The 17th International Conference on

Critical Thinking & Educational Reform

Sponsored By The Center for Critical Thinking and Moral Critique
Sonoma State University
Proceedings of
The Seventeenth Annual International Conference on Critical Thinking and Educational Reform

Critical Thinking in the Classroom:
Ideal vs Reality

August 3-6, 1997

Sponsored by the Center for Critical Thinking and Moral Critique
Sonoma State University
(707) 664-2940
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RICHARD W. PAUL, Director of Research at the Center for Critical Thinking, is an internationally recognized authority on critical thinking, with six books and over 100 articles published on the subject. Dr. 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, British Columbia, Toronto, and Amsterdam. He has been regularly teaching beginning and advanced courses in critical thinking at the university level for over 20 years. His workshops have been attended by thousands of educators, both K-12 and university.

Attacking the Problem

Presentation time and location:
August 3, Sunday, 9:00 A.M. - 10:15 A.M.
Evert Person Theatre
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. A regular presenter at international conferences on critical thinking, he has also given numerous lectures and workshops across the country. Dr. Nosich has not only focused on teaching critical thinking skills in subject specific areas, but is also an expert in teaching critical thinking across the curriculum.

**Teaching for Insight**

Presentation time and location:
August 3, Sunday, 7:00 P.M. - 8:15 P.M.
Evert Person Theatre

LINDA ELDER, educational psychologist and Executive Director of the Center for Critical Thinking, has extensive experience in designing and executing instructional curricula for a wide variety of groups from elementary to higher education. She has led numerous critical thinking workshops for educators in topics such as the affective dimension of thinking, infusing critical thinking and instruction, and Socratic questioning. Dr. Elder has written an original stage theory of critical thinking development and co-authors a column on critical thinking in the Journal of Developmental Education.

**Deep Structures: Teaching for Long-Term Significant Learning**

Presentation time and location:
August 4, Monday, 9:00 A.M. - 10:15 A.M.
Evert Person Theatre

MARLYS HEARST WITTE, M.D is Professor of Surgery and Director of the Medical Student Research Program at The University of Arizona and Secretary-General of the 42-nation International Society of Lymphology. Her husband, Charles L. Witte, M.D. is also Professor of Surgery at The University of Arizona and Editor of the international Journal Lymphology. Together with their philosopher colleague Ann Kerwin, Ph.D., they have developed an internationally recognized Curriculum on Medical (and Other) Ignorance, which deals with “all the things we know we don’t know, don’t know we don’t know, and think we know but don’t.” and as a recent spinoff, an Eisenhower-funded project to improve scientific literacy in Arizona’s K-12 schools by nurturing “Questions, Questioning and Questioners (Q³).”

**Understanding our Ignorance**

Presentation time and location:
August 4, Monday, 7:00 P.M. - 8:15 P.M.
Evert Person Theatre

T. EDWARD DAMER, is Professor at Emory and Henry College in Emory, Virginia. He holds the Alumni Chair in Creative Studies and is the Chair of the Division of Visual and Performing Arts. He is the author of a textbook on critical thinking, Attacking Faulty Reasoning, now in its third edition. This is his sixteenth year at the conference.

**The Student as Thinker**

Presentation time and location:
August 5, Tuesday, 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.

Academic Conformity and Inertia

Presentation time and location:
August 5, Tuesday, 7:00P.M - 8:15 P.M.
Evert Person Theatre

THE CRITICAL THINKING MOVEMENT: 1970-1997:
Putting the 1997 Conference into Historical Perspective

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.
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.

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 take command of the logic of language and the logic of questions—key components of critical thinking. If one views “logical structures” as omnipresent 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 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 “superficiality” 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 analysis 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
• 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 should one 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.
HISTORICAL PERSPECTIVE

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 in 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 needs to integrate rigor and depth into its comprehensiveness. Theory of teaching and learning (based on theory of thinking, emotion, and action) need to be carefully integrated.

The field needs a comprehensive theory of thinking and critical thinking. It needs a clear set of intellectual standards. It needs an integrated set of dispositions. It needs a comprehensive concept of logic which accommodates the role of emotion, intuition, imagination, and values in thinking. It needs to make clear the leading role of thinking in the shaping of human feelings and behavior. It needs to provide a framework into which can be set integrated theories of teaching and learning in the widest variety of human contexts. It must provide both for the universal elements in reasoning and those which are domain and context-specific.

Critical Thinking in The Classroom: Ideal vs Reality

Bursting the Bubble: Recent Study Indicates Most Instruction Does Not Emphasize Critical Thinking

A Recent Ground-Breaking Study of College and University Professors Revealed:
1) Though the overwhelming majority (89%) claimed critical thinking to be a primary objective of their instruction, only a small minority (19%) could give a clear explanation of what critical thinking is; and only 9% of the respondents were clearly teaching for critical thinking on a typical day in class.

2) Though the overwhelming majority (78%) claimed that their students lacked appropriate intellectual standards (to use in assessing their thinking), and 73% considered that students learning to assess their own work was of primary importance, only a very small minority (8%) could enumerate any intellectual criteria or standards they required of students or could give an intelligible explanation of what those criteria and standards were.

3) When asked how they conceptualized truth, a surprising 41% of those who responded to the question said that knowledge, truth and sound judgment are fundamentally a matter of personal preference or subjective taste.

4) Although the vast majority (89%) stated that critical thinking was of primary importance to their instruction, 77% of the respon-
Students had little, limited or no conception of how to reconcile content coverage with the fostering of critical thinking.

5) Although the overwhelming majority (81%) felt that their department's graduates develop a good or high level of critical thinking ability while in their program, only 20% said that their departments had a shared approach to critical thinking, and only 9% were able to clearly articulate how they would assess the extent to which a faculty member was or was not fostering critical thinking. The remaining respondents had a limited conception or no conception at all of how to do this.

6) Although the vast majority (89%) stated that critical thinking was of primary importance to their instruction, only a very small minority could clearly explain the meanings of basic terms in critical thinking.

7) From either the quantitative data directly, or from minimal inference from those data, it is clear that most faculty:
• do not understand the connection of critical thinking to intellectual standards.
• are not able to clarify major intellectual criteria and standards.
• inadvertently confuse the active involvement of students in classroom activities with critical thinking in those activities.
• are unable to give an elaborated articulation of their concept of critical thinking.
• cannot provide plausible examples of how they foster critical thinking in the classroom.
• are not able to name specific critical thinking skills they think are important for students to learn.
• are not able to plausibly explain how to reconcile covering content with fostering critical thinking.
• do not consider reasoning to be a significant focus of critical thinking, do not think of reasoning within disciplines as a major focus of instruction.
• cannot specify basic structures essential to the analysis of reasoning.
• cannot give an intelligible explanation of basic abilities either in critical thinking or in reasoning.
• do not distinguish the psychological dimension of thought from the intellectual dimension.
• have had no involvement in research into critical thinking and have not attended any conferences on the subject.
• are unable to name a particular theory or theorist that has shaped their concept of critical thinking.

These results are based on a study of professors at 48 public and 38 private colleges and universities.

Yet Critical Thinking is More & More Essential
Unfortunately, though most teachers and professors are failing to teach their students to think critically, their students need critical thinking more and more each year. In a world of accelerating change, a world of intensifying complexity, a world of increasing interdependence, we need to focus instruction on what does not change. When content is transformed faster than anyone can record that transformation, we must shift the focus from mere memorization of that which fluctuates to command of that which is eternally the same: the nature, structure, and standards of sound thinking. To the extent that we help students to discipline their minds, we free them from dependence on any particular piece or mass of content. To the extent that we aid students to learn how to assess their own learning, we help them acquire the tools to learn new content, analyze new problems, interpret new situations, and think within new domains and subjects. For though the content of historical thinking may change, the essence of it does not. The same is true for mathematical thinking, for scientific thinking, for anthropological thinking–indeed for every established mode of thinking. Critical thinking is an indispensible tool for all who would discipline their minds, learn content, communicate effectively, and perform successfully in a complex changing world.

Introducing Critical Thinking in Layers
There are four layers in which critical thinking can be introduced into instruction:
1) as a tool for the overall design of a course
2) as a tool for the design of a unit or given day of instruction
3) as a tool for transferring learning from subject to subject
4) as a tool for the conduct of everyday life

The 17th International Conference on Critical Thinking will focus on these practical realities.
Special Events

Evening Thinkfests

The evening Thinkfests are designed as an integral part of the conference. These socials 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. Those giving Keynote addresses, as well as session presenters, are encouraged to attend and be available for discussion regarding their session topics. Please come and share your thinking with others. The socials will take place in the University Club inside the Dining Commons.

Special Interest Groups
Sunday through Tuesday, 8:15 PM

Tables will be available for various interest groups to meet and organize themselves. Signs will be available for the groups listed on the next page, as well as blank signs so that you may create your own discussion group. 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.

Critical Thinking in the Disciplines
Critical Thinking in the Arts
Critical Thinking in Business and Management
Critical Thinking and Education
Critical Thinking and Gifted Education
Critical Thinking and Informal Logic
Critical Thinking and Language Arts
Critical Thinking and Mathematics
Critical Thinking in Nursing
Critical Thinking and Philosophy
Critical Thinking and Psychology
Critical Thinking and the Sciences
Critical Thinking and Social Studies and History

Critical Thinking Pedagogy
Critical Thinking and the Affective dimension
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

Create Your Own Group


RESOURCES

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 International Conference. 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.

Sonoma State Bookstore
At Far End of Central Quad Area (past Commons)
Monday through Wednesday

Each year, the bookstore carries books focused on critical thinking. Visit the bookstore to see the books that have been recommended by this year’s presenters. For additional book recommendations, please review the book list provided with your conference materials.
How to Find the Sessions You Want to Attend

Due to the large number of sessions, we have organized the conference schedule both chronologically and by presenter name with session abstracts. The following recommendations may make planning easier.

- Each session has audience codes which indicate the areas to be addressed. Most of these codes are assigned by the presenter. The key to these codes is located on page 18, 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.

- There is a section with session abstracts which are listed alphabetically by the presenter's name. If there are some speakers you especially want to see, you can review their session abstract as well as find out when and where it will occur.

- If you are 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 what the structure of the session will be.

- For your convenience, we have included a planning guide on page 16. 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 passed out at registration) in your schedule.
# Individual Planning Guide

<table>
<thead>
<tr>
<th><strong>Sunday</strong></th>
<th><strong>Monday</strong></th>
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| **9:00 AM to 10:15 AM** | Keynote by Richard Paul (Evert Person Theatre)  
Keynote by Linda Elder (Evert Person Theatre) |
| **10:30 AM to 12:00 PM** |  
12:00 PM to 1:30 PM  
For those not lodging on-campus, lunch is available for purchase inside the Commons at the Servery or at Pastries Plus. A barbeque is also offered outside of the Commons. For participants lodging on-campus, 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  
8:00 PM  
9:00 PM  
10:00 PM  
11:00 PM  
7:00 P.M. - 8:15 P.M.  
8:15 P.M. - 11:00 P.M. |

<table>
<thead>
<tr>
<th><strong>Tuesday</strong></th>
<th><strong>Wednesday</strong></th>
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</table>
| **9:00 AM to 10:15 AM** | Keynote by T. Edward Damer  
(Evert Person Theatre)  
Sessions will start at 8:45 A.M.  
10:30 AM to 12:00 PM  
12:00 PM to 1:30 PM  
For those not lodging on-campus, lunch is available for purchase inside the Commons at the Servery or at Pastries Plus. A barbeque is also offered outside of the Commons. For participants lodging on-campus, 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  
8:00 PM  
9:00 PM  
10:00 PM  
11:00 PM  
7:00 P.M. - 8:15 P.M.  
8:15 P.M. - 11:00 P.M.  
Wrap-up session by Richard Paul (STEV 1002)  
|
   (Sunday 10:30, STEV 3046, Lynda N. Brown and Sandra A. Jones)

2. Thinking Critically about Nursing Issues  
   (Sunday 1:30, STEV 3046, Alice McFarlane)

3. Impact of Assessment Results on Curriculum Design in a Baccalaureate Degree Nursing Program  
   (Monday 10:30, STEV 3046, Marilyn Stoner)

4. Teaching Strategies: Developing Critical Thinking Skills in Clinical Programs  
   (Monday 1:30, STEV 3046, Marilyn A. Cairns)

5. Classroom Assessment of Critical Thinking Learning Activities  
   (Monday 3:15, STEV 3046, Penny Heaslip)

6. Microthemes: The Reading, Writing, Thinking Connection  
   (Tuesday 10:30, STEV 3046, Penny Heaslip)

7. Educational Reform to Meet Changing Health Care Environments  
   (Tuesday 1:30, STEV 3046, Barbara Ritter)

8. Using Conference Boards to Develop Critical Thinking  
   (Tuesday 3:15, DAR 19A, Jeanette Murray)

9. Journey to Nursing Nirvana or Mission to Mars: Classroom Discourse on Nursing Theory  
   (Wednesday 10:30, STEV 3046, Kathryn Grams and Linda Testani-Dufour)
CONFERENCE SCHEDULE

SUNDAY

9:00 AM - 10:15 AM
RICHARD PAUL .............................................. EPT
Welcoming Address: Attacking the Problem

10:30 AM - 12:00 PM
LINDA ELDER ............................................. CH 68
Socratic Questioning: An Essential Component of Instruction  GEN, TACTIC/STRAT

GERALD NOSICH ........................................... STEV 3008
Thinking Within a Field or Discipline  COLL, HIGH

M. NEIL BROWNE, STUART M. KEELEY ....................... STEV 2049
Getting Started as a Teacher of Critical Thinking  BEG, ADV, TACTIC/STRAT, INTERDISC

LYNDA N. BROWN, SANDRA A. JONES ....................... STEV 3046
Critical Thinking: A Comparative Analysis of Meaning and Interpretation for Nursing Education, 1990-97  NURS, COLL, BEG

T. EDWARD DAMER ............................................ STEV 2006
How to Distinguish "Good" Arguments from "Bad" Ones  MID/HIGH, COLL, BEG, INF LOGIC

DONALD L. HATCHER ............................................ STEV 3072
Is Critical Thinking a Moral Obligation?  GEN, PHIL, STAFF  DEV, TACTIC/STRAT

12:00 PM - 1:30 PM
LUNCH

For those not lodging on-campus, lunch is available for purchase inside the Commons at the Servery or at Pastries Plus. A barbecue is also offered outside of the Commons. For participants lodging on-campus, the Residence Dining Hall will be open from 12:00 p.m. - 1:30 p.m.

1:30 PM - 3:00 PM
RICHARD PAUL ............................................. CH 68
What Can We Learn From Reflecting on the History of Critical Thinking  GEN

PENNY HEASLIP ............................................. STEV 3008
Critical Thinking: Everything You Ever Wanted to Know But Were Afraid to Ask  GEN, HIGH, COLL
SUNDAY

1:30 PM - 3:00 PM

SUE Y. LUCKEY .................................. STEV 2049
The Case for Transforming Higher Education  ADULT,
COLL, BUS/ECON, TACTIC/STRAT, TECH

ALICE McFARLANE ......................... STEV 3046
Thinking Critically about Nursing Issues  NURS,
TACTIC/STRAT, COLL, ASSESS

RALPH H. JOHNSON, WILLIAM DORMAN ...... STEV 2006
Teaching Mass Media Consumption for Depth and
Insight  MEDIA, COLL, HIGH

NORMAN UNRAU ................................ STEV 3072
Teaching Strategies that Help Students Think Critically
in the Content Areas  STAFF DEV, TACTIC/STRAT, MID, BEG

Uri Zoller ........................................ CH 20
Student Dispositions Toward Critical Thinking  COLL,
GEN, INTERDISC, SCI

JIMMY CARL HARRIS ............................. NICH 173
Using the Dissertation Model to Teach Developmental
Critical Thinking  COLL, INTERDISC, TACTIC/STRAT, INF LOGIC

GRETCHEN GRUFMAN .......................... STEV 3040
Identifying the Intersections of Race, Class, and Gender
Issues in United States History, or "Able to Leap Tall
Boundaries with Simple Films"  MUL-CULT, FEM, SOC STUD,
COLL

JOHN R. FEARE ................................. NICH 204
Beyond Speechmaking and the Marketplace of Ideas: A
Radical Transformation in Communication  H CON,
TACTIC/STRAT, GEN

MIRYAM BEREZINA .............................. STEV 3030
Why are Students Afraid of Mathematics?  MATH,
TACTIC/STRAT, HIGH, ADULT

3:15 PM - 4:45 PM

LINDA ELDER ................................. CH 68
How to Distinguish Faculty Knowledge and Ignorance
in Critical Thinking  GEN

YEHUDI WEBSTER .............................. STEV 3008
Are There White and Black People? Reasoning About
Racial Classification  GEN, SOC STUD, MUL-CULT

7:00 PM - 8:15 PM

GEORGE M. LUCKEY, JR. .......................... STEV 2049
Enhancing Intellectual Traits  GEN, BEG

DOUG BRENNER ................................. STEV 2006
On Dipping the Toes into the Pool of Experience:
Lessons from/in Teaching Critical Thinking for the First
Time  BEG, TACTIC/STRAT, INTERDISC, COLL

GEORGE HANFORD .............................. STEV 3046
A Critical Evolution  GEN

IAN WRIGHT .................................... STEV 3072
Critically Thinking About the Textbook  SOC STUD,
TACTIC/STRAT, MID, BEG

LES GOTTESMAN ............................... CH 20
Critical Conversation  TACTIC/STRAT, COLL, ADULT

JANE DAVIS-SEASER ............................ NICH 173
Constructivism: The Path to Critical Thinking in the
Classroom  ELEM

C. LINCOLN JOHNSON ......................... STEV 3040
Here Comes the Judge: Attribution Theory's
Contribution to Critical Thinking  PSYCH, SOC STUD,
TACTIC/STRAT, GEN

WILLIAM FRAYER ............................. NICH 204
Thinking on the Job: Critical and Creative Thinking
Training in Business and Industry  TACTIC/STRAT,
BUS/ECON, COLL, BEG

MARY ANNE HEDRICH, ANNE HEDRICH  ....... STEV 2001
Partners in Teaching Critical Thinking: Educators and
Academic Librarians  COLL, TACTIC/STRAT, INTERDISC, ASSESS

8:15 PM - 11:00 PM

Gerald Nosich ................................. EPT
Keynote: Teaching for Insight

EVENING SOCIAL............................. UNIVERSITY CLUB IN THE COMMONS
Please see page 18 for details.
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<tr>
<th>Time</th>
<th>Speaker(s)</th>
<th>Topic</th>
<th>Location</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MONDAY</td>
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</tbody>
</table>
| 9:00 AM - 10:15 AM | LINDA ELDER ................................| EPT  
Keynote: Deep Structures: Teaching for Long-Term Significant Learning |          |                                            |
| 10:30 AM - 12:00 PM | RICHARD PAUL ................................| CH 68  
The Values Underlying Critical Thinking | GEN     |                                            |
|              | M. NEIL BROWNE ...............................| STEV 3008  
The Tense Partnership Between Active Learning and Critical Thinking | BEG, ADV, TACTIC/STRAT, INTERDISC |                                            |
|              | PIERRE LAROCHE, STEVE LUDINGTON ............| STEV 2049  
Thinking Like Writers: Getting Students to Logically Assess Their Writing | LANG, TACTIC/STRAT, COLL |                                            |
|              | MARILYN STONER ...............................| STEV 3046  
Impact of Assessment Results on Curriculum Design in a Baccalaureate Degree Nursing Program | NURS, BEG, HEALTH, MUL-CULT |                                            |
|              | YEHUDI WEBSTER .............................| STEV 2006  
Multi-Culturalism and Critical Thinking: Compatibility or Competition? | GEN, MUL-CULT |                                            |
|              | ROBERT J. MENGES ............................| STEV 3072  
Critical Thinking and Evaluation of Professors' Teaching | COLL, STAFF DEV |                                            |
|              | RICHARD OGNIBENE ..........................| CH 20  
E. D. Hirsch's Failure as a Critical Thinker | TACTIC/STRAT, INTERDISC, COLL, K-12 |                                            |
|              | FRANK HUGHES, MARY ANN E. CEBULESKY ........| NICH 173  
Riddles and Toulmin Diagrams: An Intelligence Approach to Critical Thinking | INF LOGIC, TACTIC/STRAT, COLL, ADV |                                            |
|              | TOBY KLINGER ................................| STEV 3040  
Integrating Critical Thinking into Introduction to Psychology: Designing Content and Context | PSYCH, INF LOGIC, COLL, COMP AID |                                            |
|              | COLEMAN J. GOIN .............................| NICH 204  
A High School Critical Thinking Course: Experience, Ideas, and Suggestions | MID, SOC STUD, TACTIC/STRAT |                                            |
| 12:00 PM - 1:30 PM | JENNIFER REED .................................| STEV 3030  
Integrating Critical Thinking into Post-Secondary Introductory History Courses: Strategies for Using Primary Source Documents | SOC STUD, COLL, BEG, TACTIC/STRAT |                                            |
| 1:30 PM - 3:00 PM | RALPH H. JOHNSON .............................| CH 68  
Narrowing the Gap Between Logical Theory and Argumentative Practice: Reflections on Toulmin's Revolution | ADV, INF LOGIC, PHIL |                                            |
|              | MARLYS MAYFIELD ............................| STEV 3008  
|              | JOSEPH HEYER ................................| STEV 2049  
Embedding Critical Thinking in Experiential Education | GEN, BEG, TACTIC/STRAT |                                            |
|              | CHRIS KUCHURIS ..............................| STEV 2006  
Critical Thinking and the Postmodern Student | TACTIC/STRAT, GEN, SOCIOl, PHIL |                                            |
|              | MARILYN A. CAIRNS ...........................| STEV 3046  
Teaching Strategies: Developing Critical Thinking Skills in Clinical Programs | COLL, NURS, SCI, TACTIC/STRAT |                                            |
|              | GINNY EpSTEIN ..............................| CH 20  
Teaching the Text: Examining Roles and Value Issues in Children's and Young Adult Literature | TACTIC/STRAT, K-12, MUL-CULT, FEM |                                            |

Lunch

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## CONFERENCE SCHEDULE

### MONDAY

#### 1:30-3:00 PM

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Room</th>
<th>Title</th>
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<tbody>
<tr>
<td>Daniel C. Abel, Robert McConnell</td>
<td>Nich 173</td>
<td>Critical Thinking Exercises in Environmental Studies</td>
</tr>
<tr>
<td>Lee Brown</td>
<td>Stev 3049</td>
<td>Using the Logic of Words for Enhancing Teaching Effectiveness and for Promoting Intellectual Excellence in Students at Risk</td>
</tr>
<tr>
<td>John H. Bryant</td>
<td>Stev 3076</td>
<td>The Commercialization of Public Education: A Brave New World</td>
</tr>
<tr>
<td>Yun Ja Lassek</td>
<td>Stev 3082</td>
<td>The Roles of Context in Perception: Teaching Critical Thinking Through Visual Arts</td>
</tr>
<tr>
<td>Richard Paul</td>
<td>Ch 68</td>
<td>The Search For &quot;Magic Bullets&quot;: A Brief Critique of Educational Trends &amp; Fads</td>
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<tr>
<td>Gerald Nosich</td>
<td>Stev 3008</td>
<td>Thinking About the Logic of a Field or Discipline</td>
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<tr>
<td>Stuart M. Keeley</td>
<td>Stev 2049</td>
<td>Coping with Student Resistance to Critical Thinking</td>
</tr>
<tr>
<td>Penny Heaslip</td>
<td>Stev 3046</td>
<td>Classroom Assessment of Critical Thinking Learning Activities</td>
</tr>
<tr>
<td>T. Edward Damer</td>
<td>Stev 3072</td>
<td>How to Resolve Disagreements on Controversial Issues</td>
</tr>
<tr>
<td>Bunny Jones</td>
<td>Ch 20</td>
<td>The Discussion Leader Assignment</td>
</tr>
</tbody>
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#### 3:15 PM - 4:45 PM

<table>
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<tr>
<th>Speaker</th>
<th>Room</th>
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<tbody>
<tr>
<td>Philip Groth</td>
<td>Nich 173</td>
<td>Sociology and the Promotion of Religiosity Through Higher Education</td>
</tr>
<tr>
<td>Wendy Oxman, Linda Wise, Werner Liepolt</td>
<td>Stev 3040</td>
<td>Academic Tasks, Curriculum Mapping, and Critical Thinking Standards</td>
</tr>
<tr>
<td>Ted M. Kraus</td>
<td>Nich 204</td>
<td>Lead a Student to Culture and Make Her Think</td>
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<tr>
<td>Linda Q. Smith</td>
<td>Stev 3028</td>
<td>The Thinking Machine: Chess in the School</td>
</tr>
<tr>
<td>Richard Paul</td>
<td>Ch 68</td>
<td>The Search For &quot;Magic Bullets&quot;: A Brief Critique of Educational Trends &amp; Fads</td>
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#### 7:00 PM - 8:15 PM

**EVENING SOCIAL**

University Club in the Commons

Please see page 18 for details.

### TUESDAY

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

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<tr>
<th>Speaker</th>
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<tbody>
<tr>
<td>T. Edward Damer</td>
<td>Ept</td>
<td>Keynote: The Student as Thinker</td>
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</tbody>
</table>

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

<table>
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<tr>
<th>Speaker</th>
<th>Room</th>
<th>Title</th>
</tr>
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<tbody>
<tr>
<td>Ralph H. Johnson</td>
<td>Stev 3008</td>
<td>The Case Against (Formal) Logic as a Tool for Teaching Critical Thinking</td>
</tr>
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</table>
CONFERENCE SCHEDULE

TUESDAY
10:30 AM - 12:00 PM

CONTINUED

RICHARD PAUL .................. CH 68
How to Generate Faculty Awareness of, and
Commitment to, Teaching for Critical Thinking  GEN, STAFF DEV

MARILYN KENNEDY .......... STEV 2049
Avoiding the Parrot Syndrome: Techniques to Develop
Empathetic Thinking and Critical Understanding of
Cause and Effect Consequences  H CON, TACTIC/STRAT,
LANG, COLL

RICHARD WUERTZ .......... STEV 2006
An Approach to Integrating Critical Thinking into
Traditional Content  GEN, ASSESS, LANG, TACTIC/STRAT

PENNY HEASLIP .......... STEV 3046
Microthemes: The Reading, Writing, Thinking
Connection  GEN, NURS, COLL, HIGH

ROBERT L. McCONNELL, DANIEL C. ABEL .......... STEV 3072
Is Administrative Assessment an Impediment to Critical
Thinking?  ASSESS, MATH, COLL, BEG

MARY ANNE HEDRICH ........ CH 20
If You're Going to Teach About Diversity and Conflict
Resolution, You've Gotta Use Critical Thinking  COLL,
MUL-CULT, H CON, GEN

WEBSTER E. COTTON .......... NICH 173
Re-Thinking the Nature of Scientific Inquiry: The
"Personal Knowledge" Perspective of Michael Polanyi
GEN, PHIL, SOCIAL, PSYCH

LLOYD PEAKE .......... STEV 3040
Do Majorities Need Protection Against Discrimination?
Travelling Down the Road of Political Structure Equal
Protection  H CON, POL, MUL-CULT, BUS/ECON, COLL

MARION VAN NOSTRAND .......... STEV 3028
Students Creating Theory  TACTIC/STRAT, INTERDISC, COLL,
ADV

CHRISTOPHER GILBERT ......... NICH 304
Hear: Critical Thinking African-American Poetry  GEN,
LANG, ARTS

CONFERENCE SCHEDULE

12:00 PM - 1:30 PM

LUNCH
For those not lodging on-campus, lunch is available for
purchase inside the Commons at the Servery or at Pastries
Plus. A barbecue is also offered outside of the Commons.
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Hall will be open from 12:00 p.m. - 1:30 p.m.

1:30 PM - 3:00 PM

LINDA ELDER .......... CH 68
Collaborative Learning: Collaborative Mislearning  GEN,
TACTIC/STRAT

GERALD NOSICH .......... STEV 3008
Thinking Realistically About Anger  GEN

JIMMY CARL HARRIS .......... STEV 2049
Developmental Critical Thinking at Southeastern
Louisiana University  COLL, INTERDISC, TACTIC/STRAT,
INF

GAIL HUGHES .......... STEV 2006
Eduational Reform to Meet Changing Health Care
Environments  NURS, ADULT, TACTIC/STRAT

BRIAN COTTOPA ............. STEV 3072
Reintegration: A Productive Solution for the
Consequences of Disintegrative Progress in Formal
Education  COLL, SCI, ASSESS, ADV

WILLIAM STREAN .......... CH 20
Generating Critical Thinking and Dialogue in Large
Classes  TACTIC/STRAT, COLL, ADULT, BEG

LINDA FARR DARLING .......... NICH 173
The Task of Teaching Critical Thinking: A Model from
British Columbia's Critical Thinking Cooperative
TACTIC/STRAT, BEG, GEN

CAROL ANN BAYS .......... STEV 3049
Teaching World Literature: Designing Courses Which
Produce Cosmopolitan Creative Thinkers  TACTIC/STRAT,
COLL, MUL-CULT, INTERDISC

SANDRA PARKS, MARLYS MAYFIELD .......... STEV 3040
Spirituality and Critical Thinking  ADV, H CON, PSYCH, PHIL

36
CONFERENCE SCHEDULE

TUESDAY
1:30 PM - 3:30 PM

RICHARD PAUL ................................ CH 68
How Standard University Practices Undermine Critical
Thinking  GEN

DONALD L. HATCHER, LUCY PRICE .................. STEV 3008
Why Critical Thinking Enhances Written Composition
(and Vice Versa)  COLL, MID, INTERDISC, LANG

SHARON SCHWARZE, HARVEY LAPE .............. STEV 2049
Student Resistance and the Problem of Criteria
TACTIC/STRAT, PHIL, MUL-CULT, INF LOG

RENAITE OTTERBACH  ......................... STEV 2006
Creativity and Critical Thinking: Their Interdependence
in Problem Solving  MATH/SCI, ARTS, GEN, ADV

THOMAS HART ....................................... STEV 3046
Critical Thinking and Transfer of Knowledge: Students
as Agents  COLL, BEG, TACTIC/STRAT, H CON

EILEEN GAMBRILL  ....................... STEV 3072
Spotting Propaganda in the Professions  GEN, BEG,
TACTIC/STRAT, INTERDISC

EDNA MAYE LOVELESS ............ CH 20
Addressing and Prizing Academic Dissonance in the
Classroom  LANG, TACTIC/STRAT, COLL, HIGH

MICHAEL GRIFFIN  ......................... STEV 3036
Critical Thinking: A Practical Guide  COLL, H CON, INF
LOGIC, HIGH

JAMES PARSONS, MICHAEL MURRAY ............... STEV 3049
"I feel, therefore it is": Reflections on the Academic
Study of Music in an Unthinking World  COLL, HIGH, ARTS,
TACTIC/STRAT

DOUG BRENNER, CONSTANCE L. HOAG ........... NICH 173
Understanding Critical Thinking from the Perspective of
Lacotah-Native American Culture  MUL-CULT, GEN, SOC
STUD, TACTIC/STRAT

JEANETTE MURRAY ............... DAR 19A
Using Conference Boards to Develop Critical Thinking
NURS, FEM, TECH, TACTIC/STRAT

CONFERENCE SCHEDULE

7:00 PM - 8:15 PM

YEHUDI WEBSTER ................................ EPT
Keynote: Academic Conformity and
Inertia

8:00 PM - 11:00 PM

EVENING SOCIAL  .................... UNIVERSITY CLUB IN THE COMMONS
Please see page 18 for details.

WEDNESDAY
8:45 AM - 10:15 AM

RICHARD PAUL ................................ CH 68
How to Evaluate Definitions of Critical Thinking  GEN

GORDON LEON BLACK ....................... STEV 3008
Emotive Language and Neutral Language  LANG, INF
LOGIC, POL, TACTIC/STRAT

JOEL LEVINE, SUZANNE BORMAN ........ STEV 2049
Teacher of Education as a System of Thoughtful Action
COLL, TACTIC/STRAT, K-12, STAFF DEV

MARY BROGAN ................................ STEV 2006
The Role of Formal Logic in Critical Thinking  FORMAL
LOGIC, GEN, INTERDISC

NATHAN LEVY  ....................... STEV 3046
Practical Ideas, Activities, Strategies, and Materials to
Stimulate Integrated Thinking in the Classroom
TACTIC/STRAT, K-12, STAFF DEV, INF LOGIC

PAUL ADY  ....................... STEV 3072
Critical Thinking for Media Analysis: Classical Rhetoric
Meets Semiotics  MEDIA, INF LOGIC, LANG, GEN

EDWARD RIPPY  ....................... CH 20
John W. Gofman and the 'Nuclear Establishment': A
Real-Life Exercise in Critical Thinking  BEG, SCI, POL, MEDIA

MARK STONER ..................... STEV 3049
Distance Education: Media Contexts and Critical
Thinking  MEDIA, TECH, TACTIC/STRAT, GEN
WEDNESDAY

10:30 AM - 12:00 PM

LINDA ELDER .................................. CH 68
Strategic Thinking: Fundamental to the Developed
Mind GEN, TACTIC/STRAT

BARBARA HITCHKO, DAN BURRITT .............. STEV 3008
Motivating Students to Accept the Challenges of the
21st Century by Utilizing the Premises/Principles of
Socratic Literacy and Character Education TACTIC/STRAT,
ELEM, MID, HIGH

JUANITA HOLLIMAN .......................... STEV 2049
Empowering Students to Become Critical Thinkers
Utilizing Universal Intellectual Standards COLL, ASSESS,
TACTIC/STRAT

JANICE HART, NANCY KING .................... STEV 2006
Using a Critical Teaching Group: Planning a Critical
Thinking Curriculum Together STAFF DEV, COLL, INTERDISC,
BEG

KATHRYN GRAMS, LINDA TESTANI-DUFOUR .......... STEV 3046
Journey to Nursing Nirvana or Mission to Mars:
Classroom Discourse on Nursing Theory NURS,
TACTIC/STRAT, COLL, FEM

DON FAWKES ..................................... STEV 3072
Administration and Critical Thinking for Non-
Administrators GEN, INTERDISC, BUS/ECON, PSYCH

WILLIAM DRUMIN ............................. CH 20
Using the Film Inherit the Wind as a Learning Tool in
Critical Thinking Courses and Across the Curriculum
COLL, H CON, INF LOG, TACTIC/STRAT

12:00 PM - 1:30 PM

LUNCH
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1:30 PM - 3:00 PM

WRAP-UP SESSION WITH RICHARD PAUL .......... STEV 1002
Back to Reality: Bringing the Conference Insights into
the Everyday Classroom (this will be an interactive
session)
ABEL, DANIEL C • MON 1:30; NICH 173
Marine Science Instructor, Coastal Carolina University

ROBERT L. McCONNELL
Professor, Mary Washington College

CRITICAL THINKING EXERCISES IN ENVIRONMENTAL STUDIES

A good education, we feel, focuses on acquisition of key skills and nurtures the ability to critically evaluate issues. Here, in the fifth presentation in this series, we set out the skills necessary to apply critical thinking to environmental studies, and use these to analyze issues dealing with population and migration, energy, air pollution and climate changes, the hydrosphere and water pollution, and consumption and the quality of life. These topics are explored more fully in our book Twenty Environmental Issues.

ADY, PAUL • WED 8:45; STEV 3072
Associate Professor of English, Assumption College

CRITICAL THINKING FOR MEDIA ANALYSIS: CLASSICAL RHETORIC MEETS SEMIOTICS

In this session we will practice an approach to media analysis that combines classical rhetoric with semiotic theory. Session participants will view a public service ad, a commercial, and a political ad in order to disclose the logical and emotional manipulations that operate in each.

BAYS, CAROL ANN • TUES 1:30; STEV 3049
Professor of English, Northern Michigan University

TEACHING WORLD LITERATURE: DESIGNING COURSES WHICH PRODUCE COSMOPOLITAN CREATIVE THINKERS

After years of teaching World Literature to college juniors, I realized that although my students "valued" the encounter with foreign cultures, their thinking in papers, discussions, and tests remained disappointingly superficial. I gradually redesigned my courses to foster critical thinking, which entailed my moving away from lecturing and broad coverage to practical classroom strategies, such as modeling, group work, student presentations, and close readings of fewer texts. I will report on this trial-and-error process, conduct a demonstration of how I introduce students to the dynamic questioning of a foreign text, and encourage an active exchange of ideas among participants.

Berezina, Miryam • SUN 1:30; STEV 3030
Lecturer, Ort Braude College

WHY ARE STUDENTS AFRAID OF MATHEMATICS?

Most students nowadays are afraid of Mathematics. It is not that students are finding Mathematics dull or uninteresting; they are simply afraid of the subject. The problem is not that we have got a generation of brainless students; the problem is wrong teaching. By using Dr. Richard Paul's theory of critical thinking, Mathematics can and should be taught in such a way that students really understand the subject and its problems from the very beginning. In this session we will try to explain how this can be achieved, using examples from our own teaching experience.

BLACK, GORDON LEON • WED 8:45; STEV 3008
Philosophy Instructor, Santa Rosa Junior College

EMOTIVE LANGUAGE AND NEUTRAL LANGUAGE

Reducing emotive terms to neutral is a simple requisite for distinguishing claims of fact from claims of value, so each may be judged separately. Sensitivity and appreciation for language also is increased. This session demonstrates student responses to a useful set of exercises: reducing polemics and poetry to neutral terms, and also adding emotive coloring to neutral language. These exercises are adaptable to most grade levels. At advanced levels, this approach is prerequisite for describing moral disagreements and positions. It applies work of the late Charles L. Stevenson, who was doing third wave critical thinking research fifty years ago.
argumentative styles, sources of credible evidence, and appropriate methods of communication. This session will compare and contrast Richard Paul’s, et al., model of critical thinking with Lakotah Native American ways of being and thinking within their culture. In this presentation, we seek to enrich cross-cultural understandings as well as inform our comprehension of critical thinking processes.

BROGAN, MARY

The Role of Formal Logic in Critical Thinking

FORMAL LOGIC, GEN, INTERDISC

Sloppy thinking is often a result not so much of a poor intellect but of poorly organized premises and conclusions. Formal Logic is primarily concerned with logical relationships between statements, with the specific subject matter and relative truth of the individual statements being completely irrelevant. The advantage of using Formal Logic to train students to think better is that by replacing words with symbols the emotive quality of the words can be removed so that the validity of any given argument, based solely on its structure, can become apparent. This workshop will provide a concise and cohesive package of information and exercises on one aspect of Formal Logic; that is with the logical structure of categorical statements and the logical relationship between them called Logical Implication (syllogisms).

BRANTLEY, HELEN

On Dipping the Toes into the Pool of Experience: Lessons from/in Teaching Critical Thinking for the First Time

BEG, TACTIC/STRAT, INTERDISC, COLL

This session seeks to share practical teaching tips and strategies gained from a semester of teaching an honors seminar in critical thinking for undergraduate students. Items discussed will range from working with assignments and portfolios, to using team/peer projects and videotapes. It primarily aims to help beginners and others understand ways of working with Richard Paul’s approach, that is, with the elements, standards, traits and abilities involved in critical thinking. A hands-on (or, toe-dipping) approach will be emphasized by drawing from a pool of experience -- both from the point of view of the presenter and those who attend the program. Exercises and handouts will be used to reinforce an understanding of critical thinking and approaches to engaging students in the process of critical thinking.

BROGAN, MARY

Understanding Critical Thinking from the Perspective of Lakotah-Native American Culture

MUL-CULT, GEN, SOC STUD, TACTIC/STRAT

Modes of thinking undoubtedly vary within the culture in which they are embedded and operationalized. Cultures favor certain types of reasoning,
GREEN professionals must be able to effectively apply and integrate effective communication. Some preliminary research to identify health the book, clinical curriculum. This session will focus on instructional redesign and...

State University course work will be presented. These examples as well as...
What is the nature of scientific inquiry? Michael Polanyi, the respected scientist-philosopher, in his book *Personal Knowledge* (as well as other writings) challenges the “conventional wisdom” about the scientific ideal, i.e., that “true knowledge” is achieved through detached, impersonal fact gathering and hypothesis testing. For Polanyi, this is a dangerous illusion. In reality, the scientist is guided by creative insight, personal commitment, moral conviction and a sense of community responsibility - which factors he sums up as the tacit dimension of knowing. The session which will be in seminar format, will explore the implications of this perspective for understanding the meaning of critical thinking in the context of the human project.

**Damper, T. Edward**

*Professor of Philosophy/Author, Emory and Henry College*

**How to Resolve Disagreements on Controversial Issues**

*BEG, COLL, MID/HIGH, INF LOGIC, H CON*

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 my *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. A good but not necessary background for this workshop would be my earlier workshop on “How to Distinguish ‘Good’ Arguments from ‘Bad’ Ones.”

**Damper, T. Edward**

*Professor of Philosophy/Author, Emory and Henry College*

**How to Distinguish “Good” Arguments from “Bad” Ones**

*MID/HIGH, COLL, BEG, INF LOGIC*

This workshop will demonstrate how a basic understanding of the nature of a fallacy can provide a simple and effective means of evaluating the quality of an argument. A fallacy is defined 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 my *Attacking Faulty Reasoning* will be distributed to workshop participants. Special attention will be given to moral arguments. Sample arguments that deal with current issues will be evaluated as a part of the workshop. Ideally, this workshop would be a good background for my other workshop on “How to Resolve Disagreements on Controversial Issues.”
DARLING, Linda Farr ............................Tues 1:30; Nich 173
Assistant Professor of Curriculum Studies, University of British Columbia

THE TASK OF TEACHING CRITICAL THINKING: A MODEL FROM BRITISH COLUMBIA'S CRITICAL THINKING COOPERATIVE TACTIC/STRAT, BEG, GEN

The approach to critical thinking pedagogy that will be presented is based on the model constructed by founding members for BC's Critical Thinking Cooperative. In his review of their approach, Richard Paul wrote, "anyone seriously using it will be encouraging critical thinking in deep and important ways." Elements for the model will be described based on a definition of critical thinking as making reasoned judgments about what to believe or do, judgments most fruitfully made within the context of a community of critical thinkers. Session participants will be asked to engage in meeting "critical challenges" from the Cooperative's materials for teachers.

DAVIS-SEAYER, Jane ..............................Sun 3:15; Nich 173
Assistant Professor of Curriculum and Instruction, NC Agricultural & Technical State University

CONSTRUCTIVISM: THE PATH TO CRITICAL THINKING IN THE CLASSROOM ELEM

This session will look at the essential qualities of critical thinking in early childhood, focusing on the abilities and qualities put forth by leading proponents of critical thinking, especially Richard Paul and Henry Giroux. These components will be integrated into the constructivist view of teaching and learning such as proposed by Eleanor Duckworth. A practical look into a critical thinking, constructivist classroom will be given using the experiences within the classroom of the presenter as well as the research into critical thinking in young children done by the presenter. Research findings that will be presented will show that young children are using the critical thinking strategies isolated in the writings of Paul and Giroux, especially outside of the traditional early childhood classroom; that even in school, when teachers do no interfere, they employ critical thinking skills. Evidence of adult manipulation of their thinking, of thinking as a political act, and strategies employed by young children to think will be discussed. The aim of this presentation is to show that young children are thinking critically outside of school now, and that within a constructivist classroom 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 outset of the child's educative experience.
inherent in deep issues, questions which routinely cause the mind to turn back on itself in an evaluative way. In this session, Linda Elder will focus on how to model questioning for students in order to teach them the skills which comprise high quality questioning. The session will include a Socratic questioning exercise, followed by a discussion of the intellectual moves inherent in a questioning process designed to probe and upgrade reasoning.

**Elder, Linda**

Executive Director, Center for Critical Thinking

**HOW TO DISTINGUISH FACULTY KNOWLEDGE AND IGNORANCE IN CRITICAL THINKING**

In the study *California Teacher Preparation for Instruction in Critical Thinking: Research Findings and Recommendations*, the difference between faculty who have a plausible understanding of critical thinking and faculty who lack such an understanding is made explicit. Many examples are included in both categories. The purpose of this session is to enable the participants to distinguish between faculty who basically understand and faculty who fail to understand critical thinking. We will look at faculty answers within the study, as well as faculty profiles, and faculty design of courses, in each case drawing this distinction. It will become apparent that most faculty need professional development in critical thinking in order to effectively design it into their classrooms. Participants will examine and evaluate faculty responses and profiles. Please bring your copy of the study to this session.

**Elder, Linda**

Executive Director, Center for Critical Thinking

**TACTIC/STRAT**

Collaborative Learning: Collaborative Mislearning

Each and every day students engage in collaborative learning, whether or not we design opportunities in the classroom for them to do so. When young children play at recess, when teenagers “hang out” with their peers, when college students go to parties, indeed when any human group is formed, its members engage in collaborative learning. Yet often group learning is of low quality. It is learning which insulates the group from recognizing its deficiencies and dysfunctional behavior. It is learning which enables the group to serve its vested interests and maintain its distorted views. Similarly, collaborative learning activities in the classroom do not in-and-of-themselves guarantee high quality learning. In this session, Linda Elder will focus on the fundamental difference between collaborative learning which is of high quality and that which is of low or mixed quality. Participants will critique collaborative learning assignments and then redesign them to foster high quality learning.

**Epstein, Ginny**

Professor of Education, Regis University

**TEACHING THE TEXT: EXAMINING ROLES AND VALUE ISSUES IN CHILDREN’S AND YOUNG ADULT LITERATURE**

This session will provide an opportunity to engage in dialogues about literature. Excerpts from picture books to novels will be discussed to establish a framework for teaching critical reading of value positions and conflicts. Participants will develop ways of teaching students to uncover the sometimes subtle messages of authors and illustrators. This model for teaching critical reading is a model of inclusion that allows us opportunities for moving beyond meaning - making from personal experience to evaluating and reconstructing meaning from the social constructions of gender, class and race, for a start. This is one way to engage in lively and meaningful dialogues in classrooms that continue past the bell’s ring.
FAWKES, DON ..................................................Wed 10:30; STEV 3072
Assistant Professor, James Madison University

ADMINISTRATION AND CRITICAL THINKING FOR NON-
ADMINISTRATORS  GEN, INTERDISC, BUS/ECON, PSYCH

This session considers applications of skills, elements, and standards of critical
thinking to administration. At a workshop during last year's conference
administrators applied critical thinking to administrative practice in education . This session invites Non-Administrators to the project. Since there are
fairly well acknowledged gaps in the understanding of administration
between administrators, faculty, and staff, this session aims at opening dia-
logue. Elements, skills, and standards are applied to concrete circumstances.
Participants will role-play and discuss concepts and applications. VCR and
overhead slides will be used. The session is suitable for advanced partici-
pants, but is also designed to be easily accessible for beginners.

FEARE, JOHN R ..................................................Sun 1:30; NICH 204
Community Issues Forums, Town of Windsor

BEYOND SPEECHMAKING AND THE MARKETPLACE OF IDEAS: A
RADICAL TRANSFORMATION IN COMMUNICATION  H CON,
TACTIC/STRAT, GEN

Much communication, public and private, amounts to little more than peo-
ples making speeches at one another. In whatever setting (homes, offices,
council chambers) and in whatever form (meetings, forums, hearings) par-
ticipants take turns proclaiming what they think and feel and the
counterpart ends without any meeting of minds and hearts. 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 think-
ing. The argument will be presented also that the presumption that individ-
uals can formulate informed opinions and judgments and make intelligent
decisions after receiving information, claims, and ideas in the “marketplace
of ideas” is faulty.

FRAYER, WILLIAM ...........................................Sun 3:15; NICH 204
Communication Department Chairperson, Central Maine Technical College

THINKING ON THE JOB: CRITICAL AND CREATIVE THINKING
TRAINING IN BUSINESS AND INDUSTRY  TACTIC/STRAT, BUS/ECON,
COLL, BEG

The ability to think critically and creatively in a workplace setting are
clearly valued by employers. A common problem, however, is that corpo-
rate trainers do not often have a clear idea of what critical thinking is or
how to approach teaching it. This session will introduce the content and
pedagogical strategy of a successful 12 hour thinking training seminar
offered to supervisory personnel and front line workers at Liberty Mutual
Insurance Company, Inc. in Lewiston, Maine. The goals and scope of the
training will be presented, and participants will have an opportunity to
work through some of the thinking exercises for themselves. This training
was derived from some of the material developed for a critical thinking
course at a two year technical college.

GAMBRILL, EILEEN ...........................................Tues 3:15; STEV 3072
Professor of Social Welfare, University of California at Berkeley

SPOTTING PROPAGANDA IN THE PROFESSIONS  GEN, BEG,
TACTIC/STRAT, INTERDISC

The purpose of this session is to enhance participants’ skill in identifying
propaganda in professional sources such as journals, books, workshops, and
newsletters. Being influenced by propagandistic appeals (such as inflated
claims of the effectiveness of assessment and/or intervention methods) may
result in offering clients ineffective or harmful treatment methods. Propa-
ganda is defined as encouraging beliefs and actions with the least thought
possible. It stands in direct contrast to critical thinking which encourages
well-reasoned views and actions. Participants will be introduced to Hugh
Rank’s four-fold model of propaganda and examples of each of the four
types of propaganda that occur in professional sources will be given. In this
model the propagandistic inflates his/her positive aspects and hides or min-
imizes his/her negative ones and overemphasizes his/her opponents’ nega-
tive aspects and hides and minimizes their positive ones. The reasons why
propagandistic appeals are questionable will be described and the links to
informal fallacies discussed. Participants will have practice opportunities to
apply Rank’s four-fold model to examples in their field (e.g., nursing, psy-
chology, education, social work).

GILBERT, CHRISTOPHER ...................................Tues 10:30; NICH 304
Associate Professor, Bristol Community College

HEAR: CRITICAL THINKING AFRICAN-AMERICAN POETRY  GEN,
LANG, ARTS

This session will delve into the problems of the notion of ethnic art and lit-
erature by considering African-American poetry. Questions put on the table
will include “What makes it possible for readers to consider a poem an
African-American poem?” Issues will include considerations of ethnicity,
purpose, the role of rhetoric, musicality, and writer/reader relationship.
A HIGH SCHOOL CRITICAL THINKING COURSE: EXPERIENCE, IDEAS, AND SUGGESTIONS  

This session will detail my experiences teaching a High School critical thinking course. I will present and explain my curriculum and teaching methods. I will also present some of the better student projects. I will reserve the last part of the session for questions and discussion.

CRITICAL CONVERSATION  

Hermeneutic philosophy (of Gadamer, Ricoeur, and others) proposes a certain kind of conversation as the instance and model of critical reflection on self and society—a kind of conversation that leads, rather than is led by, the will of the conversants. Such a conversation, says Gadamer “has a spirit of its own...bears its own truth within it...[and] allows something to ‘emerge’ which henceforth exists.” But can such a conversation be catalyzed and conducted? Can teachers orchestrate critical conversations to expose and test prejudices, ideology, and misunderstanding? This presentation illustrates hermeneutic concepts and processes with classroom examples and student testimony.

JOURNEY TO NURSING NIRVANA OR MISSION TO MARS: CLASSROOM DISCOURSE ON NURSING THEORY  

The purpose of this session is to explore the use of writing in developing critical thinking skills in nursing students. Classroom discourse in the form of expressive, interactive, and transactional writing creates an environment that promotes empowerment and connectedness, is social and collaborative, values active learning and interactive teaching, and develops reasoning skills. Writing activities developed for a course on the nature of professional nursing practice and nursing theory will be demonstrated as participants in the workshop examine ideas and competing perspectives and travel in a hot air balloon to Nursing Nirvana or blast off in a rocket to Mars.
Handouts formatted to critical thinking analysis for films and comparison reasoning will assist participants and groups in reaching conclusions.

HANFORD, GEORGE Sun 3:15; STEV 3046 President Emeritus, The College Board

A CRITICAL EVOLUTION gen

Discussion of the evolution of critical thinking in relation to the 16 previous Annual Conferences will be based on a paper by an administrative pragmatist who has attended almost all of them. It will trace the maturation of critical thinking from its beginnings as a fledgling subject to its status as a recognized force in educational reform in higher education and call for its reconnection to reform at the secondary level. Invoking the old maxim that “truth springs more readily from error than confusion,” the second half of the session will provide an opportunity to correct the presenter’s misperceptions.

HARRIS, JIMMY CARL Sun 1:30; NICH 173 Director of Developmental Critical Thinking, Southeastern Louisiana University

USING THE DISSERTATION MODEL TO TEACH DEVELOPMENTAL CRITICAL THINKING COLL, INTERDISC, TACTIC/STRAT, INF LOGIC

The dissertation model is used to introduce developmental students to the elements and standards of critical thinking. They learn to validate assumptions, to consider points of view, to base understanding on evidence, to create knowledge. They pose a question, plan their research, gather and analyze data, arrive at conclusions, and determine the implications for further study. Strengths include the variety of subjects, ability to gather data, and understanding of the implications for further research. Weaknesses include problems with objectivity, difficulty of analyzing data and arriving at conclusions, and failure to complete the assignment. Changes will be discussed and materials will be provided.

HARRIS, JIMMY CARL Tues 1:30; STEV 2049 Director of Developmental Critical Thinking, Southeastern Louisiana University

DEVELOPMENTAL CRITICAL THINKING AT SOUTHEASTERN LOUISIANA UNIVERSITY COLL, INTERDISC, TACTIC/STRAT, INF LOGIC

This open-admissions university offers a course in critical thinking that enables developmental students to succeed across the curriculum by enhancing their critical thinking skills. Emphasis is placed on teaching through critical thinking activities utilizing the elements and standards of critical thinking. The course design was informed by the critical thinking scholarship of Richard Paul and John Chaffee. The audience will be encouraged to contribute their own experiences with critical thinking courses, especially at the developmental level. Copies of a syllabus, sample activity, and student contract will be distributed.

HART, JANICE Wed 10:30; STEV 2006 Instructor, Albuquerque TVI Community College

NANCY KING Instructor, Albuquerque TVI Community College

USING A CRITICAL TEACHING GROUP: PLANNING A CRITICAL THINKING CURRICULUM TOGETHER STAFF DEV, COLL, INTERDISC, BEG

Teaching toward critical thinking requires that teachers be able first to think critically about their own pedagogues. We propose a session that (a) describes a semester-long multidisciplinary critical teaching group we started at the community college level and (b) offers guidelines for similar groups. We will discuss the interplay and relative successes of four tools we used to design and assess our respective courses for critical thinking: (1) email discussions throughout the semester based on readings in critical thinking, (2) face-to-face meetings (including a critical teaching mini-retreat), and (3) teaching journals used for individual reflection and self-evaluation, and (4) peer evaluations.

HART, THOMAS Tues 3:15; STEV 3046 English Instructor, Merritt College

CRITICAL THINKING AND TRANSFER OF KNOWLEDGE: STUDENTS AS AGENTS COLL, BEG, TACTIC/STRAT, H CON

Like the transfer one receives to continue a journey on more than one conveyance, constructs such as intellectual standards and elements of reasoning help students reach understanding of their thoughts and feelings about problems, conflicts and values. Participants will practice, then discuss, a collaborative teaching approach that helps students assess their thinking in order to make transaction between “information” and “understanding.” Using a literary reading, participants identify problems, decide how a value or set of values work as solution, and assess the thinking involved in making such evaluative judgments.

HATCHER, DONALD L. Sun 10:30; STEV 3072 Director, Center for Critical Thinking, Baker University

IS CRITICAL THINKING A MORAL OBLIGATION? GEN, PHIL, STAFF DEV, TACTIC/STRAT

This paper will present a series of arguments that, beyond the usual pragmatic reasons for being a critical thinker, we do indeed have a moral obliga-
This conference session will be facilitated to address issues and problems educators face in revising classroom lessons for critical thinking and implementing critical thinking teaching strategies. Opportunity will be provided to share experiences, dialogue and debate various educational approaches to critical thinking. Practical solutions will be generated by the participants out of their own experiences in teaching for critical thinking.

HETHEL, PENNY
Nursing Instructor, University College of the Cariboo

MICROTHEMES: THE READING, WRITING, THINKING CONNECTION
GEN, NURS, COLL, HIGH

The use of microthemes in an introductory professional course can successfully develop a student's ability to reason critically about what to believe and how to act in a practice discipline. This session examines how frequent writing, critical reading of professional literature, self and peer critique enhance the student's ability to develop a reasoned view of practice disciplines. Through the application of the elements of reasoning and critical analysis students come to know the discipline not through a process of socialization and indoctrination but rather as an ethically held stance of reasoned views. The construction of professional values and examination of personal beliefs develop an ethical way of knowing the field which becomes the practitioner's basis of practice.

HEDRICH, MARY ANNE
Assistant Professor of Physical Education, University of Wisconsin, Whitewater

AnNE HEDRICH
Reference Librarian, Utah State University

PARTNERS IN TEACHING CRITICAL THINKING: EDUCATORS AND ACADEMIC LIBRARIANS
COLL, TACTIC/STRAT, INTERDISC, ASSESS

It's the perfect team--educators' wanting to infuse critical thinking into their courses and academic librarians. Information literacy is the purview of academic librarians with their grounding in information access, organization, and evaluation of what is found. Instructors' challenging students' too-often assumptions that "if it's in print, it's valid" or "if it's on the Web, it's OK" find natural allies in academic librarians who assist students' search for information. This session will provide strategies to develop partnerships and explore a more systematic approach to infusing critical thinking in academia.

HEDRICH, MARY ANNE
Assistant Professor of Physical Education, University of Wisconsin, Whitewater

IF YOU'RE GOING TO TEACH ABOUT DIVERSITY AND CONFLICT RESOLUTION, YOU'VE GOTTA USE CRITICAL THINKING
COLL, MULTICULT, H CON, GEN

We'll explore the various strategies that can be used to bring an understanding of the value of diversity and the importance of conflict resolution to resistant or reluctant learners, along with the central role of critical think-
Embedding Critical Thinking in Experiential Education

Critical Thinking is as old as Socrates. Experiential Education was proposed by John Dewey early in this century. But, they are not yet formally linked in the field of education. This workshop addresses the opportunity to establish their association. Critical Thinking fits logically and meaningfully into the practice of Experiential Education, a process that requires thoughtful analysis of one's experience to develop new insights.

In this workshop, we take our cue from Project Adventure success and focus on processing designed group activity. What is unique here is the application of Critical Thinking to the reflection process. Participants will learn to structure critical thinking elements in all experiences for groups and to construct processing questions that help students to develop new ways of thinking and feeling.

Hitchko, Barbara
Independent Study Teacher -E.C.S., C.A.R.E.

Dan Burritt
Co-Director, RST, C.A.R.E.-Children at Risk in Educ.

Motivating Students to Accept the Challenges of the 21st Century by Utilizing the Premises/Principles of Socratic Literacy and Character Education

Are we asking noncritical or critical thinking questions in the classroom? Or more importantly, are the students asking critical thinking questions in the pursuit of creating a community of inquiry? A community of inquiry in which students and teachers engage in Socratic Dialogue, Reciprocity, utilize the principles of Character Education, and embrace the strengths of successful intelligence and focus on Socratic Literacy. The participants will engage in a dialogue that will examine critical thinking questioning vs. noncritical questioning, learn how to facilitate students in posing critical thinking questions and recognizing noncritical thinking questions, realize the power of reciprocity in questioning, examine both answers and questions in the light of the principles of Character Education and how these principles truly guide questioning in using the Traits of Mind, and determine if the focus of education ought to be Socratic Literacy (Socratic Literacy is the particular ability to engage in Socratic Dialogue and apply the tenets of true creative critical thinking as the manner of pursuing a comprehension of language, thinking, problem solving, and reasoning.)

Holliman, Juanita
Assistant Professor of Language Arts and Sciences, DePaul University

Empowering Students to Become Critical Thinkers - Utilizing Universal Intellectual Standards

The presenter will demonstrate the use of a model, devised to assess Critical Thinking Outcomes in the written works of students across subjects. In search of definitions, criteria, and a model for assessing higher level reasoning, the teacher chose Paul's (1995) conceptualization of the use of Intellectual Standards: to propel students to "take charge of their thinking and to regularly assess it with standards appropriate to thinking." Critical thinking is best understood as the ability of thinkers to take charge of their thinking: this requires that they develop sound criteria and standards for analyzing and assessing their own thinking and routinely use those criteria and standards to improve its quality. The evolution of the paradigm used for assessing critical thinking outcomes in the written works of students consisted of: 1) defining critical thinking, 2) identifying standards, 3) defining standards or criteria, and 4) deciding the appropriate tactics to facilitate continual critical thinking about the content. The criteria or standards include: Clarity, Accuracy, Precision, Relevance, Depth, Logic, and Breadth. Thus, the CAPR-DLB Model. When evaluating and designing structures and tactics, facilitation of critical thinking across content must be at the core of the planning process. Otherwise teaching strategies can easily regress into a didactic mode where "covering the content" is the primary focus.

Hughes, Frank
Department Chairman, Defense Intelligence Agency

Mary Ann E. Cebulesky
Faculty/Gen. Collin L. Powell Chair, Joint Military Intelligence College

Riddles and Toulmin Diagrams: An Intelligence Approach to Critical Thinking

This presentation will examine how the model of argument, advanced by S. Toulmin in The Uses of Argument, is employed as a teaching tool to assist students in defending their claims, evidence analysis and conclusions in support of an argument. In addition, this presentation will examine the newly developed "Riddle" methodology which assists the students in developing a disciplined thinking approach in the field of strategic Intelligence analysis. Together these teaching strategies encourage the use of critical
thinking in research, evaluation, and the establishment of evidence to support judgments on national security issues.

**Hughes, Gail**
Co-ordinator of Program Evaluation, Minnesota State Colleges and Universities

**How to Construct Adaptive Interviews to Teach and Assess Critical Thinking**
***ASSESS, SOCIOLO, GEN, PSYCH***

In this "demonstration and application" session, faculty from a Critical Thinking Interview project will show participants how to ask questions and assess student responses which relate to three levels of reasoning proficiency: Novice - provides reasons, evidence, and sources of information for their position; Intermediate - supports the strength of their reasons and evidence and the quality of their sources; and Advanced - describes and responds to challenges and alternative perspectives. Participants will work in small groups to design an interview for a topic of their choice, and will work in trios to practice interviewing each other.

**Johnson, C. Lincoln**
Associate Professor of Sociology, University of Notre Dame

**Here Comes the Judge: Attribution Theory’s Contribution to Critical Thinking**
***PSYCH, SOCIOLO, TACTIC/STRAT, GEN***

This seminar will draw upon a number of well-established social psychological principles which affect an individual's perceptions and judgments, and consequently his or her ability to think critically. Major attention will be given to the attribution process, which is the term given to the way in which people perceive and judge or evaluate others. All people are subject to attribution biases, which can affect critical thinking as it occurs in the classroom and in everyday life. Awareness of these biases is one means of enhancing critical thinking. Illustrations from research and the media will be shared for possible use by seminar participants.

**Johnson, Ralph H.**
University Professor of Philosophy, University of Windsor

**Narrowing the Gap Between Logical Theory and Argumentative Practice: Reflections on Toulmin’s Revolution**
***ADV, INF LOGIC, PHIL***

In *The Uses of Argument* (1958) Toulmin writes: "If all were well in philosophical logic, there would be no point in embarking on these investigations: our excuse lies in the conviction that a radical re-ordering of logical theory is needed in order to bring it more nearly into line with critical practice." Toulmin says "philosophical logic" but he really means logic and more likely he means something like the theory of argument. Toulmin’s fine efforts notwithstanding, the gap between logical theory and practice remains large. The purpose of this paper is to notice the gap, inquire into its causes, and make some suggestions about how to bring logical theory into better alignment with the best practices.

**Johnson, Ralph H.**
University Professor of Philosophy, University of Windsor

**Teaching Mass Media Consumption for Depth and Insight**
***MEDIA, COLL, HIGH***

Teaching mass media consumption for depth and insight requires the application of standards and ways of processing media. In this workshop Dorman and Johnson will discuss and illustrate standards that may usefully be applied to mass media, with particular reference to print and broadcast journalism. They will also discuss how these standards and the process of applying them can be taught.

**Johnson, Ralph H.**
Teaching Mass Media Consumption for Depth and Insight

**William Dorman**
Professor of Government, C.S.U., Sacramento

**The Case Against (Formal) Logic as a Tool for Teaching Critical Thinking**
***A SPECIAL SESSION ON LOGIC AND CRITICAL THINKING***

In this paper I argue that formal deductive logic (FDL) is not well-suited to the task or argument analysis and evaluation which I take to be a fundamental critical thinking skills. I argue that FDL encourages other habits and patterns of thought that may interfere with the development of critical thinking. I argue that informal logic is better suited to the development of critical thinking skills and attitudes. I will also discuss the contribution that FDL can make to the development of critical thinking.

**Jones, Bunny**
Associate Professor of General Studies, Cal Maritime, CSU

**The Discussion Leader Assignment**
***TACTIC/STRAT, COLL, LANG, BEG***

This session describes a college English assignment in which students are required to lead the discussion on literary works of their choice. During their preparation and performance, students exercise the traits and abilities of reasoning and exhibit creative and critical thinking in a way that is related to content. The guidelines, merits, and pitfalls of this activity will be described, as well as its relationship to concepts taught by the Center for Critical Thinking. Following the explanatory lecture, there will be time to share ideas and ask questions. Accompanying handouts will describe the
assignment and provide the assessment tool, which relates performance to intellectual standards.

JONES, Bunny ........................................... Sun 10:30; STEV 3040
Associate Professor of General Studies, Cal Maritime, CSU

IDENTIFYING BIAS AND BROADENING PERSPECTIVES
TACTIC/STRAT, COLL, HIGH, BEG

This session focuses on exercises, a few of which will be experienced but most of which will be summarized. Some help students identify biases or assumptions. Others require students to decipher the message of a puzzle by experiencing more than one perspective. Still others show how easy it is to get locked into one viewpoint or require students to take a stand, then draw inferences about their values. In all cases, students will be learning the difference between their opinions and a broader perspective. A generous number of handouts will describe the exercises, which have been used in English, humanities, and social science classes.

Keeley, Stuart M. ...................................... Mon 3:15; STEV 2049
Professor of Psychology, Bowling Green State University

COPIING WITH STUDENT RESISTANCE TO CRITICAL THINKING BEG, ADV, TACTIC/STRAT

Teachers embracing critical thinking as a classroom objective must face a major obstacle - student resistance to change. How can teachers overcome student resistance? The psychotherapy literature gives us some important insights, because therapists must address analogous kinds of resistance. This workshop illustrates how insights borrowed from the psychotherapy literature can help teachers overcome student resistance to critical thinking. Workshop participants will generate kinds of resistance they have encountered. I will then share a list of ideas about how to overcome resistance stimulated by the psychotherapy literature on resistance. Participants will also be asked to share anti-resistance strategies they have found to be helpful.

Kennedy, Marilyn ............................... TUES 10:30; STEV 2049
English Instructor, Orange Coast College

AVOIDING THE PARROT SYNDROME: TECHNIQUES TO DEVELOP EMPATHETIC THINKING AND CRITICAL UNDERSTANDING OF CAUSE AND EFFECT CONSEQUENCES H CON, TACTIC/STRAT, LANG, COLL

Students must move away from the realm of "parroting" vital information and develop skills which enable him or her to think independently, empathetically, and consequentially; this is the essence of critical thinking. Yet developing a sense of empathy is often difficult in beginning critical thinkers, but it is a necessity if one is to leap beyond the personal experi-

ence and into the bounds of the universal elements of compassion and perception. This workshop will offer hands-on experience in techniques you can use with students to cultivate their empathetic listening and argumentative skills, as well as to help develop discerning consequential thinking.

Klinger, Toby ..................................... MON 10:30; STEV 3040
Psychology Instructor, Johnson County Community College

INTEGRATING CRITICAL THINKING INTO INTRODUCTION TO PSYCHOLOGY: DESIGNING CONTENT AND CONTEXT PSYCH, INF, LOGIC, COLL, COMP AID

This presentation and participatory workshop explores ways to design syllabi and class activities enhancing the informal logic of college students for both a traditional-based and computer-based Introduction to Psychology course. Teaching students how to think through the discipline's methods of inquiry and theoretical perspectives is essential in constructing minds that are thinkers rather than mere memorizers or learners of solitary, unconnected concepts. In both traditional and non-traditional learning environments students should successfully complete this college level course possessing specific rudimentary skills for thinking critically.

Kraus, Ted M. .................................... Mon 3:15; NICH 204
Consultant, Seminars for Educators & the Educated

LEAD A STUDENT TO CULTURE AND MAKE HER THINK LANG, ARTS, MID/HIGH, COLL

This seminar explores how the application of critical thinking principles and techniques to live theatre attendance (school, community, touring productions) introduces students to the excitement of life-long thinking about and enjoyment of all the performing and fine arts. The seminar will discuss thinking about the historical circumstances of the first productions, the auspices and expectations of the local production, the make-up of the specific audience, thinking during the performance, thinking about the performance before discussing and/or writing about it, etc. The seminar will conclude with consideration of how critical thinking can be used to expand the students' interests beyond the theatre experience to an enjoyment of all the arts.

Kuchuris, Chris .............................. Mon 1:30; STEV 2006
Philosophy Instructor, Community College of Southern Nevada

CRITICAL THINKING AND THE POSTMODERN STUDENT TACTIC/STRAT, GEN, SOCIOl, PHIL

Effective critical thinking calls for the use of intellectual standards as the basis of decision making and argument analysis. However, many educators argue that post modern or Generation X students have lost confidence in
most standards and reason itself. If critical thinking is to be of value to students, not simply something they have to endure to obtain a grade, then we as educators must attempt to bridge this gap. This may be accomplished by addressing students concerns about standards and reestablishing rational thought as the basis of higher order thinking. This session will outline some pedagogical techniques addressing this problem which I have used in classes. Through active participation of attendees I will demonstrate how to implement these techniques in the classroom.

LAROCHE, PIERRE
Assistant Professor of College Composition, Doña Ana Community College

THINKING LIKE WRITERS: GETTING STUDENTS TO LOGICALLY ASSESS THEIR WRITING

If there is a logic to composition, the project of teaching is the effective illumination of that logic. But establishing a meaningful logic of writing, while essential for students, is tricky. Specifically, writers need to understand that readers approach texts with a set of expectations. We shaped some of these expectations into elements and values to guide our responses to student papers and help students meaningfully assess their own work. We will discuss the concept of our classes and how it led to a strategy for assigning and responding to student work. Participants will also work in small groups to devise other useful strategies based on the logic of writing.

LASSEK, YUN JA
Program Chair, Greater Philadelphia Philosophy Consortium

THE ROLES OF CONTEXT IN PERCEPTION: TEACHING CRITICAL THINKING THROUGH VISUAL ARTS

At the 14th Annual International Conference on Thinking and Educational Reform, I explored the important role of visual imagery in the process of perception and cognition. The ideas I advanced at the time were: (1) perception as an active cognitive process, (2) perceptual learning is an education of attention, and (3) visual arts education enhances perceptual learning and critical thinking. Our traditional view of perception, adopted since the British Empiricists, has led us to believe that our perception is passive and is dependent solely on sensory input. However, a constructionist view of perception empowers the individual student as an active agent, enabling one to take charge of one's own perceptual learning. The importance of the interplay between perception and cognition has long been recognized, however, the role of context in perception and its influence on educational practices has been little explored. While we are encouraged to interpret the meaning of a subject by paying careful attention to the context, we have ignored its influence on our cognitive understanding. At this International Conference on Thinking, I will illustrate through a slide presentation of visual imagery how perceptual context plays a major role in both our perception and in cognitive learning. We must teach students to recognize a variety of perspectives and the hidden biases embedded in every context to understand their effects. Exploring these effects can be used to teach critical thinking and open-mindedness as students are liberated from the boundaries of context and encouraged to think with multiple perspectives.

LEVINE, JOEL
Director of Teacher Education, United States International Univ.

SUZANNE BORMAN
Associate Professor of Education, United States International Univ.

TEACHER OF EDUCATION AS A SYSTEM OF THOUGHTFUL ACTION

This presentation will describe how critical thinking can be integrated as a central feature of a Teacher Education Program. We will examine the overall program design, indicate the ways in which that design is implemented, and discuss the results in terms of changes in faculty approaches to teaching and student approaches to learning.

LEY, NATHAN
President, NL Associates Inc.

PRACTICAL IDEAS, ACTIVITIES, STRATEGIES, AND MATERIALS TO STIMULATE INTEGRATED THINKING IN THE CLASSROOM

This workshop explores numerous ways to reach learners in creative and challenging ways. Teachers will learn to assist their students in developing fluency of thinking and writing. As a facilitator, s/he will provide students with the opportunity to become open to the world and its complexities. Students will air their values, challenge their stands, and make decisions after experimentation. They will learn to differentiate between fact and opinion. They will develop options for problem solving. Participants will leave with a plethora of new time saving strategies, abundant creative ideas for activities, and specific materials for implementing several of the new strategies.

LOVELESS, EDNA MAYE
Professor of English/Communication, La Sierra University

ADDRESSING AND PRIZING ACADEMIC DISSONANCE IN THE CLASSROOM

By their sophomore year, most university students have discovered that textbooks don't agree, professors don't agree. They face assignments asking...
them why they agree or disagree with what they read. Disagreeing gracefully, critiquing precisely, taking positions—all require multiple skills: mastering conventions of the academic community's "comment and respond" genre, monitoring premature generalizations, achieving a courteous stance, recognizing hoaxes, tuning in to opposing viewpoints. We will examine graceless and graceful performances by academics and students, and devise ways to achieve reciprocity of an alternative point of view in assigning critiques, journals, research projects.

Lowe, Karen Sun 10:30; Nich 173
Assistant Professor of Developmental Studies, Dona Ana Community College/ NMSU

Thinking About Math: Reorganizing Math Content Math, Coll, High, Beg
Traditionally, math is taught in discrete fragments. If there are twelve chapters with four sections each, then thirty-six discrete concepts are taught, much to the confusion of the student. I have explored reorganizing the material in my beginning algebra class into different conceptual bundles. I am moving down the spectrum from twelve chapters with four concepts each to two concepts independent of textbook chapters. I propose to discuss how I have reorganized how I think about teaching math, about understanding how I know what I know as a "math ready" type of person, and how this changed and continues to change my content focus.

Luckey, Sue Y. Sun 1:30; Stev 2049
Professor of Business Education, Morehead State University

The Case for Transforming Higher Education Adult, Coll, Bus/Econ, Tactic/Strat, Tech
Two startling facts set the stage for this presentation: (1) In 10 years, at least one fourth of all current "knowledge" and "practice" will be obsolete, and (2) "The life span of new technologies is now down to 18 months and decreasing." According to the Center for Occupational Research and Development in Waco, Texas, the Information Age, characterized by knowledge explosion and high performance workplaces, affects what we teach and how we teach. This session will present 13 ground rules for job success in the Information Age and will lead participants in developing a list of characteristics unique to adult learners. Participants will leave with a clearer vision of the need for transforming higher education because critical thinking is more and more essential in the workplace.

Luckey, Jr., George M. Sun 3:15; Stev 2049
Director, Center for Critical Thinking, Morehead State University

Enhancing Intellectual Traits Gen, Beg
Successful teachers of quality thinking must foster skills and abilities as well as standards by which thinking can be assessed. In addition, critical thinking instruction should cultivate effective traits including intellectual courage, curiosity, empathy, humility, integrity, and perseverance. The goal of this interactive session is to design and examine simple instructional methods for enhancing these traits. Participants will receive copies of materials developed for this purpose at the Morehead State University Center for Critical Thinking.

Mayfield, Marlys Mon 1:30; Stev 3008
Adjunct Assistant Professor of Liberal Studies, Golden Gate University

This workshop will demonstrate use of the "scoring sheets" used in the fourth edition of the presenter's textbook, Thinking for Yourself. These sheets guide critical thinking awareness in the writing process and serve for student self-evaluations, peer evaluations and instructor evaluations. They are offered as models for instructors to adapt to their own purposes in preparing composition assignments and essay tests emphasizing critical thinking. Participants will engage in short peer scoring exercises, consider their advantages, and brainstorm solutions for remaining problems.

McConnell, Robert L. Tues 10:30; Stev 3072
Professor of Environmental Science and Geology, Mary Washington College

Daniel C. Abel
Instructor, Coastal Carolina University

Is Administrative Assessment an Impediment to Critical Thinking? Asses, Math, Coll, Beg
Current instruments used by administrators to evaluate teaching are geared to the traditional mode of pedagogy—learning to students whose in-class role is as stenographer. As a result, we believe that the advancement of a pedagogy involving critical thinking, active learning, and collaboration involves considerable risk. In this forum we will discuss: taking these risks and the consequences of doing so; making students our partners in education and not merely scribes; and designing instruments that fairly evaluate
non-traditional but nonetheless proven and effective approaches to teaching.

McFARLANE, Alice .............................................Sun 1:30; STEV 3046
Associate Professor of Nursing, Maryville University

THINKING CRITICALLY ABOUT NURSING ISSUES  NURS, TACTIC/STRAT, COLL, ASSESS

Nursing issues courses can easily degenerate into discussion groups where the most impassioned speaker gets the most credit. This workshop will explore curriculum design, teaching strategies, and assessment techniques that can be used to create an issues course which will be firmly based in critical thinking theory and standards. Workshop participants will receive a sample syllabus, bibliography, examples of exercises and evaluation tools, and have the opportunity to engage in critical thinking activities that can be used in the classroom setting. Theoretical frameworks used are those of Richard Paul and Edward Damer.

MENGES, Robert J .............................................Mon 10:30; STEV 3072
Professor and Director, Center for Teaching Professions, Northwestern University

CRITICAL THINKING AND EVALUATION OF PROFESSORS’ TEACHING  COLL, STAFF DEV

Evaluations of faculty performance, especially evaluations of teaching, often fail to embody elements and standards of critical thinking. This session summarizes faculty dissatisfactions about how they are evaluated, emphasizing three problematic areas: poorly defined job expectations, inadequate evidence about teaching performance, and confusion between criteria of merit and criteria of worth. A case in which these problems are evident will be presented for discussion. Evaluations of teaching can be improved through attention to the critical thinking elements of assumptions, inferences, and point of view, and to the standards of clarity, accuracy, and relevance.

MURRAY, Jeanette .............................................Tues 3:15; DAR 19A
Nursing Instructor, University College of the Cariboo

USING CONFERENCE BOARDS TO DEVELOP CRITICAL THINKING  NURS, FEM, TECH, TACTIC/STRAT

The purpose of this presentation is to explore how computer based conference boards can promote critical thinking in students. The presentation will address a brief overview of critical thinking and explore the development of reasoning skills using a conference board. Participants will have an opportunity to sign on to a conference board and will use their critical thinking skills to respond to a question/scenario posted by the presenter. In addition, participants will be able to read and respond to each others comments. An open discussion will follow the interactive component of the presentation.

NOSICH, Gerald .............................................Mon 3:15; STEV 3008
Professor of Philosophy, University of New Orleans

THINKING ABOUT THE LOGIC OF A FIELD OR DISCIPLINE  COLL, HIGH

In teaching students a discipline or a field of study (like biology, management, sociology, reading, etc.), it is important that students get hold of the logic of the field. That is, it is important that they develop an idea of the field not as a bunch of details stringed together, but as a purposive way of thinking, as an integrated whole. A way to explicate the logic of a field is to take the elements of reasoning – the most central concepts of critical thinking – and apply them to the field or area of study as a whole. This will be the man activity of this session: after an introduction and some examples, participants will work on developing an account of the logic of their own fields. There will be sharing and discussion.

NOSICH, Gerald .............................................Sun 10:30; STEV 3008
Professor of Philosophy, University of New Orleans

THINKING WITHIN A FIELD OR DISCIPLINE  COLL, HIGH

One of the most difficult problems we confront in trying to teach for critical thinking is how to teach for it within a field or discipline. In a biology course, for example, students need to learn to think biologically, to think (at the appropriate level) in terms of biology, using the major concepts of biology as an important way to understand the world they encounter. The same is true in nursing, history, the arts, business—indeed, in any field: students need not merely to acquire information in the field, they need to be able to think in terms of the field. This will be a workshop in identifying the fundamental and powerful concepts underlying the field you teach, and then in generating a set of problems that will be illuminated by those fundamental and powerful concepts. At the end of the workshop you should have some practical tools that will help your students think critically in terms of the discipline, as well as a set of problems useful for modeling critical thinking, for student assignments, and for assessing student thinking.

NOSICH, Gerald .............................................Tues 1:30; STEV 3008
Professor of Philosophy, University of New Orleans

THINKING REALISTICALLY ABOUT ANGER  GEN

This will be a workshop centering on a set of activities I have my students engage in during a course on Critical Thinking. The goal of the activities is to get students to become better able to think critically about their own anger and the situations that give rise to that anger, to begin to develop a
model that can help them become more pro-active in anticipating those situations, and perhaps to become a little more adept at dealing reasonably with their anger. Participants in the workshop will engage in some of these same activities.

OGNIBENE, RICHARD

Mon 10:30; CH 20
Professor of Educational Studies, Seton Hall University

E. D. HIRSCH'S FAILURE AS A CRITICAL THINKER TACTIC/STRAT, INTERDISC, COLL, K-12

E. D. Hirsch's *The Schools We Need* (1996) has been widely acclaimed. This is not surprising given the general acceptance of curriculum standards since Hirsch's *Cultural Literacy* appeared a decade ago, and given the recently documented accomplishments of several Core Knowledge Schools implementing his ideas. What is surprising is the failure of commentators to note Hirsch's inability to use sound intellectual standards when thinking about controversial educational issues. An examination of Hirsch's new book from the perspective of logicalness, fair-mindedness, accuracy, evidentiary support, depth, and breadth reveals errors that substantially weaken the appeal of his intriguing approach to educational reform.

OTTERBACH, RENATE

Tues 3:15; STEV 2006
CREATIVITY AND CRITICAL THINKING: THEIR INTERDEPENDENCE IN PROBLEM SOLVING MATH/SCI, ARTS, GEN, ADV

Often creativity and critical thinking have been presented as if they were opposed to each other. This misconception has been carried into teaching practices. Within math and science, teaching focuses on logic and rationality often to the exclusion of creativity. In artistic endeavor in schools, however, the emphasis is on creativity and self-expression often to the exclusion of evaluative judgment. It is posited that this separation and polarizing of critical thinking and creativity is artificial and does a disservice to both the arts and the sciences. In this workshop participants will examine the interdependence of both critical thinking and creativity in a problem solving situation. The first part of the session will use examples of both statistics and photography to explore the concepts of both critical thinking and creativity. The focus of the second half of the workshop will be on the educational implications of the proposed interrelationship.
between mind and body - yet note that it is the former that is accorded the upper hand in his now classic formulation "I think, therefore I am." For the Enlightenment, it was a rift between the "Rational" and "Irrational." Whatever the words, the reality that lies behind it is a deadlock of binary oppositions that has trailed western culture from its very start and one that has extracted a high price when it comes to the study of music. Indeed, when it comes to music we have been taught that it is better to feel than to think, the result being that the typical undergraduate arrives at our universities having learned one all-encompassing lesson: "if I am to be a successful musician I must not think." Needless to say, such a state of affairs places the music appreciation/history instructor desirous of founding that study on the tenets of critical thinking at a disadvantage. From the perspective of the non-music major as well as of the music major, this presentation will focus on a course of study in which the fissure between head and heart might be lessened thereby leading to a more complete understanding and appreciation of one of humankind's most profoundly rewarding achievements.

Paul, Richard
Director of Research, Center for Critical Thinking

The Values Underlying Critical Thinking

In this session Richard Paul argues that the history of critical thinking and its research tradition reveal that critical thinking is not value free. It could not be—given that it seeks to distinguish the sound from the unsound, the logical from the illogical, the clear from the vague, the relevant from the irrelevant... It represents a commitment to address the world in a questioning way, not to accept things as they are, but continually to seek ways to analyze, assess, and improve things. Critical thinkers, historically speaking, have been persons of intellectual courage who were willing to question what others accepted without question. They displayed dispositions or value commitments that motivated their involvement in critical thinking.

Those who have deeply studied critical thinking have articulated these values somewhat differently, but, nevertheless, clearly agree on the common core. Paul examines the views of Robert Ennis, Harvey Siegel, and R.S. Peters. Paul argues that there are fundamental intellectual traits that are based on basic values essential to critical thinking. He delineates them as follows: intellectual humility, intellectual courage, intellectual empathy, intellectual perseverance, intellectual integrity, faith in reason, and fairmindedness. What is more, Paul's delineation of questions appropriate to the application of intellectual standards implicitly reflects traditional values basic to critical thinking.

Paul, Richard
Director of Research, Center for Critical Thinking

The Search For "Magic Bullets": A Brief Critique of Educational Trends & Fads

Public school education is filled with fragmented, and fragmenting, influences; drug abuse programs, child abuse programs, sexual education programs, extracurricular activities, school improvement programs, gang control, peer coaching, gifted programs, writing across the curriculum, standardized testing, programs to prevent on-campus violence, programs on hunger and malnutrition, Chapter 1, cooperative learning, mainstreaming, individualized education programs, dropout prevention and at-risk programs,... What is more, it is also entranced with a variety of educational "trends" and "fads," characterized by names such as: Authentic Pedagogy, Block Scheduling, Brain-based Teaching & Learning, Character Education, Charter Schools, School Choice, Vouchers, Privatization, Constructivism, Core Knowledge, Cultural Literacy, Emotional Intelligence, Inquiry-Based Learning, Multiculturalism, Multiple Intelligences, Outcome-Based Education, Outcomes-Based Assessment, Whole Language, Portfolio-Based Assessment, Problem-Based Learning, Quality Schools, Restructuring Schools Movement, School-Based Management, School Choice, School Climate, School Standards Movement, School-To-Work Movement, Self-Esteem, Teaching For Understanding, Thematic Curriculum, and Thematic Teaching.

What is going on? For the last 100 years of public school education, the schools have increasingly fallen victim to the educational fad roller coaster. Educators are continually on the lookout for panaceas. However, there are no panaceas in education. There is no one simple way to fix the schools. To fix the schools we must fix the thinking that is running the schools. But there are a variety of persons whose thinking is "running" the schools, and we can directly control only one person's thinking, our own. So even if we are part of the process and our thinking is influencing what is happening in school, there are always a variety of others whose thinking is bound to have impact on the quality of learning. In this session, Paul will share the work of his colleague, Linda Elder, and himself, on the critique of educational fads and trends. He will argue that unless public school educators learn how to see through the fads and focus on what is eternally essential in education, there is little hope for substantial improvement.
The idea behind critical thinking is ancient, traceable to the questioning practices of Socrates in ancient Greece. The basic idea has not changed, though the tools and resources of the critical thinker have been vastly increased in virtue of the history of critical thought. Hundreds of thinkers have contributed to its development. Each major discipline has made some contribution to critical thought. In this session, Paul reviews the history briefly, summing up the baseline common denominators.

Paul argues that critical thinking, by its very nature, requires, for example, the systematic monitoring of thought, that thinking, to be critical, must not be accepted at face value but must be analyzed and assessed for its clarity, accuracy, relevance, depth, breadth, and logicalness. We now recognize that critical thinking, by its very nature, requires, for example, the recognition that all reasoning occurs within points of view and frames of reference, that all reasoning proceeds from some goals and objectives, has an informational base, that all data when used in reasoning must be interpreted, that interpretation involves concepts, that concepts entail assumptions, and that all basic inferences in thought have implications. We now recognize that each of these dimensions of thinking need to be monitored and that problems of thinking can occur in any of them.

Paul argues that the result of the collective contribution of the history of critical thought is that the basic questions of Socrates can now be much more powerfully and focally framed and used. In every domain of human thought, and within every use of reasoning within any domain, it is now possible to question:

- ends and objectives
- the status and wording of questions
- the sources of information and fact
- the method and quality of information collection
- the mode of judgment and reasoning used
- the concepts that make that reasoning possible
- the assumptions that underlie concepts in use
- the implications that follow from their use, and
- the point of view or frame of reference within which reasoning takes place.

In other words, questioning that focuses on these fundamentals of thought and reasoning are now baseline in critical thinking. It is beyond question that intellectual errors or mistakes can occur in any of these dimensions, and that students need to be fluent in talking about these structures and standards.

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In other words, questioning that focuses on these fundamentals of thought and reasoning are now baseline in critical thinking. It is beyond question that intellectual errors or mistakes can occur in any of these dimensions, and that students need to be fluent in talking about these structures and standards.
1) THE STANDARD FORMS OF INSTRUCTION. Instructors teach as they were taught and as they are used to teaching. It is difficult to break old habits. The standard paradigm defines “accepted practice,” so that those who conform are not typically questioned while those who attempt reform are.

2) STUDENT RESISTANCE. Those students used to being fed information didactically often resist teaching methods that shift more responsibility onto them.

3) FAULTY STANDARD MODES OF EVALUATION OF INSTRUCTION. The standard ways to go about evaluating instruction are often deeply flawed.

   The typical multiple choice student class evaluation is often little more than a “popularity” contest.
   The typical faculty class visitation model is flawed in a number of possible ways.
   The typical written evaluation (for RTP purposes) is often flawed by an unexpressed “buddy system hidden agenda” underlying the process itself.
   Actual student learning is rarely documented.

4) PROFESSIONAL STATUS & ACADEMIC FREEDOM. If a faculty member institutes changes in instruction that require students to think critically through the content, some or all of the following may occur:
   a) some students may complain either to the department or to a Dean
   b) student course evaluations may suffer
   c) other faculty may object (for example, that less content is being covered or that the instruction is not meeting the standard department model)
   d) the enrollment in the class may go down

Depending on the response at the departmental level or higher, the professional status and/or security of the instructor may be threatened.

PAUL, RICHARD.............................................Wed 8:45; CH 68
Director of Research, Center for Critical Thinking

HOW TO EVALUATE DEFINITIONS OF CRITICAL THINKING

Given the complexity of critical thinking—its rootedness in 2500 years of intellectual history as well as the wide range of its application—it is unwise to put too much weight on any one “definition” of critical thinking. Any brief formulation of what critical thinking is bound to have important limitations. Some theoreticians well established in the literature have provided us with a range of useful “definitions”, each with their limitations. In this session, Richard Paul examines definitions from Harvey Siegel, Robert Ennis, Matthew Lipman, Michael Scriven, Browne and Keeley, Carole Wade, Carol Tavris, John Chaffee, and Marlys Mayfield. He argues that each of the definitions—as most in the field—cut in fundamentally the same direction.

All deal with the problem of up-grading the quality of human thinking by the cultivation of special skills, abilities, and insights that enable the thinker to take mindful command of his or her thinking. What is most obvious from a serious examination of these multiple characterizations of critical thinking is how much they share a common set of concerns and objectives—quite in line with the history of the concept and with the nature of critical thinking tests.

PEAKE, LLOYD.............................................Tues 10:30; STEV 3040
Assistant Professor of Management, CSUSB, School of Business & Public Administration

DO MAJORITIES NEED PROTECTION AGAINST DISCRIMINATION?
TRAVELING DOWN THE ROAD OF POLITICAL STRUCTURE EQUAL PROTECTION
H CON, POL, MUL-CULT, BUS/ECON, COLL

This presentation will briefly trace the relatively short history of Constitutional adjudication with respect to “political structure” equal protection theory before and after the California Civil Rights Initiative. Historically, equal protection analysis regarding unequal political structure was directed at the protection of minority interests. With the advent of the CCRI (Proposition 209) and its aftermath, this analysis was sought to be used by those opposing implementation of the Initiative, for the protection of majority interests, namely minorities and women who constitute a majority of the electorate. Thus, the question presented and analyzed will be whether a law can be determined to deny equal protection to members of a group which constitute a majority of the electorate that enacted it.

REED, JENNIFER.............................................Mon 10:30; STEV 3030
Instructor, Polk Community College

INTEGRATING CRITICAL THINKING INTO POST-SECONDARY
INTRODUCTORY HISTORY COURSES: STRATEGIES FOR USING PRIMARY SOURCE DOCUMENTS
SOC STUD, COLL, TACTIC/STRAT

For many instructors, teaching for critical thinking is an individual effort accomplished without institutional support. This session will provide practical examples for integrating critical thinking into course content using historical documents. While theoretical and empirical support for these activities will be considered, the session will focus on practical strategies for engaging students in the process of thinking historically and critically. Three different instructional approaches will be modeled: structured controversy, reading and discussion guide (small groups), and Richard Paul’s elements of reasoning. Participants will experience the strategies and participate in a discussion of the advantages and disadvantages of each approach.
RIPPY, EDWARD ...........................................Wed 8:45; CH 20
JOHN W. GOPMAN AND THE "NUCLEAR ESTABLISHMENT": A REAL-LIFE EXERCISE IN CRITICAL THINKING BEG, SCI, POL, MEDIA

John W. Gofman, MD, PhD, was an associate director and founder of the Biomedical Division at Lawrence Livermore National Laboratory. Hardly had he assumed his post when he was asked to help discredit and suppress other scientists' research showing politically unacceptable health risks from the government's nuclear-weapons testing program. Refusing to do so, he had his budget almost entirely removed and was bureaucratically harassed until finally he left the Lab to continue as an independent researcher. However, he found he was unable to get funding for any of his cancer research and ultimately was forced to continue his career along less politically sensitive lines. But he has not been idle; he started a nonprofit educational foundation and has quietly produced outstanding work detailing how to critique biomedical research and documenting the subtle distortion of databases to cover up the true risks of low level radiation. We shall discuss the details of his critiques, the demystification of science, and the politics of research funding in the context of the U.S. government's ongoing commitment to nuclear weapons as a cost-effective way of maintaining global military supremacy.

RITTER, BARBARA .......................................Tues 1:30; STEV 3046
Faculty, University of San Francisco
EDUCATIONAL REFORM TO MEET CHANGING HEALTH CARE ENVIRONMENTS NURS, ADV, ADULT, TACTIC/STRAT

The purpose of this session is to share new graduate nursing expectations for general and advanced practice that address critical thinking abilities needed for a changing health care environment. A unique aspect of the new programs includes the development of nurses who can utilize critical thinking abilities to adapt care to culturally diverse and high risk populations in a cost effective manner.

SCHWARZE, SHARON ....................................Tues 3:15; STEV 2049
Professor and Chair of Philosophy, Cabrini College

STONER, MARILYN .........................................Mon 10:30; STEV 3046
Lecturer/Clinical Lab Coordinator, C. S.U., San Bernardino
IMPACT OF ASSESSMENT RESULTS ON CURRICULUM DESIGN IN A BACCALAUREATE DEGREE NURSING PROGRAM NURS, BEG, HEALTH, MUL-CULT

This presentation will describe the initiation of the California Critical Thinking Disposition Inventory and impact of assessment results on curriculum design in a baccalaureate degree nursing program. Significant issues concerning providing students with meaningful feedback on results and
TEACHING STRATEGIES THAT HELP STUDENTS THINK CRITICALLY IN THE CONTENT AREAS  STAFF DEV, TACTIC/STRAT, MID, BEG

This session's purpose is to introduce teachers and teacher educators to strategies that help middle and secondary students engage in critical thinking across the curriculum. These methods include lesson design, discussion and questioning techniques, reader-based responses to promote reasoned reflection, and writing to develop reasoning. During the session, we will look closely at specific lesson design features, such as reading, discussing, and writing, that facilitate a teacher's infusion of critical thinking into daily instruction. Several of these strategies will be taken from Unrau's new book, *Thoughtful Teachers, Thoughtful Learners: A Guide to Help Adolescents Think Critically*.

STONER, MARK .............................................Wed 8:45; STEV 3049
Professor of Communication Studies, California State University, Sacramento

DISTANCE EDUCATION: MEDIA CONTEXTS AND CRITICAL THINKING MEDIA, TECH, TACTIC/STRAT, GEN

This interactive workshop is designed to explore the impact of media on critical thinking in the distance education context. Research suggests that media use promotes a didactic approach to teaching, short-circuiting development of critical habits of mind. However, the media possess specific interactive potentials that can be appropriated for critical thinking instruction. This session, done via one-way television and two-way audio will 1) provide an experience in context for the session participants to analyze, in situ, the instructional processes, in order 3) to develop media uses that cultivate habits of mind in students that mark fair-minded critical thinkers.

STREAN, WILLIAM ...........................................Tues 1:30; CH 20
Assistant Professor of Physical Recreation, University of Alberta

GENERATING CRITICAL THINKING AND DIALOGUE IN LARGE CLASSES  TACTIC/STRAT, COLL, ADULT, BEG

After a brief introduction to the presenter's concept of critical thinking and an explanation of the context of a critical thinking course with 200 students, participants will experience one classroom structure that may be used to promote students' critical thinking in a large class. Other structures that promote critical thinking (even in lecture theaters) will be described. Based on audience preferences, there will be active participation in another selected activity. Participants will play the role of learners in a classroom. The session will conclude with a general discussion and suggestions about how to foster critical thinking.

UNRAU, NORMAN...........................................Sun 1:30; STEV 3072
Associate Professor of Education, California State University, Los Angeles

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 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.
ARE THERE WHITE AND BLACK PEOPLE? REASONING ABOUT RACIAL CLASSIFICATION

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 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.

CRITICALLY THINKING ABOUT THE TEXTBOOK

The textbook is ubiquitous in classrooms and it is often regarded as an icon by students. In this workshop, participants will use a well known social studies textbook and will apply several ideas to help middle and high school students critically analyze their textbooks using such standards as fairness, adequacy, accuracy, completeness, representativeness and relevance of the contents.

AN APPROACH TO INTEGRATING CRITICAL THINKING INTO TRADITIONAL CONTENT

How can learning "to think about one's thinking" be integrated into a traditional course? One way of doing so is considered in this session. A method of blending critical thinking concepts and traditional content is explored in two ways. First, participants will experience the results of the 'blending' by sampling a student learning activity. It involves organizing thoughts for a speech. (No one will be asked to deliver one.) Secondly, the process used to restructure the course and to create the learning activities will be described. A general discussion will follow.

STUDENT DISPOSITIONS TOWARD CRITICAL THINKING

An emerging consensus among educators worldwide is that the acquisition of higher-order cognitive skills (HOCS) by our students should be a major instructional goal in modern education. Given the relationship between critical thinking - a major component of HOCS - and the disposition toward critical thinking has direct implications for future education and science teaching. By using the California Critical Thinking Disposition Inventory (CCTDI), the profiles of science and non-science student's dispositions toward critical thinking in three EC countries were measured and working baselines on the seven scales of the instrument have been established. The results will be analyzed and discussed in terms of the different research populations and sub-groups studied, disposition toward critical thinking relationships, and implications for future science education.
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ABOUT THE CENTER FOR CRITICAL THINKING:

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

ABOUT THE FOUNDATION FOR CRITICAL THINKING:

The Foundation for Critical Thinking is a nonprofit educational corporation, legally independent from Sonoma State University. It works cooperatively with the Center for Critical Thinking and Moral Critique, PBS Adult Learning Satellite Service, the College Board and other research centers, institutes and public institutions to publish and disseminate a variety of critical thinking resources. The Foundation seeks support for its work through tax deductible contributions. Contributions can be mailed to The Foundation For Critical Thinking, P.O. Box 7087, Cotati, CA 94931.

PHILOSOPHY OF THE CENTER FOR CRITICAL THINKING AND MORAL CRITIQUE

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 objective 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.
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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E-Mail: CCT@Sonoma.edu

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THE CENTER FOR CRITICAL THINKING AND THE FOUNDATION FOR CRITICAL THINKING OFFER SIX AVENUES FOR CONTINUING PROFESSIONAL DEVELOPMENT:

- **Inservice at your school or district:** For one day or more we will 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.

- **Administrator's Academy:** A three-day event for administrators who seek to increase the effectiveness of administration through the use of critical thinking.

- **Videotapes:** Including "How to Teach for Critical Thinking," "How to Teach Through Socratic Questioning," and the "Assessment" video series, as well as a variety of presentations given by conference presenters. These study courses can be used alone, with a colleague, or with a team of people.

- **Resource Materials:** In addition to videotapes, we offer several publications on critical thinking, including grade level specific handbooks.
**Inservice**

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
- The Role of Affect in Critical Thinking

**Why Do It?**

Critical thinking is not an isolated goal 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.
UP-COMING EVENTS

REGIONAL WORKSHOPS

We are offering four regional workshop options next year: our foundational workshop on infusing critical thinking into instruction, a Socratic workshop, a workshop on critical thinking and the process of assessment, and a workshop on critical thinking and writing. First-time participants may enroll either in the foundational workshop or in the more specialized workshops. All workshops run from 9:00 A.M. to 4:30 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 foundational 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.

Critical Thinking and Writing will focus on such questions as: What is the role of thinking in writing? What is the role of writing in the development of thinking? How can we foster critical thinking through written assignments? How could we teach content better by the use of writing assignments (that require students to think through the content)? As a result of the workshop, instructors will be able to design instruction so that students improve their learning through extensive writing (without adding additional work for the instructor).

Workshop Dates and Locations

Cincinnati: March 14-15, 1998
strands offered: Foundational, Socratic Questioning, Writing

Dallas: April 18-19, 1998
strands offered: Foundational, Socratic Questioning, Assessment

Portland: May 16-17, 1998
strands offered: Foundational, Writing

Please contact the Foundational for Critical Thinking for more information regarding these events.
STAFF DEVELOPMENT

NATIONAL ACADEMY

The National Academy 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. 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.

STAFF DEVELOPMENT

Critical Thinking for Administrators

This special national academy will be focused on increasing the effectiveness of administration through the use of critical thinking. The questions covered will include such issues as: How can we define administrative goals and problems effectively using critical thinking? How can we find time for important (but non-urgent) issues and problems crucial to educational quality? How can we institute effective employee and faculty self-assessment strategies? How can we exercise effective educational leadership using critical thinking strategies? How can we institute appropriate assessment programs? How can we design quality student input into assessment? How can we prevent "trivial" concerns from taking up time better spent on important matters? How can we resolve conflicts using critical thinking? How can we deal with educational fads and special interest groups?

Academy Date and Location

Dallas: April 20-22, 1998

Please contact the Foundational for Critical Thinking for more information regarding these events.
# Important Phone Numbers and Locations

Specially-marked phones are available throughout campus. When calling on campus, dial the last four digits only.

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<thead>
<tr>
<th>Service</th>
<th>Number*</th>
<th>Location</th>
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<tr>
<td>Campus Operator</td>
<td>664–2880</td>
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<tr>
<td>Conference Info Desk</td>
<td>664–4082</td>
<td>COM</td>
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<td>Shuttle Information</td>
<td>664–2901</td>
<td>COM</td>
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<tr>
<td>Housing Service Desk</td>
<td>644–2530</td>
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<td>Campus Police</td>
<td>664–2143</td>
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<td>Lost &amp; Found</td>
<td>664–2317</td>
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<td>Parking Information</td>
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<td>Emergency Only</td>
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<td>Academic Credit</td>
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<td>Copy Center</td>
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**On-Campus Food:**

- Pastries Plus                | COM
- Servery                      | COM
- Barbeque                     | COM
- Zinfandel Market             | ZIN
CRITICAL THINKING IN THE CLASSROOM:
IDEAL VS REALITY

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