs: the designing,

implementing and evaluating of new curriculum to meet these needs. This team will further address the necessity of encouraging faculty to cross traditional barriers between the academic and vocational community in order to enhance the education of students with the essential skills of critical thinking. In addition to the presentation, time will be allocated for answering questions and for group discussion.

PETERSON, JOEL TUES 1:30; STEV 2049
Teaching For Thinking Program Coordinator, Minnesota Community College System

CONSTANCE STACK
Teaching For Thinking Program Coordinator, Minnesota Community College System

Teaching Thinking in Four Dimensions: Affirming What is Strong, Strengthening What is Undeveloped COLL, K-12, MUL-CULT, STAFF DEV

The best way to get where you want to go is rarely a straight line. The best way to help someone develop as a thinker is rarely a linear progression. Only a few of us think in straight lines. One dimensional thinking may be clear and orderly, but few can live there. Those that do, miss much. When thinking is healthy and robust, it lives in four dimensions.

The teacher who knows this and can recognize which dimensions are "home" for her students is the teacher who will be most effective at helping each student boldly go where they have never gone before. Every learner needs the affirmation of her strengths. Every learner needs a guide for help in exploring and developing the undeveloped.

Logical thinking is one dimension of good thinking, and so is factual thinking. But without imaginative thinking and value-conscious thinking, critical thinking remains flat. Wisdom resides in balancing and harmonizing all four.

Working in quartet, presenters in this participatory workshop will demonstrate specific strategies for affirming and developing all four dimensions of thinking—in solo, counterpoint, and harmony.

PFEIFFER, RAYMOND S. TUES 8:45; NICH 173
Professor of Philosophy, Delta College

Thinking Critically with the Resolvedd Strategy of Ethical Decision-Making COLL, BEG, MID/HIGH, TEACH TACTIC

The RESOLVEDD strategy guides one in an orderly fashion through the questions essential to making a responsible decision in a situation where ethical principles conflict. The strategy affords an orderly, practical, understandable and easily remembered way to teach the value and methods of critical thinking in day-to-day ethical decision-making. It requires no specialized training to understand and apply, and is readily employed to advantage by faculty in disciplines other than applied ethics. The workshop is directed to help participants understand the RESOLVEDD strategy, apply

it to real-life, practical ethical problems, and to prepare them to teach critical ethical decision-making to their students.

PHILLIPS, JOHN ARUL TUES 3:15; DAR 139
Associate Professor, University of Malaya

Developing Critical, Creative and Content Thinking in the Malaysian Classroom: Approaches and Methods K-12, BEG

The promulgation of a National Philosophy of Education in the late 1980's saw a surge of interest in teaching various kinds of thinking skills in Malaysian schools. The main task is to convince teachers to incorporate thinking skills into their daily instructional activities while simultaneously preparing students for national examinations.

This paper will address this dilemma and describe initial efforts in training experienced teachers and pre-service teachers in colleges and universities to teach thinking. Focus will be on the approaches and methods proposed taking into consideration learner characteristics, Malaysia's multi-ethnic and multi-religious society, and the rapid rate of socioeconomic development.

PHUNTSOG, NAWANG SUN 3:15; STEV 3072
Adjunct faculty, School of Education, University of Massachusetts

Renewal of Tibetan School Curriculum in Exile: A Tibetan-centric Approach MUL-CULT, H CON, ELEM, SOCIOL

This presentation consists of three major parts. First, a brief overview of the monastic education is presented as a way to provide a context to the importance of Tibetan culture. Second, the rationale for a Tibetan-centric approach to schooling in exile is offered at various levels of its importance. Finally, the integration of Tibetan culture is attempted.

Development of critical thinking of Tibetan children is, in the final analysis, the key to understanding the importance of Tibetan culture and to recognizing the fact the struggle to maintain Tibetan culture is indeed an integral part of regaining freedom for Tibet.

POLLARD, JIM TUES 10:30; STEV 2049
Curriculum Specialist, Spokane Falls Community College

100% Mastery (A Self-Assessment Workshop) TEST, ADV, BUS/ECON, TEACH TACTIC

The premise that learners need to distinguish for themselves what they know from what they don't know, provides the focus of this session. The development of the learners' self-assessment skills is a key element in empowerment in the workplace and in the classroom. This session will present a reflective thinking model used for assisting learners and workers in developing self-assessment skills and criteria. Exploring ideas for self-assessment activities and strategies in the workplace and in the classroom will take participants beyond the mechanics of self-assessment to a discussion of "self expectation."

POLLARD, JIM MON 10:30; STEV 3028
Curriculum Specialist, Spokane Falls Community College

The Learning Environment Workplace and Critical Thinking ADV, BUS

This session will look at ways the critical thinking skills support Edward Demings' principles of management. Demings' principles of quality and continuous improvement promises to improve the work process. The key to that success is assisting individuals to develop new thinking skills. This session will look at ways to help individuals discover that they can improve the way they think.

POPE, RICHARD SUN 10:30; SU 100
Teacher, Berryessa Unified School District

Restructuring Your Class To Make 'Em Think! ELEM, BEG, STAFF DEV

Of course your students already think. Unfortunately, they rarely think critically. Enjoy a session of activities that can make "Clarity, Relevance, Completeness, Accuracy, Depth, Consistency, Precision, and Significance" a major part of every Language Arts, Math/Science, Social Studies, Art and P.E. lesson you teach. Prepare yourself for a session of involvement and humor. Walk away with a new perspective on the joy, motivation, and mental energy critical thinking can bring to your class.

PORTER, DAVID B. MON 8:45; NICH 173
Senior Military Professor of Behavioral Sciences & Leadership, United States Air Force Academy

SANDRA A. MOSCOVIC
Assistant Professor of Behavioral Sciences & Leadership, United States Air Force Academy

Thinking Critically About Eyewitness Testimony COLL, PSYCH, SOC STUD, TEST

One of the most important aspects of teaching students about critical thinking is teaching them to identify circumstances in which critical thinking is itself critical. Jury deliberations and decisions provide just such a circumstance. In particular, students' critical analysis of eyewitness testimony allows the students to learn experientially about critical thinking on several different levels. These levels include the unwitting distortions of "fact" by the eyewitness and the jurors' distortion of decisional processes when eyewitness testimony is introduced. By evaluating jurors' eager acceptance of testimony from eyewitnesses, students identify phenomena which impair thinking and decision making. Ultimately, students arrive at the realization that jurors aren't making poor decisions so much because of a lack of knowledge about visual memory, but because of what they think they know which simply is untrue. Providing students with the opportunity to construct, evaluate, and reconstruct their own models of these cognitive processes increases awareness and appreciation of critical thinking in a real world context most of them find inherently interesting.

PORTER, JULIA Y. SUN 3:15; IVES 34
Instructor of Critical Thinking, Department of Developmental Education, Southeastern Louisiana University

WAYNE C. PORTER
Associated Professor, Department of Horticulture, Louisiana State University

Meeting the Challenge of Effectively Assessing Critical Thinking Skills

TEST, COLL, STAFF DEV, BEG, TEACH TACTIC

"How can we use the assessment process to ensure that critical thinking skills are an intrinsic form of learning that students will use as a way of life?" Answering this question from a talent development perspective requires us as educators to define the assessment process and establish standards of excellence based on the increase of knowledge and personal development for each student. Classroom tactics for enhancing student's critical thinking skills were examined, and talent development assessment techniques that most actively contributed to the critical thinking process were identified. These techniques include both formal and informal assessment measures which emphasize self-assessment strategies. Session participants will examine the talent development view of assessment through discussion of and by participation in assessment activities that are applicable in the classroom. Handouts which include a bibliography are provided.

PRESLEY, SHARON WED 8:45; STEV 3008
Executive Director, Resources for Independent Thinking

Questioning Authority: How to Encourage Students and Others to Have a More Critical Attitude Toward Authority PSYCH, POL, COLL, H CON, TEACH TACTIC

Recent renewed interest in the Holocaust reminds us again how destructive obedience to unjust authority can be. But it isn't just the "bad guys" who obey. As the classic Milgram experiment shows, ordinary people who mean no harm can be induced to obey unjust authority without question. Why do decent people obey? Why do some resist? What can be done to encourage a less mindless attitude toward authority?

In this participatory workshop, we'll explore the psychological research on obedience and resistance to authority and look at ways that psychological principles and critical thinking skills can be applied in both classroom and everyday settings to encourage students and others to have a more critical attitude toward authority. A kit with practical, "how-to" suggestions, exercises, and lists of educational resources will be provided.

PRITCHARD, FLORENCE FAY MON 10:30; ART 108
Associate Vice President of Academic Affairs, Salisbury State University

Teaching Thinking Across the Curriculum with the Concept Attainment Model K-12, STAFF DEV, COLL, TEACH TACTIC

This paper and mini-workshop presentation explains how teachers can use the Concept Attainment Model to simultaneously teach critical thinking

and subject matter content. The paper outlines the model and demonstrates how teachers at any level can use it to plan instruction centered on key concepts in subject areas across the curriculum, and how they can help students learn and use specific critical thinking skills to acquire these concepts. The mini-workshop involves participants in using the model to design their own, sample lesson plans and in exploring ways they can use concept attainment to introduce units of instruction, build knowledge and skill during a unit, and assess the subject matter and thinking skills students have learned.

RADDUE, GEORGE **MON 8:45; STEV 2065**
Founder/Director, Science Discovery Workshop, in cooperation with the Headlands Institute, Science Discovery Workshop

JOANN RADDUE

Critical Thinking Smorgasbord: Showcase of Project-Based Learning Activities ELEM, STAFF DEV, MATH/SCI, ENV

Objectives for the workshop:

- 1) Interactive Display: of evidence (student products) that children (grade K-7) can learn to think critically as they solve real-world design problems encountered during the construction of numerous cross-disciplinary life/physical "science" (science, art, mechanics, wood and metal working, anthropology,...) projects.
- 2) Presenter Modeling: of hands-on manipulatives, materials, and tools. Practical and theoretical background information will be provided. George will relate, as he models and displays "prototype" samples, just how he leads kids through activities that instill patterns of lateral, thematic, whole-systems thinking that helps the child weave a fabric of knowledge-based operation. He argues that teachers who don't subject their students (and themselves) to the "chaos" of truly cross-disciplinary hands-on exploratory, "constructivistic" activities are missing out on a best-kept-secret of many successful teachers. He further contends that kids need to be led through certain *exploratory* real-world activities before they are thrust into the role of "inventor" or critical thinker. The instructor is a veteran teacher and school science consultant with extensive classroom experience with children, preschool into high school, public and private, throughout California and internationally.
- 3) Discussion and Information: regarding nitty-gritty stuff like inexpensive materials and sources, and evaluation, an how to actually pull the whole thing off in your classroom.

RADDUE, GEORGE **MON 3:15; STEV 2065**
Founder/Director, Science Discovery Workshop, Science Discovery Workshop

JOANN RADDUE

Hand-To-Mind: Project-Based Learning: Making Microscopes MATH/SCI, K-12, STAFF DEV, ENV

Teachers will discover how children (grades 3-7) can learn to think critically as they solve real-world design problems encountered during the construction of this cross-disciplinary life/physical science project. Students walk in the footsteps of scientists and inventors as they investigate properties of optics, light, and mechanics while constructing a rugged and practical (and inexpensive!) learning tool. The instructor will punctuate the activities with both practical and theoretical background information. He argues that teachers who don't subject their students (and themselves) to the "chaos" of truly cross-disciplinary hands-on exploratory, "constructivistic" activities are missing out on a best-kept-secret of many successful teachers. He further contends that kids need to be led into certain exploratory real-world activities before they are thrust into the role of "inventor" or critical thinker. The instructor is a veteran teacher and school science consultant with extensive classroom experience with children, preschool into high school, public and private, throughout California and internationally. Each participant will construct a microscope and receive how-to instructions enabling she/he to implement this project in the classroom.

(The MICROSCOPE is made of pine wood and recycled steel. The teacher may wish to use scrap wood when making them in the classroom. The power is 14x, perfect for observation of small insects, aquatic critters, and plant identification. *Materials and supplies will be provided by the instructor, for a reimbursement consideration of \$7.00 materials per participant.*)

RAMIREZ, JOSÉ ALEJANDRO **MON 3:15; STEV 3046**
Chairman Department of Education, Universidad De Las Americas, Puebla

Quality of Education and Critical Thinking in Mexican Elementary Schools ELEM

Quality of education in elementary schools has been the major concern of the Mexican government during the last 5 years. Mainly for this reason, we have seen a greater allocation of financial resources to the educational system. Most of the money has gone to build more schools, to provide more furniture, equipment, didactic materials and incentives to teachers. All these actions are fine, except that the quality of education of elementary schools has not improved significantly.

The project reported in this paper starts with a different approach: a reorientation of the objectives that we want to achieve with elementary schooling and a change of the pedagogical model to reach those objectives. The paradigm advocated is the development of abilities to think critically and

creatively by using the "community of learning" pedagogical model. The initial results in the rural schools of the state of Tabasco are encouraging.

REED, JEFFREY MON 8:45; DAR 143
Teacher of History-Social Sciences, Windsor Unified School District

Analyzing Historical Images: Using Illustrations to Stimulate Critical Thinking SOC STUD, MID/HIGH, LANG, TEST

Although they are an often neglected medium, carefully selected visual images are powerful tools to enhance critical thinking. This presentation will focus on how teachers can best use such illustrations through Socratic discussions, groupwork leading to relevant and reasonable conclusions, to review or emphasize key concepts, and stimulate writing on central problems and essay questions. Some time will be devoted to strategies for locating, copying, and reproducing important images for classroom use, as well as the implications of copyright law and recent changes in technology. Examples shown will be from US and World History, 15th-19th centuries.

REED, JEFFREY TUES 10:30; IVES 78
Teacher of History-Social Sciences, Windsor Unified School District

The Story Behind Cinco de Mayo: A Study in Different Points of View MUL-CULT, MID/HIGH, SOC STUD, COLL

Today Chicanos, Anglos, Mexicans, and even the French have different perspectives on the importance of *el Cinco de Mayo*. Historically, it commemorates the initial Mexican victory over French invaders in 1862, France occupied Mexico for the next five years. After a 13-minute synchronized slide/tape program focusing on the continual resistance of the Mexican people to the French intervention, this presentation will focus on how teachers can use some of the vivid, thought-provoking illustrations of Mexico that appeared in European newspapers, 1862-67, to help students analyze different perspectives. One goal of this workshop is to critically examine the varying viewpoints of the people who lived at this time, such as the artists who created these powerful images; soldiers in Mexico; Union and Confederate soldiers embroiled in the US Civil War during most of the French Intervention; and French and Mexican Civilians.

ROCHE, EILEEN M. MON 8:45; IVES 119
Assistant Professor, Widener University

Promoting Critical Thinking in Nursing Students Through Concept Mapping and Cooperative Learning Strategies NURS, COLL, TEST, HEALTH

In a class of 100 junior level BSN students enrolled in a pathophysiology-pharmacology course the instructor used both *cooperative learning* and *concept mapping* to promote critical thinking skills. The students were randomly

assigned to 20 groups. The majority of course grading was based upon group completion of concept maps developed from assessment data collected by students on their patients assigned to them in a co-requisite medical-surgical clinical nursing course. The concept maps had to include relevant information on assessment, pathophysiology, pharmacology and nursing interventions. Each concept map was evaluated according to clarity, logic and accuracy. Common problems and solutions related to these two strategies will be discussed as well as samples of student work. Many of the learners achieved a much higher and broader level of relational comprehension than expected by the instructor who has taught this particular course numerous times. How these methods theoretically improve critical thinking will be examined.

ROMAIN, DIANNE SUN 1:30; DAR 139
Chair of Philosophy Department, Sonoma State University

Thinking in Another's Shoes: Role Playing and Critical Decision Making COLL, H CON, ENV, FEM

This workshop will explore the power of role playing for learning how to look at a decision from a variety of points of view and for keeping students and teachers alert and engaged.

The workshop leader will report on her classroom successes with role playing, invite participants to discuss their own experiences, and lead a role playing activity. The workshop will focus on decisions of special interest to environmentalists and feminists.

RUDERMAN, RENÉE TUES 3:15; STEV 3046
Assistant Professor of English, Metropolitan State College of Denver

JOSÉ RODRIGUEZ
Psychologist, Counseling Center, Metropolitan State College of Denver

Diversity Training Within the First Year Program: A Model for Empathy Development COLL, H CON, PSYCH

During this interactive presentation, participants will receive an *overview* of Metropolitan State College of Denver's First Year Experience program focusing on classroom activities, including writing, which systematically permit students to evolve in their thinking and to develop more complex and critical responses to the moral dilemmas presented by living in the world. An original *videotape* on diversity training that is longitudinal in nature, encompassing one seminar during the first semester of college, and a *discussion* of empathy development and pluralism as vital human values which need to be examined and analyzed at every level of education, will follow the presentation.

RUDINOW, JOEL
Lecturer in Philosophy, Sonoma State University

PART 1: MON 8:45; CAR 1
PART 2: MON 10:30; CAR 1

ROB R. BRADY
Professor of Philosophy, Stetson University

Sessions Repeat:
PART 1: TUES 8:45; CAR 1
PART 2: TUES 10:30; CAR 1

Tutorial Cybernetics: Interactive Tutorial Software for Critical Thinking

MID/HIGH, COLL, STAFF DEV, COMP AID

This two-part hands-on workshop will explore the utility of computer technology and interactive tutorial software as an ancillary supplement to instruction in critical thinking.

Part One: A hands-on guided tour of the student exercise banks in The LogicWorks Version 7.0

Part Two: Instructional Applications: keeping a gradebook with The LogicWorks, editing and customizing the exercises, networking, course design.

SANCHEZ, CAROL A.
Doctoral Candidate, Psychology, University of California, Riverside

TUES 8:45; DAR 139

NOREEN C. FACIONE
Research Associate, Nursing, University of California, San Francisco

Critical Thinking Dispositions and Skills Among Junior and Senior High Students

MID/HIGH, TEST, PSYCH

This session will involve an interactive examination of results from two studies of the critical thinking dispositions and skills of junior and senior high students from Canada and the U.S. Participants will engage in round-table discussions which aim to interpret the data as well as propose possible uses of the results in curriculum development. The first study explores the critical thinking dispositions and skills of 7th grade, French speaking, science students from Canada, and the second study was conducted in Phoenix, Arizona with English and Spanish speaking high school students. Both studies used the California Critical Thinking Dispositions Inventory and the California Critical Thinking Skills Test as well as other academic variables. In the session, participants will attempt to connect the results with what is known about human cognitive development and the critical thinking dispositions and skills of older students and adults.

SCHEFF, THOMAS J.
Professor Emeritus of Sociology, University of California, Santa Barbara

SUN 3:15; STEV 3046

Alienation in Families and Classrooms: Repairing the Bond

ADV, H CON, SOCIOL, PSYCH

There is by now a vast literature which suggests that children can have a significant learning experience only when there is a *secure bond* with the parent or teacher. I will show a videotape and distribute transcripts which suggest the depth of alienation between children and their teachers and parents. The handouts and discussion will show how to analyze verbal and

nonverbal discourse in order to assess the state of the bond. I will use this same material to suggest how the situations portrayed might have been used to repair the bond through the use of what Satire called "leveling".

SCOTT, STANLEY
Professor of English and Philosophy, University of Maine - Presque Isle

SUN 3:15; DAR 139

Creativity and Critical Thinking: A New Model of Learning as the Making of Meaning

COLL, ADV, ENV

This session will begin with a short talk based on a paper that raises the critical questions: "What is learning?" "Are we in the midst of a paradigm shift in learning theory?" and "How can we adapt teaching to the emergent understanding of what learning is?" The coming revolution in learning is described in the paper in terms of critical and creative thinking. It is related to Peter Elbow's theory of the writing process, and Lawrence Kohlberg's developmental psychology. Participants will engage in a 20 minute exercise that asks them to redesign a segment of their teaching based on a transformational model of learning. Open discussion will follow.

SECCO, THOMAS
Professor of English and Philosophy, Triton College

MON 1:30; STEV 3036

The Reign of the Faculties

ADV

In some way, my concerns about this problem re-visits tradition and the concerns of Descartes, Hume, and Kant. In another way, they anticipate the resolution of questions which are vital for our common future.

Is reason a "nomic primitive," the various functions of which we tend to differentiate with names such as imagination, intuition, judgment, reflection, and even memory. Or are these independent and autonomous faculties whose relation to reason must be specified in order to understand the independent nature of knowledge. This focuses on two problems: the very structure and function of reason, and the transmission and reception of knowledge we call learning. This opens the field of inquiry into a series of conjunctions and disjunctions: the relations of reason and logic, of logic and psycho-logic, of truth and meaning, of learning and the context of learning, of image and concept, of practice and theory, of utility and agreement.

SINCLAIR, A.J.L.
Director of Educational Support Services Trust

MON 10:30; IVES 35

J.H.C. OLIVIER
Programme Director of Educational Support Services Trust

The Whole-Mind Development of the Young Learner in a New Society: Rethinking the South African Classroom

LANG, MATH/SCI, MUL-CULT, ELEM

South Africa finds itself in the aftermath of a dramatic political event. A new society has dawned, with all the dreams and ideals of emerging nationhood.

But then, the ill-effects of the past are still with us and are not going to disappear overnight; this apart from the intricate educational reality of a multi-cultural society where the majority of primary schools wish their students to be exposed to English—the lingua franca of the new South Africa—at as early a stage as possible. The question is: how can this be done without impeding the child's general and linguistic academic performance.

The paper in question reports on the English Proficiency Programme (EPP), a programme in which English is used as the medium through which the child experiences the world in a natural and spontaneous manner. The material is designed in such a way that it inculcates problem-solving and thinking skills—the major underpinning of the Programme—in a heuristic way.

The Programme, which has been in existence for the past eight years, has received international recognition as a frontrunner in the conceptualization of how a second language can be contextually acquired, despite the decontextualized confines of the classroom, while at the same time developing the student's cognitive capacity.

SKOOG, KIM TUES 10:30; STEV 1040
Associate Professor of Philosophy, University of Guam

Towards a Holistic Model of Knowledge: Understanding the Interplay Between Reason, Revelation, and Realization ADV, MUL-CULT, ARTS

This presentation will propose a new epistemological model which recognizes a diverse set of modalities through which individuals explore the world. Besides rational and empirical observation, people frequently perceive reality from aesthetic, spiritual, or intuitive points of view. It must be recognized that these are not mutually exclusive modes of inquiry, but mutually supportive avenues of understanding. Drawing upon such diverse sources as cognitive psychology, ancient and modern Western philosophy, Buddhism, Hinduism, Jainism, Taoism, and Confucianism, I will attempt to explicate the nature of these "modalities" and provide a meaningful model to help clarify their relation of interdependence. The presentation will conclude with an examination of several alternative pedagogical methodologies and educational goals developed within the Asian traditions. These didactical systems attempt to develop all aspects of human consciousness as opposed to only ratiocination.

SMITH, LINDA Q. TUES 1:30; STEV 3028
Special Education Teacher, Riverside Unified School District

Reading Into the Knight SPEC ED, K-12, BEG

If you're a chess player or not, let's get together and examine this ancient game of Kings. In over 30 countries chess is used in the school curriculum. Educators are discovering that the game teaches profound lessons in think-

ing as the learner is preoccupied in the pleasure of a game. We will examine some current educational research, e.g., a five year study of 7th and 8th graders by Robert Ferguson of the Bradford PA School District showed that test scores improved by 17.3% for students regularly engaged in chess instruction, compared with 4.5% for children participating in other forms of enrichment activities. Also, a Watson Glaser Thinking Appraisal evaluation showed overwhelmingly that chess improved critical thinking skills more than other methods of enrichment. Finally, we will look at simple ways to teach the game, and count the many ways it is relevant to our curriculum.

SPEAK, DAVID TUES 1:30; NICH 173
Associate Professor of Political Science, California State Polytechnic University, Pomona

THOMAS M. COOPER
Principal, Sycamore Elementary School

Place of Democracy in Education/School K-12, POL

A growing dilemma exists in education. How do you decentralize and involve parents and others in shared decision making while respecting traditional—and well grounded—demands for accountability. Contemporary educational theory suggests that decision making's should be kept as close to the ground as possible—directly involving learners and their parents and classroom instructors and members of the community. How can we develop a language for addressing this tension between professional and bureaucratic competence on one side and the value of democratic participation on the other? This is not simply a problem of governance structures.

STEELE, JOE M. WED 8:45; IVES 78
Director, College Outcome Measures Program, American College Testing

Assessing Critical Thinking Outcomes of College General Education Programs COLL, TEST, BEG, STAFF DEV

This workshop will examine college general education outcomes that emphasize critical thinking. Assessing the ability to use critical thinking in applied contexts will be illustrated by instruments in ACT's College Outcome Measures Program. Topics include designing performance measures, comparing measures of college outcomes of general education, and comparing measures of critical thinking. An open-ended assessment task will be used to illustrate the application of criterion-referenced scales to objectively evaluate student responses. Implications will be explored for use of assessment results to improve teaching/learning practices rather than to evaluate students.

STEVENS, CHRISTINE D. SUN 3:15; IVES 35
Assistant Professor of Health Sciences, Western Carolina University

Flowcharting As a Tool for Critical Thinking in the Health Sciences

HEALTH, MATH/SCI, NURS, COLL, TEACH TACTIC

Flowcharts are a graphical representation of all the steps involved in a specific process. They can be used to identify problems, analyze data, and plan solutions. The starting and ending points of the process are decided upon, and activities and decision points are arranged in succession. This technique can be applied to the teaching of science, in that isolated facts are tied together in a logical sequence and applied to a situation in which decision-making is necessary. An example from microbiology will be presented to show how such a flowchart is created.

This technique has broader applications than just science teaching, however. It has become an important tool in the workplace, relating to total quality improvement. The technique is used to facilitate communication and understanding of a total process, and it allows constant assessment of outcomes. A case study from the health care arena will be presented, giving participants the opportunity to participate in the creative process of developing a flowchart.

SUTORIUS, JANET MAY TUES 1:30; DAR 139
Chair of the English Department, Juab High School

LORRAINE WALLACE
English/Writing Teacher, Department of English, Juab High School

Teaching Mathematics Through Children's Literature ELEM, BEG, MATH/SCI

Children's mathematics should be a living, exciting activity that gives them a tool for solving real problems and a way of looking at, and communicating about, their world that adds understanding and insight. By connecting math to literature, children should be able to more readily recognize mathematical concepts in their daily lives and transfer their arithmetic skills into a natural context. Anyone who lacks the expertise, creativity, or vision required to make the connection between children's literature and mathematics, simply needs to be shown the way and then set upon the path to creating his own cross-curriculum plans. This course is intended to help teachers view mathematics in a new light, a light that will ignite their creative powers while linking elementary mathematics to the natural world of a child.

TANNER, PAUL SUN 10:30; STEV 2049
Instructor of English, Utah Valley State College

Methodology Based Writing as a First Step to Critical Thinking for Late High School and Early College Students MID/HIGH, COLL, LANG, INF LOGIC

Late high school/early college students often have difficulty understanding the more theoretical and abstract foundations of critical thinking. Two

problems are 1) a naive acceptance of the "arguments" in the media, in class, and in social situations; and 2) a need to see the "practical application" of what they learn to render it valid. In a writing class, by first exposing the methods of rhetorical argument used in advertising, political speeches, and more, and then requiring the application of similar rhetorical arguments in their own writing, students create a bridge into the meatier levels of critical thinking. The session will deal with the rhetorical elements themselves, the class process, philosophy, and success, and a hands on workshop.

TAYLOR, TRISH MON 10:30; STEV 3040
Director of Operations, Center for Critical Thinking

A Critical Thinking Road Map to Problem Solving: Avoiding the Pitfalls

No one can escape the need to solve problems; simple and mundane as well as complex and extraordinary. Given the experience we've acquired and the abundance of "how to" theories, one would think that we would all be excellent problem solvers. But how often do we set out to solve a problem, assuming that we have thought critically about it, only to find that after much time and effort the problem isn't solved adequately. In the worst cases, we realize that what we thought was the problem wasn't the problem at all or that we didn't establish criteria for determining if the problem was solved or not. By approaching problems using the elements of thought, by applying standards to our process, and by striving to maintain effective ways of thinking, we can all save time and avoid frustration. This session will present a "road map" which acts as an overview for problem solving as well as detailed worksheets. The worksheets include flags to help identify pitfalls and strategies to help avoid them. We will also work in small groups, using the road map to begin working through a specific problem.

TROW, RUBY L. MON 8:45; DAR 122
Professor of Foods and Nutrition/Home Economics, California State Polytechnic University

MARILYNN FILBECK
Associate Professor of Family Environmental Science, California State University, Northridge

Using Student Portfolios to Assess Student Critical Thinking Skills

TEST, MID/HIGH, COLL, TEACH TACTIC

The focus of this workshop is on the process used to design and evaluate student portfolios. Participants will identify criteria for assessing students' critical thinking skills and develop descriptors which may be used in a scoring guide for portfolio assessment. Examples of various uses of student portfolios will be given by the presenters.

UNRAU, NORMAN J.

Associate Professor of Education, California State University, Los Angeles

SUN 1:30; DAR 137

The Role of Critical Thinking in Teacher Education Programs COLL, STAFF
DEV, K-12

This dialogue-workshop session will begin with a brief overview of the issue of critical thinking in pre-service teacher education or preparation programs, especially in California. We will then address three questions during the session:

- 1) What kind of training in critical thinking instruction are pre-service teachers now getting in most teacher preparation programs in California and in other states and countries?
- 2) What kind of training should be made available to them as they prepare to become teachers?
- 3) What can be done to bring about changes in teacher education programs so that further development of critical thinking might take place?

A few minutes will be taken to present some findings or a perspective relevant to each question and then the floor will be opened to contributions from the participants who will bring their knowledge and beliefs to bear on each question. We will then close the session with reactions, reviews, and reflections.

VANETZIAN, ELEANOR

Assistant Professor, University of Massachusetts

SUN 1:30; IVES 35

BARBARA CORRIGAN

Clinical Assistant Professor, University of Massachusetts

Designing Case Studies That Stimulate Inquisitiveness to Acquire Nursing Knowledge NURS

Affective dispositions and cognitive skills are interwoven in conceptualizing critical thinking (Pless & Clayton, 1993). Using nursing examples participants in this workshop will design case studies that stimulate student curiosity to think critically as they acquire knowledge. A "Preparation for Class" assignment provides guidelines for students to glean information from texts and journals pertinent to management of patient situations. Independently written preparations form a necessary knowledge base for active participation in a "Classroom Activity" that poses new "wrinkles" in the case. Students examine the issues, assumptions, and conclusions made when preparing for class. Patient care decisions are based on inferences and deductive reasoning. Critical thinking is enhanced as students answer questions they themselves raise about the management of patient care. The safe environment of a classroom allows students to practice and gain confidence in thinking critically.

VERLINDEN, JAY G.

Associate Professor of Speech Communication, Humboldt State University

TUES 1:30; IVES 35

Everyday Argumentation, Ethics, and Critical Thinking LANG, COLL,
MID/HIGH, BEG

Everyday argumentation intersects with Critical Thinking as arguers present their own reasoning and evaluate the reasoning of others, generally with the intent of either persuading others or resisting persuasion. People often think ethical considerations are irrelevant to effective arguing, and more effective arguing is done when ethics are not considered. This workshop will explore ethical behavior associated with everyday argumentation. Moreover, the session will demonstrate a group discussion technique useful to help students critically think about ethics as well as other issues.

VOORHEES, BURTON

Professor of Science, Athabasca University

MON 3:15; DAR 122

Some Basic Principles of Reason and of Complex Systems and Their Relevance to Critical Thinking COLL, MATH/SCI, INF LOGIC, ADV

This paper presents a discussion of four principles of reason. These are: the principles of non-contradiction, sufficient reason, identity of indiscernibles, and complementarity. In addition two paradigmatic exemplars of complex systems principles are given, the principle of virtual stability, and the tragedy of the commons. The relation of these principles to critical thinking is discussed, and participants are invited to carry out a critical analysis of some posed questions.

WALLACE, LORRAINE

English/Writing Teacher, Department of English, Juab High School

MON 8:45; STEV 3072

JANET SUTORIUS

Chair of the English Department, Juab High School

A Shot in the Dark? or Rubric? TEST, LANG, K-12

Do you remember trying to guess what a teacher wanted? Have you ever discovered, after your students have turned in an assignment, that *you* didn't really know what you wanted? Do you find that kids produce mediocrity and claim it's quality work? Rubrics may be your answer.

WEBSTER, YEHUDI O.

Professor of Pan-African Studies, California State University, Los Angeles

TUES 10:30; IVES (WARREN)

Multi-Culturalism and Critical Thinking: Compatibility or Competition? G, MUL-CULT

Multi-culturalism has been proposed as a solution to some educational and social problems. It promises to reduce stereotyping and prejudice, increase sensitivity to America's cultural diversity, and combat the legacies of racism and ethnocentrism which permeate education and society. Advocates of critical thinking make similar promises. I argue that a critical examination of the dominant conception of multi-culturalism would discover that it is

incompatible with critical thinking and cannot deliver on its promises. To mention three incompatibilities: 1) Multi-culturalism downplays the role of reasoning in human behavior. 2) Cultures cannot be taught or cultivated in schools, but conceptions of culture used in anthropology can be analyzed, (this would not be called Multi-culturalism). 3) Multi-culturalism affirms relativism: each individual or group has its own "perspective"; all perspectives are relatively right. The alternative to multi-culturalism is to foster critical thinking about racial and cultural theories of society.

WEBSTER, YEHUDI O. SUN 1:30; IVES (WARREN)

Professor of Pan-African Studies, California State University, Los Angeles

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

Description: Criticisms of racial classification have come from every discipline except philosophy. Yet racial classifications exhibit a multitude of logical flaws, as in the syllogism: "I have white skin. Therefore, I am a white." "People regard themselves as black. Therefore, race is a reality." "Only black people have been enslaved. Therefore, white people cannot appreciate the black experience." This presentation will outline the theoretical-educational source of these and other fallacies, and indicate how critical thinking skills must be integrated with courses on racial and ethnic relations. It will therefore also address hidden (realist and relativist) philosophical inputs in the training of teachers and social scientists.

WEBSTER, YEHUDI O. MON 1:30; IVES (WARREN)

Professor of Pan-African Studies, California State University, Los Angeles

On Becoming a (Better?) Critical Thinking Instructor: The Elements of Thought G

This presentation will address some processes of infusing critical thinking in the classroom setting, specifically, conveying the ramifications of the elements of thought — the foundation of critical thinking instruction and critical thinking as a competency. Beliefs and propositions are the end-product of an infinite series of related assumptions, points of view (theory, paradigm, world view), premises, and inferences; they have implications, policy and behavioral consequences. All these elements are integrated by reasoning, and critical thinking is the conscious grasping of these elements and subjecting them to intellectual standards. Thinking about the elements of thought requires a commitment to learning, to educability, and this commitment should be infused in every student, whether in the natural sciences, social sciences, or humanities. Grasping the elements of thought is a first step in intellectual adventures, in the construction of a critical thinking classroom, and in becoming a teacher in the Socratic sense.

WEDDLE, PERRY

Cal State Univ., Sacramento

SUN 10:30; NICH 173

Causal Reasoning MID/HIGH, COLL, INF LOGIC, MATH/SCI

Causal argument, conclusions of which are merely "A did, or does something, to B," whether murdered, flushed, cured, drowned, helped, "failed to file," neglected, abused...is *everywhere!*

Plenty of plain English needs to be brought into classrooms. Plain English like, "variables." Plain English like "control," like "control for;" like "blind" and "double blind." Like "significance," "self-esteem," "control-group," "replication," and "crossover."

All on K-14 level. No math.

And if this workshop does not boil down to horse sense, then the participants can jump upon the Presenter.

WEDDLE, PERRY

Cal State Univ., Sacramento

MON 1:30; STEV 3072

Stereotyping GEN, BEC, MEDIA, PSYCH, SOC STUD, INF LOGIC

The term "stereotype" is 20th Century, but the *idea* goes back as far as at least the Cro-Magnon—"them," and "us": "What woolly mammoths are like." (Think of Gary Larson.)

At bottom, stereotyping is oversimplification, the nonobservance of *diversity*, in favor of an easy formula.

Slides will be shown. Most you would expect, but some might be surprising.

Tricks for breaking stereotypes will, with your help, be explored. Primary are use of *Counterexample*, and (to steal from Madison Avenue) *Projection of Counter Image*.

The workshop is not just "fun & games." You'll be asked, (a) To think, creatively, of a stereotype *you* fit; (b) to delineate the *folklore* about the stereotype—how non-CT-society thinks of "you"—; and (c) to *break* the stereotype, by eliciting counter examples and perhaps by projecting counter images. (E.g., "Italian Mother.")

WEDDLE, PERRY

Cal State Univ., Sacramento

SUN 3:15; ART 108

Critical Thinking Diagrams MID/HIGH, COLL, INF LOGIC

Many Critical Thinking concepts and ideas can be simplified and made vivid via diagram. The techniques require no more than chalk and chalkboard. Can one do "question begging," or "argument" or "practical reason," or "causal case" on chalkboard? You bet! "Analysis of variance?" Maybe.

Workshop participants get 30-plus years of chalk, on condition that they pony up their own favorites.

WELLS, CLARENCE TUES 10:30; STEV 3028
Assistant Superintendent, Educational Services, Oakley Union School District

Understanding Human Thinking Behavior: The Impact of Contemporary Brain Research Findings PSYCH, STAFF DEV, TEST, ELEM

Cutting edge brain research will be examined that supports the idea that there is a biological foundation to all human behavior, including thinking. The recent controversial biologically-based brain theories argue that all we do in life is discover what's already built into our brain. What we call learning is actually a search through our brain's existing library of operating basic networks for the combinations of those that best allow us to respond to the current challenge (Edelman, 1992. Sylwester, 1993.).

WHITEHEAD, JUDITH K. MON 8:45; STEV 3046
Training Specialist, Quality Training & Resource Center, Westinghouse Hanford Company

Training the Workforce: New Tactics Required BUS, COLL, MID/HIGH, BEG, TEACH TACTIC

The workplace, from offices to manufacturing facilities, is changing at an ever-increasing pace. New technology creates more complex work scopes. Global competition requires greater quality work. Economic crises demand responsive work strategies. Employers look to training as a solution to their need for workers with the requisite knowledge to perform the job tasks that will make their companies successful. What kind of training will foster the ability to analyze, organize, assess, and "figure out things" on the job?

America's workforce needs the ability to think critically. This workshop will focus on how we can provide opportunities for problem-solving, creativity, and reasoned judgment in adult training. We will examine alternative instructional methods to lecture and recall-only evaluation of learning. New tactics are being used in technical training by the Quality Training & Resource Center at the U.S. Department of Energy's Hanford Site. Workshop participants will experience some of their techniques: case studies, games, collective recall exercises, the Worry Tree, and the Parking Lot — activities that promote learning.

WILCOX, MARK A. TUES 3:15; IVES 35
Principal and Founder of the Center for Whole Brain Thinking, theBrainWorks

Whole-Brain Teaming: A Critical Thinking Tactic That Works STAFF DEV, BUS/ECON, MID/HIGH, COLL

The vast majority of teaming being practiced in both schools and industry is artificial and ineffective; and that's the good news. In a survey (Traits of a World-Class Work Force), 75% of the respondents said that "Teaming" is a key to being world-class. This session will identify the keys for forming effective learning teams. We will also report the results of using mental preferences to form teams at the college level, with applications for high school and indus-

try. Participants will understand the importance of thinking preferences and experience "team" activities to demonstrate the points of the program.

WILCOX, MARK A. MON 3:15; IVES 35
Principal and Founder of the Center for Whole Brain Thinking, theBrainWorks

Creative Thinking: A Relevant Tool for Today and the Future BUS, MID/HIGH, COLL, STAFF DEV

Many have asked, "Can creativity, and creative thinking, be taught?" For many of the largest companies, the answer is a resounding YES! The tools and methods discussed in this session are being applied at Shell Oil, DuPont, IBM, Apple, AT&T, Binney & Smith (Crayola), and many others.

This session will present tools to stimulate creative thought. We will also show how metaphoric thinking can be used as a test of understanding. We will identify the creative thinking style and present methods for developing that style in your students. This is a fun, energy packed, participative presentation.

WILSON, BARBARA S. SUN 10:30; IVES 78
Specialist, Thinking Skills/Gifted Education, Ladue School District

ALICE J. MCFARLANE
Assistant Professor of Nursing, Maryville University

How Can Nursing Educators Define Critical Thinking for Themselves and Their Students? NURS, HEALTH, STAFF DEV, BEG

The Required Outcome Criteria #1 for the National League of Nursing accreditation process is critical thinking. How does critical thinking relate to theory and clinical education, and how can nurse educators make sense out of all of the different definitions? Multiple definitions by experts in critical thinking, including Paul, Tavis, Ennis, Chaffee and others, will be analyzed to identify *common threads* which nursing educators will use to develop a definition of critical thinking for their particular setting. The presentation of specific strategies for achieving student outcomes in critical thinking will be enhanced by dialogues on the relationship between the nursing process and critical thinking. The role of creative thinking skills and activities in developing critical thinking will also be explored.

WILSON, SALLIE L. TUES 10:30; IVES 34
Education Consultant/Even Start Coordinator, California Department of Education

Teacher + Theory + Students = Math Quality Learning! MATH, K-12, STAFF DEV

To coordinate mathematic reforms in the classrooms, and across the grade levels, successfully, depends on the teacher's understanding of how a concept transfers from theory and assimilates into practices through minds of the learner. *Math Matters* is a four year National Science Foundation (NSF) Staff Development program designed to assist teachers of Chapter 1 (Compensatory Education) and Migrant Education students in grades K-6. This

mathematic enhancer develops the knowledge and skills of the teachers in mathematic instruction to facilitate quality thinking and reasoning among students as they explore their learning in a variety of ways. The project is organized to mode successful strategies developed and implemented by the California. Department of Education Initiatives in numerous staff development programs. This session will emphasize Math Matters activities, approaches, and materials to demonstrate how mathematics for students at risk can be fun!

WINCHELL, PETER
Educational Consultant, Socratic Seminars

TUES 8:45; STEV 3036

VICTORIA ALLEN
Educational Consultant, Socratic Seminars

Socratic Seminars — Learning How To Learn STAFF DEV, K-12, BEG

Successful people must resolve a basic dilemma — success increasingly depends on learning, yet most people don't know how to learn. Even successful people must learn how to learn.

By emphasizing questioning, Socratic Seminars "teach" learners how to: construct knowledge, reason logically, make connections, and work collaboratively. Too often, organizations, including educational institutions, focus on policies, schedules, budgets and bottom-line issues because they are simple and tidy when subject to analysis. Socratic Seminars can give educational and non-educational institutions alike a forum in which to construct knowledge about the ideas, issues, and values that drive their actions.

Socrates taught people to learn to think by asking questions. Participate in a modern version of Socratic learning. This is not a make-it and take-it workshop or a presentation by "experts." It's an experience in learning how to learn.

WOOD, MARTHA M.
Associate Professor of Developmental Mathematics and Director of Systems Approach to Remediation, Clayton State College

SUN 10:30; STEV 3040

Cognitive Enrichment in Developmental Mathematics COLL, MATH/SCI

"Can instruction in learning to learn skills be introduced in a developmental mathematics course without adversely affecting mathematics learning?" In this study, 15 percent of experimental group (4 section, N = 100) class time was devoted to cognitive enrichment activities based on Feuerstein's theory of cognitive modifiability. A control group (6 sections; N = 134) received conventional instruction. Data analysis revealed that students in the experimental group progressed farther and persevered more than control group students, and also scored significantly higher on measures of

information processing, self-testing, and test strategies. Four recommendations are offered for developmental studies programs.

WRAGG, DIXON **MON 10:30; NICH 173**
Director of Community Liaison, North Coast Treatment Center

Nonrational Determinants of Thinking, and Implications for Critical Thinking Pedagogy PSYCH, SOCIOL, MUL-CULT, BEG

Most presentations of critical thinking emphasize specifically cognitive factors such as rules of logic. But nonrational (social, political, cultural, economic, geographical, emotional and physiological) factors inform our perceptions, beliefs and values more than we like to admit. In this workshop, I'll present examples of how these factors affect our thinking, and we'll consider how to optimize our approach to teaching in light of this information. Format will be lecture-discussion, with the emphasis on discussion.

WRAGG, DIXON **TUES 10:30; NICH 173**
Director of Community Liaison, North Coast Treatment Center

Reasoning with Irrational Persons PSYCH, H CON, BEG

We've all had the frustrating experience of trying to reason with extremely irrational persons (and we all have been irrational to varying degrees ourselves). In this workshop, we'll look at the underlying causes of irrationality and share some ideas as to how to deal constructively with it, including a look at some tried-and-true principles of communication. Format will be a brief presentation of the basic concepts, followed by spirited discussion. If time allows, we may also do a role-play or two.

WRAGG, DIXON **SUN 1:30; DAR 143**
Director of Community Liaison, North Coast Treatment Center

Critical Thinking and Social Responsibility: From the Classroom to the World H CON, SOCIOL, BEG

The main explicit function of an educational system is educating people, which implies imparting critical thinking skills. Its main tacit function is uncritically indoctrinating people with societal mores. The two are fundamentally in conflict, although most educators prefer to ignore that uncomfortable fact. To the extent that the world's problems are predicated upon dominant societal assumptions, "education" which uncritically teaches social acceptability as a valued norm perpetuates these problems. Educators, then, have a social responsibility to replace indoctrination with real education. I'll briefly present the basic concepts, and then we'll have a spirited discussion through which we'll explore how we can confront this issue without losing either our sanity or our jobs.

WRIGHT, IAN

MON 1:30; IVES 34

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

Critically Deciding What To Do BEG, ELEM, SOC STUD, TEACH TACTIC

In this workshop, participants will engage in two activities designed to identify and apply the standards of good practical reasoning (reasoning about what to do). Although the activities relate to the elementary school social studies curriculum, they can be adapted to other situations in which a practical decision is required.

YOSHII, RIKA

SUN 3:15; NICH 173

Assistant Professor of Computer Sciences, California State University, San Marcos

ALASTAIR MILNE

Associate at Educational Technology Center, University of California, Irvine

JAMES CHOU

Student, California State University, San Marcos

Critical Analysis and Problem Solving Through Debugging MID/HIGH, COLL, MATH/SCI

This session will relate the "debugging" of computer programs to critical analysis and problem solving in various domains. Debugging is the process of precise, logical, in-depth analysis of a system, in which fault (due to inconsistency, incompleteness, or inadequate reasoning) has been found, to identify and resolve the causes.

This process can be applied, outside the programming domain, to the similar sorts of problem solving needed in many different situations. We argue that students can develop critical analysis and problem-solving skills by receiving instruction in the purpose of debugging and in useful techniques for it. While traditional problem-solving courses have concentrated on program design, we emphasize the debugging process. Participants will engage in demonstrations of the process and of possible teaching methods.

YOUNG, MARYBETH

MON 3:15; DAR 137

Associate Professor, MCH Nursing, Loyola University, Chicago

Fostering Critical Thinking in Novice Nurses NURS, HEALTH, COLL, TEACH TACTIC

How can educators prepare today's nursing students for practice in a rapidly changing health care delivery system? No single, clear answer emerges; indeed, more questions are raised. Rather than adding content and credit hours, we search for effective tactics to help students learn to select and use data through careful reasoning. In this participatory session, reflection on past successes and challenges will provide a basis for faculty dialogue. After a brief review of assessment approaches, the group will identify and analyze

varied practical approaches to fostering critical thinking skill development and self-evaluation in classroom and clinical settings.

YOUNG, MICHELE M.

WED 8:45; DAR 139

Chair of Nursing Department, Illinois Benedictine College

Cognitive Reengineering: A Process for Cultivating Critical Thinking Skills in RN's COLL, FEM, NURS

Critical thinking has been identified as essential to development of the professional nursing role. A process, "cognitive reengineering" has been created to facilitate critical thinking skill development in RN's. The process is derived from adult learning principles, techniques of consciousness-raising and transformational theory. Its basic components include examination, disassembly, transformation and reassembly of assumptions, beliefs, and perspectives using personal experience, historical research, and nursing trends and issues as content for exploration. Essential environmental conditions include mechanisms to engage the student, a knowledgeable facilitator, models, and peer support. Conceptual mapping is described as a means to assess student development.

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With a solid core membership of 750 leading educators as a foundation, the National Council for Excellence in Critical Thinking (NCECT) is working hard to expand its outreach and impact. The strategy is twofold: to staff research-reporting committees with bona-fide experts in 75 domains and to establish regional and state centers for critical thinking.

The hopes of the National Council leadership are ambitious, no less than the establishment of NCECT representatives in every school district, college, and university. "Only with wide outreach can the message of the National Council transform classrooms at all educational levels," says Richard Paul, NCECT chair.

Unless educators come to understand the importance of intellectual criteria, they will not make the basic changes in teaching and assessment fundamental to sound educational reform. For informational material, please visit the Foundation for Critical Thinking representatives, on the ground floor of the Student Union. There are also informational meetings held around the country. Contact any of the affiliated Centers (see next page) for a brochure and information on locations and dates for the meetings



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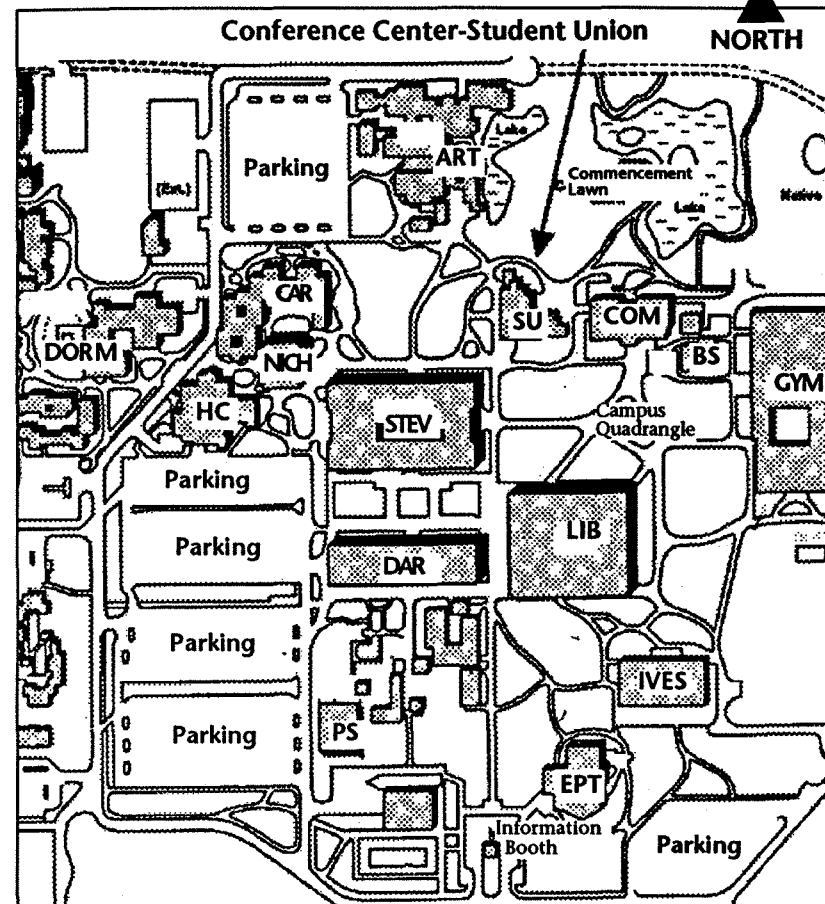
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