Critical Thinking & Educational Reform

SPONSORED BY THE CENTER FOR CRITICAL THINKING AND MORAL CRITIQUE
PROCEEDINGS OF
THE
FIFTEENTH ANNUAL
INTERNATIONAL CONFERENCE
ON
CRITICAL THINKING AND
EDUCATIONAL REFORM

Three Waves of
Research and Practice

JULY 30–AUGUST 2, 1995

SPONSORED BY THE
Center for Critical Thinking and Moral Critique
SONOMA STATE UNIVERSITY
(707) 664-2940
# Table of Contents

## Introduction
- Keynotes ............................................................................. 1
- Conference Theme .............................................................. 4
- Conference History ................................................................ 14
- Special Events ..................................................................... 17

## Conference Scheduling
- How to Find the Session You Want to Attend ......................... 19
  - Audience Codes and Campus Map ......................................... 21
  - Planning Guide .................................................................. 22
- Conference Schedule ............................................................. 24
  - Special Interest Groups ...................................................... 47
  - Selected Sessions (Listed by Audience Code) ......................... 49

## Conference Abstracts
- Session Abstracts ................................................................ 79
- Presenter's Addresses ........................................................... 172

## About the Sponsors
- About Our Organization ........................................................ 183
- Staff Development ............................................................... 187
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.

Re-thinking the Critical Thinking Movement: Three Waves of Research and Practice

Presentation time and location:
July 30, Sunday, 9:00 A.M. - 10:15 A.M.
Evert Person Theatre

How to Catch the Third Wave

Presentation time and location:
August 2, Wednesday, 1:30 P.M. - 3:00 P.M.
Warren Auditorium
**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.

**On the Need for Comprehensiveness in Critical Thinking**

Presentation time and location:
July 30, Sunday, 7:00 P.M. - 8:15 P.M.
Evert Person Theatre

**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. 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.

**Why Affect is Crucial to Thinking**

Presentation time and location:
July 31, Monday, 9:00 A.M. - 10:15 A.M.
Evert Person Theatre

**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*.

**Riding the Third Wave in the Shoals of Everyday Life: A Personal Account**

Presentation time and location:
July 31, Monday, 7:00 P.M. - 8:15 P.M.
Commencement Lawn

**RALPH JOHNSON** is one of the distinguished and respected leaders in the field of informal logic and critical thinking. He is the co-founder of Informal Logic, one of the oldest and best established journals in the field. He has many publications in the field and has been a regular presenter at the critical thinking conference for the last 15 years.

**Intellectual Standards for Critical Thinking**

Presentation time and location:
August 1, Tuesday, 9:00 A.M. - 10:15 A.M.
Evert Person Theatre
THEME

Critical Thinking, the State of Education Today, and the Goals of the 15th International Conference

By Richard Paul

Understanding Substantive Critical Thinking
Avoiding the Growing List of Counterfeits

It is now generally conceded that the art of thinking critically is a major missing link in education today, and that effective communication and problem-solving skills, as well as mastery of content, require critical thinking. It is also generally recognized that the ability to think critically becomes more and more important to success in life as the pace of change continues to accelerate and as complexity and interdependence continue to intensify. It is also generally conceded that some major changes in instruction will have to take place to shift the overarching emphasis of instruction from rote memorization to effective critical thinking (as the primary tool of learning).

It is not so clear to most educators how to affect the shift, nor what that shift essentially should effect in. All too often the phrase “critical thinking” is nothing more than a vague place-holder for any of a miscellany of changes and/or conceptions of change. All too often, the phrase is used so imprecisely that no one knows exactly what is being said nor how to assess its unclarified effect. Critical thinking is too important, the reforms it makes possible too essential, to leave the concept to helter-skelter intuitive use.

The 15th International Conference on Critical Thinking has two goals. The first is to lay out the history of work in the critical thinking field in such a way that interested persons can see where we are, how we have gotten there, and where we are going. Insight into the recent history of critical thinking sheds light on how one can best understand models that purport to foster critical thinking.

The second goal builds on the first, namely: to display some of the powerful and practical ways in which critical thinking can be brought into instruction, in the light of the latest research and practice. With perspective on the field, one can make an intelligent decision about what conceptions of critical thinking offer the greatest potential for long term reform of teaching and learning.

There are three “waves” of critical thinking research that can be identified since the early 70’s. The three waves represent, in essence, different research agendas and point to different emphases in application. Each wave has its committed adherents, and each therefore represents an important choice in laying the foundation for future work in the field. The third wave can accomplish its goals only through a mastery of the most basic insights of the first two waves. Excellent work in the research agendas of all “waves” will play an important role in the 15th International Conference.

The first wave—based on a focus of the theory of logic, argumentation, and reasoning—has become a field unto itself, dominated by philosophers. First wave theorists tend to focus only on those instances of thinking in which persuasion and argumentation are explicit, and they tend to analyze them with a minimum of background context. They tend to view reasoning and logic in a relatively narrow and technical fashion, ignoring the broad family of related uses of the word ‘logic’ which one would find in any dictionary of the English Language. The notion of critical thinking as providing the tools for a broad analysis and assessment of thinking in a full range of the contexts in which thinking is at work in human feelings and behavior is not a core notion in the writings of most informal logicians. The result is that they do not make command of the logic of language and the logic of questions key components of critical thinking.

If one views “logical structures” as omni-present in virtually all human thought, emotion, and behavior, the framework and writings of most informal logic theorists strikes one as generally narrow and specialized.

The second wave, lacking grounding in any one field of study, represents a loose conglomeration of interested persons, producing work of mixed quality, developed from many different standpoints. This diversity of standpoints gives to second wave research a scattered character. It includes some working on critical thinking from the standpoint of cognitive psychology, some from the standpoint of “critical pedagogy”, some from the standpoint of feminism, a variety of others from the standpoint
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The second wave, lacking grounding in any one field of study, represents a loose conglomeration of interested persons, producing work of mixed quality, developed from many different standpoints. This diversity of standpoints gives to second wave research a scattered character. It includes some working on critical thinking from the standpoints of cognitive psychology, some from the standpoint of “critical pedagogy”, some from the standpoint of feminism, a variety of others from the standpoint of particular disciplines (such as critical thinking in biology, business, or nursing), and yet others, from the standpoint of some element purportedly missing from first wave research agendas (such as emotion, intuition, imagination, creativity, etc.)

Taken collectively, therefore, second wave projects are more comprehensive than first wave projects, since second wave analysis looks at critical thinking typically outside the tradition of logic and rhetoric. Unfortunately, second wave work (lacking a shared intellectual tradition) is collectively far less integrated, less coherent, and often more “superficial”. While exceptional work has been done during the second wave, the gain is too often vague comprehensiveness at the expense of depth and rigor.

The third wave represents a commitment to transcend the predominant weaknesses of the first two waves (rigor without comprehensiveness, on the one hand, and comprehensiveness without rigor, on the other). Third wave theorists are still relatively rare, though the work of a variety of intellectuals and scholars is relevant to third wave research agendas.

The principles and standards of the National Council for Excellence in Critical Thinking (NCECT) illustrate well an attempt to answer the need created by the limitations of the first two waves of critical thinking theory and practice and therefore represents a third wave phenomenon. The research projects based on these principles and standards are comprehensive in nature, going much beyond a narrow view of logic and critical thinking.

Still, the NCECT has found it difficult to “recruit” scholars and researchers with the breadth of background which third wave agendas call for. There are at present few scholars willing to internalize both first and second wave insights. The field is therefore at a crucial juncture, for if comprehensiveness and rigor are not combined in the work of the field, it is likely to split even further into a narrow technical field on the one hand, and a hodge-podge on the other. However, it is too early to tell whether and to what extent the need for both comprehensiveness and rigor will be answered by the full development of NCECT research agendas.

Unfortunately, third wave agendas cannot go forward without a general recognition of the importance of a deep and comprehensive theory that goes beyond the “narrowness” of most first wave research and the “superficiency” of much second wave research. It requires a willingness to think outside one’s discipline or at least to think within one’s discipline from the standpoint of a broader range of concerns. It requires, on the one hand, informal logicians who are willing not only to examine the problems posed by second wave theorists, but also to move to a broader conception of logic, one that recognizes that there is a logic to thinking within different disciplines, a logic to human emotions, a logic to human behavior, a logic, indeed, to every dimension of human life in which
thinking is the driving force. On the other hand, it calls for those with second wave concerns to take seriously the insights of first wave research and not simply to grudgingly (and abstractly) admit some value to it.

In other words, while first wave researchers need to recognize the importance of broadening the sweep of their concerns, second wave researchers need to recognize the need to build on the theoretical rigor of the first wave, to internalize, not ignore, the insights of the first wave, and to build on them. Only out of a real marriage of first and second wave concerns, only by a deep integration of insights, can the third wave fully develop. Those who would contribute significantly to the field of critical thinking research need to internalize the strengths of the first two waves.

The First Wave of Critical Thinking Research & Practice
1970-1982
Formal & Informal Logic Courses

First Wave Research Concerns:

• the design of individual courses in critical thinking or informal logic
• the critique of formal logic as a tool for the analysis and assessment of "real world" reasoning and argumentation
• the development of theories of fallacies in thought
• the development of theories of informal logic, reasoning, persuasion, rhetoric, and argumentation, etc.
• the exploration of philosophical issues raised by theories developed to account for informal logic, reasoning, and argumentation

In the first wave of critical thinking practice, the dominant paradigm came from philosophy and logic and the dominant educational manifestation was a formal or informal logic course. The idea was to establish a basic course in critical thinking which would provide entering freshmen with the foundational intellectual skills they need to be successful in college work. Almost from the beginning, however, there was a contradiction between the concerns and ideals that gave rise to the theory and practice and actual classroom practice. The ideals were broad and ambitious. The practice was narrow and of limited success. For example, the State College and University System of California defined the goals of the critical thinking graduation requirement as follows:

Instruction in critical thinking is to be designed to achieve an understanding of the relationship of language to logic, which should lead to the ability to analyze, criticize, and advocate ideas, to reason inductively and deductively, and to reach factual or judgmental conclusions based on sound inferences drawn from unambiguous statements of knowledge or belief. The minimal competence to be expected at the successful conclusion of instruction in critical thinking should be the ability to distinguish fact from judgment, belief from knowledge, and skills in elementary inductive and deductive processes, including an understanding of the formal and informal fallacies of language and thought.

On the one hand, we have a global comprehensive goal and on the other hand a fairly narrow and specialized way to meet that goal. Students do not in my experience achieve "an understanding of the relationship of language to logic" leading to "the ability to analyze, criticize, and advocate ideas"; they do not develop "the ability to distinguish fact from judgment" or "belief from knowledge" simply because they have been drilled in "elementary inductive and deductive processes" nor because they have been exposed to the theory of formal and informal fallacies. The misfit between goal and means is obvious to anyone who takes the goals in the above paragraph seriously. One three unit course in critical thinking can at best open the door to the beginning of critical thinking, provide an opening framework. It cannot result in the students having deep notions like "an understanding of the relationship of language to logic" or sweeping abilities like "the ability to analyze, criticize, and advocate ideas."

No one or two isolated courses can change the basic habits of thought of anyone. Furthermore, as a practical matter, many of the courses established to accomplish the objective fell far short of the best design. Often, for example, a course in formal logic was allowed to qualify as a course in critical thinking even though such courses generally are confined to teaching only the mechanical manipulation of symbols in accord with rules for such manipulation, a practice that does not result in changing habits of thought. Students who have taken such courses demonstrate little sense of how to transfer their "manipulative" abilities (with the symbols of formal logic) into practical tools in everyday thought.

Substituting informal logic courses for formal ones was one of the earliest shifts in emphasis as more and more instructors recognized that the formal logic approach had little transfer effect. The emphasis in the informal logic approach to the improvement of thinking was a giant step in the right direction. In place of highly abstract and contrived "arguments" in symbolic form, the students had to read and analyze arguments that came from editorials and everyday speech and debate.

Unfortunately, the informal logic textbooks were often rich in vocabulary and sophisticated distinctions but, unfortunately, poor in fostering deep internalization. The distinctions were generally well thought out, but there were far too many distinctions for a one semester course, and
furthermore, they were typically too narrow in their scope. Consequently, most students were rushed on to new distinctions and concepts before they had internalized the "old" ones. There was little emphasis on the construction—as against the critique—of reasoning. There was little done with the essential dispositions and values underlying critical thinking. The goals remained broad and profound; the means narrow and unrealistic.

Furthermore, the problem of transfer remained; it was still not clear to students how to transfer their analyses of bits and pieces of argumentation into learning what they were being taught in other courses, namely, sociology, psychology, biology, etc. So most students, once their critical thinking courses were finished, reverted to their established lower-order, survival skills—principally, rote memorization and cramming—to get by.

The problem of most first wave work is both theoretical and pedagogical. Theoretically, little if anything was done to work out a comprehensive theory of "logic" sufficient to make sense of the logic of biology, the logic of sociology, the logic of anthropology, geography, literature, the arts, etc. The concept of logic implicit in informal logic research is too narrow to provide the basis for transfer of critical thinking from, in fact, informal logic courses (no matter how well designed) to the broader curriculum, nor into the complex problems of everyday life and thought (except in a narrow range of such problems).

Pedagogically, little was done to work out the practical problems of restructuring instruction and learning overall. After all, how is one to teach anyone anything in such a way as to foster their taking command of their thinking, so that they develop not only intellectual skills but the basic dispositions and values that underlie critical thinking? How are academic subjects to be taught such that students leave school with the intellectual skills necessary to adapt to incessant and accelerating change and complexity? How are we to teach so that students explicitly recognize that the work of the future is the work of the mind, intellectual work that demands global skills of reasoning and intellectual self-discipline? These questions must be addressed.

The Second Wave of Critical Thinking Research & Practice
1980-1993
Critical Thinking Across the Curriculum Across the Grades

Second Wave Research Concerns:

- the development of a model for teaching critical thinking at some educational level or within some particular subject
- the development of a theory of critical thinking within a given domain or subject
- exploration of the relation of critical thinking to emotion
- exploration of the relation of critical thinking to the media
- exploration of the relation of critical thinking to problem-solving
- exploration of the relation of critical thinking to creative thinking
- exploration of the relation of critical thinking to sound business organization and management
- exploration of the relation of critical thinking to parenting
- exploration of the relation of critical thinking to political and ideological agendas
- research in cognitive psychology

The second wave of critical thinking research and practice began when increasing numbers of educators and administrators began to recognize that one course in critical thinking at the college level does not a critical thinker make. The problem for these reformers was transformed from "How is one to design an isolated critical thinking course for college students?" to "How can critical thinking be integrated into instruction across all subjects and all grade levels?" From "What is informal logic, reasoning, and argumentation?" to "What is the role of emotion—or intuition or culture or gender or problem solving or creative thinking or political and ideological positioning—in thinking?"

Unfortunately, many second wave reformers were not at all clear on how to integrate critical thinking into instruction across the curriculum or across grade levels. The concept of informal logic which had been developed in and for critical thinking and informal logic courses did not translate readily into the "logic" of the disciplines, let alone into the "logic" of everyday life. For though informal logicians were often clear and rigorous in the development of theory, the theory they developed was narrowly conceived. In other words, most informal logicians have never seriously considered the challenge of developing a theory of critical thinking adequate for the teaching of all subjects across all grade levels. Informal logic was not conceived as applicable to virtually all human contexts. The theory of the informal logician remained the theory of a specialist thinking and writing for other specialists (about a subject of relatively narrow scope). It was not the thinking of a comprehensive educational thinker writing for educational reformers. It was not the thinking of a comprehensive mind considering broad and comprehensive problems.

From a third wave perspective, an adequate account of informal logic and critical thinking must shed significant light on the logic of everyday thinking as well as on the logic of the disciplines (if it is to attract the attention of educational reformers and those concerned with the application of critical thinking to everyday life). Problems in business, parenting, everyday relationships, politics, civics, and such, cannot easily be
addressed within the framework of current theories of logic. And since critical thinking makes sense whenever and wherever thinking might go awry, the logic of critical thinking must be broad and encompassing, not narrow and specialized.

Unfortunately, second wave reformers did not set out to broaden the basis of informal logic and reasoning. Rather, some second wave reformers mistakenly rejected “logic” rather than worked to expand it. To some logic constrained thinking, limited creativity, discounted intuition. Others seemed simply to ignore logic and focused instead on any of the various “discoveries” and popular theories of thinking. In fact, the field of “thinking” became, and still is, a veritable hodge-podge, some work bordering on charlatanism. Quick-fixes for teaching and understanding thinking became commonplace. Quick-fixes ruled, and still rule, reform efforts at all educational levels.

Otherwise respectable educational organizations sponsored approaches to thinking that were simplistic and glitzy. Big money began to move into the field, since there was much money to be made by quick-fix programs that implied that thinking could be quickly and painlessly upgraded by educators, even by those who had never themselves studied thinking and thought poorly themselves. Instant success was promised. The phenomena of pseudo-critical thinking became common.

States set up new testing strategies that were claimed to be higher order. California mounted a very expensive new testing system in reading and writing which was touted to be focused on critical thinking—when it in fact was simply subjective and poorly designed. The result was a political battle between the “liberals” who liked the test and “conservatives” who thought it advanced a liberal agenda. Eventually the governor vetoed the test.

Other second wave researchers—principally cognitive psychologists—have focused concern on the manner in which experts and novices think. They have developed various theories of “thinking” and “intelligence,” however, this research and these theories often lack a philosophical foundation, regularly ignore the problem of the intellectual assessment of thinking, and, like first wave informal logic research, lack a clear connection to the comprehensive problem of teaching subject matter in a variety of fields. The “practical” suggestions developed were more often like a bag of tricks than a coherent pedagogy. The problem of long-term infusion was not significantly addressed.

Though second wave did not explicitly call for an abandonment of “logic” and additional attention was directed at explicating various subject areas in the light of some theory of critical thinking, there was little effort to marry the insights of the first wave with the needs of the second. Little was done, for example, to explicate the logic of history, the logic of math, bio-logic, socio-logic, psycho-logic, the logic implicit in disciplined ways of thinking. After all, what does it mean to think historically, to think geographically, to think mathematically, to think philosophically, to think aesthetically, etc.? These are pressing second wave questions. However, since most subject matter specialists have not studied informal or formal logic, they are not well-positioned to integrate insights from logic into their concept of their field.

In short, the variety of attempts to reconstruct (with little background in informal logic or theory of critical thinking) the role of critical thinking within a domain, has tended to result in disjointed and sometimes superficial results. The upshot is often a hodge-podge of ideas, often superficial, usually incomplete, and in some cases, arbitrary. The phenomenon of instant-expert critical thinking becomes commonplace. Those who decide to write an article on critical thinking become in their minds an expert overnight. Programs are rushed into press to capitalize on the emerging market for critical thinking materials.

### The Third Wave of Critical Thinking Research & Practice

#### 1990-Present

#### Depth & Comprehensiveness in Theory & Practice

Third Wave Research Concerns:

- integrating the insights of first and second wave research
- developing a theory of critical thinking that is rigorous and comprehensive
- explicating intellectual standards that have general application both within and beyond academic environments
- accounting for the appropriate role of emotion and values in thinking
- understanding the leading role of thinking in the shaping of emotion and behavior
- integrating the empirical work of cognitive psychology into critical thinking theory
- establishing common denominator principles and standards within the field of critical thinking research and practice
- developing effective assessment tools
- identifying and critiquing pseudo-critical thinking models and programs

The third wave of critical thinking research and practice is only just now beginning to emerge. As yet there are few who see clearly the enormity of the task which the field faces. The success of the third wave can be achieved only with a growing recognition of the strengths and weaknesses of the first two waves. First wave research needs to bring its rigor and depth into a broader complex of concerns. Second wave research
Conference History

The 1995 Conference on Critical Thinking and Educational Reform reflects the development implicit in the fourteen 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, 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 21), 2) by listing sessions according to selected audience codes (see page 49), and 3) by setting up a meeting time on Tuesday evening (8:00 P.M.) for groups to organize themselves into networks (see the section entitled Special Interest Groups, page 47, 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!

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**Exhibitors**

**The Foundation for Critical Thinking**

In the Dining Commons, Sunday 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 15th International Conference. It will be located in the Dining Commons. On display will be books, video tapes, micro-publications, tee-shirts, sweat shirts, and book totes.

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.

**Publishers**

In the Dining Commons, Sunday through Wednesday

Various publishers 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.
Mini-Sessions

A new feature of this year's conference will be the mini-sessions which offer a potpourri of ideas for the classroom. In these forty-minute mini-sessions, specific classroom tested ideas and strategies will be presented in an informal setting conducive to interaction between the presenters and participants.

Evening Thinkfests

The evening Thinkfests are designed as an integral part of the conference. They provide an opportunity for presenters and participants to interact and explore multiple possibilities and lines of thought. These interactions are essential for thinking to develop. Please come and share your thinking with others.

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 49). 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 21, as well as on the last page of the program.

• The conference schedule section is best used to view the schedule as a whole. It lists the sessions chronologically, giving the presenter name(s), session title, location, and audience codes. The abstracts can be located by referencing the presenter's name.

• The abstracts are listed alphabetically by presenter's name. If there are some speakers you especially want to see, you can find out what talks they will give and when.
• There is also a listing of some sessions by selected audience codes. This section is not intended to give a complete list of every session addressing that category, but rather to highlight some that have especially strong emphasis in those areas. Again, the abstracts can be found by referencing the presenter's name.

• If you’re especially interested in hands-on sessions, check the abstract. Many abstracts describe the nature of the session, as well as more detail about the content. If the abstract is unclear, arrive early and ask the presenter if the session is hands-on.

• For your convenience, we’ve included a planning guide on page 22. 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: advanced session
- ARTS: the Arts
- BEG: beginners in critical thinking
- BUS: business
- COMP AID: computer assisted instruction
- ENV: environment
- FEM: feminism
- GEN: general
- HEALTH: health sciences
- H CON: human conflicts
- INF LOGIC: informal logic
- LANG: language arts/English
- MATH/SCI: math/science
- MEDIA: media, media literacy
- MUL-CULT: multi-culturalism
- NURS: nursing
- PEACE: peace studies
- POL: politics, political science
- PSYCH: psychology
- SOC STUD: social studies
- SOCIOl: sociology
- STAFF DEV: staff development
- TACTIC/STRAT: teaching tactics & strategies
- TEST: testing and assessment
## Individual Planning Guide

<table>
<thead>
<tr>
<th>SUNDAY</th>
<th>MONDAY</th>
</tr>
</thead>
</table>
| **9:00 AM to 10:15 AM**
  Keynote by Richard Paul
  (Evert Person Theater) | **Keynote by Linda Elder**
  (Evert Person Theater) |
| **10:30 AM to 12:00 PM** |                |
| **12:00 PM to 1:30 PM**
  Lunch available at BBQ (outside Dining Commons), in Pub
  (upstairs Student Union) or at Commons Dining Facility (inside
  Dining Commons). For participants staying in On-campus
  housing the Residence Dining Hall will be open from 12:00 P.M.~
  1:30 P.M. |                |
| **1:30 PM to 3:00 PM** |                |
| **3:15 PM to 4:45 PM** |                |
| **5:00 PM** |                |
| **6:00 PM** |                |
| **7:00 PM**
  Keynote by Gerald Nosich
  (Evert Person Theater) | **Keynote by Yehudi Webster**
  (Commencement Lawn) |
| **8:30 PM** |                |
| **9:00 PM**
  ThinkFest, see page 18, (Dining
  Commons) | **ThinkFest, see page 18, (Dining Commons)** |
| **10:00 PM** |                |
| **11:00 PM** |                |

<table>
<thead>
<tr>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
</tr>
</thead>
</table>
| **9:00 AM to 10:15 AM**
  Keynote by Ralph Johnson
  (Evert Person Theater) |                |
| **10:30 AM to 12:00 PM** |                |
| **12:00 PM to 1:30 PM**
  Lunch available at BBQ (outside Dining Commons), in Pub
  (upstairs Student Union) or at Commons Dining Facility (inside
  Dining Commons). For participants staying in On-campus
  housing the Residence Dining Hall will be open from 12:00 P.M.~
  1:30 P.M. |                |
| **1:30 PM to 3:00 PM** |                |
| **3:15 PM to 4:45 PM** |                |
| **5:00 PM** |                |
| **6:00 PM** |                |
| **7:00 PM**
  ThinkFest, including
  Special Interest Groups,
  see page 47, (Dining
  Commons) |                |
| **8:00 PM** |                |
| **9:00 PM** |                |
| **10:00 PM** |                |
| **11:00 PM** |                |
| **11:00 PM** |                |
| **11:00 PM** |                |
| **11:00 PM** |                |
| **11:00 PM** |                |
CONFERENCE SCHEDULE

SUNDAY

9:00 AM -- 10:15 AM

RICHARD PAUL

 Welcoming Address: The History of the Critical Thinking Movement. Three Waves of Research and Practice.

10:30 AM -- 12:00 PM

TISH ALLEN, LYNN CHONG, NED McGUIRE, FREDERICK TORZS, DEANNA YAMEEN

Collaboration within One Critical Thinking Department

M. NEIL BROWNE, STUART M. KEELEY WARREN

Getting Started as a Teacher of Critical Thinking: Classroom Behavior and Assignments

YEHUDI O. WEBSTER

Are There White and Black People? Reasoning About Racial Classification

T. EDWARD DAMER

How to Distinguish "Good" Arguments from "Bad"

HARRY T. MAYO, PAUL DUAX, GAIL HUGHES, VIRGINIA O'KEEFE, JOAN RYKIEL, MICHAEL MONK

What are We Doing With Critical Thinking in the Community College System and Where are We Headed With It in the Classroom? A Panel Discussion Moderated by HARRY MAYO

JEFFERY R. W. DONLEY

Surfing the Third Wave: Integrating Critical Thinking and Interdisciplinary Studies for the 21st Century
CONFERENCE SCHEDULE

MINI-SESSIONS
Ives 119
10:30 AM – 11:10 AM

G. DOUGLAS MEYERS
Achieving Poetic Consciousness: Found Poetry/Poetry
Found  LANG, INF LOGIC, K-12

JEFF REED
Using Assessment Rubrics for Critical Thinking
Mid/High, Coll

11:20 AM – 12:00 PM

EDWARD L. MCGUIRE
Advantages of a Technical Assistant for a Critical
Thinking Program  Mid/High, Coll, Test, Tactic/Strat

DAVID ZWICKER
SAVY & SAFE: A Critical Thinking Approach to Self-
Defense  Staff Dev, Beg, Psych, Health

12:00 PM – 1:30 PM

LUNCH
Available at BBQ (outside Dining Commons), in Pub
(upstairs Student Union) or at the Commons Dining Facility
(inside Dining Commons).

1:30 PM – 3:15 PM

M. NEIL BROWNE, STUART M. KEELEY ............... WARREN
Lessons Learned from Two Decades of Teaching Critical
Thinking  Tactic/Strat, Coll, Beg, Soc Stud

T. EDWARD DAMER ......................... STEV 1002
How to Construct Effective Moral Arguments  Mid/High,
Coll, Beg, Inf Logic

RICHARD PAUL ......................... SU 100
Beyond Argumentation: The Use of Reason in Everyday
Life  Gen, Beg

JAN WILLIAMSON ....................... STEV 3008
Alternative Assessment: Enhancing and Monitoring
Student Thinking  Test, Gen

HARRIET CHAMBERLAIN, PH.D ............... STEV 2049
Thinking For Your Life  Coll, Adv

NORMAN J. UNRAU ....................... STEV 2006
Toward a New Wave Conception of Critical Thinking: A
Process, Dispositions, and an Outlook In a Context
Coll, Mid/High, Tactic/Strat, Staff Dev

CONFERENCE SCHEDULE

MINI-SESSIONS
Ives 119
1:30 PM – 2:10 PM

JARED HAYNES
(Mini-Session) Commenting on Student Writing  High, Coll

SUNDAY

1:30 PM – 3:15 PM

KENNETH ANDERSON ....................... ART 108
Critical Thinking Made Simple  Beg, Coll, Mid/High, Inf Logic

MAURICE A. FINOCCHIARO ............... STEV 3072
Philosophy and Critical Thinking in Socrates, Galileo,
and Marx  Adv, Inf Logic, Pol, H Con

ELEANOR VANETZIAN, BARBARA CORRIGAN ............... IVES 34
"Prep" for Class and Class Activity: Key to Critical
Thinking  Health, Nurs, Tactic/Strat

DIXON WRAGG .......................... DAR 112
Nonrational Determinants of Thinking, and Implications
for Critical Thinking Pedagogy  Psych, Soc, Mid-Coll, Beg

MARGARET ANDERSON, VICTORIA ALLEN ............... IVES 35
Socratic Seminars  Tactic/Strat, Staff Dev, Mid/High, Beg

CHERIE L. KASSEM ....................... STEV 3049
Critical Thinking and Early Childhood Education: Design
for a Master's Level Course on Critical Thinking and
Creativity in the Classroom  Elem, Coll, Tactic/Strat

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, Soc Stud, Tactic/Strat

WEBSTER E. COTTON ....................... DAR 122
Thinking, Education and the Human Project: The
Contrasting Perspectives of Socrates, Dewey and
Heidegger  Coll, Psych, Tactic/Strat, Soc Stu

ERIC E. MILLER ......................... STEV 3046
Advertising  Mid/High, Beg, Lang

DOUG BRENNER, TOM GEU .................. STEV 3040
Critical Thinking and the Rules of Evidence In Law: A
Historical Perspective and Pedagogical Implications
Coll, Adv, Tactic/Strat

26
CONFERENCE SCHEDULE

2:20 PM – 3:00 PM

RICHARD SANZENBACHER
(Mini-Session) Working with Imagery from a Semiotic Perspective TACTIC/STRAT, LANG, MID/HIGH, COLL

3:15 PM – 4:45 PM

M. NEIL BROWNE ................. WARREN Potential Trouble Spots that Bedevil Critical Thinking Classrooms (Participatory Workshop) TACTIC/STRAT, COLL, MID/HIGH

YEHUDI O. WEBSTER .................. DAR 108 Multi-Culturalism and Critical Thinking: Compatibility or Competition? GEN, Mid-Cult

T. EDWARD DAMER .................. STEV 1002 How to Resolve Disagreements on Controversial Issues GEN, Mid/High, H Con, Inf Logic

WILLIAM A. DORMAN, DONALD LAZERE, JONAH RASKIN, NORMON SOLOMON, MARK LOWENTHAL................. SU 100 Mass Media and the American Conversation: Perspectives on Power and Culture MID/HIGH, COLL, MEDIA

KATHLEEN HERSCHELMANN................. STEV 3008 Critical Thinking in International Trade—Using a Format Adaptable to Other Disciplines Mid/High, COL, BUS, TACTIC/STRAT

DENNIS MATTHIES .................. STEV 2006 Working Smarter Through Precision Questioning 1 GEN, BIG, BUS, TACTIC/STRAT

VIRGINIA O'KEEFE ..................... ART 108 Teaching for Discovery: The Questioning Class Mid/High, COLL, LANG

CONNIE MISSIMER ................... STEV 3072 The Case That Alternative Argumentation Drives the Growth of Knowledge—Some Preliminary Evidence ADV, Math/Sci, Fem, Inf Logic

DONALD JOHNS ...................... DAR 112 Literature, Empathy, and Critical Thinking TACTIC/STRAT, COLL, MID/HIGH, Mid-Cult

JEANETTE K. MUSER, JULIA E. NORATO, LAWRENCE E. SWESLEY........... IVES 34 Applying and Teaching Critical Thinking HIGH, Math/Sci, Test, TACTIC/STRAT

TRISH TAYLOR-JONES ............... IVES 35 A Critical Thinking Road Map to Problem Solving: Avoiding the Pitfalls BUS, STAFF DEV

SUNDAY

3:15 PM – 4:45 PM

Continued

EDNA MAYE LOVELESS ................. STEV 3049 Fuzzy Thinking Produces Fuzzy Writing: An Alert for Precise Language COLL, LANG, TACTIC/STRAT

JACKIE A. GIULIANO .................. DAR 139 Challenging our Perception of our World: Merging Ecology and Psychology into “Ecopsychology” PSYCH, ENG, MiCULT, SOCIO

MERLE KATAOKA-YAHIRO, KATHERINE ABRAM-YAGO, ED.D. DAR 122 The Use of Mentoring and Role-Modeling with Nursing Students: An Application of the Critical Thinking Model for Nursing Judgment NURS

LARRY LITECKY ....................... STEV 3046 Active Learning and Improving the Quality of Thinking TACTIC/STRAT, COLL, STAFF DEV

THOMAS HART, REBECCA SKAGGS ............... STEV 3040 Integrating Critical Thinking at a Christian College COLL, BIG, LANG, MiCULT

MINI-SESSIONS

IVES 119

3:15 PM – 3:55 PM

JANE DAVIS-SEAVER (Mini-Session) Portfolios for Critical Thinking ELM

4:05 PM – 4:45 PM

H. OGDEN MORSE (Mini-Session) The Dialectical Notebook MID/HIGH, SOC STUD

7:00 PM – 8:15 PM

GERALD NOSICH .................... EPT Keynote: On the Need for Comprehensiveness in Critical Thinking
## Conference Schedule

### Monday

**9:00 AM - 10:15 AM**

**Linda Elder**  
Keynote: Why Affect is Crucial to Thinking

---

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

**Ben E. Johnson**  
No Longer Preaching to the Choir: "Sarasota THINKS," the Nation's First, Week-long, County-wide Thinking Festival Designed for the Public

**Donald Lazer**  
Reading Rush Limbaugh Critically

**Robert D. Allen, David J. Stroup**  
Teaching Critical Thinking Skills in Science and Mathematics

**Richard Paul**  
Socratic Questioning: A Series of Three Demonstration Sessions. First Demonstration (Asking Questions That Take Thinking Apart)

**Stuart M. Keeley**  
Coping with Student Resistance to Critical Thinking

**Rosemary Keller**  
Development and Implementation of a Hospital Based Critical Thinking Program

**Dennis Matties**  
Working Smarter Through Precision Questioning II

**T. Frank Saunders, Amy Schlessman**  
Double Think: Restructuring Content, Context, and Purposes for 21st Century Thinking

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**10:30 AM - 12:00 PM (Continued)**

**Donald Hatcher**  
Three Theories of Rationality: Implications for Educational Practice

**Sue Y. Luckey**  
Creative and Critical Thinking Strategies for Participating in a Global Economy

**Giuseppe Amedeo Galvan**  
Logic and Contents of the Common Sense (Sensus Communis) as a Solution of the Problems of a Multicultural Society

**Toby Klinger**  
Integrating Critical Thinking into the Teaching of Introduction to Psychology

**Sharon Schwarze, Harvey Lape**  
The Third Wave is the Oldest Wave: The Socratic Model

**Herman Haluza**  
Literature and the Writing Curriculum

**Joan D. Rykiel**  
The Community College Experience: Is There an Effect on Critical Thinking and Moral Reasoning?

**Dan Burritt**  
Creating Math Islands with the Thinking Skills Format

**Chris Kuchuris**  
Dilemma or Opportunity?

**Doug Brenner**  
Developing Video Literacy/Critical Thinking Skills

**Richard B. Lewis**  
Critical Thinking: Classroom Procedures, Format, Grading, etc. Part I

**George Collison**  
Empowering Teachers to Teach Using Inquiry in Algebra and Pre-Algebra

Please see page 18 for details.
CONFERENCE SCHEDULE

MINI-SESSIONS
Ives 119

10:30 AM - 11:10 AM

JARED HAYNES
(Mini-Session) The Exploratory Paper: Prelude to Argument Coll

JEANETTE K. MUSER, JULIA E. NORATO, LAWRENCE E. SWESNEY
(Mini-Session) Teaching Critical Thinking Mid/High

11:20 AM - 12:00 PM

T. EDWARD DAMER
(Mini-Session) Concept of Rebuttal Inf Logic, Gen

KATHLEEN HERSHELMANN
(Mini-Session) Writing Modules Using Critical Thinking as a Base Mid/High, Coll

LUNCH
Available at BBQ (outside Dining Commons), in Pub (upstairs Student Union) or at the Commons Dining Facility (inside Dining Commons).

1:30 PM - 3:00 PM

Gerald Nosich...

An Introduction To Critical Thinking: What Is It? Why Should I Teach For It? How Can I Teach For It? Gen, Big

Yehudi O. Webster...

Are There White and Black People? Reasoning About Racial Classification Gen, Soc Stud, Mul-Cult

Gedeon J. Rossouw, J. Coley Lamprecht...

The IIT Approach to the Development of Thinking and Its Multi-Cultural Application in South Africa Tactic/Strat, Coll, Staff Dev, Mul-Cult

Richard Paul...

Socratic Questioning (Second Demonstration Session): Asking Questions That Assess Thinking Based on Intellectual Standards Tactic/Strat, Big

Monday Schedule

1:30 PM - 3:00 PM

LINDA ELDER...

Understanding Our Egocentric Nature: Is Yours Dominant or Submissive? Gen

WILLIAM A. DORMAN, RALPH JOHNSON...

Mass Media and Critical Thinking: Part I Coll, Media

DIXON WRAGG...

Reasoning with Irrational Persons Psych, H Con, Big

FRANK E. COLOBOURN...

How We Put the Background of Epistemic Application Into the Foreground of Critical Thinking Coll, Adv, Psych, Tactic/Strat

BRENDA CHEREDNICHENKO...

The Geographical Location of the Teaching of Thinking Skills Programs Elem, Social

CONNIE MISSIMER...

How to Teach Critical Thinking In a Way That is Not Culturally Biased Without Sacrificing High Evidentary Standards Mid/High, Coll, Mul-Cult

WILLIAM B. STREAN, RUS LINDGREN...

Critical Thinking About Periodical/ Critical Thinking Within Periodical Gen, Psych, Big, Media, H Con

LESLEY S. MCKILLOP, DAVID W. MCKILLOP, DAVID WHITE...

Not Waving but Drowning: Caught in the Second Wave Undertow Coll, Mid/High, Psych, Tactic/Strat

JOE M. STEELE...

Tasks for Critical Thinking: When is a Problem Just an Exercise? Tactic/Strat, Test, Coll, Staff Dev

JIM POLLARD...

Transference-Making the Classroom Part of Life Tactic/Strat, Gen

DON FAWKES...

How to Teach Students to Distinguish Premises and Conclusions Tactic/Strat, Big, Adv, Inf Logic

ROBERT G. BUCKENMEYER...

Traditional Critical Thinking and the American English Language and “Culture” Coll, Staff Dev, Lang, Inf Logic

RICHARD B. LEWIS...

Critical Thinking: Classroom Procedures, Format, Grading, etc. Part 2 Coll, Tactic/Strat, Math
CONFERENCE SCHEDULE

MINI-SESSIONS
Ives 119

1:30 PM – 2:10 PM

JAN WILLIAMS
(Mini-Session) Writing and Critical Thinking: Action
Research at One College Coll

2:20 PM – 3:00 PM

JEFFERY, R.W. DONLEY
(Mini-Session) The Hermeneutical Worksheet Coll

3:15 PM – 4:45 PM

BEN E. JOHNSON ........................................... WARREN
How We Did It: Sarasota's Unique Plan for Motivating
and Training 2000 Thinking Skills Teachers K-12, Staff Dev,
Beg, Adv

YEHUDI O. WEBSTER ....................................... DAR 108
On Becoming a (Better?) Critical Thinking Instructor:
The Elements of Thought Gen

RICHARD POPE ............................................ STEV 1002
Total Quality Management Comes to the Thinking
Classroom K-12, Staff Dev, Lang, Tactic/Strat

RICHARD PAUL ............................................ SU 100
Socratic Questioning (Third Demonstration Session):
Asking Questions Based on Systems and Domains
Tactic/Strat, Beg

NANCY CARTER MCDONALD ......................... CAR 68
A Critical Thinking Model for the College Classroom
Coll, Tactic/Strat, Beg, Nurs

WILLIAM A. DORMAN, RALPH JOHNSON ............. STEV 3008
Mass Media and Critical Thinking: Part II Coll, Media

DIXON WRAGG ............................................. STEV 2049
Critical Thinking and Social Responsibility H Con, Social,
Beg

SUSAN MCGURY, KATHLEEN TAYLOR, JANIS BRADLEY ... STEV 2006
Thinking and Transformation: Models of Support for
Emerging Critical Thinkers Coll, Gen, Fem, Lang, Tactic/Strat

3:15 PM – 4:45 PM

JANE WILSENN LORAND ................................ ART 108
Self-Assessment at the High School and College Level:
Peer Editing, Group and Individual Assessment in
Speaking and Writing Mid/High, Coll, Staff Dev

DEANNA L. YAMEEN, MARITA PRATER ................... STEV 3072
Interdependent (Critical) Thinking: A Bridge Between
Education and the Workplace Coll, Staff Dev, Adv, Nurs

RON BOHANNON ......................................... IVES 34
A Critical Study of H.L. Mencken's Dialectic Irony in In
Defense of Women Beg, Adv, Lang, Tactic/Strat

JACKIE A. GIULIANO ........................................ IVES 35
The Development of Social Responsibility and
Environmental Awareness Through Techniques in
Critical Teaching - A Community Involvement Approach
Tactic/Strat, Env, Pol, Beg

ANTHONY OLUWATOYIN .................................. DAR 112
Questions, Eccentricities and Critical Thinking Test, Gen

LINDA Q. SMITH ......................................... STEV 3049
Chess: A Thinking Machine That Works Gen, Beg,
Tactic/Strat, Test

ROSE AGUILAR WELCH, KATHLEEN F. O’CONNOR, MARY J. CRUISE, DAR 139
A Study of Critical Thinking in Nursing Education Nurs,
Coll, Beg, Tactic/Strat

KRISTAN CAVINA ........................................... DAR 122
Teaching Critical Thinking in the Writing Class Lang,
Tactic/Strat, Coll

WILLIAM L. HOOPER ...................................... STEV 3046
Thinking Critically in the Fine Arts Coll, Arts, Tactic/Strat

LYNN R. CHONG ............................................. STEV 3040
How Do You Know Your Evidence Is True? High, Coll,
Tactic/Strat

WILLIAM J. STEPIEN, SHELAGH A. GALLAGHER ........... STEV 2065
Thinking Is More Than "Bumper Sticker" Reasoning
Tactic/Strat, Beg, K-12

GEORGE COLLISON ........................................... STEV 1040
Linking Understanding in Math and Science Through
Argument and Discussion in the Language of Functions
and Graphs Math/ScI, Mid/High, Coll, Comp Aid

MONDAY

3:15 PM – 4:45 PM

Continued

CONFERENCE SCHEDULE

34
## Conference Schedule

### Mini-Sessions

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Presenter</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>3:15 PM - 3:55 PM</td>
<td>Ives 119</td>
<td>Jon Pappas</td>
<td>(Mini-Session) The Oral Test for the Mastery of Basic Concepts TACTIC/STRAT, TEST, BEG</td>
</tr>
<tr>
<td>4:05 PM - 4:45 PM</td>
<td></td>
<td>T. Edward Damer</td>
<td>(Mini-Session) Concept of Fallibility BEG, COLL, MID/HIGH, H CON</td>
</tr>
</tbody>
</table>

### Keynote: Riding the Third Wave In the Shoals of Everyday Life: A Personal Account

**Yehudi Webster**  
Commemoration Lawn

### Thinkfest

Dining Commons

### Tuesday

#### 9:00 AM - 10:15 AM

**Ralph H. Johnson**  
EPT  
Keynote: Intellectual Standards for Critical Thinking

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

**Gerald Nosich**  
DAR 108  
Providing a Model for Student Self-assessment in a Subject-Matter Course COLL, HIGH

**Mark Weinstein**  
STEV 1002  
A Comprehensive Approach to Instructional Planning GEN

**Richard Paul, Ralph Johnson**  
SU 100  
Informal Logic: Is Our Present Concept Comprehensive Enough? INF LOGIC, COLL

**Sandy Fritz-Kelly, RN, MSN, M Ed.**  
CAR 68  
Applying Critical Thinking Skills to the Complex Task of Delegating Nursing Care NURS, HEALTH, COLL

**Judith Collison**  
STEV 3008  
How to Write and Evaluate Open-ended Questions in Mathematics TEST, MATH, K-12

**Wendy Oxman**  
STEV 2049  
Elementary Teachers' Perceptions of Critical Thinking in Theory and Practice ELEM, STAFF DEV, TACTIC/STRAT

**P.K. Mohapatra**  
STEV 2006  
Critical Thinking and the Problem of Personal Identity ADV, PSYCH, LANG, TACTIC/STRAT

**James O'Connor**  
ART 108  
A Renewal Seminar: The Role of Critical Thinking in Your Life TACTIC/STRAT, STAFF DEV, SOC STUD, H CON

**H. Ogden Morse**  
STEV 3072  
Literature, History, and What We Believe MID/HIGH, TACTIC/STRAT, LANG, SOC

**Gail Hughes, Margaret Borden, Sandra Kaplan, Judy Nelson**  
IVES 34  
Conducting and Assessing Critical Thinking Interviews: Excerpts from Interdisciplinary Areas, Developmental Education, and Biology Test, Coll, Staff Dev, Inf Logic

**Edward B. Rippy**  
DAR 112  
Critical Thinking, Fear of Freedom, and Authoritarianism PSYCH, H CON, TACTIC/STRAT, BEG

**George H. Hanford**  
IVES 35  
Observing an Element of Critical Thinking? GEN

**Vickey Daley, Sylvia Bierschenk**  
STEV 3049  
What do You See? What do You Know? MID/HIGH, BEG, TACTIC/STRAT, LANG

**Max Dresden**  
DAR 139  
The Notion of Proofs and Evidence SCI, COLL, ADV

**Karen Rankin, Carol Wilson**  
DAR 122  
The Fortune Cookie Syndrome: Self-disclosure as a Teaching/Learning Strategy for Critical Thinking NURS, SOC, PSYCH, FEM

**Jerry Cederblom**  
STEV 3046  
The Critical Reasoner As Protagonist INF LOGIC, TACTIC/STRAT, COLL

**Charles Angeletti**  
STEV 3040  
The American Road as Metaphor: Exploring the Voices of Those "On the Road" in America to Teach Critical Thinking MID/HIGH, COLL, MUL-CULT, SOC STUD
CONFERENCE SCHEDULE

ERIC E. MILLER
The Law of Conservation of Mass and Inductive Reasoning
ELEM, BIG, SCI

JOANN RADDUE, GEORGE RADDUE
Critical Thinking Smorgasbord: Showcase of Project-Based Learning Activities
ELEM, STAFF DEV, SCI, ENV

MINI-SESSIONS
Ives 119

10:30 AM - 11:10 AM

WILLIAM L. HOOPER
(Mini-Session) Thinking About Paintings
COLL, ARTS

JEFF REED
(Mini-Session) Leading Socratic Discussions in History Classes
MID/HIGH, COLL

TISH ALLEN
(Mini-Session) Student Initiated Study of Assumptions
COLL, TEST, TACTIC/STRAT

P.J. JANSON
(Mini-Session) Critical Thinking in Music History Courses
COLL, BIG, ARTS

12:00 PM - 1:30 PM

LUNCH
Available at BBQ (outside Dining Commons), in Pub (upstairs Student Union) or at the Commons Dining Facility (inside Dining Commons).

1:30 PM - 3:00 PM

BEN E. JOHNSON
A Successful Private Funding Model for District-Wide Teacher Training in Thinking Skills: Sarasota County and the Selby Chair in Critical Thinking
K-12, COLL, BIG, ADV

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

TUESDAY
1:30 PM - 3:00 PM

SOPHIA MING-LEE WEN
The Four Modes of Critical Thinking: Its Nature and Critique
PHIL, SOCIO, BIG

RALPH H. JOHNSON, RICHARD PAUL, CONNIE MISSIMER, ANNE M. PHELAN
Re-Thinking Reason (Panel Discussion)
GEN, INF LOGIC

PENNY HEASLIP
Classroom Assessment of Critical Thinking Learning Activities
COLL, BIG, TEST, NURS, TACTIC/STRAT

LES GOTTESMAN
Toon Logic III
BIG, INF LOGIC, TACTIC/STRAT

DANIEL C. ABEL, ROBERT L. MCCONNELL
Understanding Environmental Issues Using Critical Thinking, Simple Math, and the Metric System
ENV, MATH/SCI, COLL, MID/HIGH

PHYLIS L. SIMPSON
MINDS: Architectural Supplies for the Instructional Designer
COLL, MID/HIGH, LANG, TACTIC/STRAT

LEE BROWN
Materials, Methods, and Strategies for Teaching Critical Thinking to the Educationally Disadvantaged-to Students at Risk
MID/HIGH, COLL, MUL-CULT, TACTIC/STRAT, BIG

V. SHVYRKOV
Principles of Critical Thinking in Statistical Science
TEST, BUS, MATH/SCI, TACTIC/STRAT
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenters</th>
</tr>
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<tbody>
<tr>
<td>3:15 PM - 4:45 PM</td>
<td>Panel Discussion of Critical Thinking in the K-12th Grade Curriculum</td>
<td>JAN WILLIAMSON, RENATE OTTERBACH, H. OGDEN MORSE, JANE DAVIS-SEAVE, DAN BURRITT, WILLIAM STEPIEN, JUDITH COLLISON</td>
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<td>Mini-Session</td>
<td>JARED HAYNES</td>
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<td>DARRELL E. COSTA, STEVEN ROSENBLOOM</td>
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<td>SHERRI MCCARTHY-TUCKER</td>
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<td>RALPH H. JOHNSON, MAURICE FINOCCHIARO, JERRY CEDERBLOM, CLAUDE GRATTON</td>
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<td>SANDRA A. JONES, LYNDA N. BROWN</td>
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<td>Mini-Session</td>
<td>JOELYN SCRIBA</td>
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</table>
CONFERENCE SCHEDULE

KIM SKOOG ................................................. STEV 3049
A Multicultural/Critical Thinking Reader  Elem, Mul-Cult,
Arts, Soc Stud

PAUL TANNER .............................................. DAR 139
Audio Tape as a Feedback Tool: Increased Transfer of
Critical Thinking Skills  TactiC/Strat, Test, Coll, Mid/High

PRISCILLA AGNEW ........................................ DAR 122
Sex, Death, Advertising and Children: Teaching Media
Literacy  Media, Inf Logic, TactiC/Strat, H Con

GREGORY BASSHAM, HENRY NARDONE .......... STEV 3046
Using the Film “JFK” to Teach Critical Thinking
TactiC/Strat, Pol, Media, Soc Stud

LES GOTTESMAN .......................................... STEV 3040
What is Hermeneutics and is it Critical?  Coll, Pol, Lang,
Socil

GEORGE RADDUE, JOANN RADDUE .............. STEV 2065
Project-Based Learning: Making Microscopes (A Two-
Part Session)  Elem, Staff Dev, ScI, ENV

MINI-SESSIONS
Ives 119

3:15 PM - 3:55 PM

MARIAN B. SIDES
(Mini-Session) Analyzing Assumptions Underlying Critical
Thoughts  TactiC/Strat, Nurs, Staff Dev, Health, Coll

4:05 PM - 4:45 PM

SHIRLEY TAN, LIM TOCK KENG
(Mini-Session) The Community of Inquiry Approach to
Critical Thinking  Beg, Mid/High, Mul-Cult, TactiC/Strat

8:00 PM - 11:00 PM

SPECIAL INTEREST GROUPS AT
THINKFEST ............................................... DINING COMMONS
Please see page 47 for details.

WEDNESDAY
8:45 AM - 10:15 AM

GERALD NOSICH ........................................ DAR 108
Working with the Elements of Reasoning  Gen

GEORGE M. LUCKEY JR ................................... STEV 1002
Common Slogans and Uncommon Sense  TactiC/Strat,
Mid/High, Coll

RICHARD PAUL ........................................... SU 100
What Is It to Join the Third Wave?  Gen

JOHN R. FEEARE ......................................... CAR 68
Beyond Speechmaking and the Marketplace of Ideas: A
Radical Transformation In Communication  H Con

JARED HAYNES ........................................... STEV 3008
The Writing Strategies of College Students: Reflections
of Cognitive Development  Coll

WILLIA L. NWA .......................................... STEV 2049
Thinking Critically About Cultural Diversity: How Should
Educators Do It?  Mid/High, Coll, Beg, Mul-Cult, H Con

ROBERT L. McCONNELL, DANIEL C. ABEI ............ STEV 2006
Critical Assessment of College Student Course Reaction
Questionnaires  Staff Dev, Test, TactiC/Strat, Coll

MAVIS ALDRIDGE ......................................... ART 108
Analogical Reasoning: A Research Project on Cognitive
Processes in the Interpretation of Proverbs between
Advanced and Less Advanced College Students  Coll, Adv,
Mul-Cult, Lang

JANE DAVIS-SEEVER .......................... STEV 3072
Constructivism—Putting Critical Thinking to Work in the
Elementary Classroom  Elem, TactiC/Strat

TISH ALLEN .............................................. IVES 34
Toward Strong Self-Assessment Skills  Coll, Test

MARSHA E. FONTENY .................................... DAR 112
Strategies for Improving Nurses’ Clinical Reasoning
Skills  Coll, Health, Nurs, TactiC/Strat

MARIA CARDELLE-ELAWAR .................. STEV 3049
A Self-Regulated Model to Guide Low-Achieving
Students in Solving Mathematics Problems  Gen, Beg, Adv,
Mul-Cult

JIM POLLARD ............................................ DAR 139
Finding Meaning—The Search for Logic  TactiC/Strat, Gen
CONFERENCE SCHEDULE

Dan Burritt .................................................. DAR 122
Using Reciprocity: Mutual Exchange of Information in Solving Tasks or Problems  K–12, TACTIC/STRAT

Brant Abrahamson .......................................... STEV 3046
Teaching About Religion from an Empathetic but Critical Thinking Perspective  High

Bernard Davis ............................................... STEV 3040
Informal Logic and the Problem of Factual Belief  COLL, INF LOGIC, ADV, TACTIC/STRAT

Renate Otterbach .......................................... STEV 2065
Teaching Critical Thinking Inductively  TACTIC/STRAT, STAFF DEV, MID/HIGH, COLL

MINI-SESSIONS
Ives 119

8:45 AM – 9:25 AM

Kristan Cavina
(Mini-Session) Teaching Grammar Through Critical Thinking  Mid/High, COLL

Donald Johns
(Mini-Session) Identifying Central Passages in Essays or Stories  Mid/High, COLL

9:35 AM – 10:15 AM

Rose Aguilar Welch, Kathleen F. O'Connor, Mary J. Cruise
(Mini-Session) Critical Thinking: Getting There with Fun and Games  COLL, TACTIC/STRAT

Brenda Cheredinchenko
(Mini-Session) Confident Critical Thinkers  GEN

10:30 AM – 12:00 PM

Penny Heaslip ............................................... DAR 108
Paradigm Shift in Nursing Education: Curriculum Reform in Action  COLL, INF, STAFF DEV, NURS

Ann Kerwin, Maryls Witte, M.D., Charles Witte, M.D. .................................................. STEV 1002
Don't Vanquish Ignorance...Use It Well!  COLL, Mid/High, HEALTH, NURS

Richard Paul ................................................. SU 100
How To Recognize Pseudo Critical Thinking  GEN

Linda Elder .................................................. CAR 68
Critical Thinking and the Young Child  ELEM, TACTIC/STRAT

CONFERENCE SCHEDULE

WEDNESDAY

10:30 AM – 12:00 PM

Judith Collison ........................................... STEV 3008
The Role of Critical Thinking in Mathematics Education Reform  MATH, STAFF DEV, K–12

Burton Voorhees .......................................... STEV 2049
Could a Computer Ever Think—Critically or Otherwise?  MATH/SCI, ADV, INF LOGIC

Jeff Reed ................................................... STEV 2006
Illustrations and the Information Age  STAFF DEV, MID, TEST, COMP AID

Lauren Goodley, Robert Wright .......................... ART 108
Critical Thinking and Medicine: A Dialectical Analysis  HEALTH, POL, Bus, SOCIOL

Ralph H. Johnson .......................................... STEV 3072
The Principle of Vulnerability  ADV, INF LOGIC, COLL

Paul Tanner ................................................ IVES 34
Critical Writing: Getting from Wording to Meaning  TACTIC/STRAT, COLL, MID/High, TEST

Ruby Trow, Marilynn Filbeck ............................. DAR 112
Jigsaw: A Collaborative Strategy for Teaching Critical Thinking  TEST, TACTIC/STRAT, COLL, BEG

Edward L. McGuire ........................................ STEV 3049
Reflective Logic and Third-Wave Critical Thinking  INF LOGIC, COLL, TACTIC/STRAT

Kim Skoog .................................................. DAR 139
A Pluralistic Model of Knowledge  ADV, PSYCH, Multi-Cult, SOCIOL

Frederic Torzs .............................................. DAR 122
Rational Choice and Strong-Sense Critical Thinking  H CON, PSYCH, COLL, INF LOGIC

Brant Abrahamson ......................................... STEV 3046
Using Critical Thinking to Understand Prejudice: A Workshop - Demonstration  Mid/High, TACTIC/STRAT, SOC STUD, H CON

Robert J. Menges ......................................... STEV 3040
Critical Thinking and Evaluation of Professor's Teaching  COLL, STAFF DEV
**CONFERENCE SCHEDULE**

**MINI-SESSIONS**

**Ives 119**

**10:30 AM - 11:10 AM**

**VICKEY DALEY, SYLVIA BIERSCHEK**

*(Mini-Session) Real-World Focus: The Practical Art of Reasoning*  
**Mid/High, Coll**

**12:00 PM - 1:30 PM**

**LUNCH**

Available at BBQ (outside Dining Commons), in Pub (upstairs Student Union) or at the Commons Dining Facility (Inside Dining Commons).

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

**Wrap-up Session With Richard Paul**  
**Warren Auditorium**

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**SPECIAL INTEREST GROUPS**

**TUESDAY, 8:00 PM**

In order to facilitate networking between colleagues with similar interests, special interest group meetings will be combined with the Tuesday night ThinkFest held in the Dining Commons. Tables will be designated for various interest groups to meet and organize themselves. The nature and extent of the organization is dependent on the will of the members present. We suggest as a minimum that each group develop a networking list with addresses and phone numbers.

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.

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**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
SPECIAL INTEREST GROUPS

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
Graduate Schools in Critical Thinking

SELECTED SESSIONS
LISTED BY AUDIENCE CODE

ADVANCED

MAURICE A. FINOCCHIARO . . . . . . . . Sun 1:30; STEV 3072
Philosophy and Critical Thinking in Socrates, Galileo, and Marx
ADV, INF LOGIC, POL, H CON

DOUG BRENNER, TOM GEU . . . . . Sun 1:30; STEV 3040
Critical Thinking and the Rules of Evidence in Law: A Historical Perspective and Pedagogical Implications
COLL, ADV, TACTIC/STRAT

CONNIE MISSIMER . . . . . . . . Sun 3:15; STEV 3072
The Case That Alternative Argumentation Drives the Growth of Knowledge—Some Preliminary Evidence
ADV, MAIN/SCI, FEM, INF LOGIC

FRANK E. COLBOURN . . . . . . . . Mon 1:30; ART 108
How We Put the Background of Epistemic Application Into the Foreground of Critical Thinking
COLL, ADV, PSYCH, TACTIC/STRAT

RON BOHANNON . . . . . . . . . Mon 3:15; IVES 34
A Critical Study of H.L. Mencken's Dialectic Irony in In Defense of Women
ADV, PSYCH, LANG, TACTIC/STRAT

P.K. MOHAPATRA . . . . . . . . Tues 10:30; STEV 2006
Critical Thinking and the Problem of Personal Identity
ADV, PSYCH, LANG, TACTIC/STRAT

MICHAEL A. GRIFFIN . . . . . . . . Tues 1:30; STEV 3040
Critical Thinking: A Practical Guide
ADV, MID/HIGH
COLL
### ADVANCED

**Continued**

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<th>Speaker</th>
<th>Date</th>
<th>Time</th>
<th>Location</th>
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<tr>
<td>MAVIS ALDRIDGE</td>
<td>Wed 8:45</td>
<td>ART 108</td>
<td>Analogical Reasoning: A Research Project on Cognitive Processes in the Interpretation of Proverbs between Advanced and Less Advanced College Students</td>
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<td>MARIA CARDELLE-ELAWAR</td>
<td>Wed 8:45</td>
<td>STEV 3049</td>
<td>A Self-Regulated Model to Guide Low-Achieving Students in Solving Mathematics Problems</td>
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<td>BURTON VOORHEES</td>
<td>Wed 10:30</td>
<td>STEV 2049</td>
<td>Could a Computer Ever Think Critically or Otherwise?</td>
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<td>RALPH H. JOHNSON</td>
<td>Wed 10:30</td>
<td>STEV 3072</td>
<td>The Principle of Vulnerability</td>
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<td>KIM SKOOG</td>
<td>Wed 10:30</td>
<td>DAR 139</td>
<td>A Pluralistic Model of Knowledge</td>
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<td>WILIAM L. HOOPER</td>
<td>Mon 3:15</td>
<td>STEV 3046</td>
<td>Thinking Critically in the Fine Arts</td>
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<td>WILIAM L. HOOPER</td>
<td>Tues 10:30-11:10</td>
<td>IVES 119</td>
<td>(Mini-Session) Thinking About Paintings</td>
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<td>P.J. JANSON</td>
<td>Tues 11:20-12:00</td>
<td>IVES 119</td>
<td>(Mini-Session) Critical Thinking in Music History Courses</td>
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<td>CANDACE JESSE STOUT</td>
<td>Wed 10:30</td>
<td>STEV 2065</td>
<td>Critical Thinking and Criticizing Art</td>
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### ARTS

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### BEGINNERS

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<tr>
<td>M. NEIL BROUWE, STUART M. KEELEY</td>
<td>Sun 10:30</td>
<td>WARREN</td>
<td>Getting Started as a Teacher of Critical Thinking: Classroom Behavior and Assignments</td>
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<td>MARGARET ANDERSON, VICTORIA ALLEN</td>
<td>Sun 10:30</td>
<td>IVES 35</td>
<td>Socratic Seminars</td>
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**SELECTED SESSIONS**
SELECTED SESSIONS

BEGINNERS

RON BOHANNON
Mon 3:15; IVES 34
A Critical Study of H.L. Mencken's Dialectic
Irony in In Defense of Women
BEG, ADV, LANG, TACTIC/STRAT

WILLIAM J. STEPIEN, SHELAGH A. GALLAGHER
Mon 3:15; STEV 2065
Thinking Is More Than "Bumper Sticker"
Reasoning
TACTIC/STRAT, BEG, K-12

T. EDWARD DAMER
Mon 4:05-4:45; IVES 119
(Mini-Session) Concept of Fallibility
BEG, COLL, MID/High, H Con

VICKY DABLEY, SYLVIA Bierschenk
Tues 10:30; STEV 3049
What do You See? What do You Know?
MID/High, BEG, TACTIC/STRAT

PENNY HEASLIP
Tues 1:30; STEV 2049
Classroom Assessment of Critical Thinking
Learning Activities
COLL, BEG, TEST, NURS, TACTIC/STRAT

LES GOTTESMAN
Tues 1:30; STEV 2006
Toon Logic III
BEG, INF LOGIC, TACTIC/STRAT

LINDA ELDER
Tues 3:15; CAR 68
A Stage Theory of Critical Thinking in
Adulthood
GEN, BEG

ANN KERWIN, JUDY NELSON
Tues 3:15; STEV 2006
Thinking Passionately: Ignorance, Critical
Thinking, and the Reluctant Student
COLL, TACTIC/STRAT, BEG, MID/High, BEG

SHIRLEY TAN, LIM TOCK KENG
Tues 4:05-4:45; IVES 119
(Mini-Session) The Community of Inquiry
Approach to Critical Thinking
BEG, MID/High, MUL-CUL, TACTIC/STRAT

MARIA CARDHELLE-ELAWAR
Wed 8:45; STEV 3049
A Self-Regulated Model to Guide Low-Achieving
Students in Solving Mathematics Problems
GEN, BEG, ADV, MUL-CUL

BUSINESS

NANCY KUBASEK, ANDREA GIAMPETRO-MEYER
Sun 10:30; STEV 3072
Introducing Critical Thinking into the Legal
Environment of Business Classroom
BUS, COLL

DENNIS MATTHIES
Sun 3:15; STEV 2006
Working Smarter Through Precision
Questioning I
GEN, BEG, BUS, TACTIC/STRAT

TRISH TAYLOR-JONES
Sun 3:15; IVES 35
A Critical Thinking Road Map to Problem
Solving: Avoiding the Pitfalls
BUS, STAFF DEV

DENNIS MATTHIES
Mon 10:30; STEV 2049
Working Smarter Through Precision
Questioning II
GEN, BEG, BUS, TACTIC/STRAT

SUE Y. LUCKEY
Mon 10:30; STEV 3072
Creative and Critical Thinking Strategies for
Participating in a Global Economy
MUL-CUL, BUS, MID/High, COLL

DEANNA L. YAMEEN, MARITA PRATER
Mon 3:15; STEV 3072
Interdependent (Critical) Thinking: A Bridge
Between Education and the Workplace
STAFF DEV, ADV, NURS

V. SHVYRKOV
Tues 1:30; STEV 3049
Principles of Critical Thinking in Statistical
Science
COLL, TEST, BUS, MATH/SCI, TACTIC/STRAT

M. NEIL BROWNE, STUART M. KEELEY
Sun 10:30; WARREN
Getting Started as a Teacher of Critical
Thinking: Classroom Behavior and Assignments
TACTIC/STRAT, COLL, BEG, SOC STUD

HARRY T. MAYO, PAUL DUAX, GAIL HUGHES, VIRGINIA O'KEEFE,
JOAN RYKIEL, MICHAEL MONK
Sun 10:30; SU 100
What We Are Doing With Critical Thinking in
the Community College System and Where Are
We Headed With It in the Classroom? A Panel
Discussion Moderated by Harry Mayo
STAFF DEV, TACTIC/STRAT, BEG, COLL

TISH ALLEN, LYNN CHONG, NED McGUIRE, FREDERIC TORZS,
DEANNA YAMEEN
Sun 10:30; STEV 2049
Collaboration within One Critical Thinking
Department
COLL, TEST

LESLIE K. HICKCOX
Sun 10:30; ART 108
Developing Problem-Solving Skills through
Kolb's Experiential Learning Cycle
COLL, TACTIC/STRAT, BEG, SCI

NANCY KUBASEK, ANDREA GIAMPETRO-MEYER
Sun 10:30; STEV 3072
Introducing Critical Thinking into the Legal
Environment of Business Classroom
BUS, COLL

COLLEGE

53
SELECTED SESSIONS

College

Continued

LEE BROWN
Sun 10:30; STEV 3040
Materials, Methods, and Strategies for Teaching Critical Thinking to the Educationally Disadvantaged-to Students at Risk Mid/High, Coll, Mul-Cult, Tactic/Strat, Beg

DOUG BRENNER, TOM GEU
Sun 1:30; STEV 3040

M. NEIL BROWNE
Sun 3:15; WARREN
Potential Trouble Spots that Bedevil Critical Thinking Classrooms(Participatory Workshop) Tactic/Strat, Coll, Mid/High

KATHLEEN HERSCHELMANN
Sun 3:15; STEV 3008
Critical Thinking in International Trade—Using a Format Adaptable to Other Disciplines High, Coll, Bus, Tactic/Strat

EDNA MAYE LOVELESS
Sun 3:15; STEV 3049
Fuzzy Thinking Produces Fuzzy Writing: An Alert for Precise Language Coll, Lang, Tactic/Strat

LARRY LITECKY
Sun 3:15; STEV 3046
Active Learning and Improving the Quality of Thinking Tactic/Strat, Coll, Staff Dev

THOMAS HART, REBECCA SKAGGS
Sun 3:15; STEV 3040
Integrating Critical Thinking at a Christian College Coll, Beg, Lang, Mul-Cult

DONALD HATCHER
Mon 10:30; ART 108
Three Theories of Rationality: Implications for Educational Practice Test, Tactic/Strat, Inf Logic, Coll

TOBY KLINGER
Mon 10:30; DAR 112
Integrating Critical Thinking into the Teaching of Introduction to Psychology Coll, Beg, Inf Logic, Psych, Tactic/Strat

SHARON SCHWARZE, HARVEY LAPE
Mon 10:30; IVES 34
The Third Wave is the Oldest Wave: The Socratic Model Coll, Tactic/Strat, Inf Logic

HERMAN HALUZA
Mon 10:30; STEV 3049
Literature and the Writing Curriculum Coll, Arts, Tactic/Strat

RICHARD B. LEWIS
Mon 10:30; STEV 2065
Critical Thinking: Classroom Procedures, Format, Grading, etc. Part 1 Coll, Tactic/Strat, Math

JARED HAYNES
Mon 10:30–11:10; IVES 119
(Mini-Session) The Exploratory Paper: Prelude to Argument Coll

KATHLEEN HERSCHELMANN
Mon 11:20–12:00; IVES 119
(Mini-Session) Writing Modules Using Critical Thinking as a Base Mid/High, Coll

FRANK E. COLBOURN
Mon 1:30; ART 108
How We Put the Background of Epistemic Application Into the Foreground of Critical Thinking Coll, Adv, Psych, Tactic/Strat

JAN WILLIAMSON
Mon 1:30–2:10; IVES 119
(Mini-Session) Writing and Critical Thinking: Action Research at One College Coll

ROBERT G. BUCKENMEYER
Mon 1:30; STEV 3040
Traditional Critical Thinking and the American English Language and “Culture” Coll, Staff Dev, Lang, Inf Logic

RICHARD B. LEWIS
Mon 1:30; STEV 2065
Critical Thinking: Classroom Procedures, Format, Grading, etc. Part 2 Coll, Tactic/Strat, Math

JEFFERY, R.W. DONLEY
Mon 2:20–3:00; IVES 119
(Mini-Session) The Hermeneutical Worksheet Coll

JANE WILLSEN LORAND
Mon 3:15; ART 108
Self-Assessment at the High School and College Level: Peer Editing, Group and Individual Assessment in Speaking and Writing Mid/High, Coll, Staff Dev

DEANNA L. YAMEEN, MARITA PRATER
Mon 3:15; STEV 3072
Interdependent (Critical) Thinking: A Bridge Between Education and the Workplace Coll, Staff Dev, Adv, Nurs

LYNN R. CHONG
Mon 3:15; STEV 3040
How Do You Know Your Evidence Is True? High, Coll, Tactic/Strat

GERALD NOSICH
Tues 10:30; DAR 112
Providing a Model for Student Self-assessment in a Subject-Matter Course Coll, High

JEFF REED
Tues 10:30–11:10; IVES 119
(Mini-Session) Leading Socratic Discussions in History Classes Mid/High, Coll

P.J. JANSON
Tues 11:20–12:00; IVES 119
(Mini-Session) Critical Thinking in Music History Courses Coll, Beg, Arts
SELECTED SESSIONS

COLLEGE
Continued

PENNY HEASLIP

Classroom Assessment of Critical Thinking
Learning Activities COL, BEG, TEST, NURS, TACTIC/STRAT

Tues 1:30; STEV 2049

DAWN PATTERSON

Active Engagement and the Construction of Knowledge COL, TACTIC/STRAT, NURS, BEG

Tues 1:30; STEV 3046

MICHAEL A. GRIFFIN

Critical Thinking: A Practical Guide ADV, MIO/HIG, COL

Tues 1:30; STEV 3040

GERALD NOSICH

Pyramid Teaching: Formulating a Philosophy of Education COL, MIO/HIG

Tues 3:15; DAR 108

GIUSEPPE AMEDEO GALVAN

Love Belongs to the Essence of Wisdom? Reflections about the Practical Dimension of Critical Thinking COL, MIO/HIG, LANG, SOC

Tues 3:15; ART 108

LES GOTIESMAN

What is Hermeneutics and is it Critical? COL, POL, LANG, SOC

Tues 3:15; STEV 3040

JARED HAYNES

The Writing Strategies of College Students: Reflections of Cognitive Development COL

Wed 8:45; STEV 3008

ROBERT L. McCONNELL, DANIEL C. ABEL

Critical Assessment of College Student Course Reaction Questionnaires STAFF DIV, TEST, TACTIC/STRAT, COL

Wed 8:45; STEV 2006

MAVIS ALDRIDGE

Analogical Reasoning: A Research Project on Cognitive Processes in the Interpretation of Proverbs between Advanced and Less Advanced College Students COL, ADV, MIO/CULT, LANG

Wed 8:45; ART 108

TISH ALLEN

Toward Strong Self-Assessment Skills COL, TEST

Wed 8:45; IVES 34

BERNARD DAVIS

Informal Logic and the Problem of Factual Belief COL, INF LOGIC, ADV, TACTIC/STRAT

Wed 8:45; STEV 3040

EDWARD L. MCGUIRE

Reflective Logic and Third-Wave Critical Thinking INF LOGIC, COL, TACTIC/STRAT/MIO/HIG, COL, TEST, TACTIC/STRAT

Wed 10:30; STEV 3049
### ELEMENTARY

**JANE DAVIES-SEAVER**  
**Constructivism—Putting Critical Thinking to Work in the Elementary Classroom**  
_Elem_, Tactic/Strat  
Wed 8:45; STEV 3072

**LINDA ELDER**  
**Critical Thinking and the Young Child**  
_Elem_, Tactic/Strat  
Wed 10:30; CAR 68

### ENVIRONMENT

**JACKIE A. GIULIANO**  
**The Environmental Studies Curriculum as a Vehicle for the Introduction of Feminist Philosophies and Spirituality into the Classroom**  
Env, Fem, Soc Stud, Tactic/Strat  
Sun 1:30; DAR 139

**JACKIE A. GIULIANO**  
**Challenging our Perception of our World: Merging Ecology and Psychology into “Ecopsychology”**  
Psych, Env, Mut-Cult, Social  
Sun 3:15; DAR 139

**DANIEL C. ABEL, ROBERT L. MCCONNELL**  
**Understanding Environmental Issues Using Critical Thinking, Simple Math, and the Metric System**  
Env, Math/Sci, Coll, Mid/High  
Tues 1:30; IVES 35

### FEMINIST ISSUES

**JACKIE A. GIULIANO**  
**The Environmental Studies Curriculum as a Vehicle for the Introduction of Feminist Philosophies and Spirituality into the Classroom**  
Env, Fem, Soc Stud, Tactic/Strat  
Sun 1:30; DAR 139

**CONNIE MISSIMER**  
**The Case That Alternative Argumentation Drives the Growth of Knowledge—Some Preliminary Evidence**  
Adv, Math/Sci, Fem, Inf Logic  
Sun 3:15; STEV 3072

**JOELYN SCRIBA**  
**Critical Thought as a Personal Journey**  
Fem, Nurs  
Tues 3:15; IVES 35

### HEALTH/NURSING

**ELEANOR VANETZIAN, BARBARA CORRIGAN**  
**“Prep” for Class and Class Activity: Key to Critical Thinking**  
Health, Nurs, Tactic/Strat  
Sun 1:30; IVES 34

**MERLE KATAOKA-YAHIRO, KATHERINE ABRAM-YAGO, ED.D.**  
**The Use of Mentoring and Role-Modeling with Nursing Students: An Application of the Critical Thinking Model for Nursing Judgment**  
Nurs  
Sun 3:15; DAR 122

**ROSEMARY KELLER**  
**Development and Implementation of a Hospital Based Critical Thinking Program**  
Nurs, Health, Staff  
Mon 10:30; STEV 3008

**ROSE AGUILAR WELCH, KATHLEEN F. O’CONNOR, MARY J. CRUISE.**  
**A Study of Critical Thinking in Nursing Education**  
Nurs, Coll, Beg, Tactic/Strat  
Mon 3:15; DAR 139

**ROSEMARY KELLER**  
**Understanding Environmental Issues Using Critical Thinking Skills to the Complex Task of Delegating Nursing Care**  
Nurs, Health, Coll  
Tues 10:30; CAR 68

**KAREN RANKIN, CAROL WILSON**  
**The Fortune Cookie Syndrome: Self-disclosure as a Teaching/Learning Strategy for Critical Thinking**  
Nurs, Socio, Psych, Fem  
Tues 10:30; DAR 122

**DAWN PATTERSON**  
**Active Engagement and the Construction of Knowledge**  
Coll, Tactic/Strat, Nurs, Beg  
Tues 1:30; STEV 3046

**MARIAN B. SIDES**  
**Analyzing Assumptions Underlying Critical Thoughts**  
Tactic/Strat, Nurs, Staff  
Tues 3:15–3:55; IVES 119

**PENNY HEASLIP**  
**NLN Site Visit: The Essential Elements**  
Coll, Staff  
Tues 3:15; IVES 34

**SANDRA A. JONES, LYNDA N. BROWN**  
**Creating an Agenda for Critical Thinking in Nursing Education: Out of the Past, Into the Future**  
Nurs, Health  
Tues 3:15; DAR 112

**JOELYN SCRIBA**  
**Critical Thought as a Personal Journey**  
Fem, Nurs  
Tues 3:15; IVES 35

**MARSHA E. FONTEYN**  
**Strategies for Improving Nurses’ Clinical Reasoning Skills**  
Coll, Health, Nurs, Tactic/Strat  
Wed 8:45; DAR 112
SELECTED SESSIONS

HEALTH/NURSING

Continued

PENNY HEASLIP ........................................... Wed 10:30; DAR 108
Paradigm Shift in Nursing Education: Curriculum Reform in Action  COLL, FIN, STAT DIV, NURS

ANN KERWIN, MARYLS WITTE, M.D., CHARLES WITTE, M.D. .................. Wed 10:30; STEV 1002
Don’t Vanquish Ignorance...Use It Well!  COLL, Mid/High, Health, Nurs

LAUREN GOODLEY, ROBERT WRIGHT ........................................... Wed 10:30; ART 108
Critical Thinking and Medicine: A Dialectical Analysis  HEALTH, POL, Bus, SOC

HIGH SCHOOL

LEE BROWN .................................................... Sun 10:30; STEV 3040
Materials, Methods, and Strategies for Teaching Critical Thinking to the Educationally Disadvantaged-to Students at Risk  Mid/High, COLL, Multi-Cult, TACTIC/STRAT

JARED HAYNES ................................................ Sun 1:30–2:10; IVES 119 (Mini-Session) Commenting on Student Writing  HIGH, COLL

KATHLEEN HERSCHELMANN ........................................ Sun 3:15; STEV 3008
Critical Thinking in International Trade—Using a Format Adaptable to Other Disciplines  HIGH, COLL, Bus, TACTIC/STRAT

JEANETTE K. MUSEB, JULIA E. NORATO, LAWRENCE E. SWEESEY ....... Sun 3:15; IVES 34
Applying and Teaching Critical Thinking  HIGH, Math/SCI, Test, TACTIC/STRAT

LYNN R. CHONG ............................................... Mon 3:15; STEV 3040
How Do You Know Your Evidence Is True?  HIGH, COLL, TACTIC/STRAT

GERALD NOSICH ............................................ Tues 10:30; DAR 108
Providing a Model for Student Self-assessment in a Subject-Matter Course  COLL, High

GERALD NOSICH ............................................ Tues 3:15; DAR 108
Pyramid Teaching: Formulating a Philosophy of Education  COLL, High

BRANT ABRAHAMSON ....................................... Wed 8:45; STEV 3046
Teaching About Religion from an Empathetic but Critical Thinking Perspective  High

T. EDWARD DAMER .......................................... Sun 1:30; STEV 1002
How to Construct Effective Moral Arguments  Mid/High, COLL, Beg, Inf Logic

T. EDWARD DAMER .......................................... Sun 3:15; STEV 1002
How to Resolve Disagreements on Controversial Issues  COLL, Mid/High, H CON, Inf Logic

DIXON WRAGG ............................................... Mon 1:30; STEV 2049
Reasoning with Irrational Persons  PSYCH, H CON, Beg

DIXON WRAGG ............................................... Mon 3:15; STEV 2049
Critical Thinking and Social Responsibility  H CON, SOC

JOHN R. FEARE ............................................. Tues 1:30; STEV 3072
Critical Thinking Within a Theological Dimension  H CON

JOHN R. FEARE ............................................. Wed 8:45; CAR 68
Beyond Speechmaking and the Marketplace of Ideas: A Radical Transformation in Communication  H CON

FREDERIC TORZS ............................................ Wed 10:30; DAR 122
Rational Choice and Strong-Sense Critical Thinking  H CON, PSYCH, COLL, Inf Logic

BRANT ABRAHAMSON ....................................... Wed 10:30; STEV 3046
Using Critical Thinking to Understand Prejudice: A Workshop - Demonstration  Mid/High, TACTIC/STRAT, SOC STUD, H CON

INFORMAL LOGIC

T. EDWARD DAMER .......................................... Sun 10:30; STEV 1002
How to Distinguish "Good" Arguments from "Bad" Ones  Inf Logic, GEN

T. EDWARD DAMER .......................................... Sun 1:30; STEV 1002
How to Construct Effective Moral Arguments  Mid/High, COLL, Beg, Inf Logic

KENNETH ANDERSON ........................................ Sun 1:30; ART 108
Critical Thinking Made Simple  Beg, COLL, Mid/High, Inf Logic

MAURICE A. FINOCCHIARO .................................. Sun 1:30; STEV 3072
Philosophy and Critical Thinking in Socrates, Galileo, and Marx  Adv, Inf Logic, POL, H CON

DONALD HATCHER ......................................... Mon 10:30; ART 108
Three Theories of Rationality: Implications for Educational Practice  Test, TACTIC/STRAT, Inf Logic, COLL
INFORMAL LOGIC

Continued

T. EDWARD DAMER .......... Mon 11:20-12:00; IVES 119
(Mini-Session) Concept of Rebuttal Inf Logic, Gen

DON FAWSKES ............... Mon 1:30; STEV 3046
How to Teach Students to Distinguish Premises and Conclusions Tact/Strat, Beg, Adv, Inf Logic

RICHARD PAUL, RALPH H. JOHNSON ....... Tues 10:30; SU 100
Informal Logic: Is Our Present Concept Comprehensive Enough? Inf Logic, Coll

JERRY CEDERBLOM .......... Tues 10:30; STEV 3046
The Critical Reasoner As Protagonist Inf Logic, Tact/Strat, Coll

RALPH H. JOHNSON, RICHARD PAUL, CONNIE MISSIMER, ANNE M. PHELAN ....... Tues 1:30; SU 100
Re-Thinking Reason (Panel Discussion) Gen, Inf Logic

CLAUDIE GRATTON .......... Tues 1:30-2:10; IVES 119
(Mini-Session) A Game of Posing Critical Questions While Watching Television Inf Logic, Gen

LES GOTTESMAN .......... Tues 1:30; STEV 2006
Toon Logic III Beg, Inf Logic, Tact/Strat

RALPH H. JOHNSON, MAURICE FINOCCHIARO, JERRY CEDERBLOM, CLAUDE GRATTON .......... Tues 3:15; WARREN
Panel on Informal Logic Gen, Inf Logic

DARRELL E. COSTA, STEVEN ROSENBLUM ....... Tues 3:15; STEV 3072
Demagogues in Our Midst: Critically Assessing Demagogic “Talk” in Our Political, Religious and Entertainment Leaders (From Limbaugh, Gingrich and Robertson to Jackson, Perot, Farrakhan and Kahane, to You and I) Lang, Pol, Inf Logic, Coll

BERNARD DAVIS .......... Wed 8:45; STEV 3040
Informal Logic and the Problem of Factual Belief Coll, Inf Logic, Adv, Tact/Strat

RICHARD H. JOHNSON ....... Wed 10:30; STEV 3072
The Principle of Vulnerability Adv, Inf Logic, Coll

EDWARD L. MCGUIRE .......... Wed 10:30; STEV 3049
Reflective Logic and Third-Wave Critical Thinking Inf Logic, Coll, Tact/Strat/Mid/High, Coll, Test, Tact/Strat

K-12

G. DOUGLAS MEYERS .......... Sun 10:30-11:10; IVES 119
(Mini-Session) Achieving Poetic Consciousness: Found Poetry/Poetry Found Lang, Inf Logic, K-12

BEN E. JOHNSON .......... Mon 3:15; WARREN
How We Did It: Sarasota’s Unique Plan for Motivating and Training 2000 Thinking Skills Teachers K-12, Staff Dev, Beg, Adv

RICHARD POPE .......... Mon 3:15; STEV 1002
Total Quality Management Comes to the Thinking Classroom K-12, Staff Dev, Lang, Tact/Strat

WILLIAM J. STEPIEN, SHELAGH A. GALLAGHER .... Mon 3:15; STEV 2065
Thinking Is More Than “Bumper Sticker” Reasoning Tact/Strat, Beg, K-12

JUDITH COLLISON .......... Tues 10:30; STEV 3008
How to Write and Evaluate Open-ended Questions in Mathematics Test, Math, K-12

JAN WILLIAMSON, RENATO OTTERBACH, H. OGDEN MORSE, JANE DAVIS-SEAYER, DAN BURRITT, WILLIAM STEPIEN, JUDITH COLLISON ....... J. Tues 3:15; SU 100
Panel Discussion of Critical Thinking in the K-12th Grade Curriculum K-12

DAN BURRITT .......... Wed 8:45; DAR 122
Using Reciprocity: Mutual Exchange of Information in Solving Tasks or Problems K-12, Tact/Strat

LANGUAGE ARTS, ENGLISH

VICKY GARCIA, NATASHA HAUGNES .......... Sun 10:30; STEV 3049
Training ESL and Native English Speakers for Critical Peer Reading Lang, Tact/Strat, Coll

NORMAN BETZ .......... Sun 10:30; DAR 122
The Myers-Briggs and the Process Toward Critical Thinking Coll, Tact/Strat, Lang, Test

G. DOUGLAS MEYERS .......... Sun 10:30-11:10; IVES 119
(Mini-Session) Achieving Poetic Consciousness: Found Poetry/Poetry Found Lang, Inf Logic, K-12

RICHARD SANZENBACHER .......... Sun 2:20-3:00; IVES 119
(Mini-Session) Working with Imagery from a Semiotic Perspective Tact/Strat, Lang, Mid/High, Coll
<table>
<thead>
<tr>
<th>Session Title</th>
<th>Date/Time</th>
<th>Location</th>
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</thead>
<tbody>
<tr>
<td><strong>SELECTED SESSIONS</strong></td>
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<tr>
<td><strong>LANGUAGE ARTS, ENGLISH</strong></td>
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<td><strong>Continued</strong></td>
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<tr>
<td>Edna Maye Loveless</td>
<td>Sun 3:15; STEV 3049</td>
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<td>Fuzzy Thinking Produces Fuzzy Writing: An Alert for Precise Language</td>
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<td><strong>Herman Haluza</strong></td>
<td>Mon 10:30; STEV 3049</td>
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<td>Literature and the Writing Curriculum</td>
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<td><strong>Robert G. Buckenmeyer</strong></td>
<td>Mon 1:30; STEV 3040</td>
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<td>Traditional Critical Thinking and the American English Language and “Culture”</td>
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<td><strong>Ron Bohannon</strong></td>
<td>Mon 3:15; IVES 34</td>
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<td>A Critical Study of H.L. Mencken’s Dialect &amp; Irony in <em>In Defense of Women</em></td>
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<td><strong>Kristan Cavina</strong></td>
<td>Mon 3:15; DAR 122</td>
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<td>Teaching Critical Thinking in the Writing Class</td>
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<td><strong>H. Ogden Morse</strong></td>
<td>Tues 10:30; STEV 3072</td>
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<td>Literature, History, and What We Believe</td>
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<td><strong>Renée Ruderman</strong></td>
<td>Tues 1:30; DAR 122</td>
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<td>The Beat, the Word, the Feeling! Using the Techniques of Poetry to Generate</td>
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<td>Critical Thinking and Writing</td>
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<td><strong>Jared Haynes</strong></td>
<td>Tues 3:15; STEV 3008</td>
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<td>Designing Writing Assignments that Foster Critical Thinking</td>
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<td><strong>Connie Missimer</strong></td>
<td>Sun 3:15; STEV 3072</td>
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<td>The Case That Alternative Argumentation Drives the Growth of Knowledge—Some</td>
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<td>Preliminary Evidence</td>
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<td><strong>Robert D. Allen, David J. Stroup</strong></td>
<td>Mon 10:30; STEV 1002</td>
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<td>Teaching Critical Thinking Skills in Science and Mathematics</td>
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<td><strong>Dan Burritt</strong></td>
<td>Mon 10:30; DAR 122</td>
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<td>Creating Math Islands with the Thinking Skills</td>
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| **MATH**                                                                    |                  |            |
| **George Collison**                                                         | Mon 10:30; STEV 1040 |            |
| Empowering Teachers to Teach Using Inquiry in Algebra and Pre-Algebra        |                  |            |
| **George Collison**                                                         | Mon 3:15; STEV 1040 |            |
| Linking Understanding in Math and Science Through Argument and Discussion in  |                  |            |
| the Language of Functions and Graphs                                         |                  |            |
| **Judith Collison**                                                         | Tues 10:30; STEV 3008 |            |
| How to Write and Evaluate Open-ended Questions in Mathematics                |                  |            |
| **Daniel C. Abel, Robert L. McConnell**                                     | Tues 1:30; IVES 35 |            |
| Understanding Environmental Issues Using Critical Thinking, Simple Math, and  |                  |            |
| the Metric System                                                            |                  |            |
| **V. Shvyrkov**                                                             | Tues 1:30; STEV 3049 |            |
| Principles of Critical Thinking in Statistical Science                       |                  |            |
| **Robert D. Allen, David J. Stroup**                                        | Tues 3:15; STEV 1002 |            |
| Teaching Critical Thinking Skills in Science and Mathematics                 |                  |            |
| **Judith Collison**                                                         | Wed 10:30; STEV 3008 |            |
| The Role of Critical Thinking in Mathematics / Education Reform              |                  |            |
| **Burton Voorhees**                                                         | Wed 10:30; STEV 2049 |            |
| Could a Computer Ever Think—Critically or Otherwise?                         |                  |            |
| **Media**                                                                   |                  |            |
| **Eric E. Miller**                                                          | Sun 1:30; STEV 3046 |            |
| Advertising                                                                  |                  |            |
| **William A. Dormman, Donald Lazere, Jonah Raskin, Norm Solomon, Mark Lowenthal** | Sun 3:15; SU 100 |            |
| Mass Media and the American Conversation: Perspectives on Power and Culture  |                  |            |
| **Donald Lazere**                                                           | Mon 10:30; DAR 108 |            |
| Reading Rush Limbaugh Critically                                             |                  |            |
| **Doug Brenner**                                                            | Mon 10:30; STEV 3040 |            |
| Developing Video Literacy/Critical Thinking Skills                           |                  |            |
SELECTED SESSIONS

MEDIA

Continued

WILLIAM A. DORMAN, RALPH JOHNSON ....... Mon 1:30; STEV 3008 Mass Media and Critical Thinking: Part I Coll, Media

WILLIAM A. DORMAN, RALPH JOHNSON ....... Mon 3:15; STEV 3008 Mass Media and Critical Thinking: Part II Coll, Media

JONAH RASKIN ................. Tues 1:30; STEV 3008 Joseph McCarthy, Television, and the Limits of Critical Thinking Media, Polit, Soc Stud, H Con

CLAUDE GRATTON ............ Tues 1:30-2:10; IVES 119 (Mini-Session) A Game of Posing Critical Questions While Watching Television Inf Logic, Gen

PRISCILLA AGNEW ............ Tues 3:15; DAR 122 Sex, Death, Advertising and Children: Teaching Media Literacy Media, Inf Logic, Tactic/Strat, H Con

GREGORY BASSHAM, HENRY NARDONE ....... Tues 3:15; STEV 3046 Using the Film "JFK" to Teach Critical Thinking Tactic/Strat, Pol, Media, Soc Stud

MID/HIGH SCHOOL

M. NEIL BROWNE ............ Sun 3:15; WARREN Potential Trouble Spots that Bedevil Critical Thinking Classrooms (Participatory Workshop) Tactic/Strat, Coll, Mid/High

VIRGINIA O'KEEFE ........... Sun 3:15; ART 108 Teaching for Discovery: The Questioning Class Mid/High, Coll, Lang

H. OGDEN MORSE ............ Sun 4:05-4:45; IVES 119 (Mini-Session) The Dialectical Notebook Mid/High, Soc Stud

JEANETTE K. MUSER, JULIA E. NORATO, LAWRENCE E. SWESEY ....... Mon 10:30-11:10; IVES 119 (Mini-Session) Teaching Critical Thinking Mid/High

KATHLEEN HERSHEYELMANN ..... Mon 11:20-12:00; IVES 119 (Mini-Session) Writing Modules Using Critical Thinking as a Base Mid/High, Coll

JANE WILSEN LORAND ......... Mon 3:15; ART 108 Self-Assessment at the High School and College Level: Peer Editing, Group and Individual Assessment in Speaking and Writing Mid/High, Coll, Staff Dev

VICKEY DALEY, SYLVIA BIERSCHEK ..... Tues 10:30; STEV 3049 What do You See? What do You Know? Mid/High, Beg, Tactic/Strat, Lang

JEFF REED ....................... Tues 10:30–11:10; IVES 119 (Mini-Session) Leading Socratic Discussions in History Classes Mid/High, Coll

JANE WILSEN LORAND ......... Tues 1:30; 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

MICHAEL A. GRIFFIN ........... Tues 1:30; STEV 3040 Critical Thinking: A Practical Guide Adv, Mid/High, Coll

DONALD JOHNS .................. Wed 8:45–9:25; IVES 119 (Mini-Session) Identifying Central Passages in Essays or Stories Mid/High, Coll

BRANT ABRAHAMSON ........... Wed 10:30; STEV 3046 Using Critical Thinking to Understand Prejudice: A Workshop - Demonstration Mid/High, Tactic/Strat, Soc Stud, H Con


JEFF REED ....................... Sun 10:30–11:10; IVES 119 (Mini-Session) Using Assessment Rubrics for Critical Thinking Mid/High, Coll

EDWARD L. MCGUIRE .......... Sun 11:20–12:00; IVES 119 (Mini-Session) Advantages of a Technical Assistant for a Critical Thinking Program Mid/High, Coll, Test, Tactic/Strat

DAVID ZWICKER ............... Sun 11:20–12:00; IVES 119 (Mini-Session) SAVVY & SAFE: A Critical Thinking Approach to Self-Defense Staff Dev, Beg, Psych, Health

JARED HAYNES .................. Sun 1:30–2:10; IVES 119 (Mini-Session) Commenting on Student Writing High, Coll

RICHARD SANZENBACHER ...... Sun 2:20–3:00; IVES 119 (Mini-Session) Working with Imagery from a Semiotic Perspective Tactic/Strat, Lang, Mid/High, Coll
SELECTED SESSIONS

MINI-SESSIONS

continued

JANE DAVIS-SEAVER
Sun 3:15–3:55; IVES 119
(Mini-Session) Portfolios for Critical Thinking
ELEM

H. OGDEN MORSE
Sun 4:05–4:45; IVES 119
(Mini-Session) The Dialectical Notebook
MID/HIGH, SOC STUD

JEANETTE K. MUSER, JULIA E. NORATO, LAWRENCE E. SWESEY
Mon 10:30–11:10; IVES 119
(Mini-Session) Teaching Critical Thinking
MID/HIGH

JARED HAYNES
Mon 10:30–11:10; IVES 119
(Mini-Session) The Exploratory Paper: Prelude to
Argument
COLL

KATHLEEN HERSHEYELLMANN
Mon 11:20–12:00; IVES 119
(Mini-Session) Writing Modules Using Critical
Thinking as a Base
MID/HIGH, COLL

T. EDWARD DAMER
Mon 11:20–12:00; IVES 119
(Mini-Session) Concept of Rebuttal
ENG, GEN

JAN WILLIAMSON
Mon 1:30–2:10; IVES 119
(Mini-Session) Writing and Critical Thinking:
Action Research at One College
COLL

JEFFERY, R. W. DONLEY
Mon 2:20–3:00; IVES 119
(Mini-Session) The Hermeneutical Worksheet
COLL

JON PAPPAS
Mon 3:15–3:55; IVES 119
(Mini-Session) The Oral Test for the Mastery of
Basic Concepts
TACTIC/STRAT, TEST, BEG

T. EDWARD DAMER
Mon 4:05–4:45; IVES 119
(Mini-Session) Concept of Fallibility
BEG, COLL, MID/HIGH, H CON

JEFF REED
Tues 10:30–11:10; IVES 119
(Mini-Session) Leading Socratic Discussions in
History Classes
MID/HIGH, COLL

WILLIAM L. HOOPER
Tues 10:30–11:10; IVES 119
(Mini-Session) Thinking About Paintings
COLL, ARTS

P. J. JANSON
Tues 11:20–12:00; IVES 119
(Mini-Session) Critical Thinking in Music History
Courses
COLL, BEG, ARTS

TISH ALLEN
Tues 11:20–12:00; IVES 119
(Mini-Session) Student Initiated Study of
Assumptions
COLL, TEST, TACTIC/STRAT

CLAUSE GRATTON
Tues 1:30–2:10; IVES 119
(Mini-Session) A Game of Posing Critical
Questions While Watching Television
ENG

LINDA Q. SMITH
Tues 2:20–3:00; IVES 119
(Mini-Session) Teaching Critical Thinking
Through Chess
K–12, BEG, TACTIC/STRAT, ENG

MARIAN B. SIDES
Tues 3:15–3:55; IVES 119
(Mini-Session) Analyzing Assumptions Underlying Critical Thoughts
TACTIC/STRAT, NURS, STAFF
DEV, HEALTH, COLL

SHIRLEY TAN, LIM TOCK KENG
Tues 4:05–4:45; IVES 119
(Mini-Session) The Community of Inquiry
Approach to Critical Thinking
BEG, MID/HIGH, MID/CULT, TACTIC/STRAT

DONALD JOHNS
Wed 8:45–9:25; IVES 119
(Mini-Session) Identifying Central Passages in
Essays or Stories
MID/HIGH, COLL

KRISTAN CAVINA
Wed 8:45–9:25; IVES 119
(Mini-Session) Teaching Grammar Through
Critical Thinking
MID/HIGH, COLL

BRENDA CHEREDNICHENKO
Wed 9:35–10:15; IVES 119
(Mini-Session) Confident Critical Thinkers
ENG

ROSE AGUILAR WELCH, KATHLEEN F. O’CONNOR, MARY J. CRUISE
Wed 9:35–10:15; IVES 119
(Mini-Session) Critical Thinking: Getting There with Fun and Games
COLL, TACTIC/STRAT

VICKEY DALEY, SYLVIA BIERSCHEK
Wed 10:30–11:10; IVES 119
(Mini-Session) Real-World Focus: The Practical Art of Reasoning
MID/HIGH, COLL

YEHUDI O. WEBSTER
Sun 10:30; DAR 108
Are There White and Black People? Reasoning About Racial Classification
GEN, SOC STUD, MID-CULT

YEHUDI O. WEBSTER
Sun 3:15; DAR 108
Multi-Culturalism and Critical Thinking: Compatibility or Competition?
GEN, MID-CULT

GIUSEPPE AMEDEO GALVAN
Mon 10:30; IVES 35
Logic and Contents of the Common Sense (Sensus Communis) as a Solution of the Problems of a Multi-Cultural Society
COLL, TACTIC/STRAT, PSYCH, ENG
SELECTED SESSIONS

MULTI-CULTURAL

YEHUDI O. WEBSTER ............................................ Mon 1:30; DAR 108
Are There White and Black People? Reasoning About Racial Classification Gen, Soc Stud, Mul-Cult

GDEON J. ROSSOUW, J. COLEY LAMPRECHT .................................... Mon 1:30; STEV 1002
The IIT Approach to the Development of Thinking and its Multi-Cultural Application in South Africa Tactic/Strat, Coll, Staff Dev, Mul-Cult

CONNIE MISSEIMER ........................................ Mon 1:30; IVES 35
How to Teach Critical Thinking in a Way That is Not Culturally Biased Without Sacrificing High Evidentiary Standards Mid/High, Coll, Mul-Cult

CHARLES ANGELETTI ........................................ Tues 10:30; STEV 3040
The American Road as Metaphor: Exploring the Voices of Those “On the Road” in America to Teach Critical Thinking Mid/High, Coll, Mul-Cult, Soc Stud

LEE BROWN ........................................... Tues 1:30; IVES 34
Materials, Methods, and Strategies for Teaching Critical Thinking to the Educationally Disadvantaged-to Students at Risk Mid/High, Coll, Mul-Cult, Tactic/Strat, Beg

KIM SKOOG ............................................ Tues 3:15; STEV 3049
A Multicultural/Critical Thinking Reader Elem, Mul-Cult, Arts, Soc Stud

WILLIA L. NWAA ........................................ Wed 8:45; STEV 2049
Thinking Critically About Cultural Diversity: How Should Educators Do It? Mid/High, Coll, Beg, Mul-Cult, H Con

KIM SKOOG ............................................ Wed 10:30; DAR 139
A Pluralistic Model of Knowledge Adv, Psych, Mul-Cult, Soc Stud

SHIRLEY TAN, LIM TOCK KENG .................................. Tues 4:05–4:45; IVES 119
(Mini-Session) The Community of Inquiry Approach to Critical Thinking Beg, Mid/High, Mul-Cult, Tactic/Strat

PSYCHOLOGY

DAVID ZWICKER ........................................ Sun 11:20–12:00; IVES 119
(Mini-Session) SAFFY & SAFE: A Critical Thinking Approach to Self-Defense Staff Dev, Beg, Psych, Health

DIXON WRAGG ........................................ Sun 1:30; DAR 112
Nonrational Determinants of Thinking, and Implications for Critical Thinking Pedagogy Psych, Soc, Mul-Cult, Beg

WEBSTER E. COTTON ........................................ Sun 1:30; DAR 122
Thinking, Education and the Human Project: The Contrasting Perspectives of Socrates, Dewey and Heidegger Coll, Psych, Tactic/Strat, Soc Stud

JACKIE A. GIULIANO ........................................ Sun 3:15; DAR 139
Challenging our Perception of our World: Merging Ecology and Psychology into “Ecopsychology” Psych, Env, Mul-Cult, Soc Stud

TOBY KLINGER ........................................ Mon 10:30; DAR 112
Integrating Critical Thinking into the Teaching of Introduction to Psychology Coll, Beg, Inf Logic, Tactic/Strat

WILLIAM B. STRANES, RUSS LINDGREN ................................ Mon 1:30; DAR 112
Critical Thinking About Sport/ Critical Thinking Within Sport Gen, Psych, Beg, Media, H Con

P.K. MOHAPATRA ........................................ Tues 10:30; STEV 2006
Critical Thinking and the Problem of Personal Identity Adv, Psych, Lang, Tactic/Strat

EDWARD B. RIPPY ........................................ Tues 10:30; DAR 112
Critical Thinking, Fear of Freedom, and Authoritarianism Psych, H Con, Tactic/Strat, Beg

KAREN RANKIN, CAROL WILSON ................................... Tues 10:30; DAR 122
The Fortune Cookie Syndrome: Self-disclosure as a Teaching/Learning Strategy for Critical Thinking Nurs, Soc, Psych, Fem

SHERRI McCARTHY-TUCKER, PH. D. .................................. Tues 1:30; DAR 139
Teaching Reality-Based Formal Logic to Adolescents to Improve Critical Thinking Skills Psych, Tactic/Strat, Inf Logic, Gen

GIUSEPPE AMEDEO GALVAN ................................ Tues 3:15; ART 108
Love Belongs to the Essence of Wisdom? Reflections about the Practical Dimension of Critical Thinking Coll, Tactic/Strat, Psych, Inf Logic

FREDERIC TORZS ........................................ Wed 10:30; DAR 122
Rational Choice and Strong-Sense Critical Thinking H Con, Psych, Coll, Inf Logic
### Science

**Connie Missimer** Sun 3:15; STEV 3072
*The Case That Alternative Argumentation Drives the Growth of Knowledge—Some Preliminary Evidence*  
Adv, Math/Sci, Fem, Inf Logic

**Robert D. Allen, David J. Stroup** Mon 10:30; STEV 1002
*Teaching Critical Thinking Skills in Science and Mathematics*  
Math/Sci, Tactic/Strat, Health, Nurs

**George Collison** Mon 3:15; STEV 1040
*Linking Understanding in Math and Science Through Argument and Discussion in the Language of Functions and Graphs*  
Mid/High, Coll, Comp Aid

**Max Dresden** Tues 10:30; DAR 139
*The Notion of Proofs and Evidence*  
Sci, Coll, Adv

**Eric E. Miller** Tues 10:30; STEV 3076
*The Law of Conservation of Mass and Inductive Reasoning*  
Elem, Beg, Sci

**Joann Raddue, George Raddue** Tues 10:30; STEV 2065
*Critical Thinking Smorgasbord: Showcase of Project-Based Learning Activities*  
Elem, Staff Dev, Sci, Env

**V. Shvyrykov** Tues 1:30; STEV 3049
*Principles of Critical Thinking in Statistical Science*  
Test, Bus, Math/Sci, Tactic/Strat

**Eric E. Miller** Tues 1:30; STEV 3076
*Consumer Science*  
Elem, Beg, Sci

**George Raddue, Joann Raddue** Tues 1:30; STEV 2065
*Project-Based Learning: Making Microscopes (A Two-Part Session)*  
Elem, Staff Dev, Sci, Env

**Robert D. Allen, David J. Stroup** Tues 3:15; STEV 1002
*Teaching Critical Thinking Skills in Science and Mathematics*  
Math/Sci, Tactic/Strat, Health, Nurs

**George Raddue, Joann Raddue** Tues 3:15; STEV 2065
*Project-Based Learning: Making Microscopes (A Two-Part Session)*  
Elem, Staff Dev, Sci, Env

**Burton Voorhees** Wed 10:30; STEV 2049
*Could a Computer Ever Think—Critically or Otherwise?*  
Math/Sci, Adv, Inf Logic

### Sociology/Social Studies

**Dixon Wragg** Sun 1:30; DAR 112
*Nonrational Determinants of Thinking, and Implications for Critical Thinking Pedagogy*  
Psych, Social, Mul-Cult, Beg

**Brenda Cherednichenko** Mon 1:30; IVES 34
*The Geographical Location of the Teaching of Thinking Skills Programs*  
Elem, Social

**Charles Angeletti** Tues 10:30; STEV 3040
*The American Road as Metaphor: Exploring the Voices of Those "On the Road" in America to Teach Critical Thinking*  
Mid/High, Coll, Mul-Cult, Soc Stud

**Les Gottesman** Tues 3:15; STEV 3040
*What is Hermeneutics and is it Critical?*  
Coll, Pol, Lang, Social

### Staff Development

**Harry T. Mayo, Paul Duax, Gail Hughes, Virginia O'Keefe, JoAnn Rykie, Michael Monk** Sun 10:30; SU 100
*What are We Doing With Critical Thinking in the Community College System and Where are We Headed With It in the Classroom? A Panel Discussion Moderated by Harry Mayo*  
Staff Dev, Tactic/Strat, Beg, Coll

**Jeffery R.W. Donley** Sun 10:30; STEV 3008
*Surfing the Third Wave: Integrating Critical Thinking and Interdisciplinary Studies for the 21st Century*  
Coll, Staff Dev, Mul-Cult, Adv

**William H. Maurer, Patricia A. Maurer** Sun 10:30; IVES 34
*Moving From "I Think I Can!" to "I Can Think!": Changing Attitudes and Actions of Elementary Grade Teachers*  
Elem, Beg, Staff Dev, Tactic/Strat

**Ben E. Johnson** Mon 10:30; WARREN
*No Longer Preaching to the Choir: "SARASOTA THINKS," the Nation's First, Week-long, County-wide Thinking Festival Designed for the Public*  
Staff Dev, Beg, Adv
SELECTED SESSIONS

**StafF Development**

<table>
<thead>
<tr>
<th>Name</th>
<th>Time/Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>T. Frank Saunders, Amy Schlessman</td>
<td>Mon 10:30; STEV 2006</td>
</tr>
<tr>
<td>Double Think: Restructuring Content, Context, and Purposes for 21st Century Thinking</td>
<td>Staff Dev, Gen</td>
</tr>
<tr>
<td>Gedeon J. Rossouw, J. Coley Lamprecht</td>
<td>Mon 1:30; STEV 1002</td>
</tr>
<tr>
<td>The IIT Approach to the Development of Thinking and its Multi-Cultural Application in South Africa</td>
<td>Tactic/Strat, Coll, Staff Dev, Mul-CoL</td>
</tr>
<tr>
<td>Ben E. Johnson</td>
<td>Mon 3:15; Warren</td>
</tr>
<tr>
<td>How We Did It: Sarasota's Unique Plan for Motivating and Training 2000 Thinking Skills Teachers K-12, Staff Dev, Beg, Adv</td>
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<tr>
<td>Wendy Oxman</td>
<td>Tues 10:30; STEV 2049</td>
</tr>
<tr>
<td>Elementary Teachers' Perceptions of Critical Thinking in Theory and Practice</td>
<td>Elem, Staff Dev, Tactic/Strat</td>
</tr>
<tr>
<td>James O'Connor</td>
<td>Tues 10:30; Art 108</td>
</tr>
<tr>
<td>A Renewal Seminar: The Role of Critical Thinking in Your Life</td>
<td>Tactic/Strat, Staff Dev, Soc Stud, H Con</td>
</tr>
<tr>
<td>Gail Hughes, Margaret Borden, Sandra Kaplan, Judy Nelson</td>
<td>Tues 10:30; IVES 34</td>
</tr>
<tr>
<td>Conducting and Assessing Critical Thinking Interviews: Excerpts from Interdisciplinary Areas, Developmental Education, and Biology</td>
<td>Test, Coll, Staff Dev, Inf Logic</td>
</tr>
<tr>
<td>Ben E. Johnson</td>
<td>Tues 1:30; Warren</td>
</tr>
<tr>
<td>A Successful Private Funding Model for District-Wide Teacher Training in Thinking Skills: Sarasota County and the Selby Chair in Critical Thinking K-12, Coll, Beg, Adv</td>
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<tr>
<td>Jane Willeen Lorand</td>
<td>Tues 1:30; Dar 108</td>
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<tr>
<td>How Do I Know If My Thinking is Good Thinking? Teaching Intellectual Standards to Middle School and High School Students Mid/High, Staff Dev</td>
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<tr>
<td>Richard Paul</td>
<td>Wed 8:45; Su 100</td>
</tr>
<tr>
<td>What Is It to Join the Third Wave?</td>
<td>Gen</td>
</tr>
<tr>
<td>Robert L. McConnell, Daniel C. Abel</td>
<td>Wed 8:45; STEV 2006</td>
</tr>
<tr>
<td>Critical Assessment of College Student Course Reaction Questionnaires</td>
<td>Staff Dev, Test, Tactic/Strat, Coll</td>
</tr>
</tbody>
</table>

**Tactics/Strategies**

<table>
<thead>
<tr>
<th>Name</th>
<th>Time/Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penny Heaslip</td>
<td>Wed 10:30; Dar 108</td>
</tr>
<tr>
<td>Paradigm Shift in Nursing Education: Curriculum Reform in Action</td>
<td>Coll, Fem, Staff Dev, Nurs</td>
</tr>
<tr>
<td>Richard Paul</td>
<td>Wed 10:30; Su 100</td>
</tr>
<tr>
<td>How to Recognize Pseudo Critical Thinking</td>
<td>Gen</td>
</tr>
<tr>
<td>Judith Collison</td>
<td>Wed 10:30; STEV 3008</td>
</tr>
<tr>
<td>The Role of Critical Thinking in Mathematics Education Reform</td>
<td>Math, Staff Dev, K-12</td>
</tr>
<tr>
<td>Jeff Reed</td>
<td>Wed 10:30; STEV 2006</td>
</tr>
<tr>
<td>Illustrations and the Information Age</td>
<td>Staff Dev, Mid, Test, Comp Aid</td>
</tr>
<tr>
<td>Leslie K. Hickcox</td>
<td>Sun 10:30; Art 108</td>
</tr>
<tr>
<td>Developing Problem-Solving Skills through Kolb's Experiential Learning Cycle</td>
<td>Coll, Tactic/Strat, Beg, Sci</td>
</tr>
<tr>
<td>Margaret Anderson, Victoria Allen</td>
<td>Sun 10:30; IVES 35</td>
</tr>
<tr>
<td>Socratic Seminars</td>
<td>Tactic/Strat, Staff Dev, Mid/High, Beg</td>
</tr>
<tr>
<td>Claude Gratton</td>
<td>Sun 10:30; Dar 112</td>
</tr>
<tr>
<td>Critical Thinking's Contribution to Psychological Health</td>
<td>Tactic/Strat, Inf Logic, Coll, Mid/High</td>
</tr>
<tr>
<td>Vicky Garcia, Natasha Haugnes</td>
<td>Sun 10:30; STEV 3049</td>
</tr>
<tr>
<td>Training ESL and Native English Speakers for Critical Peer Reading</td>
<td>Lang, Tactic/Strat, Coll</td>
</tr>
<tr>
<td>J.E. (Peter) Peters</td>
<td>Sun 10:30; STEV 3046</td>
</tr>
<tr>
<td>The Student Lecture Review: Critical Feedback on Standards and Expectations</td>
<td>Coll, Tactic/Strat, Mid/High</td>
</tr>
<tr>
<td>M. Neil Browne, Stuart M. Keeley</td>
<td>Sun 1:30; Warren</td>
</tr>
<tr>
<td>Lessons Learned from Two Decades of Teaching Critical Thinking</td>
<td>Tactic/Strat, Coll, Beg, Soc Stud</td>
</tr>
<tr>
<td>Margaret Anderson, Victoria Allen</td>
<td>Sun 1:30; IVES 35</td>
</tr>
<tr>
<td>Socratic Seminars</td>
<td>Tactic/Strat, Staff Dev, Mid/High, Beg</td>
</tr>
<tr>
<td>Cherie L. Kassem</td>
<td>Sun 1:30; STEV 3049</td>
</tr>
<tr>
<td>Critical Thinking and Early Childhood Education: Design for a Master's Level Course on Critical Thinking and Creativity in the Classroom</td>
<td>Elem, Coll, Tactic/Strat</td>
</tr>
<tr>
<td>Jared Haynes</td>
<td>Sun 1:30-2:10; IVES 119</td>
</tr>
<tr>
<td>(Mini-Session) Commenting on Student Writing</td>
<td>High, Coll</td>
</tr>
</tbody>
</table>
SELECTED SESSIONS

**TACTICS/STRATEGIES**

Continued

M. NEIL BROWNE Sun 3:15; WARREN
Potential Trouble Spots that Bedevil Critical Thinking Classrooms (Participatory Workshop)
TACTIC/STRAT, Coll, Mid/High

DONALD JOHNS Sun 3:15; DAR 112
Literature, Empathy, and Critical Thinking
TACTIC/STRAT, Coll, Mid/High, Mul-Cult/Mid/High, Coll

LARRY LITECKY Sun 3:15; STEV 3046
Active Learning and Improving the Quality of Thinking TACTIC/STRAT, Coll, Staff Dev

RICHARD PAUL Mon 10:30; SU 100
Socratic Questioning: A Series of Three Demonstration Sessions. First Demonstration (Asking Questions That Take Thinking Apart)
TACTIC/STRAT, Beg

DAN BURRITT Mon 10:30; DAR 122
Creating Math Islands with the Thinking Skills Format TACTIC/STRAT, K-12, Beg, Math

RICHARD B. LEWIS Mon 10:30; STEV 2065
Critical Thinking: Classroom Procedures, Format, Grading, etc. Part 1 Coll, TACTIC/STRAT, Math

RICHARD PAUL Mon 1:30; SU 100
Socratic Questioning (Second Demonstration Session): Asking Questions That Assess Thinking Based on Intellectual Standards TACTIC/STRAT, Beg

RICHARD B. LEWIS Mon 3:15; SU 100
Critical Thinking: Classroom Procedures, Format, Grading, etc. Part 2 Coll, TACTIC/STRAT, Math

RICHARD PAUL Mon 3:15; SU 100
Socratic Questioning (Third Demonstration Session): Asking Questions Based on Systems and Domains TACTIC/STRAT, Beg

JACKIE A. GIULIANO Mon 3:15; IVES 35
The Development of Social Responsibility and Environmental Awareness Through Techniques in Critical Teaching - A Community Involvement Approach TACTIC/STRAT, Env, Pol, Beg

LYNN R. CHONG Mon 3:15; STEV 3040
How Do You Know Your Evidence Is True? High Coll, TACTIC/STRAT

JON PAPPAS Mon 3:15-3:55; IVES 119
(Mini-Session) The Oral Test for the Mastery of Basic Concepts TACTIC/STRAT, Test, Beg

JERRY CEDERBLOM Tues 10:30; STEV 3046
The Critical Reasoner As Protagonist Inf Logic, TACTIC/STRAT, Coll

LINDA ELDER Tues 1:30; CAR 68
Struggling Against Egocentrism: My Personal Journey Gen, TACTIC/STRAT

PHYLLIS L. SIMPSON Tues 1:30; DAR 112
MINDS: Architectural Supplies for the Instructional Designer Coll, Mid/High, Lang, TACTIC/STRAT

LEE BROWN Tues 1:30; IVES 34
Materials, Methods, and Strategies for Teaching Critical Thinking to the Educationally Disadvantaged-to Students at Risk Mid/High, Coll, Mul-Cult, TACTIC/STRAT, Beg

PAUL TANNER Tues 3:15; DAR 139
Audio Tape as a Feedback Tool: Increased Transfer of Critical Thinking Skills TACTIC/STRAT, Test, Coll, Mid/High

GREGORY BASSHAM, HENRY NARDONE Tues 3:15; STEV 3046
Using the Film "JFK" to Teach Critical Thinking TACTIC/STRAT, Pol, Media, Soc Stud

GEORGE M. LUCKEY JR Wed 8:45; STEV 1002
Common Slogans and Uncommon Sense TACTIC/STRAT, Mid/High, Coll

JIM POLLARD Wed 8:45; DAR 139
Finding Meaning–The Search for Logic TACTIC/STRAT, Gen

DAN BURRITT Wed 8:45; DAR 122
Using Reciprocity: Mutual Exchange of Information in Solving Tasks or Problems K-12, TACTIC/STRAT

RENA TE OTTERBACH Wed 8:45; STEV 2065
Teaching Critical Thinking Inductively TACTIC/STRAT, Staff Dev, Mid/High, Coll

ROSE AGLULAR WELCH, KATHLEEN E. Wed 9:35–10:15; IVES 119
O'CONNOR, MARY J. CRUISE (Mini-Session) Critical Thinking: Getting There with Fun and Games Coll, TACTIC/STRAT

LINDA ELDER Wed 10:30; CAR 68
Critical Thinking and the Young Child Elem, TACTIC/STRAT
**CONFERENCE ABSTRACTS**

**ABEL, DANIEL C.**
Instructor of Marine Science, Coastal Carolina University

**ROBERT L. McCONNELL**
Professor, Environmental Science and Geology, Mary Washington College

**Understanding Environmental Issues Using Critical Thinking, Simple Math, and the Metric System**

*ENV, MATH/SCI, COLL, MID/HIGH*

Students are often unable to evaluate conflicting claims about environmental issues critically and make informed judgments. As a result, they may rely on others for opinions, in the process abandoning any higher intellectual processes. Part of the problem is an uncertainty about using numerical data and an inability to make even rudimentary calculations, which they lack confidence in once completed. We have addressed these problems by designing a new set of exercises, some of which we will distribute, about relevant environmental issues, including air and water pollution; energy, resources, and living standards; and population. We will demonstrate how we use these to get students to think critically about environmental issues in an active-learning setting.

**ABRAHAMSON, BRANT**
President - The Teachers' Press, The Teachers' Press

**Using Critical Thinking to Understand Prejudice: A Workshop - Demonstration**

*MID/HIGH, TACTIC/STRAT, SOC STUD, H CON*

Following a brief historical introduction, participants learn how informal logic (simple fallacy study) provides the foundation for a non-tracked, low cost public school critical thinking program that includes a focus on prejudice reduction. Attendees will receive essential information on the foundation fallacy unit as well as the "Prejudice in Group Relations" unit. In addition, they have an opportunity to complete one key activity from each of these three-week courses of study.
Teaching About Religion from an Empathetic but Critical Thinking Perspective

I will focus upon comparing and contrasting Eastern World Religions (Hinduism and Buddhism primarily) with those of the West (Judaism, Christianity, Islam and their offshoots). After a summary of Eastern and Western religious orientations, I will distribute a unit relating the two belief systems. Then I will describe more specifically how we teach about religion from a critical thinking perspective at Riverside-Brookfield High School that is located in a rather fundamentalist area.

Critical thinking presupposes literacy. At present, more and more students are being exposed to visual images in the media. It is imperative that we teach students to “read” the visual images and to critically evaluate the information presented. For example, images of sex and death are found in advertising in the form of subliminal messages which are not readily available to us on a conscious level, so that we are unable to critically evaluate these advertisements. In this slide presentation, we shall look at some of the techniques used by advertisers, and then shall focus on ads which depict children and also use subliminal images of sex and death. We will discuss some of the troubling questions which are raised by the use of these images.

A Study of Critical Thinking in Nursing Education

This participatory workshop will include: presentation of the findings of a research project which studied critical thinking in nursing education, discussion of the findings with and by the workshop participants, and development of future plans for use of the research findings. The session focuses on critical thinking as an integrative component of teaching/learning throughout the curriculum. Little nursing literature exists with practical information promoting critical thinking skills in graduate/undergraduate nursing students, despite the rich opportunity for critical thinking inherent in health care. The project purpose was to describe and disseminate strategies to increase critical thinking skills in these students. Survey methodology was used to gather data from selected NLN accredited nursing programs on four items: (a) the definition of critical thinking used by nursing faculty, (b) common barriers to critical thinking, (c) successful teaching methods used to promote critical thinking, and (d) tools used by nursing faculty to measure growth in critical thinking. Descriptive statistics were used to analyze data.

Critical Thinking: Getting There with Fun and Games

The purpose of this mini-session is to illustrate how games can impart content and stimulate critical thinking. “A spoonful of sugar helps the medicine go down...”. These words illustrate how the creative use of games in the classroom can facilitate the acquisition of knowledge and enhanced critical thinking skills. Participant involvement in an abbreviated “build a tinkertoy moose” exercise will illustrate how thinking is provoked in a creative way. Following the brief demonstration, how games encourage critical thinking and advantages and disadvantages will be discussed. Through the utilization of stimulating, thought-provoking activities, learning can be enhanced “in a most delightful way.”

A Study of Critical Thinking in Nursing Education

Although analogical reasoning is a versatile, multidisciplinary critical thinking tool, and useful for everyday living, it has been neglected in advancing students’ thinking abilities. Analogical reasoning taps schematic information, compels metacognitive processing, promotes creativity, and evokes the recognition of resemblances between obviously similar objects, but more so among disparate relations and ideas.

This workshop will present various theoretical views of analogical reasoning through my research on proverb interpretation. This research was based on...
Teaching Critical Thinking Skills in Science and Mathematics  

This workshop focuses on the critical and analytical thinking skills essential in learning science and mathematics. Teachers recognize that students should develop the ability to utilize basic concepts to draw conclusions, make interpretations, analyze experimental designs and evaluate results, make predictions, and solve problems. Although teaching these skills is difficult, appropriate teaching techniques, coaching and practice will lead to improved performance. During this session, critical and analytical thinking skills, and especially the difficulties and problems exhibited by students, will be illustrated and discussed. Primary emphasis will be given to designing instructional activities to incorporate the practice of critical thinking skills into classroom teaching within the context of specific subject matter. Each participating teacher will be able to develop appropriate instructional activities for one course which he or she teaches.

(This session will be repeated.)

Allen, Robert D.  
Mon 10:30; STEV 1002  
Vice President of Instruction, Victor Valley College

David J. Stroup  
Professor of Biology, Francis Marion University

Teaching Critical Thinking Skills in Science and Mathematics  

This workshop focuses on the critical and analytical thinking skills essential in learning science and mathematics. Teachers recognize that students should develop the ability to utilize basic concepts to draw conclusions, make interpretations, analyze experimental designs and evaluate results, make predictions, and solve problems. Although teaching these skills is difficult, appropriate teaching techniques, coaching and practice will lead to improved performance. During this session, critical and analytical thinking skills, and especially the difficulties and problems exhibited by students, will be illustrated and discussed. Primary emphasis will be given to designing instructional activities to incorporate the practice of critical thinking skills into classroom teaching within the context of specific subject matter. Each participating teacher will be able to develop appropriate instructional activities for one course which he or she teaches.

Allen, Robert D.  
Tues 3:15; STEV 1002  
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David J. Stroup  
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Allen, Robert D.  
Tues 11:20–12:00; IVES 119  
Coordinator of Alternative Instruction, Massachusetts Bay Community College

Toward Strong Self-Assessment Skills  

This participatory workshop will focus on the importance of student self-assessment for critical thinking. It will trace the presenter's efforts at facilitating rigorous student self-assessment, at making intellectual standards explicit, and at providing multiple opportunities for students to assign standards and assess their own work. The presenter will offer several examples of her work on student self-assessment. Workshop participants will be asked to join in a set of activities designed to simulate instructional feedback to students on their self-assessment process and standards.

Allen, Tish  
Tues 11:20–12:00; IVES 119  
Coordinator of Alternative Instruction, Massachusetts Bay Community College

Coll, Test  
Conf. Abstr. 83
significant. This should lead to the transfer of abilities to other areas of the students' lives.

A student initiated project challenging student assumptions about AIDS education will be presented as an example of the kind of work which might be undertaken.

Anderson, Kenneth
Instructor, Social Science, College of the Sequoias

Critical Thinking Made Simple Beg, Coll, Mid/High, Inv Logic

Critical thinking can be a very complex topic, but not in this session. Every attempt will be made to create a simple but comprehensive overview by examining how we do it and why.

Essentially, critical thinking is deciding what to believe logically and accurately. Logic and several different criteria for judging the accuracy of what we think about will be presented during the first hour. The relevance of other topics, such as, fallacies, problem solving, creativity, and the scientific method will be touched on as time allows.

Anderson, Margaret
Educational Consultant, Bay Area Socratic Seminars

Victoria Allen
Educational Consultant, Bay Area Socratic Seminars

Socratic Seminars Tactic/Strat, Staff Dev, Mid/High, Beg

The Socratic Seminar leader assumes that knowledge and understanding are better achieved when constructed rather than received. Thus, learning is the new creation of cooperative action rather than the product of a teacher's or student's solo effort. The Socratic Seminar leader must draw out multiple perspectives on texts, insist that all interpretations be supported by textual evidence and clear reasoning, urge exploration of alternative views and help participants think about substantive agreements and disagreements. Seminar participants are given practice in critical thinking and are encouraged to pursue their curiosity about the context of ideas in question: the author, the historical period, possible connections with other texts, importance in their own lives, etc. In this workshop participants will have the opportunity to engage in Socratic dialogue and to critique this experience as a group. Participants will also engage in small group dialogue and critique. The workshop facilitators will offer basic exercises and tools which can help to develop the "seminar attitude" and effective seminar skills. This is not a presentation by experts but a "mind's on" experience in learning how to learn.

(Participants will benefit most by attending both "Socratic Seminars" as they are designed to be presented in a three hour format.)

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

The American Road as Metaphor: Exploring the Voices of Those "On the Road" in America to Teach Critical Thinking Mid/High, Coll, Mus-Cult, Soc Stu

Travel writing has received a bad rap. The presenter has taught/facilitated a course titled "Voices from the American Road" for several years. The writing of those who have used the road (in America) serve as internal and external journeys. The writings range from Tom Kromer in the 1930's to Jack Kerouac and the Beats to Eddy Harris and others in the 1990's. The class uses the "road" to teach critical thinking through experiential small town investigation, urban explorations, text explication, resource speakers, videos, personal journals and small group work. The course emphasizes critical thinking as a process which encourages students to individualize and take charge of their thinking and learning. Course materials will be distributed and where to go will be suggested...
Bassham, Gregory  
Assistant Professor of Philosophy, King’s College

Henry Nardone  
Assistant Professor of Philosophy, King’s College

Using the Film “JFK” to Teach Critical Thinking  
TACTIC/STRAT, POL, MEDIA, SOC

The assassination of JFK is the ultimate murder mystery of the 20th century and thus a natural “hook” for critical thinking teachers looking for interesting ways to drive home to their students that critical thinking can indeed be of great “real world” value. In this session, we offer a practical description of how to use Oliver Stone’s controversial and award-winning film “JFK” and related materials to teach critical thinking. The presentation will show excerpts from the film and use small-group settings to discuss how the film can be used to teach key critical thinking skills and dispositions.

Betz, Norman  
Associate Professor of English and Philosophy, Central Missouri State University

The Myers-Briggs and the Process Toward Critical Thinking  
COL, TACTIC/STRAT, LANG, TEST

This session will apply the Myers-Briggs to the classroom as a means of creating the environment for critical thinking. The session will demonstrate how the Myers-Briggs provides a vocabulary for articulating student needs, student strengths, and student limitations as class activities move toward critical thinking.

The first part of the session will be a review presentation of how the MBTI interacts with the way students learn and think.

The second part will be more interactive: we will examine early papers to induce M-B types and to detect early thought indicators. Later we will again induce M-B typology and the critical thinking present in final exam papers on Jane Tompkins’ book West of Everything.

At the end, we will evaluate the extent to which students have attained the NCECT standards. If time permits, we will suggest future teacher interventions.

Bohannon, Ron  
Media Instructor (Programming), Independence High School

A Critical Study of H.L. Mencken’s Dialectic Irony in In Defense of Women  
BEG, ADV, LANG, TACTIC/STRAT

H.L. Mencken wrote in the Socratic tradition seen in Nietzsche and Schopenhauer using dialectic irony for inquiry On Women. Mencken’s book In Defense of Women (1922) focuses on the women’s movement in the wake of feminine triumphs, such as winning the right to vote and other diverse cultural advances in the early part of the twentieth century.

Mencken’s writing In Defense of Women reveals the genetic influence of Socratic style. Schopenhauer and Nietzsche had concordant philosophic methods, and Mencken held views consonant with Nietzsche and Schopenhauer “On Women.”

A summary of the critique of the classical method of dialectic irony is obtained from the Critical School (Adorno, Horkheimer), the Rhetorical school (De Man, Derrida), Oxford scholars (Vlastos, Robinson) and Classic philosophers (Socrates, Schopenhauer, Nietzsche, and Kierkegaard) to form an evaluation criteria. Mencken’s irony in In Defense of Women is critiqued in contrast to Socrates’ original method to show how and when dialectic irony becomes legitimate ethical inquiry. Conclusions focus on recommendations, implications, limitations and possibilities for using dialectic irony in relation to pluralistic discourse.

Bohannon, Ron  
Media Instructor (Programming), Independence High School

Dialectic/Pragmatic Thinking: A Study in Conceptual Contrasts  
PHI, ADV, LANG

Pragmatism as a philosophical movement began officially with Charles Pierce, and was popularized by William James and John Dewey; the solidification of the movement at the beginning of the 20th century marked the end of critical inquiry and the move toward positivism. Pragmatism threatens to desecrate every area of humanities for whatever is expedient giving rise to the ethical relativity (Altschull, 1991, Soltzetzen, 1993) of pragmatic rituals, while interests in collectivity which require training in extensive communication skills are declining.

This study traces a social evolution of critical thinking in the fathers of pragmatic philosophy which takes fl e position—if an idea does not have any practical consequences then it is irrelevant or unreal. This paradigm shift has made people today impatient with ideas and crippled their communication skills. Other social problems of pragmatism have developed since the inception of pragmatism and its utile approach to moral expedience.

Classic liberal thinking, critical thinking, or rational thinking absent from classroom adversely affects social discourse. Findings show the flaws and faults of this transformation created a false polemic and that the founders of pragmatism were schooled in dialectic thought and never intended to corrupt it.
Critical Thinking and the Rules of Evidence in Law: A Historical Perspective and Pedagogical Implications

BRENNER, DOUG
Associate Professor, Speech Communication, University of South Dakota

Select provisions of the Federal Rules of Evidence are used to illustrate the history and applications of critical thinking within the domain of law. Critical thinking can be enhanced by understanding the development and application of thinking about evidence. Seen from a legal perspective, students may better understand how and why critical thinking is important in developing and supporting a point for a particular audience and in assessing the veracity of information presented to them. The rules concerning relevance, best evidence, expert testimony, competence and others may help students more carefully evaluate and use supporting materials. The material and teaching models presented may be used as a paradigm to foster critical thinking in the classroom and will stress practical applications (for example, using critical thinking to help resolve typical disputes involving landlord-tenant relationships or speeding tickets).

Developing Video Literacy/Critical Thinking Skills

BRENNER, DOUG
Associate Professor, Speech Communication, University of South Dakota

Students generally respond passively to media such as television or videotapes and films in the classroom. This program illustrates how to more effectively use media by using C-SPAN resources to engage students in critically questioning and thinking about current or past issues available on C-SPAN and archived material. We need to encourage students to recognize and evaluate multiple points of view as well as to analyze assumptions, reasoning and the limitations of the types of evidence offered in support of positions presented in public discourse. C-SPAN resources can be used connect students to social-political issues while enhancing the critical stance and thinking they ought to take in becoming responsible and thoughtful citizens.

Materials, Methods, and Strategies for Teaching Critical Thinking to the Educationally Disadvantaged-to Students at Risk

BROWN, LEE
Project Director, Critical Thinking/Critical Writing Development Project, University of Illinois

This interactive workshop provides materials, methods, and strategies for teaching critical thinking and critical writing to students with educationally disadvantaged backgrounds. By “educational disadvantaged” backgrounds, I refer to backgrounds that have not included the sorts of sustained educational experiences that foster a functional understanding of logic and a functional appreciations of approaches, methods, skills, strategies, or tools that are essential for competency at critical thinking and critical writing. I propose teaching materials, methods, strategies, and techniques that are effective for motivating learning and for instilling critical thinking skills and critical writing skills in educationally disadvantaged students and students at risk. The workshop should be fruitful for teachers of high school and college, and for teachers who work multi-cultural and multi-ethnic environments.

This session will be repeated.

BROWN, M. NEIL
Distinguished Teaching Professor of Economics, Bowling Green State University

Materials, Methods, and Strategies for Teaching Critical Thinking to the Educationally Disadvantaged-to Students at Risk

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

Getting Started as a Teacher of Critical Thinking: Classroom Behavior and Assignments

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 found especially effective.

BROWNE, M. NEIL
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 TACTIC/STRAT, COL, 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
Distinguished Teaching Professor of Economics, Bowling Green State University

Potential Trouble Spots that Bedevil Critical Thinking Classrooms(Participatory Workshop) TACTIC/STRAT, COL, M/H/MID/HIGH

Those of us who teach critical thinking are often lonely and unappreciated. Consequently, we need more opportunities to share with one another our pedagogical problems and strategies for responding to them. This participatory workshop will offer one such opportunity by focusing on the trouble spots that experienced critical thinking teachers have encountered and struggle regularly to overcome. The trouble spots will be classified into the following categories: psychological condition of the learner, lack of integration in the instructional plan, the consumer metaphor of education, infrequency of internalizing the critical skills and attitudes that can be displayed quite proficiently on an exam or in a paper, artificial separation of the student from the argument being evaluated, and Olympian expectations. The presenter will both suggest responses to these trouble spots and encourage other experienced teachers to supplement these suggestions with their helpful hints. The presenter has taught critical thinking for over twenty-five years, and that experience has persuaded him that these problems will arise. So it just makes sense to get ready for them.

BUCKENMEYER, ROBERT G.
Professor of Philosophy and Religion, American River College

Traditional Critical Thinking and the American English Language and "Culture" COL, STAFF DEV, LANG, INF LOGIC

Since the American English Language is a derivative language, not only non-inflected, but linear and one dimensional, it lacks any foundation or internal discipline which would promote critical thinking within its American monolingual speakers or writers.

The result is that if and when monolingual, even bilingual or trilingual non-American English speakers failure is the inevitable result for two reasons: first, because lacking any intrinsic consistent morphology, American English is an ineffective medium through which to teach critical thinking or writing; secondly, lacking any other language experience, monolingual American English teachers have no context from which to draw any coherent morphology and lack any bridge to construct any transfer so students can learn this non-inflected derivative language.

BURRITT, DAN
Teacher/Co-director C.A.R.E., Children at Risk in Education

Creating Math Islands with the Thinking Skills Format TACTIC/STRAT, K-12, BEG, MATH

Math Islands is a classroom tested unit. The unit facilitates students in discovering the bridges among mathematics, literature, writing, science, history, technology, and telecommunications. The learner considers the elements of reasoning and the Thinking Skills Format by applying the universal intellectual standards in the pursuit of cultivating the Traits of Mind. Primarily, it is a unit of mathematics that focuses upon the NCTM standards of reasoning, problem solving, communication, and the strands of measurement, geometry, number and computation, and statistics. By using the natural creativity and curiosity of students to create their "own" island, the unit draws the student into areas of Socratic dialogue and inquiry. Connections are made among individual islands, cognitive skills, and the academic areas. The overall guideline for the unit is the Thinking Skills Format—the thinking programs used in the classroom. Students learn the power of applying the stages of intention—reciprocity—metacognition—bridging—principle—summary—in this project. This is a participatory workshop.
Students attempt to solve problems or tasks that appear safe or familiar. They evade solving problems or tasks that appear unfamiliar. The use of Reciprocity or the mutual exchange of information allows students to recognize the power of what they already possess. Students recognize prior knowledge or strategies that aid in task solution. Students recognize what is not known can be an aid in successful and thoughtful solutions. It is okay and appropriate not to know an immediate solution. In fact, it might be preferable to pursue what is not known to develop multiple approaches to solve a task.

Participants will receive a copy of the Thinking Skills Format Guide and a written explanation of the guide for out of class reference. We will define our meaning of Reciprocity—a reciprocity of the Reciprocity. We will investigate the student and teacher probes and questions in the Reciprocity Stage of the TSF Guide. The direct application will be examples of common problems or topics students might face in mathematics, history or reading. We will use the same concepts or lessons on the intermediate level in NCTM framework as a common reference. We will create and discuss question types/probes that students can use or investigate in the reciprocity stage. Participants will exchange areas they anticipate to pursue in developing other reciprocity questions. If teachers wish to network beyond the conference, e-mail addresses can be exchanged. I will be available for any teacher networking during the year.

This paper presents a self-regulated model to guide low achieving students in solving mathematics problems. Derived from metacognitive theory and validated with research findings, it is designed to guide students toward the process of solving problems. The author poses three practitioner oriented questions: (1) How can I develop and reinforce those processes associated with higher order thinking by promoting students' autonomy as they engage in a self-inquiry process? (2) What can I do to direct and maintain student's steady focus in sequential steps during the decision making process? (3) How can I increase students' trust and my own ability to be in control of their own learning? A description of why and how this model facilitates the process that metacognitive theory identifies as necessary for problem solving is provided as well as principles for teacher mediation during the implementation of the model. Predicted outcomes are discussed from a practical and a metacognitive perspective.
memorized definitions of grammar terms rather than acquired an understanding of what the terms represent.

Students, through the activities presented, are helped to discover four basic functions of words and the meanings of the terms used in connection with those functions.

Cederblom, Jerry

Professor of Philosophy, University of Nebraska at Omaha

Tues 10:30; STEV 3046

The Critical Reasoner As Protagonist

Inf Logic, Tactic/Srat, Coll

How can we help students transfer critical thinking skills from the classroom into their daily lives? This participatory workshop presents a method of practicing critical reasoning by acting out real-life disputes and discussions in the classroom. Scenarios based on students' own experiences present problems for the Critical Reasoner/Protagonist such as how to engage a combative opponent in a productive, cooperative exchange of views. The presentation draws on the techniques of South American dramatist Augusto Boal and his Theatre of the Oppressed.

Chamberlain, Ph.D., Harriet

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

Sun 1:30; STEV 2049

Thinking For Your Life

Coll, Adv

The need for critical thinking has overrun the boundaries of academia, business, banks and politics. If there is any chance of sustaining a quality of life that nurtures survival itself, that supports life with dignity, and advances our as-yet-unfulfilled humanity, we need to foster a quality level of thinking that is accessible across all levels of society in our everyday world.

This workshop/discussion will focus on recent research theories in brain evolution that may shed light on how and why thinking and feeling "patterns" may be beneficial in perpetuating security, but can impede or undermine the goals and practices of "strong" critical thinking. We will then examine some of the obstacles that negatively affect the quality of our everyday lives, and conclude with active participant involvement in thinking exercises designed to diminish obstacles, expand "inner space" to accommodate broader perspectives, and enlarge our repertoire of choices. Workbook provided.

Cherednichenko, Brenda

Lecturer, Department of Education, Victoria University of Technology

Mon 1:30; IVES 34

The Geographical Location of the Teaching of Thinking Skills Programs

ELEM, SOCIO

(This paper reports on an aspect of the research and work in progress.)

In exploring the differences in schools and their curricula, it has been interesting to note the broad differences in the range and type of curriculum defined and offered in schools in different geographical locations. In particular, I have examined the development and implantation of thinking skills programs in the primary school curriculum.

A survey of Melbourne primary schools has indicated an uneven distribution and implementation of programs, additional to the general curriculum, which are designed to develop thinking skills. One of the most significant issues raised by this research is why schools, both public and private, in the inner east of Melbourne are more likely than other primary schools to offer such programs.

However, apart from listing and examining the variety of programs which are considered to be addressing thinking skills in schools, the ensuing debate about the nature of thinking skills and whether or not these programs actually do develop thinking skills, there are more perplexing questions for education in Victoria University. This report of research in progress investigates the geographical location of thinking skills programs in an attempt to uncover some of the influences on school decision making with regard to these programs. It also establishes the need to discover to what extent socioeconomic and socio-cultural influences are factors in these educational decisions.

Cherednichenko, Brenda

Lecturer, Department of Education, Victoria University of Technology

Wed 9:35-10:15; IVES 119

(Mini-Session) Confident Critical Thinkers

Gen

The purpose of this mini-session is to help build confident contributors in class discussions. Some students find it easy to speak up in class and often they are good thinkers, but not all good thinkers are confident or sufficiently articulate to feel comfortable about speaking up in class. Whatever the reason for this reticence, teachers must be able to provide an environment in which all students feel able to and do contribute. Establishing communities of inquiry in classrooms provides an environment where all members feel personally safe yet intellectually challenged.

In a community of inquiry students and teachers have equal responsibility for the development of thinking, including the amount of talking time. The student's ideas are the focus of the discussion. Students engage directly with each other's ideas, rather than filter their comments through the teacher. As in all critical thinking activities, sound reasoning is valued and students offer critique of ideas rather than people.

Activities are used to foster a critical examination of language and concepts and to encourage students to engage in a discussion which requires an explanation based on sound reasoning rather than a search for the right answer. Small group and whole group activities encourage the development of trust and respect within the group so that each child is valued and their ideas challenged. This provides a sound basis for full participation and often the discovery of 'hidden' ability.
CHONG, LYNN R.  
Mon 3:15; STEV 3040  
Learning Specialist - Critical Thinking Program, Massachusetts Bay Community College  
How Do You Know Your Evidence Is True?  
HIGH, COLL, TACTIC/STRAT  
This participatory workshop session will be conducted to model a classroom of young adult learners exploring knowing, as Richard Paul’s structured examination of one’s belief, or statement, or conclusion demands. Strong sense critical thinking can evolve if a student will use standards and criteria when coming to believe, “I know.” However, any response that develops from a serious question of reasoned judgment must also be examined for its limits and its reasonableness. How can a student with one semester’s exposure to critical thinking skills accept what may feel like vacillation and, worse, that provokes insecurity in cases where “knowledge” is then debunked? What is a facilitator to to do?  
Materials used will include student papers written by MBCC students during the spring term, 1995, and other materials created from current events, such as “the cow through the roof.”

COLBOURN, FRANK E.  
Mon 1:30; ART 108  
Full Professor of Speech Communication Studies, Pace University  
How We Put the Background of Epistemic Application Into the Foreground of Critical Thinking  
COLL, ADV, PSYCH, TACTIC/STRAT  
This session presents a primary tool of learning: the underlying patterns of thought, Epistemes, we apply in perceptions, evaluations, decision, and actions. There will be a hands-on demonstration examining how participants apply Epistemes in the evaluation of a given situation. Following this focal activity, there will be a three part presentation:  
(1) How we got to where we are now in Epistemic Analysis with reference to the broad variety of scholars and ideas in its historical development;  
(2) Current usefulness and applications; and  
(3) Future applications and potential for insights in Critical Thinking using Epistemic Analysis.

COLLISON, GEORGE  
Mon 10:30; STEV 1040  
Assistant Professor of Math and Science Education, University of Massachusetts Dartmouth  
Empowering Teachers to Teach Using Inquiry in Algebra and Pre-Algebra  
MATH, MID/HIGH, COLL  
This hands-on workshop focuses on new ways to incorporate inquiry based instruction and critical thinking in pre-algebra and algebra. Manipulatives, supplemented by spreadsheets and simple plotting programs provide concrete representations and contexts for exploration of algebraic forms. The role of function in early algebra is examined, and it centrality in any critical understanding of algebraic thinking is assessed. Emphasis is placed equally on deepening both pedagogical perspective and content knowledge of instructors and students. Methods presented are applicable in one-computer classrooms as well as in lab settings.

COLLISON, GEORGE  
Mon 3:15; STEV 1040  
Assistant Professor of Math and Science Education, University of Massachusetts Dartmouth  
Linking Understanding in Math and Science Through Argument and Discussion in the Language of Functions and Graphs  
MATH/SCI, MID/HIGH, COLL, COMP AID  
A new technology that permits data taking and analysis from Quicktime™ clips provides math and science educators innovative ways to make meaning in cross disciplinary explorations of “real world” phenomena. Three software packages will be features in this ‘hands-on’ workshop: Motion Analyzer and Motion Maker (Tom Snyder Productions), and Measurement and Motion (Learning and Motion). Instead of presenting ideas or prompting students’ responses, this new approach is designed to stimulate discussion, make conjectures, and try out ideas to see if they make sense. The methods in the workshop are equally adaptable to the one-computer classroom as to a lab setting. Ways to provide similar contexts for critical discussion in technologically challenged environments will also be addressed.

COLLISON, JUDITH  
Wed 10:30; STEV 3008  
Assistant Professor, Critical and Creative Thinking Program, University of Massachusetts Boston  
The Role of Critical Thinking in Mathematics Education Reform  
MATH, STAFF DEV, K-12  
Since 1989, when the NCTM published its Standards for Curriculum and Evaluation, a great deal of attention has been paid to revising the K-12 mathematics curriculum. Statewide Systemic Initiatives, Urban Systemic Initiatives, district-based and school-based curriculum and professional development programs have focused on implementing these Standards. Many states have produced their own Mathematics Curriculum Frameworks document, based on the national standards. This session will examine the new Massachusetts Mathematics Frameworks in light of the national reform movement in mathematics education, teacher education and professional development, with special focus on the critical and creative skills that are called for by the reforms.
Collison, Judith
TUES 10:30; STEV 3008
Assistant Professor, Critical and Creative Thinking Program, University of Massachusetts, at Boston

How to Write and Evaluate Open-ended Questions in Mathematics

Reform in mathematics education necessarily calls for new methods of assessment. The new focus is on understanding and using mathematics, rather than merely recalling formulas and algorithms. New assessment methods need to be developed in order to evaluate students' understanding of and ability to use mathematical ideas. Performance-based assessment, portfolios and open-ended questions are used increasingly. While such authentic assessment tools are better measures of student progress, they are also difficult to develop and to score. In this session we look at some criteria for creating and for scoring open-ended questions in mathematics. Participants will write questions based on the criteria, provide answers at a variety of levels, and will develop benchmarks for scoring responses.

Coodley, Lauren
WED 10:30; ART 108
Professor, Social Sciences Department, Napa Valley College

Robert Wright
Professor of Economics and Music, Napa Valley College

Critical Thinking and Medicine: A Dialectical Analysis

We will present a third wave model for critical thinking which incorporates a dialectical model for analysis. We will demonstrate this model through the example of the institution of medicine without our society. Dialectical method postulates that the epistemological foundations of ordinary abstract reasoning, and particularly that of ordinary extension to objects, is not alone adequate to describe the dynamic universe in which we live. This model redefines "science" from the standpoint of a dynamic universe, as a study of process and change within a political-economic context and includes a critique of positivism as groundwork for a new paradigm. We shall see that the social production of medicine (as do all our institutions) reflect the unconscious ideology of the present society in which we live. This model will give us an opportunity to begin to apply the principles of analysis with their own experiences with medicine.

Costa, Darrell E.
TUES 3:15; STEV 3072
Professor of General Education (English/Humanities), DeVry Institute of Technology, Pomona

Steven Rosenbloom
Independent Lecturer/Filmmaker

Demagogues in Our Midst: Critically Assessing Demagogic "Talk" in Our Political, Religious and Entertainment Leaders (From Limbaugh, Gingrich and Robertson to Jackson, Perot, Farrakhan and Kahane, to You and I)

A dangerous assumption for those wishing a democracy is that demagoguery is self-evident, that "we" (having the basics of a good high school or college education) could easily recognize demagogic persuasion and actuate our resistance. In our midst, however, many leaders still lead (read "dupe") the people (even the most "educated" masses) with an arsenal of pseudo-reasoning. We propose that proper inoculation against demagogic thinking is in order through a) the mastery of key definitions and concepts, b) recognition of the demagogue's fallacies and appeals, c) practice in identifying demagoguery in various forms of rhetoric. Mini-indoctrination into demagogic "tricks of the trade" using speech excerpts from popular "leaders" will include Us vs. Them thinking, Tantalizing Tautologies, Attack Humor, the Populist Rap and playing the Patriot Game.

Cotton, Webster E.
SUN 1:30; DAR 122
Professor of Educational Foundations, School of Education, C.S.U., Los Angeles

Thinking, Education and the Human Project: The Contrasting Perspectives of Socrates, Dewey and Heidegger

For many leading thinkers the central question of our time is: "What is the meaning of our Human Beingness?" When we connect this question with Parmenides aphorism: "Thinking and Being are One," we are brought into the realm of Logos. The concept of critical thinking, in its most generic form, seems to have its roots in Logos, our unique human potential to use our mind to think, to reason, to question, to wonder - to be searching for the Truth of Being Human (what really is ... going on, possible, important for us as Human Beings). In this session I plan to explore three contrasting (but complementary) perspectives on Logos as a way of opening-up our understanding of the relationship between thinking, education and the Human Project. As representatives of these perspectives I have chosen Socrates (Diaglogical-Philosophical), Dewey (Empirical-Scientific) and Heidegger (Existential-Ontological). This session will be in the seminar format, with an initial 20-25 minute presentation.

Da Venna Tillmanns, Maria
SUN 10:30; STEV 3006
Ph.D. candidate of Education Policy Studies, University of Illinois Urbana

Philosophical Counseling: Philosophy From the Bottom Up

Philosophical Counseling assists people in dealing with problem areas in their lives. Philosophical Counseling uses the client's own "theory", or "philosophy of life" to help interpret his/her problem areas in life. It focuses on the often unquestioned underlying assumptions of the client's worldview, and is interested in discovering the logic of the person's philosophy of life. Through philosophical dialogue, and logical analysis, a client can gain insight into his/her own frame of reference. The objective is to enhance a person's ability for independent decision-making, and power of control over one's own life. To concentrate on these aspects in a person's life is also to liberate and free a person from solely egocentric and sociocentric habits of thought. Philosophical Counseling is the art of hearing through experience, whereby new ideas are generated and developed.
**CONFERENCE ABSTRACTS**

**DAMER, T. EDWARD**
Professor/Author, Department of Philosophy, Emory and Henry College

**How to Distinguish “Good” Arguments from “Bad” Ones**  
**INF LOGIC, GEN**

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 *Attacking Faulty Reasoning* will be distributed to workshop participants. Sample arguments that deal with current issues will be evaluated as a part of the workshop.

**DAMER, T. EDWARD**
Professor/Author, Department of Philosophy, Emory and Henry College

**How to Construct Effective Moral Arguments**  
**COLL, MIO/HiGH, BGC, 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**
Professor/Author, Department of Philosophy, Emory and Henry College

**How to Resolve Disagreements on Controversial Issues**  
**COLL, MIO/HiGH, H CON, INF LOGIC**

This session will focus upon the rules of intellectual behavior that critical thinkers would be expected to follow in a serious discussion of a controversial issue. These rules clearly take on an ethical dimension, since fairness demands that all parties to a dispute be committed to the same minimal standards of intellectual behavior. But the rules also describe the kind of intellectual behavior which works—which actually resolves 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 may be devoted to demonstrating the effectiveness of the principles by attempting to “resolve” a political or moral conflict found between workshop participants.

**DAMER, T. EDWARD**
Professor/Author, Department of Philosophy, Emory and Henry College

**(Mini-Session) Concept of Rebuttal**  
**INF LOGIC, GEN**

Almost any of us can construct what appears to be a decent-sounding argument for a position on one side of a controversial issue. But we often do this by ignoring the strongest argument on the other side of the issue. This mini-session will demonstrate how to turn a decent-sounding argument into a really good argument by acknowledging and effectively rebutting the best arguments on the other side of the issue.
The purpose of this mini-session is to help students develop dialogical thinking. Through the hermeneutical worksheet, the student identifies the various multilogical solutions to the issue(s) that have been suggested within the history of a particular discipline. Alternative proposals are treated as multilogical hypotheses to be tested by dialectical and dialogical thinking of the primary source data in nexus with the hypothesis.

• Students develop an openness to epistemological issues and alternatives from all sources of knowledge. They establish reliable criteria by which they can be encouraged to think critically within a schooling environment. This presentation will not only discuss the theories of both critical thinking and constructivism but will also show how these theories can be combined within a classroom to foster strong sense critical thinking from the onset of the child's educative experience.
• Students move from text to context. This movement from the "there and the then" to the "here and the now" is known as the principalizing bridge. The student relates what knowledge meant in its Sitz im Leben (setting in life) to what that same knowledge means to the student in his/her Sitz im Leben.

• Students develop a polyvalent or multilogical attitude.

DORMAN, WILLIAM A.  
Mon 1:30; STEV 3008  
Professor of Journalism/Government, CSU Sacramento

RALPH JOHNSON  
Professor of Philosophy, University of Windsor

Mass Media and Critical Thinking: Part I  
In response to requests at past conferences, Dorman and Johnson will present two, back to back sessions on how mass media studies can be incorporated into critical thinking courses, or vice versa. The pair will share concepts and techniques developed over decades of teaching students to be more critical about their consumption of media. The first session will focus on theoretical concerns, insights into media practice and effects, and course design. Plenty of time will be available for questions and discussion.

DORMAN, WILLIAM A.  
Mon 3:15; STEV 3008  
Professor of Journalism/Government, CSU Sacramento

RALPH JOHNSON  
Professor of Philosophy, University of Windsor

Mass Media and Critical Thinking: Part II  
This workshop will build on concepts and issues raised in the presentation immediately preceding through a discussion and demonstration of specific techniques and exercises useful for teaching about media in the classroom. Participants will be encouraged to share their teaching strategies and exercises as well.

DORMAN, WILLIAM A.  
Sun 3:15; SU 100  
Professor of Journalism/Government, CSU Sacramento

DONALD LAZERE  
Professor, English Department, Cal Poly, San Luis Obispo

JONAH RASKIN  
Associate Professor of Communication Studies, Sonoma State University

NORMON SOLOMON  
Media Critic

MARK LOWENTHAL  
Assistant Director, Project Censored, Sonoma State University

Mass Media and the American Conversation: Perspectives on Power and Culture  
The role of the mass media is difficult to ignore for anyone whose teaching is concerned with political, social and cultural questions in contemporary America. Norman Solomon, nationally syndicated media critic and co-author of the recently published, "Through the Media Looking Glass", will join three veteran teachers and media scholars in a panel focusing on the impact of information media on the everyday dialogue that people have about public life. The panelists will consider controversies surrounding the performance of mass media, including journalism's purported political and social bias and its power to set the public agenda. There will be ample opportunity for audience participation.

DRESDEN, MAX  
Tues 10:30; DAR 139  
Professor of Physics, History of Science Department; Stanford University

The Notion of Proofs and Evidence  
The notion of "proof" is central to all scientific investigations. Similarly, the evaluation of social or educational changes is based on an assessment of the results of the innovations. It is therefore somewhat surprising that neither the notion of "proof" itself, nor the reliability and relevance of evidence have been subjected to detailed scrutiny. This presentation is designed to provide a detailed, critical analysis of the distinct often tenuous elements in the uses of proofs--as well as the trustworthiness of information.

Since proofs in the theoretical and experimental sciences, in psychology and medicine, differ enormously, methods and concepts in one area cannot be carried over to others without great confusion. The techniques and procedures of obtaining and processing information also are quite different in the social sciences, in educational reform, in one legal practice. A "bare" statement "it has been shown that..." can be very misleading and create incorrect conclusions, leading at times to wrong policies. A large number of examples, illustrating these features will form the main topic of this discussion. Participants will be invited, urged to describe and analyze their own experiences.

ELDER, LINDA  
Mon 1:30; CAR 68  
Assistant Director, Center for Critical Thinking and Moral Critique, Sonoma State University

Understanding Our Egocentric Nature: Is Yours Dominant or Submissive?  
The functions of the mind--our thoughts, feelings, and desires--are at any given time under the control of either our egocentric nature or our rational faculties. The egocentric nature of any one of us, developed for the most part during childhood, is essentially either dominant or submissive. In this session, focus will be on understanding the theoretical construct of egocentrism, delineating the differences between the dominant ego (which is typically male) and the submissive ego (typically female), discussing the powerful role of egocentrism in impeding the development of rationality, and providing effective strategies for reducing the power of egocentrism.
To become a rational person means to understand the concepts of critical thinking and then to apply them consistently in everyday life. As a theoretical matter it appears simple. As a practical matter it is extremely difficult. Why? We are, by nature, inherently drawn toward egocentrism; in other words, we possess an automatic mental mechanism which inclines us to seek pleasure and avoid discomfort of any kind. In this session, Linda Elder will briefly discuss the idea and theory of egocentrism; then she will discuss her own continual struggle with becoming a rational person. Dr. Elder will share strategies she finds useful for recognizing her own egocentric thinking, and for gaining rational control of it.

A Stage Theory of Critical Thinking In Adulthood

Developed in collaboration with Richard Paul, Linda Elder will present a stage theory of critical thinking development in adulthood, contrast it with a parallel theory of intellectual development, and relate it to the affective dimension of thinking. The theory, originally presented at last year's conference, has been expanded and altered, with emphasis on the role of egocentric thinking in the development of critical thinking skills and abilities. This theory, developed as a conceptual tool, is useful as a monitoring template for students as they progress as critical thinkers.

Critical Thinking and the Young Child

Children relate to the world, just as adults do, through their thoughts, feelings, emotions and drives. This presentation, useful to both teachers and parents, will focus on how the cognitive and affective function of our minds heavily influences how we relate to children, how we react to them, and how productive those interactions will be; in addition, the session will emphasize the role of cognition and affect in how children relate to one another, to teachers, parents and to their own minds. Useful strategies for positively developing the affective and intellectual lives of children will be provided.

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

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 substantially improves 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.

Critical Thinking Within a Theological Dimension

The argument will be presented 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.
FINOCCHIARO, MAURICE A.

Distinguished Professor and Chair, Philosophy Department, University of Nevada Las Vegas

Philosophy and Critical Thinking in Socrates, Galileo, and Marx

A rigorous metaphysics can diagnose the intellectualism, voluntarism, and psychologism that affected the first two waves.

One approach to teaching and theorizing about critical thinking is to study great exemplars like Socrates, Galileo, and Marx. I plan to discuss this approach by reporting on a university course I have taught for 20 years and by formulating some conclusions and problems suggested by this kind of material. In the process, the critical thinking practice of these three exemplars will be related to several theories of critical thinking, such as those of Ennis, Garver, Lipman, Paul, and Scriven. The format of this presentation will be a 55 minute lecture followed by 30 minutes of questions and discussion; I will hand out a one-page outline of the lecture.

FONTENY, MARSHA E.

Assistant Professor, School of Nursing, University of San Francisco

Strategies for Improving Nurses' Clinical Reasoning Skills

This session will describe teaching strategies that are designed to improve student nurses' clinical reasoning skills. The strategies are based on what is known from research about how experienced nurses' reason in practice. This exemplar reasoning is contextually based, focused, and efficient. It includes the use of heuristics, such as: pattern recognition, questioning and anchoring. Teaching strategies that will be discussed focus on improving students' reasoning in the following areas: reflection in action, reflection on action, consideration of context, distinguishing significant data, and identifying patterns and relationships.

FRITZ-KELLY, SANDY RN. MSN. M ED.,

Associate Professor of Nursing, Delta College

Applying Critical Thinking Skills to the Complex Task of Delegating Nursing Care

This interactive session is designed to explore ways of teaching the complexity of delegation by applying critical thinking skills. Delegation, as both a concept and process, is the responsibility of the registered nurse as to who, what, how and which tasks will be delegated. Without the understanding and incorporation of critical thinking skills, delegation is often based on personal traits and/or power struggles.

Students frequently find the process of delegation a threatening task, but through interactive scenarios, it allows them to critically reflect decisions within a less threatening environment.
• This common base of the knowledge permits the intellectual communication among the individuals and the different cultures.

• The certainties of the “common sense” (we use the expression following the concept of sensus communis of Gianbattista Vico) are the conditions of possibility of the sciences both ex parte objecti (the objective premise of the investigation) and ex parte subjecti (the basic logical instruments and the motivations of the investigator).

• Questions concerning common sense, the logic of communication, and the logic of scientific investigation will be discussed.

• Conclusion: Teachers must recognize that critical thinking can be “critical” only if it considers the necessary presuppositions of common sense in the very base of every knowledge.

Garcia, Vicky
Instructor, American Language Institute, San Francisco State University

Natasha Haugnes
Instructor, English/ESL Department, Academy of Art College

Training ESL and Native English Speakers for Critical Peer Reading: Lang, Tactic/Strat, Coll

For so long, we’ve been reading our students’ essays, yet wonder why they can’t write! In this participatory demonstration, the presenters will discuss the rationale for peer reading, the problems that arise when students aren’t trained to read critically, and ten important guidelines teachers can follow to set up the activity successfully in ESL and composition classes. Using sample student essays, the presenters will then model techniques that teachers can use to train students to become critical readers and effective peer responders. These techniques will help students track the coherence of their peer’s argument, question an argument’s evidence or support and raise objections to it from other points of view, comment tactfully on vague ideas, and detect cohesive gaps rather than infer meaning that isn’t there. The presenters will also introduce peer reading criteria sheets that help students internalize the standards for a well-written essay.

Giuliano, Jackie A.
Instructor, American Language Institute, San Francisco State University

The Development of Social Responsibility and Environmental Awareness Through Techniques in Critical Teaching - A Community Involvement Approach Tactic/Strat, Env, Pol, Beg

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 includes 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.

**Gottesman, Les**  
Dean of Arts and Sciences, Golden Gate University  
Tues 1:30; STEV 2006

**Toon Logic III**  
BEG, INF LOGIC, TACTIC/STRAT

Back AGAIN by popular demand! (If you fall for that, you need this workshop!) EVERYTHING you ever wanted to know to think critically, non-fallaciously, deductively, inductively, hypothetically, ethically, post-modernistically, and cyberspatially—presented in SIMPLE CARTOON FORM! If you believe that...

**Gottesman, Les**  
Dean of Arts and Sciences, Golden Gate University  
Tues 3:15; STEV 3040

**What is Hermeneutics and is it Critical?**  
COLL, POL, LANG, SOC

Hermeneutics tries to answer the question, what does it mean to "understand"? Once an arcane sub-specialty of Biblical studies and philology, hermeneutics in the last 30 years has quietly influenced theories and practices in history, sociology, anthropology, 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.

**Gratton, Claude**  
Assistant Professor of Philosophy, Philosophy Department, University of Sudbury  
Sun 10:30; DAR 112

**Critical Thinking's Contribution To Psychological Health**  
TACTIC/STRAT, INF LOGIC, COLL, Mid/High

The author argues that one way to motivate students to (i) learn critical thinking skills and attitudes, (ii) transfer these skills to everyday life, (iii) evaluate seriously their own beliefs, and (iv) diminish their fear of having their beliefs evaluated by others, is to teach them how to use critical thinking skills to enhance or maintain their psychological health and well-being. He then describes a pedagogical strategy to teach this new application of critical thinking skills.

**Gratton, Claude**  
Assistant Professor of Philosophy, Philosophy Department, University of Sudbury  
Tues 1:30–2:10; IVES 119

**Mini-Session**  
A Game of Posing Critical Questions: While Watching Television  
INF LOGIC, GEN

The author presents a simple game to help students to transfer critical thinking skills to television programs, and to practice raising the kinds of questions that maintain active and critical listening. He will distribute a partial list of such questions. The gist of the game is that an instructor stops a videotaped debate at pre-selected places, and asks students what critical question(s) they should raise at that point of the discussion. The instructor and students compare, contrast, and evaluate the questions, and then they attempt to answer them. If a student is not sure what question(s) to raise, the instructor stops the video at that point, the student can immediately tell the instructor to stop the videotape; once it is stopped, the instructor and the other students must identify the critical question(s) that should have been raised.

**Gottschalk, Michael A.**  
Assistant Professor of Communication, Communication Department, University of Guam  
Tues 1:30; STEV 3040

**Critical Thinking: A Practical Guide**  
ADV, MID/HIGH, COLL

This participatory workshop will offer a systematic guide for conceptualizing problematic situations. The guide is based on Dewey's Reflective Thinking Sequence. As such, it attempts to get the user to systematically analyze, synthesize, generate hypotheses, and evaluate the information gathered. The model emphasizes the notion that a problem needs to be accurately defined if a solution is to be reached that solves the problematic situation.
HART, THOMAS
Assistant Professor, English Department, Patten College

HATCHER, DONALD
Director, Center for Critical Thinking, Baker University

HAYNES, JARED
Lecturer, English, University of California, Davis

HALUZA, HERMAN
Lecturer, English, California State University, Hayward

HANFORD, GEORGE H.
President Emeritus, The College Board

REBECCA SKAGGS
Professor of Philosophy and New Testament, Patten College

HATCHER, DONALD
Director, Center for Critical Thinking, Baker University

LUCY PRICE
Chair, English Department, Baker University

Combining Critical Thinking and Written Composition: The Whole is Greater than the Sum of the Parts

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. The idea behind the new sequence is that students can become better writers if they first are better thinkers and readers. Critical thinking skills can provide students with powerful strategies for developing their ideas in all forms of expository writing. The presentation will focus on the genesis of the new program, the organization of its textbook, the application of critical thinking skills to expository writing, ways for continued faculty development, and the program assessment techniques used to evaluate the program. 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 now supported by grants from the Hall Family Foundation, the panel members will make suggestions on ways to enhance one's odds for outside funding. Because assessing the outcomes of any program is important, the presenters invite others to administer similar pre and post tests in their critical thinking courses and compare results.

Integrating Critical Thinking at a Christian College

Educators at Christian colleges sometimes claim the advocacy of critical thinking to be inappropriate, even dangerous, to their enterprise of faith and learning. In secular colleges issues of faith may be routinely excluded from approaches to learning. At Christian colleges, however, problems of integrating critical thinking into a course or curriculum can be exacerbated when students in a religious setting fall back to the literal contexts of fundamentalism and "either-or" thinking. Is it the fact that critical thinking and religious belief are opposed? Indeed, what role does critical thinking play in faith, anyway? Presenters will argue that in fact critical thinking is essential to faith and that the two can work together harmoniously, as opposed to arguments by Christian educators which claim that integrating critical thinking in a Christian college curriculum is not desirable. Presenters will engage participants in the questions and possible synthesis between the antithetical opposites created between faith and reasoning.

The Writing Strategies of College Students: Reflections of Cognitive Development

Research has shown that college students move through recognizable stages in their thinking strategies from the time they enter the university to the time they graduate. This session will first present three major studies that help sum up how the research on students' cognitive development has developed: Perry's study in the 1960s on male college students, Belenky and
her colleagues’ study in the early 1980s on women college students, and Baxter Magolda’s study in the late 1980s on a mixed population. The strong similarities and increasing sophistication of these studies will be emphasized. Then participants will be asked for input on what they have observed in their students’ writing strategies and attitudes and we will discuss how these attitudes may reflect particular stages in the development of students’ thinking abilities. Finally, we will look at teaching strategies that should encourage the improvement of both their thinking and writing.

**Haynes, Jared**
Tues 3:15; STEV 3008
Lecturer, English, University of California, Davis

**Designing Writing Assignments that Foster Critical Thinking**  
Coll, Beg, Tactic/Strat

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 presentation will offer a variety of ways to structure writing assignments to help students develop their thinking abilities. We will also discuss what ought to go on an assignment handout. There will be plenty of opportunity for participants to offer input.

**Haynes, Jared**
Mon 10:30–11:10; IVES 119
Lecturer, English, University of California, Davis

**Mini-Session**  
**The Exploratory Paper: Prelude to Argument**  
Coll

The purpose of this mini-session is to help students suspend judgment until they understand an issue. Students have a tendency to want to argue positions that they have not yet thoroughly thought out and that are grounded in assumptions and biases of which they are unaware. Before making an assignment that asks them to research a position and argue it, they can be asked to write an exploratory paper. This paper has no thesis or position to defend. Instead, it explores neutrally the different arguments others have made on the issue, and shows how these arguments have answered or failed to answer each other. This assignment should lead students learning how to suspend their judgment, remain open-minded, and look at several sides to the issue in question. They can then employ these strategies in an argument paper in order to present a fair-minded position.
activities must reflect if they are to promote critical thinking. The session examines the difference between interactive learning that is simply enjoyable classroom interaction and activities that promote depth of thinking, adherence to intellectual standards and rigorous scholarship in discipline specific fields such as nursing. Continuous assessment of the quality of thinking occurring in the classroom is the central focus of exemplary classroom; the classroom infused with critical thought.

Heaslip, Penny  
Instructor, Nursing Department, University College of the Cariboo

NLN Site Visit: The Essential Elements  COLL, STAFF DEV, TEST, NURS

Preparing for an NLN site visit is an intellectually challenging experience. Whether you are an NLN visitor to a school of nursing or an educator anticipating an external evaluation team visit to your school; it is essential that you prepare effectively for your role in the Approvals process. This session addresses how a comprehensive, deep understanding of the theory of critical thinking can serve as a framework for evaluation of the effectiveness of nursing curricula. The session addresses the questions faculty and visitors should consider in preparation for site visits. Participants will have an opportunity to debate the advantages and disadvantage of common research approaches for outcome evaluation of critical thinking. Comprehensive, rigorous examination of nursing curricula will create nursing programs and nurse graduates that have deep conceptions of what it means to be a critical thinker.

Herschelmann, Kathleen  
Associate Professor of Management, School of Business, Madonna University

Critical Thinking in International Trade—Using a Format Adaptable to Other Disciplines  HIGH, COLL, BUS, TACT/STRAT

Presented here last summer was the research and planning design for a Title VI project on how students at the high school and college level could gain initial awareness and solve problems in international trade by using critical thinking. This past year ten modules and a faculty in-service were developed and tested in six public school systems and two universities in the metropolitan Detroit area.

The modules are “student friendly” and range from “Should Adam Smith Stay Home? Trade Integration vs. Trade Isolation for the U.S.?” to “What Role Does Culture Play in International Business?” While schools piloted the modules, other interested faculty members began adapting the format to their specific disciplines, and the versatility of teaching critical thinking in this manner was developed. Session participants will be invited to go through a module segment using one of the videos especially produced for the project. Richard Paul was the chief consultant on the grant.

Herschelmann, Kathleen  
Associate Professor of Management, School of Business, Madonna University

(Mini-Session) Writing Modules Using Critical Thinking as a Base  Mid/High, Coll

The purpose of this module is to have students use the elements and the standards of critical thinking as they solve problems. In developing the Madonna University Title VI International Trade Project for upper high school and beginning college students, a format was devised for the modules that is transferable to other curriculum areas. By having the students answer several sub-questions through critical thinking and then tying the final experience to the main question of the module, students assess their own critical thinking skills. (This two-year project was completed in June 1995 with Richard Paul as chief consultant.)

Hickcox, Leslie K.  
Associate Faculty, Department of Human Studies, Marylhurst College

Developing Problem-Solving Skills through Kolb’s Experiential Learning Cycle  COLL, TACT/STRAT, BEG, SCI

The research and experience of educators applying experiential learning theory in and out of the classroom are showing positive learning results. The majority of research on Kolb’s experiential learning theory between 1971-1990 demonstrated support for the theory (Hickcox, 1991). Kolb’s experiential learning theory has been researched and applied in over 30 academic fields in higher education throughout the past 20 years. This workshop initially outlines the theoretical framework of Kolb’s experiential learning theory. The theory of experiential learning promotes the student as an individual who is responsible for her/his learning, as much as the teacher is responsible for the learning environment. Development of the individual is particularly acknowledged through Kolb’s learning style model, the Learning Style Inventory and Kolb’s formulation of the learning cycle. The learning cycle was originally proposed by John Dewey. It has been found that the learning cycle tends to promote thinking, communicating and problem solving skills.

The second half of this workshop focuses on the problem solving skills which are developed through the use of the learning cycle in and out of the classroom. Each participant will experience problem solving skills through the application of a questioning process, lower and higher level brain functioning according to approaches used in the classroom, and the learning environment which promotes higher level problem solving skills. In summary, this workshop will demonstrate how Kolb’s experiential learning cycle promotes problem solving skills.
The session will open with an overview of the project, followed by short demonstrations from three subject areas. Faculty presenters will play excerpts from tape-recorded interviews they conducted with students. The audience will be invited to assess the students’ performance according to the cross-disciplinary scoring guide and to provide feedback on the procedure.

JANSON, P.J.  
Tues 11:20-12:00; IVES 119
Assistant Professor of Music, Augustana University College
(Mini-Session) Critical Thinking in Music History Courses  
COL, BEG, ARTS
Music history courses involve an understanding of historical developments, as well as an aural acquaintance with musical compositions. The common perception is that the bi-focal character compels the instructor to make the most of the time available, as there is so much material to cover. In view of this, is it possible to structure music history courses so that they foster critical thinking skills in music?

The mini-session presents course outlines, used during the 1994/1995 academic year, which aims to incorporate some methodologies that foster critical thinking in (a) a Music History Overview Course, and (b) a Period Music History Course. Syllabi used in the actual courses, together with other supporting materials, will be available.

HUGHES, GAIL  
Tues 10:30; IVES 34
Coordinator of Program Evaluation, Minnesota Community College System
Margaret Borden
Developmental English Instructor, Willmar Community College
Sandra Kaplan
Central Lakes College
Judy Nelson
Speech and Communications Instructor, Itasca Community College

Conducting and Assessing Critical Thinking Interviews: Excerpts from Interdisciplinary Areas, Developmental Education, and Biology  
TEST, COLL, STAFF DEV, INF LOGIC
This session will present work in progress to develop a valid, reliable, and useful adaptive interview procedure to assess students’ critical thinking proficiency as applied to academic subject matter relevant to students’ personal lives, their roles as citizens, and their anticipated careers. Groups of faculty are constructing interviews for biology, English, nursing, developmental education, and interdisciplinary subject areas. Although the topics students discuss vary according to discipline, the interviews will be rated according to a common, cross-disciplinary scoring guide.

JOHNS, DONALD  
Sun 3:15; DAR 112
Lecturer, English Department, University of California, Davis
Literature, Empathy, and Critical Thinking  
TACTIC/STRAT, COLL, MID/HIGH, MUL-CULT/MID/HIGH, COLL
The rationale for this session rests on four ideas: 1) Empathy is an essential element in critical thinking. 2) The study of literature can promote greater empathy with people living in diverse circumstances. 3) Introductory courses should begin with carefully constructed activities appropriate to students’ developmental levels, activities encouraging students to articulate and examine their responses to literature, particularly their deeply held preconceptions about characters whose thoughts and actions arise from disparate situations. 4) Specialized disciplinary knowledge such as critical theory and terminology, while important, should play a secondary role to the study and development of student response. We will closely examine one or two short poems, synthesizing elements of Richard Paul’s Socratic discussion strategies with reader-response activities suggested by the work of Janet Emig, Peter Elbow, and Louise Rosenblatt. This will be a participatory workshop beginning with a brief presentation of the rationale followed by writing, small-group work, and general discussion.
CONFERENCES ABSTRACTS

JOHNS, DONALD

Lecturer, English Department, University of California, Davis

(Mini-Session) Identifying Central Passages in Essays or Stories  Mid/High, Coll

When discussing an essay or story, class members need to have some common ground for discussion, some understanding of what others think is important in the text and why. Such understanding will emerge, more or less, from most discussions, and it may be expedited with discussion questions. However, such questions can impose an editor's or teacher's viewpoint on a discussion from the outset, shutting off much of a student's response.

We need to find ways to let student responses to a text emerge on their own into a setting where they can be tested and developed in response to those of others. At the same time, we can seldom rely on a free-form discussion to bring about sufficient self-reflection and dialogue.

I ask students to identify what they think is the central passage (a sentence or two) in the story or essay and to write for 10-15 minutes exploring and explaining their responses. I then ask them to exchange what they have written with a classmate and write a response. Depending on time available, I may have the pairs move into groups of four and discuss their responses or I may have students read their responses aloud to the class to elicit general discussion.

JOHNSON, BEN E.

Executive Director of the Education Foundation, The Education Foundation

How We Did It: Sarasota’s Unique Plan for Motivating and Training 2000 Thinking Skills Teachers  K-12, Staff Dev, Beg, Adv

For the past three years, all 2000 teachers in the 39 Sarasota (Florida) County Public Schools have been receiving extensive training in methods of teaching thinking under a unique teacher training program developed by The Selby Chair for Academic Enrichment. One of the most unusual aspects of this training is that it is totally voluntary, yet two-thirds of all Sarasota teachers have participated in the past two-and-a-half years! In fact, requests by teachers to participate in the training were so numerous that some sessions and summer institutes had to be limited to 250 participants at a time. Further, those 250 participants were always selected on a quota system at each school so that each person became part of a training team to go back to his/her school to train other teachers. This session discussed how all this was accomplished and the amazing community response.

JOHNSON, BEN E.

Executive Director of the Education Foundation, The Education Foundation

A Successful Private Funding Model for District-Wide Teacher Training in Thinking Skills: Sarasota County and the Selby Chair in Critical Thinking  K-12, Coll, Beg, Adv

Can a private foundation be persuaded to fund a five-year, 450,000 training program in critical thinking for 2000 district teachers? Can that foundation along with other organizations and businesses in the school district also be convinced of the need for supporting and funding an on-going, unique, teacher training and enrichment program that results in a week-long community-wide festival that celebrate good thinking? Yes. It's been done in Sarasota County, Florida. This session describes and explores the creation and private funding of a highly successful program providing Sarasota...
Creating an Agenda for Critical Thinking in Nursing Education: Out of the Past, Into the Future

NURS, HEAtTH

Historically, nurse educators rarely integrated critical thinking into its education model. Rather, the focus was on legitimizing nursing as a profession. Recently, with the nearly universal attention on critical thinking in academe, nurse educators have questioned the relevance of the scientific model for nursing education and began considering alternative models for thinking that reflect the non-linearity of major elements of nursing education and practice. This presentation will offer participants the opportunity to consider several propositions which challenge extant nursing education models and invite analysis of alternatives to integrating critical thinking in nursing education.
The purpose of this workshop is to present and discuss the design of a master's level course in critical and creative thinking for early childhood education majors. The presentation will include: the mission, foundations, and structure of the M.A.T. program; the assumptions underlying course development; course goals and instructional objectives; course instructional materials; course requirements, selected instructional strategies, and sample course tasks/assessments.

Participants will have the opportunity to practice selected tasks and will be encouraged to ask questions and/or provide feedback regarding instructional design.

Kassem, Cherrie L.  
Sun 1:30; STEV 3049  
Assistant Professor, Education, Piedmont College

Critical Thinking and Early Childhood Education: Design for a Master's Level Course on Critical Thinking and Creativity in the Classroom ELEM, COLL, TACTIC/STRAT

Kataoka-Yahiro, Merle  
Sun 3:15; DAR 122  
Assistant Professor, School of Nursing, San Jose State University

Katherine Abrium-Yago, Ed.D.  
Assistant Professor, School of Nursing, San Jose State University

The Use of Mentoring and Role-Modeling with Nursing Students: An Application of the Critical Thinking Model for Nursing Judgment NURS

This is a workshop on the use of mentoring and role-modeling with nursing students based upon the application of the Critical Thinking Model for Nursing Judgment. The Critical Thinking Model for Nursing Judgment includes five components: specific knowledge base, experience, competencies, attitudes, and standards. The model includes three levels of critical thinking which are basic, complex, and committed. Based upon this model, the workshop will emphasize and apply three of the components: competencies, attitudes, and standards. To help nursing students improve on their critical thinking abilities, these three components are essential when using mentoring and role-modeling techniques.

Keeley, Stuart M.  
Mon 10:30; CAR 68  
Professor of Psychology, Bowling Green State University

Coping with Student Psychology to Critical Thinking TACTIC/STRAT, COLL, BEG, SOC STUD

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

Keller, Rosemary  
Mon 10:30; STEV 3008  
Education Specialist, Patient Education, St. Joseph's Hospital

Development and Implementation of a Hospital Based Critical Thinking Program NURS, HEALTH, STAFF DEV, TACTIC/STRAT

This session will describe the process of developing and implementing a hospital based critical thinking program for nurses and provide nurse educators with several experiential interactive learning activities designed to elicit critical thinking skills. The program was based on Paul's model of critical thinking including elements, standards, dispositions and skills. Several teaching strategies utilizing case studies, case scenarios, video simulations, role playing and news media critique will be shared. The facilitator will model the use of these teaching strategies and guide participants through analysis utilizing specific questions designed to elicit critical thinking processes.

Kerwin, Ann  
Tues 3:15; STEV 2006  
Philosopher-in-Residence, Curriculum on Medical Ignorance, University of Arizona

Judy Nelson  
Speech and Communications Instructor, Itasca Community College

Thinking Passionately: Ignorance, Critical Thinking, and the Reluctant Student COLL, TACTIC/STRAT, MID/MED, BEG

Teachers who are passionate critical thinkers may be frustrated by students who seem allergic or averse to critical thinking. Two college-level teachers who have "lured" some (but we confess—not all!) resistant students into critical thinking will share several techniques for helping students identify their passions, and then using these as vehicles for developing inquiry, critical and creative thinking, planning, and communication skills. In this participatory session, Judy Nelson (Writing and Communication, Itasca Community College, Grand Rapids, Minnesota) and Ann Kerwin (Philosopher-in-Residence, Curriculum on Medical Ignorance, University of Arizona) demonstrate several "ignorant," "passionate" curricular experiments; they recount how passion ignited critical thinking and critical thinking became a passion for some initially-reluctant students.
Kerwin, Ann

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

Maryls Witte, M.D.
Professor of Surgery, University of Arizona

Charles Witte, M.D.
Professor of Surgery, University of Arizona

Don't Vanquish Ignorance...Use It Well! Coll, mid/high, health, nurs

Education cannot vanquish ignorance. For one thing, learning itself presupposes ignorance (we cannot learn what we already know). Further, as Pascal noted, as the sphere of our knowledge expands, so does our contact with the unknown. Ignorance—understood as "the unknown" and as "our awareness of not-knowing"—helps and harms us. While we cannot eliminate ignorance, we can use it to fuel learning. In this participatory session, the founders of the innovative Curriculum on Medical Ignorance at the University of Arizona College of Medicine share techniques for transcending the tyranny of the known and using ignorance if not fully, fruitfully—to help students question, ponder, revise, create, discover, and learn how to learn.

Klinger, Toby

Instructor, Psychology, Johnson County Community College

Integrating Critical Thinking into the Teaching of Introduction to Psychology Coll, beg, inf logic, psych, tactic/strat

As a proponent of exposing students to informal logic while they learn various disciplines, this workshop will examine ways to design syllabi and class activities that enhance the critical thinking of college students. Under discussion are ways to present an Introduction to Psychology course for critical thinking. The workshop emphasizes how to shift from teaching rote memorization of chapter terms and basic concepts to teaching students how to think through the discipline's methods of inquiry and theoretical perspectives. Students completing Introduction to Psychology should possess some rudimentary thinking skills as: (1) Applying theory and research to their everyday life; (2) Understanding how so-called "facts" are derived in a social science; (3) Evaluating the validity of scientific studies; (4) Comparing predictions from theories used to explain various psychological behaviors and questioning findings that are biased towards one theory or assumption.

Students learn psychological principles best by active participation. Participating in class debates help students understand how the discipline of psychology thinks. Debates also facilitate their perspective-taking skills and understanding of educated skepticism. There will be a discussion about selecting topics for class debates during the workshop.

Lazere, Donald

Professor, English Department, Cal Poly, San Luis Obispo

Reading Rush Limbaugh Critically Coll, mid/high, media, pol

Based on Lazere's use of Rush Limbaugh's books as texts in an argumentative writing course, this session will examine Limbaugh as a highly influential political commentator whose writing is a classic model of failure to meet virtually every standard of critical thinking: clarity, precision, accuracy, logicalness, evidentiary support, probability, predictive or explanatory power, relevance, consistency, depth and breadth. Limbaugh's ideas will be examined in the framework of his conservative ideological assumptions, in dialogue with leftist authors presenting opposing viewpoints in general ideology and on particular issues. The session will begin with Lazere's paper.
critiquing Limbaugh, followed by close study of selected passages from his books, with audience participation in generating teaching strategies and student activities.

**LEWIS, RICHARD B.**  
Associate Professor, Civil Engineering Department, Louisiana Tech University  
**Critical Thinking: Classroom Procedures, Format, Grading, etc. Part 1**  
COLL, TACTIC/STRAT, MATH  
This participatory workshop will illustrate how critical thinking can enter every facet of any course you teach, including grading, expected student performance, the syllabus, instructional objectives, study guides, Socratic Questioning, groups (teamwork), student self-assessments, student feedback on the teacher, testing procedures that have a critical thinking basis, journals, and much more. The emphasis will be upon blending the theoretical foundations of critical thinking (the elements and modes of reasoning, standards, and the intellectual virtues) with the realities of our school/college administrative requirements for content coverage, fair grading procedures, and other essentials. Included will be some hands-on exercises that will surprise you!

**LEWIS, RICHARD B.**  
Associate Professor, Civil Engineering Department, Louisiana Tech University  
**Critical Thinking: Classroom Procedures, Format, Grading, etc. Part 2**  
COLL, TACTIC/STRAT, MATH  
This participatory workshop will illustrate how critical thinking can enter every facet of any course you teach, including grading, expected student performance, the syllabus, instructional objectives, study guides, Socratic Questioning, groups (teamwork), student self-assessments, student feedback on the teacher, testing procedures that have a critical thinking basis, journals, and much more. The emphasis will be upon blending the theoretical foundations of critical thinking (the elements and modes of reasoning, standards, and the intellectual virtues) with the realities of our school/college administrative requirements for content coverage, fair grading procedures, and other essentials. Included will be some hands-on exercises that will surprise you!

**LITECKY, LARRY**  
President, Faculty Association, Minnesota Community College  
**Active Learning and Improving the Quality of Thinking**  
TACTIC/STRAT, COLL, STAFF DEV  
This presentation will link the improvement of the quality of thinking to the practice of effective thinking in college classrooms through active learning strategies. Structured student writing and speaking, designed to enhance thinking, are at the center of active learning. Four phases characterize this presentation. First, there is a presentation on the link between active learning and improving the quality of thinking. Second, participants will identify and discuss activities done by students which promoted effective thinking. The third phase will examine sample active learning strategies. Finally, participants will use these samples to generate additional methods of promoting active learning and effective thinking.

**LOVELESS, EDNA MAYE**  
Professor, English and Communication Department, La Sierra University  
**Fuzzy Thinking Produces Fuzzy Writing: An Alert for Precise Language**  
COLL, LANG, TACTIC/STRAT  
Students needing to assess their thinking for clarity, precision, accuracy, relevance and significance provide in their writing samples an arena for examining progress in these skills. Most language precision problems can be addressed by posing questions a puzzled reader might have: Whom do you mean by “they”? Why are you saying this sentence after the previous one? Are you intentionally sounding testy here? What data can you cite for this conclusion? What assumptions underlie this statement? Students need to be alert to the connection between audience awareness and commitment to precise writing. This session looks at loaded words, attribution phrases, definitions, hidden premises, vague references and offers ways to establish academic criteria for clarifying meaning with precise language.

**LUCKEY, SUE Y.**  
Professor of Information Sciences, Morehead State University  
**Creative and Critical Thinking Strategies for Participating in a Global Economy**  
MUL-COLT, BUS, MID/HIGH, COLL  
One of the most significant changes for the U.S. has been adapting to a world view of interrelatedness. Cultural diversity and intercultural communications are beginning to have profound ramifications for the American workplace. This presentation will consider teaching strategies to help bridge the gap between classrooms and the international business workplace. Specifically, creative and critical thinking teaching strategies will be presented to: (1) develop international communications concepts, (2) enhance appreciation of cultural differences, and (3) expand economic and geographic awareness.

**LUCKEY JR., GEORGE M.**  
Director of the Center for Critical Thinking, Morehead State University  
**Common Slogans and Uncommon Sense**  
TACTIC/STRAT, MID/HIGH, COLL  
“That stuff’s too deep for me” is a common slogan students use to express lack of confidence in their own rationality. “Matter is composed of solid particles” expresses an oversimplification of scientific fact. “Seeing is believing” expresses a familiar common sense trust in the accuracy of ordi-
Evidence of positive effects on both teachers and students will be presented. The IMPACT initiative shaped attitudes and actions, sustained efforts to remodel curriculum, and implement new instructional strategies. IMPACT resulted in purposeful learner behavior and improved achievement.

**Matthies, Dennis**  
Lecturer, Stanford University  
**Working Smarter Through Precision Questioning I**  
*Gen, Beg, Bus, Tactic/Strat*

The original sin in education is to give the answer before the student knows how to ask the question. "But most of the time I don't know enough to ask questions." Before this workshop is over you will realize that you always know enough to ask questions! Precise questions. Productive questions. Once you understand the basic types of questions and their natural order, you will discover that inquiring about the ozone layer and the trade deficit is no more difficult than investigating everyday things. Once we know how to handle question-tools, all forms of mental work become more organized and more productive.

**Matthies, Dennis**  
Lecturer, Stanford University  
**Working Smarter Through Precision Questioning II**  
*Gen, Beg, Bus, Tactic/Strat*

Participants in this workshop will practice two skills: asking questions of clarification and spotting assumptions. Part of what it means to be a critical thinker is to understand that neither of these processes can be accomplished with a snap of the fingers. Both require skill and patience. The exercises used in this workshop can easily be transferred to other types of subject matter. To benefit from Precision Questioning II it is not necessary to have attended Precision Questioning I.

**Maurer, William H.**  
Principal, Barney Greathouse Elementary School, Midland Independent School District  
**Moving From "I Think I Can!" to "I Can Think!": Changing Attitudes and Actions of Elementary Grade Teachers**  
*Elem, Beg, Staff Dev, Tactic/Strat*  

IMPACT (Increasing Maximal Performance By Activating Critical Thinking Skills) emerged from classroom-based research efforts. This staff-development model provides a collaborative framework for teaching intelligent behavior. This session explains the IMPACT model and describes results of school-wide implementation at Barney R. Greathouse Elementary School, Midland, Texas, and implementation in PROJECT THINK, a district-wide talent pool program for high ability students in grades K-3. Evidence of positive effects on both teachers and students will be presented. The IMPACT initiative shaped attitudes and actions, sustained efforts to remodel curriculum, and implement new instructional strategies. IMPACT resulted in purposeful learner behavior and improved achievement.

**Mayo, Harry T.**  
Instructor, English Department, American River College  
**Paul Duax**  
Instructor of Speech, American River College  
**Gail Hughes**  
Coordinator of Program Evaluation, Minnesota Community College System  
**Virginia O'Keefe**  
Adjunct Assistant Professor of Communication, Tidewater Community College  
**Joan Rykiel**  
Professor of Psychology, Social Science Department, Ocean County College  
**Michael Monk**  
Student, American River College  
**What are We Doing With Critical Thinking in the Community College System and Where are We Headed With It in the Classroom? A Panel Discussion Moderated by Harry Mayo**  
*Staff Dev, Tactic/Strat, Beg, Coll*

Listen to student and educator views on where we are and where we are going with critical thinking in the classroom. The panel will consist of community college educators from various parts of the U.S. who are engaged in the critical thinking movement in varying educational disciplines along with a community college student of critical thinking. There has been a steady growth of awareness of the benefits that critical thinking adds to the learning process, but what is being done to ensure we are getting the most out of our critical thinking skills? Are we doing the best we can to utilize and disseminate these skills? This session is designed to allow each panelist an opportunity to discuss her views on how educators and students can best facilitate the implementation of critical thinking in all aspects of the community college education process.

**McCarthy-Tucker, Ph. D., Sherri**  
Psychology Faculty, Chandler-Gilbert Community College  
**Teaching Reality-Based Formal Logic to Adolescents to Improve Critical Thinking Skills**  
*PsyCh, Tactic/Strat, Inf Logic, Gen*  

Based upon a review of literature in psychology and education, three premises were induced: (a) Like language, capacity for critical thought is acquired through dynamic interaction between organism and environment.
Practice with logic must occur for this acquisition to take place; (b) Society currently fails, for the most part, to provide adolescents with opportunities to learn, observe or practice logic in any systematic way, and (c) Practice with logic needs to occur during adolescence, in a way compatible with the manner in which the brain processes information, for critical thinking skills to develop. This session will summarize this literature and include a brief formal paper detailing a pilot study on teaching formal logic to high school students which led to dissertation research. Findings of a longitudinal study with 190 high school students to test the hypothesis that instruction in formal logic leads to improved critical thinking skills as measured by standardized ability tests and student self-report will then be presented and discussed.

**McConnell, Robert L.**  
*Professor, Environmental Science and Geology, Mary Washington College*

**Daniel C. Abel**  
*Instructor of Marine Science, Coastal Carolina University*

**Critical Assessment of College Student Course Reaction Questionnaires**  
*Staff Dev, Test, Tactic/Strat, Coll*

Student course reaction questionnaires, if properly constructed and interpreted, may validly contribute to assessment of the student's educational experience. If poorly constructed or interpreted, however, they may provide spurious data which could be used inappropriately. We propose to critically evaluate two such documents: those in use at Mary Washington College and Coastal Carolina University, and encourage participants to bring their institution's forms for comparison. We will present statistical treatment of class responses to suggest a link between the student's expected grade and his/her response to the course. Finally we will discuss ideal attributes of questionnaires for the evaluation of courses based on critical thinking methods.

**McGuire, Edward L.**  
*Technical Assistant to Critical Thinking Program, Massachusetts Bay Community College*

**Reflective Logic and Third-Wave Critical Thinking**  
*Inf Logic, Coll, Tactic/Strat/Mid/High, Coll, Test, Tactic/Strat*

This will be an informative and practical session presenting a revised view of informal logic instruction in two introductory college courses. The importance of uncovering the reasoner's own assumptions and biases will be stressed. Properly used, the study of logical standards such as reasonableness, relevancy and sufficiency can help overcome the risk of relativist positions often taken when students are encouraged to consider alternative viewpoints.

As critical thinking moves into the 21st century, it will be vital to maintain the intellectual honesty and inquiring dispositions which are the desired outcomes of these courses. In the last 30 minutes, session participants will be asked to contribute their own ideas for inculcating whole institutions with these core values.

**McGuire, Edward L.**  
*Sun 11:20–12:00; IVES 119*

**Technical Assistant to Critical Thinking Program, Massachusetts Bay Community College (Mini-Session) Advantages of a Technical Assistant for a Critical Thinking Program**  
*Mid/High, Coll, Test, Tactic/Strat*

This mini-session will focus on the position of a Technical Assistant for an introductory college critical thinking program. The tech's role can be used as an excellent model for both structuring stand-alone critical thinking courses and integrating with content-area instruction. My functions include, but are not limited to: organizing and storing course materials, maintaining grade records, meeting with students individually and in small groups for "tutorials," helping to research and create new course materials and assignments, and providing an important link between three very different course facilitators. I have been active in defining my own job as new needs arise, and I would like to share strategies for improving other schools' specific situations.

**McGury, Susan**  
*Mon 3:15; STEV 2006*

**Assistant Professor, College Reasoning Champion, 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*

**Thinking and Transformation: Models of Support for Emerging Critical Thinkers**  
*Coll, Gen, Fem, Lang, Tactic/Strat*

We start with the premise that learning is about change. We as teachers do more than add academic information to our students' learning processes; we have the privilege and responsibility to attend to and facilitate the learning experience as it impacts students' lives.

We know that when people change their thinking, they not only profoundly change their ways of processing information; they change their way of perceiving and understanding their world. How can we be of most help? We know some things about cognitive development and affective dimensions to the learning process, yet many of us still feel under-equipped to identify stages of growth and to generate appropriate strategies for intervention or support.

This workshop will present models from several important leaders in the field of adult development which we can use as tools to help us guide our
students through the difficult process of changing their thinking. As we watch this delicate, miraculous process unfold, we will have more practical ideas about how to navigate the seas of change.

**MCKILLOP, LESLIE S.**
Associate Professor, Junior High Program, Nova Scotia Teachers College

**DAVID W. MCKILLOP**
Associate Professor, Intermediate Elementary Program, Nova Scotia Teachers College

**DAVID WHITE**
Principal, Nova Scotia Teachers College

**Not Waving but Drowning: Caught in the Second Wave Undertow**

**COLL, MID/HIGH, PSYCH, TACTIC/STRAT**

Funded by the Canadian government, the Nova Scotia Teachers College, in collaboration with researchers from the Ontario Institute for Studies in Education and the University of Western Ontario, has just completed a two-tiered, three-year intervention in the area of critical thinking (specifically, cognitive and metacognitive strategy instruction). While the statistical outcomes were inconclusive, the processes involved do raise interesting questions about field research in this area. In particular, we should like to consider the preparation of the interveners, the problems of research design, the difficulties in obtaining meaningful measurements and in controlling variables and the value of imposing laboratory models on “real life” research.

We can offer observations, experiences and suggestions. We do not propose to provide answers, but may be able to identify some shoals that might hinder third wave research from reaching its full potential.

**MENGES, ROBERT J.**

**COLL, MID/HIGH, PSYCH, TACTIC/STRAT**

**Critical Thinking and Evaluation of Professor’s Teaching**

Procedures for evaluating faculty performance, especially for evaluating teaching, often fail to embody the elements and standards of critical thinking. This session provides a brief summary of research about faculty dissatisfaction regarding the evaluation process. We then examine three areas where teaching evaluations are often weak: poorly articulated and communicated job expectations, inadequate evidence about teaching performance, and failure to distinguish between criteria of merit and criteria of worth. Small groups will analyze a case in which these problematic areas are evident. We will explore how faculty evaluations can be improved through elements and standards of critical thinking, particularly the elements of assumptions, inferences, and point of view, and the standards of clarity, accuracy, and relevance.

**MEYERS, G. DOUGLAS**
Chair, English Department, University of Texas at El Paso

**(Mini-Session) Achieving Poetic Consciousness: Found Poetry/Poetry**

**LANG, INF LOGIC, K-12**

The purpose of this mini-session is to help students use critical thinking skills to achieve poetic consciousness and to write original poems. “Found poems” are ones constructed from the so-called “ordinary language” of newspapers, magazines, etc. Creating found poems involves students in discovering poetic ways in which words and phrases that are not normally thought of as poetic. Using newspapers and magazines, students think critically and creatively to develop poetic forms and to forge poetic bonds between words and phrases which, in their original context, merely inform, but—in a novel context—take on poetic life.

**MILLER, ERIC E.**
5th Grade Teacher, Stayton Middle School

**CONSUMER SCIENCE**

One way to get students interested in critical thinking is to use these skills with every day consumer related materials. This presentation will share an experiment to help motivate students to think critically about consumer products. Then it will share a process that's followed to get students to do consumer science. The steps are basic to the scientific process, but are organized and sequenced so that upper elementary students can be successful answering their problem. Several useful handouts and checklists will be shared to help others who might be interested in getting students to think critically about consumer issues.
Students are not dumb. If, for example, they are Inuit and find it offensive to be asked for their reasons, they know full well that the current Western/Anglo view is that this cultural attitude is unreasonable, or certainly sub-optimal for the doing of critical thinking. And they will clam up in class. This session models a way to turn the tables on these tacit Western assumptions, enabling students to freely communicate their views, opening both instructor and the class to considering alternative views and constructing for these views tests which would garner cross-cultural acceptance. Two points:

- This is not a West-bashing session! The greatest epistemological progress in the West has come from Westerners generating theories which violated to a shocking extent the then-reasonable Western view: Salient examples are Newton’s theory of motion, Darwin’s evolution, and Mill on the intellectual equality of women.

- Hence, encouraging students of all backgrounds to go ahead and present ideas which are unreasonable by current Western standards is not only an acceptable critical thinking practice, but might end by adding to the world’s store of knowledge in important ways.

Mohapatra, P.K.

Critical Thinking and the Problem of Personal Identity  ADV, PSYCH, LANG, TACTIC/STRAT

In the proposed session my concern is conceptual analysis reflecting critical thinking of the first and third wave variety. The concepts chosen for analysis are personal identity and the criteria thereof. While the focal force of my analysis is logic, argumentation and reasoning, I apply a broader standard of logic and rationality and present a comprehensive account of personal identity as it is used in its everyday context. The problem, I argue, is not a problem of defining personal identity but that of specifying the criteria for making identity judgments about persons. The traditional theories, which looked for “something unchanged” (e.g. the soul) to account for the sameness of persons, were duped by the apparent incompatibility of “sameness” and “change”. This incompatibility is due to a narrow view of logic and etymology; but a wider view of the logic of these words shows that in some cases sameness even includes change. I then analyze the concept of the criteria of personal identity and criticize a theory that pleads for the primacy of the psychological continuity criterion—drawing force from the alleged cases of change-of-body. By broadening the concept of bodily continuity in terms of brain continuity I show the necessity of physical continuity even in the so-called cases of change-of-body.

Highlight: Functional analysis of the concepts in question rather than formal definitions.
MORSE, H. OGDEN
Director, Lyceum Institute, Lyceum Institute

Literature, History, and What We Believe  Mid/High, Tactic/Strat, Lang, Socio/MId/High, Soc Stud

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. The lesson will model classroom strategies that ask students first to analyze their own beliefs, misconceptions, and the manner by which they acquired them. Then students explore the relationship between the facts of history and the fiction of literature. 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, H. OGDEN
Director, Lyceum Institute, Lyceum Institute

(Mini-Session) The Dialectical Notebook  Mid/High, Soc Stud

The purpose of this mini-session is to help students develop the habit of close reading and interaction with the text. In preparation for class work, students spend most of their time reading from assigned texts. Most of them take a very casual approach to this task. It is not surprising that they have only the vaguest notion of the material when they get to class. Usually the best they can do is to give back the facts of the texts. This should not be an acceptable outcome. One way to get them to concentrate on their reading is through the use of the dialectical notebook. In it they record the important elements of the text and also develop responses to specific parts of the text. Not only does this notebook become the basis for class work, but it also provides students with an intellectual history of their reading experience.

This workshop will provide a model of the dialectical notebook and will offer some strategies for its use. The thirty minutes will be taken up with a model of a dialectical notebook, complete with a brief text. Participants will spend their time working through the process so that they will know how to use it in their classrooms.

MUSER, JEANETTE K.
Librarian, West Windsor-Plainsboro High School

JULIA E. NORATO
Chemistry Teacher, West Windsor-Plainsboro High School

LAWRENCE E. SWESEY
Physics Teacher, West Windsor-Plainsboro High School

Applying and Teaching Critical Thinking  High, Math/Sci, Test, Tactic/Strat

This session demonstrates a practical, efficient method of teaching high school level students to think critically. The session presenters will discuss the process by which their students develop the skills necessary for them to think critically. Several examples of exercises used in both the sciences and humanities will be demonstrated. It is the position of the presenters that critical thinking is an active process and the teaching cycle requires students to experience the process to learn.

The presenters will describe how they use a problem solving model similar to the Bransford and Stein IDEAL model as a curriculum vehicle. The discussion will detail the students' use of the model as they progress through the three learning stages of dynamic equilibrium in order to implement the critical thinking processes on their own.

MUSER, JEANETTE K.
Librarian, West Windsor-Plainsboro High School

JULIA E. NORATO
Chemistry Teacher, West Windsor-Plainsboro High School

LAWRENCE E. SWESEY
Physics Teacher, West Windsor-Plainsboro High School

(Mini-Session) Teaching Critical Thinking  Mid/High

The purpose of this mini-session is to teach students to accomplish independent critical thought. This mini-session will discuss an efficient and practical method of teaching students to think critically. Critical thinking is an active, rather than static, process; as such it requires that students develop abilities and skills often not stressed in the normal high school curriculum. The most effective teaching cycle should stress the dynamic nature of this thinking process.

NOSICH, GERALD
Professor of Philosophy, University of New Orleans

Working with the Elements of Reasoning  GEN

The elements of reasoning constitute the basic essential vocabulary of critical thinking, the core set of ideas that, together, are the fundamentals of thinking. Teaching students to become more proficient in consciously using
the elements is a major part of teaching them to think better. This workshop will be on the elements of reasoning: what they are, how they function, how they work in analyzing a problem or an academic discipline, how they fit in with teaching high standards of critical thinking.

**Nosich, Gerald**

*Professor of Philosophy, University of New Orleans*

**Pyramid Teaching: Formulating a Philosophy of Education  Coll, High**

This workshop will be an exercise in participant-centered learning and teaching. The main goal of the session is for participants to formulate a statement of their views on what education should be, both personally and in cooperation with others. The presenter will play only a minimal role in this workshop; his main function will be to facilitate groups as they work toward consensus on the goals of education. The technique to be used is called “pyramid teaching.”

**Nosich, Gerald**

*Professor of Philosophy, University of New Orleans*

**Providing a Model for Student Self-assessment in a Subject-Matter Course  Coll, High**

Many teachers are deciding to change the way they teach courses in their discipline, away from an over-emphasis on information and “content” to an emphasis on thinking through that content, thinking critically within the discipline. Such teachers confront a cluster of problems having to do with assessment: How can I assess my students’ critical thinking in the discipline? What criteria are appropriate to use? How can I get my students better able to assess their own thinking? How can I get my students to grasp what it is to think critically within the subject-matter as a whole?

This will be a workshop on this cluster of problems. The main activity will be constructing, sharing, and discussing a model for students to use in assessing their reasoning through a central problem in the course.

**Nosich, Gerald**

*Professor of Philosophy, University of New Orleans*


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.

**Nwa, Willia L.**

*Educator, Secondary Education, Canton City Schools*

**Thinking Critically About Cultural Diversity: How Should Educators Do It?  Mid/High, Coll, Beg, Mul-Cult, H Con**

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 critically 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’Connor, James**

*Center Fellow, The North Carolina Center for the Advancement of Teaching*

**A Renewal Seminar: The Role of Critical Thinking in Your Life  Tacti/Strat, Staff Dev, Soc Stud, H Con**

The North Carolina Center for the Advancement of Teaching (NCCAT) in Cullowhee, North Carolina is dedicated exclusively to the advancement of teaching as an art and a profession. Funded by the State of North Carolina, the mission of NCCAT is to recognize the State’s outstanding career teachers by providing them with renewal experiences.

This session will share information about a five day renewal seminar at NCCAT which was held in December of 1994 entitled “The Role of Critical Thinking in Your Life”. The seminar was co-led and designed by both NCCAT Center Fellow Jim O’Connor, and Barbara Presseisen, Director of National Networking for Research for Better Schools in Philadelphia. Information will be provided about the goals and content of the various seminar sessions which focused on the development of critical thinking in one’s personal life as well as within the classroom. Participants in this workshop will engage in some of the actual activities which the North Carolina teachers participated in during the seminar.
OXMAN, WENDY

Director, Institute for Critical Thinking, Montclair State University

Elementary Teachers' Perceptions of Critical Thinking in Theory and Practice

How do elementary teachers interpret the principles and practices of critical thinking at the point in time at which they are completing their work in a masters degree program in education with a concentration in critical thinking? What, for them, is the meaning of "critical thinking as an educational ideal?" How do they describe critical thinking as it occurs in the classroom? What do they think are important ways of teaching for critical thinking? How do they convey these ideas to others?

In this session, the interpretations that these knowledgeable elementary school teachers give, generally, to the principles and practices of critical thinking will be described and discussed, along with their implications for teacher education, for inservice work with teachers, and for the development of educational materials.

Oluwatoyin, Anthony

Questions, Eccentrics and Critical Thinking

Critical thinking does not instruct in questioning—perhaps the most natural aspect of the thinking process. Good questioning skills are central to the reform of intellectual preparation, to the dismantling of "intellectual apartheid". Eccentric views in different disciplines prompt questions in ways that test attitudes toward explanation. We can thus better cultivate in students the dispositions that characterize our practice.

Otterbach, Renate

Teaching Critical Thinking Inductively

Hilda Taba's Inductive Model is designed to encourage students to think their way through the content. Research has shown that it increased students' ability to draw logical inferences and generalizations. It also enables students to analyze, synthesize, and evaluate data more effectively. When Taba's Inductive Model is combined with Richard Paul's Elements of Reasoning and intellectual standards it becomes a powerful tool to teach critical thinking.

The combined model effectively changes passive students into mentally engaged learners. Furthermore, the questioning strategies encourage students to dig deeper into the subjects, form and test their own hypotheses, and continuously evaluate both their thinking and their products in terms of universal and discipline specific intellectual standards. Thus students become reflective, self-assessing learners.

This session consists of a simulation activity combined with a lecture/discussion format.
PATTERSON, DAWN  
TUES 1:30; STEV 3046  
Faculty, Department of Nursing, University College of the Cariboo  

Active Engagement and the Construction of Knowledge  

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.

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

Socratic Questioning: A Series of Three Demonstration Sessions. First Demonstration (Asking Questions That Take Thinking Apart)  

All thinking is driven by questions. Good questions generate good thinking. Bad questions generate bad thinking. Deep questions, deep thinking. No questions, no thinking. To think well about thinking we need to learn how to ask questions that take thinking apart and reveal to us how the parts are functioning together. What is the purpose of our thinking? What is the central question? What information are we using (and where did we get it)? How are we interpreting that information (and is that interpretation justifiable)? What key concepts shape our interpretation? What are we assuming? What are we implying? What point of view are we using? In this first demonstration session, Richard Paul will illustrate how questions based on the elements of thought can be used to take thinking apart. (The Socratic Questioning sessions will be videotaped.)

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

Socratic Questioning (Second Demonstration Session): Asking Questions That Assess Thinking Based on Intellectual Standards  

To think well about thinking we need to learn how to ask questions that bring intellectual standards to bear on thinking: Is the point clear? (Do we need to elaborate or illustrate the point?); Is the point accurate? (Do we need to test it or verify it in some way?); Is the point relevant? (Does it bear upon the question at hand?); Is the point deep enough? (Does it take into account the complexities of the issue, problem, or questions?); Is the reasoning broad enough to take into account all relevant viewpoints? Is the reasoning logical? (Are there any contradictions in it? Does it make sense overall?) In this second demonstration session, Richard Paul illustrates how questions based on the universal intellectual standards of thought can be used to assess and improve thinking. (The Socratic Questioning session will be videotaped.)

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

Informal Logic: Is Our Present Concept Comprehensive Enough?  

In the first wave of critical thinking research and practice (1970-1982), most of those doing research in the field were philosophers whose expertise in critical thinking was based on their work in logic, principally informal
logic. The informal logic tradition is still an important strand in critical thinking studies, though it is no longer dominant. Nevertheless, most college texts designed for courses in critical thinking are based on informal logic. One of the most distinguished leaders in the informal logic movement is Ralph Johnson. In this session, Richard Paul and Ralph Johnson will debate the adequacy of the present conception of informal logic. The central question will be, "Is the present concept of informal logic comprehensive enough?"

**PAUL, RICHARD**

*Wed 10:30; SU 100*

Director, Center for Critical Thinking and Moral Critique, Sonoma State University

**How To Recognize Pseudo Critical Thinking**

As critical thinking has gained more and more public attention and diverse groups are convinced of the need for it in their work, a major market for critical thinking materials has developed. Since those seeking an approach to critical thinking are often (if not typically) looking for an easy, painless, instantaneous solution requiring no significant change on the part of the user, the phenomenon of pseudo critical thinking has emerged, approaches to critical thinking that lack a sound theoretical base. One of the best ways to test an approach to critical thinking to determine whether it is part of the pseudo critical thinking phenomenon is to see what intellectual standards it fosters. Typically, the quick fix approaches to critical thinking are based on devices, techniques, gimmicks, or psychological processes. Typically, they are devoid of intellectual criteria and standards. In the second wave of research and practice in the field of critical thinking studies (1980-1995), an avalanche of pseudo critical thinking materials have flooded the market. In this session, Richard Paul spells out in greater detail, with examples, how to recognize a pseudo critical thinking approach.

**PAUL, RICHARD**

*Sun 1:30; SU 100*

Director, Center for Critical Thinking and Moral Critique, Sonoma State University

**Beyond Argumentation: The Use of Reason in Everyday Life**

There are occasions in which we engage in argumentation. However, it is a serious mistake to equate critical thinking with argumentation since critical thinking involves the application of reason to every dimension of living. If I become a consummate critical thinker, I use my capacity to reason to deal effectively with negative emotions, problems of motivation, bad habits, self-deception, prejudice, and, in general, a multiplicity of forms of irrationality. As a critical thinker—to the extent, that is, to which I embody its values and traits—I am better able, than otherwise I would be, to solve problems, understand myself and others, deal with "nonsense" ideas I have unconsciously internalized, develop "powerful" ideas in their place, think philosophically, scientifically, historically, ethically, and, in general, to take charge of my life. In this session, Richard Paul makes the case for a comprehensive view of critical thinking that goes beyond not only argumentation, but beyond any conception of critical thinking that denies its application to any dimension of life, whether inner or outer. It is this broad concept of critical thinking which Paul argues needs to be at the heart of third wave work.

**PAUL, RICHARD**

*Wed 8:45; SU 100*

Director, Center for Critical Thinking and Moral Critique, Sonoma State University

**What Is It to Join the Third Wave?**

To join the third wave means to recognize the limitations of first (1970-1982) and second wave (1980-1995) work and to seek to correct them (see description of the opening keynote). In other words, it is to see, on the one hand, that a narrow concept of critical thinking cannot be used to re-think either the curriculum or the way one lives one's life; and, on the other, that universal intellectual standards are a prerequisite to critical thinking. It requires that one learn from the early work in the field without ultimately accepting the narrow concept of logic which was typically used. Whatever our concept of critical thinking—to put the point somewhat differently—it must explain the relation of critical thinking to a wide array of phenomena (intuition, emotion, values, subject domains, culture, language use, personal styles, etc.) and, whatever our concept of critical thinking, it must entail intellectual criteria and standards that enable us continually to assess our own thinking (and that of others) in ways that are not idiosyncratic and subjective.

**PETERS, J.E. (PETER)**

Lecturer in Economics, University College of the Cariboo

**The Student Lecture Review: Critical Feedback on Standards and Expectations**

One of the problems of the conventional teaching process is that feedback about course expectations and standards is limited to examinations. It is eva luative and often punitive. The Student Lecture Review, however, allows for regular feedback from instructor to students without summative evaluation. It teaches students to look at their own work and that of others in a critical manner. Students learn to think critically about what material is significant and relevant. They begin to develop criteria to judge the quality of their work in relation to the work of others. The Student Lecture Review is generic, i.e., it can be used in most subject areas.

**POLLARD, JIM**

Curriculum Specialist, Spokane Falls Community College

**Making the World a Different Place with New Thinking**

This session will be a interactive workshop type of experience. Participants will explore ways of assisting students to gain insight into why they are learning what they are learning, and learning to question why they are doing what they are doing. The objective is to provide students with opportunities to develop sound habits of thought which foster deep internalization of new thinking.
Pollard, Jim
Curriculum Specialist, Spokane Falls Community College

**Finding Meaning—The Search for Logic**
TACTIC/STRAT, GEN

This is not a lesson in logic. It is a discussion about how to encourage teachers to recognize the logic within their discipline and the importance of assisting students to develop a meaningful relationship with the subject matter. Should second graders seek the logic of addition or just memorize that 1+1=2? What is it like to think historically? What is the logic of photography, biology, graphic design, or chemistry? Thinking within one's discipline requires reaching for a broader range of concerns. Participants in this session will reach.

Pollard, Jim
Curriculum Specialist, Spokane Falls Community College

**Transferring-Making the Classroom Part of Life**
TACTIC/STRAT, GEN

This session will be a interactive workshop type of experience. Participants will explore some ideas about how to manage classroom activities in such a manner to assist students in transferece. Making it clear to students how to transfer new found thinking skills to other courses and to the problems of everyday life has been a challenge for the educational system. This session will assist participants to develop learning activities which enable their students to master transferece skills.

Pope, Richard
Instructor, Toyon School

**Total Quality Management Comes to the Thinking Classroom**
K-12, STAFF

Enjoy a humor-filled, enlightening and highly active session about making the 'Total Quality Management' process come alive in your Language Arts Program. Learn how to establish critical thinking goals for reading and writing. Discover ways to check for gaps between your goals and your students' true understanding. Acquire methods that determine the causes for these gaps and that create solutions to bridge these gaps. Construct ways of assessing the success of your solutions. Imagine this process of 'Continuous Improvement' energizing you, the students and their parents for years of learning enjoyment.

Raddue, George
Founder/Director, Science Discovery Workshop, Science Discovery Workshop

**Project-Based Learning: Making Microscopes (A Two-Part Session)**
ELEM, STAFF DEV, SCI, 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.

Note: This is a two-part session.

Raddue, George
Founder/Director, Science Discovery Workshop, Science Discovery Workshop

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Note: This is a two-part session.
RADDUE, JOANN  
Tues 10:30; STEV 2065  
Consultant, Dominican College of San Rafael, Science Discovery Workshop

GEORGE RADDUE  
Founder/Director, Science Discovery Workshop, Science Discovery Workshop

Critical Thinking Smorgasbord: Showcase of Project-Based Learning Activities  

How can teachers structure classroom learning experiences that strike a balance between content and process, and help the student understand not only what is being done, but also why.

The projects on display, along with workshop commentary and a short tape on “complex instruction” will help workshop participants plan classroom activities and projects that are engaging for both teacher and student and help avoid the pitfalls of egos and self-esteem encountered when attempting to implement hands-on cooperative groups.

Participants will have an opportunity to examine materials and talk one-on-one with workshop leaders.

RANKIN, KAREN  
Tues 10:30; DAR 122  
Assistant Professor, Nursing Department, West Georgia College

CAROL WILSON  
Associate Professor, West Georgia College

The Fortune Cookie Syndrome: Self-disclosure as a Teaching/Learning Strategy for Critical Thinking  

A dialogue of self-disclosure between students and teachers creates a powerful and practical way to encourage critical thinking. Self-disclosure brings into consciousness ones prejudices and values; what Paul (1992) describes as the abilities and affective traits necessary for higher order thinking. Students are encouraged to read, write, speak and reason by comparing and contrasting ideas from competing perspectives (Paul, 1992). This workshop will explore the use of self-disclosure as an intentional teaching-learning strategy to role model a critical thinking process in nursing. The fortune cookie syndrome will be used as a metaphor for the influence of assumptions on critical thinking.

RASKIN, JONAH  
Tues 1:30; STEV 3008  
Associate Professor of Communication Studies, Sonoma State University

Joseph McCarthy, Television, and the Limits of Critical Thinking  

Senator Joseph R. McCarthy used television to build his own career, and the anti-communist crusade in the 1950s. Moreover, television allowed itself to be used and abused by McCarthy. It also helped to destroy him at the celebrated Army-McCarthy hearings in 1954. McCarthy was not defeated through sound reasoning, logic or critical thinking, but in large part because of his poor image, bad manners and shallow performance on television. McCarthyism has continued in American society, long after McCarthy's death because the media has continued to give coverage to the lies and untruths of demagogues.

REED, JEFF  
Wed 10:30; STEV 2006  
Mentor Teacher, Instructional Technology, Windsor Unified School District

Illustrations and the Information Age  

Learn how to use carefully selected visual images to stimulate critical thinking and writing, and about Windsor Middle School's collaborative model for creating benchmark products to assess higher order thinking skills. Also includes making interactive books and illustrated Jeopardy-style computer games, and dialogue on copyright law, implications for classroom use, and the future. Those who attended last year's session (on Historical Images) are encouraged to come and share their ideas, insights, and innovations on how to use illustrations. Participants leave with instructional materials that engage students, integrate technology and thinking skills, and help implement the California Social Science and Language Arts frameworks, grades 5-11.

REED, JEFF  
Sun,10:30–11:10; IVES 119  
Mentor Teacher, Instructional Technology, Windsor Unified School District

(Mini-Session) Using Assessment Rubrics for Critical Thinking  

Participants will practice how to use an assessment rubric developed for students and teachers to assess test essays on open-ended questions. This rubric is used by the Windsor Unified School District, grades 7-9, to assess students' understanding and knowledge, language development, and higher order thinking skills. It focuses on the intellectual standards of clarity, concept development, and use of evidence-examples to answer carefully crafted essay questions.

REED, JEFF  
Tues 10:30–11:10; IVES 119  
Mentor Teacher, Instructional Technology, Windsor Unified School District

(Mini-Session) Leading Socratic Discussions in History Classes  

Participants will practice how to start discussions with carefully crafted open-ended questions, get students to share ideas, and use questions to guide and clarify meaning in classroom discussions on specific topics in history classes. This includes the use of an induction flow chart, where students take notes about what they are discussing, and thus create a written record they can use to prepare coherent, well-organized analytical essays.
RUDERMAN, RENEE  
Assistant Professor of English, Metropolitan State College of Denver  
The Beat, the Word, the Feeling! Using the Techniques of Poetry to Generate Critical Thinking and Writing  
LANG, ARTS, MID/HIGH, COLL, BEG, TACTIC/STRAT  
In this participatory workshop session we will practice some of the methodologies used in the poetry workshop. Teaching poetic techniques leads not only to the creation of poems, but to the understanding of complex and elusive thoughts and emotions. The facilitator, a published poet herself, will read some of her poetry, and discuss how to transfer these techniques and insights to various aspects of critical thinking and writing. Do not be intimidated by the idea of using poetry (even your own) to teach and to deepen critical thinking.

RYKIEL, JOAN D.  
Professor of Psychology, Social Science Department, Ocean County College  
The Community College Experience: Is There an Effect on Critical Thinking and Moral Reasoning?  
PSYCH, COLL, TEST, TACTIC/STRAT  
The purpose of this study was to assess the net effects of community college attendance on critical thinking skills and moral reasoning in community college students. The conditional effects of age and off-campus employment on the two dependent measures were also examined. A cross-sectional design with two predictor groups and a comparison group was employed. The Watson-Glaser Critical Thinking Appraisal measured critical thinking skills, the Defining Issues Test evaluated moral reasoning, and the Vocabulary subtest of the Multiple Aptitude Test was administered to assess the covariate. A multivariate analysis of covariance was employed to test the hypothesis. Discussion, speculations beyond the data, and recommendations follow.

RIPPS, EDWARD B.  
Candidate, M.S. Education, C.S.U., Hayward  
Critical Thinking, Fear of Freedom, and Authoritarianism  
PSYCH, H CON, TACTIC/STRAT, BEG  
What are the psychological processes underlying critical thinking (or its lack)? Rather than focusing on the cognitive approach, we view (philosophically) critical thinking as a foundation of freedom and responsibility, and examine psychological theories regarding freedom for their implications for critical thinking and its pedagogy. We shall consider psychodynamic (Fromm’s ‘escape from freedom’), transactional (radical psychiatry), and social learning-based (Altemayer’s Right-Wing Authoritarian personality) models of the human relationship to freedom and responsibility and construct a theoretical basis for experiments in pedagogy to enhance the teaching of critical thinking. Experiential exercises will be included; participants are advised that these almost invariably involve some emotional threat.

ROSSOUW, Gideon J.  
Professor of Philosophy, Rand Afrikaans University  
J. COLEY LAMPRECHT  
Professor of Educational Psychology, Rand Afrikaans University  
The IIT Approach to the Development of Thinking and its Multi-Cultural Application in South Africa  
TACTIC/STRAT, COLL, STAFF DEV, MUL-CULT  
The IIT (independent and innovative thinking) approach to the development of thinking is an inter-disciplinary approach in which the following factors that have a bearing on the acquisition of thinking skills are addressed:  
• The cultivation of a positive disposition towards the development of thinking,  
• The creation of conditions conducive to the development of thinking,  
• The cultivation of virtues that will dispose a person towards good thinking,  
• An understanding of what good thinking entails,  
• The teaching and assessment of thinking skills.  
In the paper the general theoretical framework of the IIT approach in explained. In the rest of the session a video on the application of this approach in the multi-cultural South African context is presented and discussed.

SANZENBACHER, RICHARD  
Associate Professor, Humanities Department, Embry-Riddle University  
(Mini-Session) Working with Imagery from a Semiotic Perspective  
TACTIC/STRAT, LANG, MID/HIGH, COLL  
The purpose of this mini-session is to help students develop a reflective/critical understanding of images and how their human experience and assumptions about the world are mediated by these images or symbolic processes. All too many times students interpret the images or sign systems around them as unmediated and truth-giving. Based on the premise that the image is the primary underlying structure in language, media, and the mind, this pedagogy takes the students through a dialectical/dialogic sequence of
activities which provoke them to reflect on how imagery is historicized and thus ideologically laden, and how it shapes their perceptions of the world.

To discover on their own how imagery is the product of historical, economic, and other cultural forces and how these images construct their lives, the students participate in a series of sequential activities which emphasize the interdependence of imagery and language.

SAUNDERS, T. FRANK  
Mon 10:30; STEV 2006  
Professor Emeritus, University of Arizona, Double Think Inc.

Amy Schlessman  
Evaluation Specialist, University of Arizona, Double Think Inc.

Double Think: Restructuring Content, Context, and Purposes for 21st Century Thinking  
Staff Dev, Gen

Deliberately restructuring our thinking for higher quality of life is as easy as one! two! three! In this workshop, participants are introduced to a method with strategies for learners to identify their thinking styles, use alternative styles of their choice to generate creative solutions, and to rethink their professional and personal experiences to enhance future success. Session participants are invited to explore their thinking styles and to learn how to constructively evaluate their thinking and experiences. To avoid "hardening of the categories," the stylization of though is creative fun. This process has been used in over 400 Think Tanks internationally in both the public and private sectors. The method is successful cross-culturally and designed to encourage lifelong learners of all ages. Don't think twice! Join us in this participatory Double Think session!

SCHWARZE, SHARON  
Mon 10:30; IVES 34  
Professor of Philosophy, Philosophy Department, Cabrini College

Harvey Lape  
Adjunct Professor of Philosophy, Philosophy Department, Cabrini College

The Third Wave is the Oldest Wave: The Socratic Model  
Coll, Tactic/Strat, Inf Logic

To be a critical thinker is to be committed to rational dialogue as the primary tool for decision making. This commitment to reason is not a commitment to force all discussion into some set of narrow logical algorithms but rather a commitment to engage in an open dialogue with yourself and/or others. This notion of rationality is inclusive rather than logocentric in that it takes seriously all contributions to the dialogue which are made in good faith and only excludes attempts to end the dialogue prematurely. We call this notion of rationality "Socratic dialogue" because it models itself on the methods and attitudes of Socrates.

Scriba, Joelyn  
Tues 3:15; IVES 35  
Chair, Department of Nursing, Bemidji State University

Critical Thought as a Personal Journey  
Fem, Nurs

Although increasing numbers of registered nurses are continuing their education in baccalaureate nursing programs, how their professional perspectives emerge is not well understood. The purpose of the study was to examine the nature of the registered nurses' experiences in learning as perceived by the registered nurses engaged in baccalaureate education. The qualitative study involved individual and group semi-structured interviews and critical incidents. Central to the data analysis is description of critical thought, and learning as nonlinear, unpredictable, emotional, powerful, and personal. The data will be examined in relation to adult learning literature associated with critical thinking and transformation learning. Educational strategies based on implications from the data will be addressed.

Shyrykov, V.  
Tues 1:30; STEV 3049  
Lecturer, Management Department, Sonoma State University

Principles of Critical Thinking in Statistical Science  
Test, Bus, Math/Sci, Tactic/Strat

All reasoning is based on statistical information. But this information is often "misused to advance the interests of a variety of groups..." (R. Paul, p. 181). Moreover, the quality of statistical information is not tested by conventional statistical methods. To assess data quality, the following principles of critical thinking must be applied:

1. Monism vs. pluralism (faith in reason)
2. Intellectual integrity (truth) vs. improbity (lie)
3. Axioms vs. unwarranted assumptions
4. Consistency vs. inconsistency (between theory and practice)

Sides, Marian B.  
Tues 3:15-3:55; IVES 119  
President, Education Enterprises, Inc., Education Enterprises, Inc.

(Mini-Session) Analyzing Assumptions Underlying Critical Thoughts  
Tactic/Strat, Nurs, Staff Dev, Health, Coll

The purpose of this strategy is to help learners recognize, interpret, and analyze assumptions underlying critical thoughts and actions. Meaningful and productive interactions are based on accurate recognition and interpretation of assumptions that characterize the thinking process. In this mini-session participants will be introduced to thought structures that shape individual paradigms and modes of thinking.
MINDS: Architectural Supplies for the Instructional Designer

The MINDS strategy can be utilized by any critical thinking teacher to better preplan for a “semester vision” that will set the stage for better student learning via hands-on activities that involve all ten elements of reason. A myriad of activities will also be described and introduced to delete any thought of a lecture format in today’s critical thinking classroom. Those teachers in attendance will be taken through an actual exercise called “Triangular Theory of Love” to demonstrate the aspects of the acronym, MINDS (materials, inquiry, introspection, decision, and assessment) as a useful teaching tool that can also become an independent student strategy. Then those in attendance will be allowed to choose 1 of 22 critical thinking activities in a handout and will construct their own MINDS design on that activity (example: return to sender, crib sheets, what’s wrong with this picture).

A Multicultural/Critical Thinking Reader

This presentation will identify the diverse ways through which individuals explore and know 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. This presentation will attempt to identify the specific characteristics of each mode of knowing and set out the distinct standards and criteria that are met by each type. It will be argued that each type of knowing is important and should be developed if we are to actualize our full potential as thinking and experiencing beings.

A Pluralistic Model of Knowledge

This session will present the first look at a student reader (elementary school level) that is designed to bring out multicultural themes while at the same time require the student to engage in critical thinking about specific topics developed in the stories. This reader is composed of short stories or folklore taken from different island cultures in Micronesia (South Pacific). Some discussion will cover how this material is being used on the island of Guam to increase critical thinking abilities and cultural awareness in students within the Guam Public School System.

Tasks for Critical Thinking: When is a Problem Just an Exercise?

This workshop will contrast examples of student activities that claim to call for problem solving and critical thinking. It will identify differences between those tasks that are closely tied to topics, such as concepts covered in mathematics and science texts, those that are highly structured to converge on an intended answer, and a variety of tasks that represent fuzzy, ill-defined problems which may be defined by the student, may be cross-disciplinary in nature, and which may address complex problems having no clear-cut answer. Implications for assessment using various kinds of tasks will be discussed.

Chess: A Thinking Machine That Works

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 thinking. Kids simply play and get smarter. In this session we will examine some current educational research, look at simple techniques in teaching the game, and count the many ways chess is relevant to our curriculum and school society.

Teaching Critical Thinking Through Chess

The purpose of this mini-session is to help students develop complex thinking skills. Between the ages of nine and fifteen a student will make a transition from concrete thinking to formal operations. The game of chess will help him accomplish this. When a chess player is trained in the touch move method of play, he learns to visualize his move and then to move his chess piece. With this training he begins to manipulate the pieces in his mind, search for patterns, and make plans. Chess is a powerful teaching tool not just a game. It is part of the curriculum of 30 countries. Research shows that scores in reading, math, and thinking are improved with chess instruction.
Stepien, William J.  
Director, Consortium for Problem-Based Learning, Consortium for Problem-Based Learning

SHELAGH A. GALLAGHER  
Research and Development Consultant, Consortium for Problem-Based Learning, Northern Illinois University

Thinking Is More Than "Bumper Sticker" Reasoning  
TACTIC/STRAT, BEG, K-12

A plague of "bumper sticker" reasoning is upon the land. Citizens want simple answers to complex problems. A strong dose of problem-based learning (pbl) and critical thinking can help stamp out the virus. Problem-based learning uses real-world, ill-structured problems as the vehicles for developing problem-solving ability and a significant knowledge base, simultaneously, in students with a range of abilities, elementary through undergraduate school and across the disciplines.

This session will include a demonstration of an ill-structured problem, review of the steps for finding and designing problems for the classroom, and discussion of how teachers become metacognitive coaches and use authentic assessments within a problem-based learning system.

STOUT, CANDACE JESSE  
Associate Professor of Art, University of Georgia

Critical Thinking and Criticizing Art  
ARTS, TACTIC/STRAT, COLL, MID/HIGH

This presentation describes how an "organic" model of art criticism can serve as a generative source for critical thinking. If we conceive of art criticism not as a fixed model or an algorithmic process, but of something organic, capable of growing and changing in response to environmental influences, art criticism has the potential to become one of the most powerfully fertile seedbeds for higher-order thinking in the visual arts. This presentation will define art criticism for instructional purposes, present methods for teaching art criticism as a mode of critical thinking, and provide authentic examples of the quality of critical thinking generated through the study of art criticism in high school and college art classes. The approach to this workshop is dialogic. Participants can expect a lively interchange of teaching experiences, philosophies, and instructional strategies.

STREAM, WILLIAM B.  
Assistant Professor of Physical Education and Recreation, University of Alberta

Critical Thinking About Sport/ Critical Thinking Within Sport  
GEN, PSYCH, BEG, MEDIA, H CON

Using presentation, discussion, and activities, the session will demonstrate the utility of critical thinking as a paradigm: (a) to consider sport in society and (b) to analyze strategic thinking in team sports. In the first part of the session, we will explore how it is important to do critical thinking about sport in society. We will examine existing models of youth sport, intercollegiate athletics, and professional sports. In this section, we will draw from two empirical studies (one about youth sport and one about intercollegiate athletics). We will then do a moral critique of some contemporary issues in professional sport and who how critical thinking can be used to develop some needed changes in the status quo of coach-athlete relationships. After raising questions about the social construction of sport, we will show how critical thinking is used by coaches and athletes, based on a study of Canadian Interuniversity teams. Future directions will be discussed with respect to ongoing work that is looking at constructs such as perceived control and autonomy (e.g., Patrick et al., 1993; Eccles, et al., 1991), freedom (Frankl, 1984; Westcott, 1988), intrinsic motivation (e.g., Deci & Ryan, 1985), authority and obedience (e.g., Kelman & Hamilton, 1989), and responsibility, which have been shown to be related to a variety of psychosocial and developmental outcomes in instructional settings.

Tan, Shirley  
Head of English Language and Literature Department, Raffles Girls' School Secondary

LIM TOCK KENG  
Lecturer, C.A.R.E., Nanyang Technological University

(Mini-Session) The Community of Inquiry Approach to Critical Thinking  
BEC, MID/HIGH, MUL/CULT, TACTIC/STRAT

Raffles Girls' School initiated the Philosophy for Children program in January 1993 to promote critical thinking of students in a community of inquiry. It introduces students to philosophical issues through the discussion of passages in specially written novels. The teacher attempts to create a community of inquiry in the classroom to encourage students to discuss philosophical issues embedded in the novels. This workshop shares the difficult experiences the teachers had at the introductory stages of the program and strategies the teachers carried out to overcome the problems.

TANNER, PAUL  
Instructor, English Department, Utah Valley State College

Audio Tape as a Feedback Tool: Increased Transfer of Critical Thinking Skills  
TACTIC/STRAT, TEST, COLL, MID/HIGH

The vast majority of teachers use red pencil notes as their primary method of providing students with feedback. The very nature of notes, e.g. writing, causes the notes and teacher's mind to be almost entirely focused on errors and how to repair them. This session will question what happens in terms of learning using that method of critique compared to one that is delivered through audio tapes, where the focus is on the "why" as well as the "what." It is modeling critical thinking where it truly means something to the student.
This discussion will examine the experience of using tapes as the response vehicle in four semester long classes; and will examine the results in terms of the improvement in writing quality, of the higher levels of critical thinking exposed in the writing, and of the positive student responses. The reasons, at present, are partially obvious and partially obscure. The session participants will be introduced to the concept, will experience a taped response as a student would experience it, will examine the reasons for the apparently positive results, and will receive workshop instruction in how to apply the process.

**Tanner, Paul**  
Instructor, English Department, Utah Valley State College  
**Critical Writing: Getting from Wording to Meaning** Tactic/Strat, Coll, Mid/High, Test  
Teachers everywhere have a common challenge: getting students to become comfortable enough with how they are writing things, e.g. grammar and syntax, to be able to truly deal with what they are saying. The answer generally does not lie in the part about the student becoming skilled at grammar and syntax, but in the part about becoming comfortable with their writing.

Writing has become such a frustration for most students that it can and often does get in the way of good critical thinking. This session presents ideas from the “writing to learn,” and “writing across the curriculum” movements in the field of rhetoric as they apply to this problem. When writing is stripped of its need to be “correct,” and when students learn to distinguish writing to learn, writing to communicate and writing to publish from each other, they are freed to use writing to its fullest: to think, to examine and to create.

The participants will practice the process and will learn how to apply writing in their classes to improve the critical thinking of their students, and to do it without increasing their current workload.

**Taylor-Jones, Trish**  
Independent Consultant, Trish Taylor-Jones Training and Consulting  
**A Critical Thinking Road Map to Problem Solving: Avoiding the Pitfalls** Test, Staff Dev  
No one can escape the need to solve problems; simple and mundane as well as complex and extraordinary. Given the experience we have 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 is not solved adequately. In the worse 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 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.

**Törzs, Frederic**  
Learning Specialist, Critical Thinking Program, Massachusetts Bay Community College  
**Rational Choice and Strong-Sense Critical Thinking** Test, Coll, Inf Logic  
As the concept of critical thinking and our understanding of what it means to be a rational person develops beyond the formal and informal requirements of logical analysis, we are faced with new questions. This presentation/dialogue considers one of these questions: are the goals of strong-sense critical thinking rationally achievable?

There are six related issues which we will address, either briefly or in depth depending on time constraints: whether the goals of strong-sense critical thinking demand a ‘negative dialectic,’ i.e., to what extent is strong-sense critical thinking a process of “stripping away” as opposed to “adding-on;” in what way is a reason a cause of an action; what is an intention; what affect our attempts to reduce dissonance have on the thinking process; the difficulty in stepping out of a self-justifying system, and how certain forms of irrationality such as the intellectual and moral fallacy of by-products (J. Elster), self-deception, akrasia, and adaptive preference formation relate to the goals of strong-sense critical thinking.

As a starting point for our discussion, we will consider various problems such as ‘the case of the neurotic horse,’ whether people who cannot satisfy their desires are more autonomous than people who can, paradoxical intention, etc. At the end of this session we will all have, hopefully, a more comprehensive grasp of some issues surrounding strong-sense critical thinking and greater insight into the complexities of becoming fully rational human beings.

**Trow, Ruby**  
Professor of Nutrition and Consumer Sciences, California State Polytechnic University, Pomona  
**Critical Writing: Getting from Wording to Meaning** Tactic/Strat, Coll, Mid/High, Test  
Teachers everywhere have a common challenge: getting students to become comfortable enough with how they are writing things, e.g. grammar and syntax, to be able to truly deal with what they are saying. The answer generally does not lie in the part about the student becoming skilled at grammar and syntax, but in the part about becoming comfortable with their writing.

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Can a comprehensive and rigorous meaning be given to critical thinking that integrates the insights of “first and second wave” practitioners with an interpretive or hermeneutic perspective? The purpose for this session will be to address that question. A “new wave” conception of critical thinking that is accessible to teachers will be presented for exploration and discussion. Critical thinking will be viewed as a process moved by dispositions and grounded in a transformative outlook. These aspects of critical thinking will be contextualized in the cognitive and social worlds of students, teachers, and their classrooms. Following the paper presentation and discussion, suggested strategies for the development of more reflective, rigorous thinkers will also be presented, including thinking through talking, reading, and writing.

UNRAU, NORMAN J.  
Associate Professor, School of Education, Division of Curriculum and Instruction, California State University, Los Angeles.

Toward a New Wave Conception of Critical Thinking: A Process, Dispositions, and an Outlook in a Context  
COLL, MID/HIGH, TACTIC/STRAT, STAFF  
DEV

Can a comprehensive and rigorous meaning be given to critical thinking that integrates the insights of “first and second wave” practitioners with an interpretive or hermeneutic perspective? The purpose for this session will be to address that question. A “new wave” conception of critical thinking that is accessible to teachers will be presented for exploration and discussion. Critical thinking will be viewed as a process moved by dispositions and grounded in a transformative outlook. These aspects of critical thinking will be contextualized in the cognitive and social worlds of students, teachers, and their classrooms. Following the paper presentation and discussion, suggested strategies for the development of more reflective, rigorous thinkers will also be presented, including thinking through talking, reading, and writing.

VANETZIAN, ELEANOR  
Assistant Professor of Nursing, University of Massachusetts  
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BARRBARA CORRIGAN  
Clinical Assistant Professor, University of Massachusetts  
BAR  

"Prep" for Class and Class Activity: Key to Critical Thinking  
HEALTH, NURS, TACTIC/STRAT

The demands of practice in today’s health care environment require that nursing professionals be prepared to manage problems and make decisions in complex patient care situations that are often ambiguous and uncertain. Students at all levels of their education need opportunities to practice analyzing patient situations, formulating problems, and proposing solutions that enable them to function competently in increasingly more autonomous roles (Miller & Malcolm, 1990, Woods, 1993). This workshop will prepare faculty members to develop a two-part teaching strategy that provides opportunities for students to develop critical thinking skills when preparing for class and participating in one or more class activities. Critical thinkers are able to use the elements of reasoning and intellectual traits in the process of “figuring something out” (Paul, 1994, p. 11)” with sensitivity to universal intellectual standards. Identifying and challenging assumptions and exploring alternative ways of thinking and living are two essential activities when students are developing critical thinking skills: (Brookfield, 1987).

VOORHEES, BURTON  
Professor of Mathematics, Mathematics Department, Athabasca University  
MATH/SCI, ADV, INF  
LOGIC

Could a Computer Ever Think—critically or Otherwise?  
MATH/SCI, ADV, INF  
LOGIC

Since the first days of the computer age, there has been a running debate on the question of whether or not a computer will ever be able to think, or become self-conscious in the way that human beings are self-conscious. That such is possible with only technical extensions of the current state of the art is known as the “strong AI” position. One of the foci of dispute in this debate centers on the Godel incompleteness theorems. Opponents of computer thought have made the claim that these theorems demonstrate that no computer will ever be able to match the human mind, even in mathematics. Proponents of computer thought have rebutted these arguments, suggesting that the Godel theorems are irrelevant to the issue. Most recently these discussions have been catalyzed by two books by Roger Penrose, The Emperor’s New Mind, and Shadows of the Mind, which put the anti-strong AI argument in a particularly telling form through use of a reductio ad absurdum.

In this session an extension of the Penrose approach is considered, in which the implications of combining the strong AI thesis with the consequences of the Godel theorems is considered. The implication of these, when taken together, is that we live in a universe which is in principle unknowable. This is a direct negation of the idea, going back to the Greeks, that the universe can be rationally known. In the context of the present conference, this raises the question of whether or not critical thinking is formalizable, and if so, whether or not the formal system which results is consistent.

WEBSTER, YEHUDI O.  
Professor of Pan-African Studies, California State University, Los Angeles  
GEN, SOC STUD, MUL-CULT

Are There White and Black People? Reasoning About Racial Classification  
GEN, 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.  
Professor of Pan-African Studies, California State University, Los Angeles  
GEN, SOC STUD, MUL-CULT

Multi-Culturalism and Critical Thinking: Compatibility or Competition?  
GEN, 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.  
Mon 3:15; DAR 108
Professor of Pan-African Studies, California State University, Los Angeles

On Becoming a (Better?) Critical Thinking Instructor: The Elements of Thought Gen

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.

WEBSTER, YEHUDI O.  
Mon 1:30; DAR 108
Professor of Pan-African Studies, California State University, Los Angeles

Are There White and Black People? Reasoning About Racial Classification Gen, 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.

GEN NEW

A Comprehensive Approach to Instructional Planning Gen

This workshop will offer the theoretic framework for instructional planning within regular school subjects and at all grade levels, including post-secondary. After a presentation of the framework and a discussion of problems and possibilities, participants will be asked to work in groups exploring the model with others who share common interests and concerns.

WEBER, SOPHIA MING-LEE  
Tues 1:30; STEV 1002
Associate Professor, Department of Education, National Taiwan Normal University

The Four Modes of Critical Thinking: Its Nature and Critique Phil, Social, Beg

The main task of this session is to redefine the nature of critical thinking from a comprehensive history with a rigorous approach. This session also meets with the third wave research concerns. The nature of critical thinking is clarified in two ways: investigating its general characteristics, and examining its noesis. The four modes of critical thinking picked out from history are the supernatural mode, the empirical mode, the subject-dialectical mode, and the communicative mode. Critical thinking has common characteristics that are justified: skepticism, reflection, emancipating from irrationality, reconstruction and autonomy. Further, dialectical method and the concept of quasi-universality are emphasized. Also, two crises of critical thinking are mentioned. Finally, learning by thinking and learning by experiencing are suggested for teaching critical thinking.

WILLIAMSON, JAN  
Sun 1:30; STEV 3008
Educational Consultant, Northeast Technical Assistance Center

Alternative Assessment: Enhancing and Monitoring Student Thinking Test, GEN COU

This participatory workshop will explore how alternative assessment, including performance assessment, can help students to become more self-directed learners and more insightful thinkers. In addition, the use of alternative forms of assessment can give the teacher more meaningful feedback about students’ metacognition and about how deeply and accurately students are thinking about content. Participants will be provided with specific examples of different forms of classroom assessments and they will then be asked to devise practical ways of expanding the role of assessment in their classes or schools.
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.

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 the intellectual standards, to support teachers and administrators who see the potential and the need for self-assessment.

The main explicit function of an educational system is to educate people, which implies imparting critical thinking skills. Its main tacit function is to uncritically indoctrinate 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 caused by existing societal mores, "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 will present the basic concepts, and then we will have a spirited discussion through which we will explore how we can confront this issue without losing either our sanity or our jobs.

Wragg, Dixon

_MON 1:30; STEV 2049

Freelance Writer/Speaker

Reasoning with Irrational Persons  

_PSYCH, H Con, Beg_ 

We have 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 will 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. The format will be a 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 112

Freelance Writer/Speaker

Nonrational Determinants of Thinking, and Implications for Critical Thinking Pedagogy  

_PSYCH, SOCIO, Mus-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 psychological) factors inform our perceptions, beliefs and values more than we like to admit. In this lecture-discussion, 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.

Yameen, Deanna L.

_MON 3:15; STEV 3072

Associate Dean, Career Programs, Massachusetts Bay Community College

Marita Prater

Staff Education, Children’s Hospital

Interdependent (Critical) Thinking: A Bridge Between Education and the Workplace  

_Coll, Staff Dev, Adv, Nurs_

This interactive session will allow participants the opportunity to explore critical thinking as a framework that allows us to bridge the gap between education and the workplace. Report after report from our educational institutions, government agencies, and the workforce point to the as yet unbridged gap between higher education and the workplace. This problem stems from a viewpoint which is outdated and relates more to issues of training and socialization than true education. In making the theoretical shift from dependent to independent to interdependent (re: critical) thinking, we begin to build a framework that meets the demands of the class-
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### PRESENTERS' ADDRESSES

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### PRESENTERS' ADDRESSES (Continued)

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ABOUT THE SPONSORS

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, to community leaders, 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 welcome your communications.

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Emiko Lewis
Peggy Bassham
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Rena Ferrick
Garth O'Brien
Colleen Call
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The National Council for Excellence in Critical Thinking

With a solid core membership of 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, in the Dining Commons.

National Council (NCECT)
4655 Sonoma Mountain Road
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phone (707) 546-0629,
fax (707) 546-4718

Staff Development

The Center for Critical Thinking and the Foundation for Critical Thinking offer five 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.

- **National Academy:** A five-day event for individuals who plan to mentor others in the art of bringing critical thinking into the classroom or the place of business.

- **"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.
Our staff development specialists, committed to helping educators facilitate the development of student critical thinking abilities in schools, colleges, universities, can bring to your campus what we bring to educators in our regional workshops, or we will create a unique program to meet your specific needs.

Your educators will:

- Learn how critical thinking can enable students to learn in every classroom
- Explore strategies and tactics they can put to work immediately
- Discover how to engage students in the thinking you want and hold them responsible for the thinking they do
- See how and why self-assessment by students is so crucial.

Some thematic workshops we have developed by request are:

- Critical Thinking Across the Curriculum
- Socratic Questioning and Teaching Students to Question
- Intellectual Standards Across the Curriculum
- Reading and Writing as Modes of Thinking
- Remodeling Curriculum Lessons so that students are required to reason
- Self-Assessment and Critical Thinking.

Why Do It?

Critical thinking is not an isolated good unrelated to other important goals in education. Rather it is a seminal goal which, done well, simultaneously facilitates a rainbow of other ends. It is best conceived, therefore, as the hub around which all other educational ends cluster. For example, as students learn to think more critically, they become more proficient at historical, scientific, and mathematical thinking. Their test scores and self-confidence increase. Finally, they develop skills, abilities, and values crucial to success in everyday life. All of this assumes, of course, that those who teach have a solid grounding in critical thinking and in the teaching strategies essential to it.

Make Long Term Plans

Critical thinking is foundational and, when taught well across the curriculum, has implications in virtually every dimension of education. However, critical thinking transfers only to the extent that it is taught with global transfer in mind. A superficial understanding of critical thinking will not lead to transfer across subject areas nor to significant application in everyday life. A long-term faculty development plan is best, since instruction rarely accentuates reasoning and critical thinking, since many who teach are habituated to didactic lecture as the main mode of instruction, and since it takes considerable time to modify established teaching habits and the thinking that underlies them. It makes the most sense to think of inservice for critical thinking as generating start-up momentum which is to be followed up in some specific way later on. It is more useful to begin with a two-day than a one-day workshop, for the more substantial the initial understanding, the more likely it will result in long range change.

Critical Thinking in the Workplace

Due to rapidly changing technology, along with ever increasing complexity and interdependence, today's workplace calls for employees with the ability to think critically on the job. Yet, most employees are not equipped with the reasoning skills they must have to survive in this complex world of work. To reason well on the job means to think critically on the job. As more and more managers come to realize this, we are being increasingly called upon to provide critical thinking workshops and staff training programs for the business community, assisting executives and managers to improve their management skills through developing their own critical thinking abilities, and facilitating the development of reasoning skills of staff at various organizational levels. Call on us to prepare a staff training program to fit the unique needs of your organization.
REGIONAL WORKSHOPS

We are offering three regional workshop options next year: our standard workshop on infusing critical thinking into instruction, a Socratic workshop, and a workshop on critical thinking and the process of assessment. The standard workshop is offered at all six locations. The Socratic workshop is offered in Boston, Minneapolis, Portland, and Orlando. The Assessment workshop is offered in Kansas City and Phoenix. First-time participants may enroll either in the standard workshop or in the more specialized workshops. Many persons who have already taken our basic workshop enroll in the Socratic and Assessment workshops. All workshops run from 9:00 A.M. to 5:00 P.M. Saturday and Sunday.

You will appreciate the practicalness and the theoretical rigor that underlies these workshops. Your intellect is challenged; your practical sense is fulfilled.

In the standard workshop you learn how to teach your content as a mode of thinking (e.g., Biology is taught as biological thinking; Sociology as sociological thinking; Art as artistic thinking.) You learn how to foster the basic criteria and standards for good thinking (clarity, precision, accuracy, relevance, depth, breadth, logicalness). You learn how to model thinking, engage students in thinking and hold students responsible for a high level of performance.

In the Socratic workshop, you learn how to teach through the systematic asking of questions. You learn how to ask questions that force students to take their thinking apart. You learn how to ask questions that force students to consider crucial standards for thinking. You learn how to ask questions that focus on both domains of thought and systems of thought.

In the workshop on the process of assessment, you learn how to use assessment effectively and how to teach students to use it. Through a better understanding of the process of assessment, you will be better able to assess: classroom design, modes of testing, standardized tests, student performances, students’ reading, writing, speaking, and listening.

NATIONAL ACADEMY

The Academy for Excellence in Critical Thinking is an in-depth, five-day interactive seminar for educators and administrators who seek to mentor others in critical thinking in their respective departments, institutions, and districts. The Academy is designed to help you aid and mentor others in responding to students’ needs:

- to self-educate,
- to reason deeply and clearly,
- to respond to change appropriately, and
- to live in community with respect and knowledge of the demands of fairmindedness, intellectual humility, empathy, and integrity.

This exciting week will be filled with self-reflection and writing. The experience will bring you closer to an intimate knowledge of your own thinking processes, insight into the processes of your colleagues, and it will bring you practical tactics and strategies that will enable you to make a difference in the lives of your students, to be the educator that you strive to be.

We will train you to:

- teach educators tactics for creating a dynamic, critical thinking classroom,
- teach administrators how to conduct effective meetings using a critical thinking model,
- teach educators how to promote critical reading and listening skills in all aspects of their program, and
- teach educators how to lead Socratic discussions.

The format will vary. The challenges will be attuned to those with high energy and commitment. You will not only enjoy the week, but come away with renewed faith in what education can be. You will look long and hard at how you can effectively use your professional energy to do the most for those most deserving of your help.

We recognize that some will come with little background. We are prepared to meet your needs, whatever your previous experience. Seminars run from 8:30 A.M. to 11:45 A.M. and 1:30 P.M. to 4:30 P.M. each day. You will be practicing teaching your peers, which will build your confidence. All participants will have the opportunity to volunteer to be videotaped while trying out new techniques, group activities, and redesigned lessons, while other participants critique your efforts.
Session Audience Codes

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<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
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<td>TEST</td>
<td>testing and assessment</td>
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Important Phone Numbers and Locations

Specially-marked on-campus phones are available throughout campus. When calling on campus from one of them, dial the last four digits only.

- Campus Operator (Information, Activities) 664-2880
- Conference Info Center 664-4156 Student Union, Downstairs
- Shuttle Information 664-2901 Student Union
- Housing Service Desk 664-2530 Zinfandel
- Public Safety (Campus Police) 664-2143 Foundation Center Buildings
- Lost & Found 664-2317
- Parking Information 664-2143
- Emergency Only 664-2911
- Academic Credit:
  Office of Extended Education 664-2394 Stevenson 1012
Three Waves of Critical Thinking Research and Practice

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The International Conference fully adheres to the principles and standards of the National Council for Excellence in Critical Thinking.