

# Howdy



College professors have been described as, “someone who talks while you are trying to sleep.” We are attending this program with the hopes of learning teaching strategies which might change that definition or at least keep them awake.

Welcome to this program focusing on Faculty Successes and Challenges. Perhaps our biggest challenge is getting our students to think critically.

According to Richard Paul in his book *Critical thinking* describes the educational process.

"(Students) mechanically repeat back what they were told, or what they think they were told, with little sense of the logicalness or illogicalness of what they are saying. Education for most is drab, empty, passive, and sluggish, a mass of permissions, rules, sanctions, and authorizations. And, if truth be told, educators are not typically disturbed by these facts. Indeed, they are disturbingly comfortable with them...In the 17th century Commenius summed up the schools of his day as '*the slaughter house of the mind.*'"

In today's program we will celebrate our successes and see what we can do to eliminate the "slaughtering of minds" in our classroom by:

1. Examining the goals of our classes
2. Examine the role of a professor.
3. Creating specific educational strategies for our students
4. Comparing active education with passive education
5. Understanding the qualities of a critical thinker.

*and whatever else emerges in our session today*

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# THE LESSON



Then Jesus took his disciples up the mountain and gathering them around him, he taught them saying:

Blessed are the poor in spirit for their's is the kingdom of heaven,  
Blessed are the meek,  
Blessed are they that mourn,  
Blessed are the merciful,  
Blessed are they who thirst for justice,  
Blessed are you when persecuted,  
Blessed are you when you suffer,  
Be glad and rejoice, for your reward is great in heaven...

Then Simon Peter said, "Do we have to write this down?"

And Andrew said, "Are we supposed to know this?"

And James said, "Will we have a test on it?"

And Philip said, "What if we don't know it?"

And Bartholomew said, "Do we have to turn this in?"

And John said, "The other disciples didn't have to learn this!"

And Matthew said, "When do we get out of here?"

And Judas said, "What does this have to do with real life?"

Then one of the Pharisees present asked to see Jesus' lesson plans and inquired of Jesus his terminal objectives in the cognitive domain...

**And Jesus wept.....**

# Class Goals

What would you like to accomplish in your class in the course of a semester? This could be your goal(s) or just what you want your students to remember about their time with you.



Take a moment to think back on the best learning situation you have ever experienced. Describe that experience. What made it so memorable?

Now, take a moment and describe the worst learning situation you have ever experienced. What made that experience so deplorable?

**Education** is the ability to listen to almost anything without losing your temper.

**Education** is hanging around until you've caught on.

*Robert Frost*

## First Day of Class

"You meet them, they meet you and the fun begins."



What is your goal on the first day of class?

What do you feel you need to accomplish?

Describe your first day. Any specific activity?



## What's the Big Idea?

Courses tend to be detail, information, or fact rich... some more than others. By the time a student gets to the end of a typical course he or she has “learned” hundreds of new concepts, principles, theories, and factoids about that topic. Frequently, immediately after the course is finished, he or she has forgotten 90% of that material. Why does this happen?

Most students study most material in a non-meaningful manner. They pack it in linearly and return it to us linearly on examinations without ever having truly processed the information internally. They are acting much like faulty tape recorders (they make more errors) and they don't understand what they are repeating.

When the next course comes along, they record over all the “useless” stuff they had to pack in from the last course. Over the span of semesters, many ideas are covered but few are retained as meaningful knowledge by the students.

As a result of this process, we find that students in upper level courses do not seem have the faintest idea of basic materials covered a semester or so before to great detail in lower level courses. Most upsetting are the “good” students who have taken those courses with us rather than with colleagues. If they had been the students of colleagues, we could have blamed their inadequacies of background on the inadequate teaching abilities of those colleagues. Because they have been our students, we are forced to search for other possibilities!

What we see as common practice among students is the reverse of what we as teachers want to happen. We want our students to incorporate what they have learned in our classes into their beings. We want them to learn ideas and information as well as the process of connecting and applying ideas in a meaningful manner. We want them to take the ideas from our courses with them for their utilitarian function and as enrichment for the students' lives. Unfortunately, this rarely happens.

### What can we do about this?

We can build our courses around a framework of Big Ideas. These Big Ideas are the principles, concepts and theories that we hope students will synthesize from the mass of content examined during the run of the course. These are the things that we hope students will remember in a meaningful manner for seven years or more after the course is finished. These are the ideas we hope students will continue to use and apply in the learning of new ideas in the future.

### Finding the Big Ideas

How do we find the Big Ideas for a particular course? It is not as easy as it sounds. Synthesizing 12 or fewer Big Ideas (ideally 5- 7!) is a difficult process... especially for a beginner. NOTE: If this is difficult for us as teachers, just how difficult is it for students to do all this synthesizing that we expect to happen naturally?

The initial Big Ideas list for a first course (General Biology - freshman, university level) was 120 items long! It took much effort and several months to synthesize that list to 12 Big Ideas.



After this initial attempt, attendance of a workshop on teaching students study skills resulted in the following insight:

### **How to find the Big Ideas:**

1. List major ideas which come to mind relative to the course. Don't get too picky here. Just get a brief list down and set it aside.
2. Examine the text for the course.
3. Add the main idea from each chapter to your initial list and go on to the next chapter until the text is finished.
4. Put each idea on an individual file card. Sort the cards into similar or related ideas. Synthesize the related ideas to more generalized big ideas (which results in a new set of cards).
5. Once you are down to 12 or fewer cards, you have your set of Big Ideas for your course. Congratulations! You probably have also gained some new insight about your field! It is amazing what stepping back to look at the big picture does for your perspective.

### **Course planning and preparation:**

The Big Ideas form a framework for your course. In designing all aspects of the course, focus on these major principles and how the minor ideas and concepts connect to them. This keeps your eye as teacher upon the really important concepts of your course and how these concepts integrate.

As part of preparation of each lecture, discussion, demonstration, lab activity, field trip, paper, etc., determine which Big Ideas form a part of the structure for this learning exercise. Visualize the interconnections among the Big Ideas as foundation and the new ideas to be added during the exercise. This helps you more clearly see what the students must do in constructing a meaningful understanding of the material.

### **Learning activities with the Big Ideas include:**

1. Give students copies of the Big Ideas at the beginning of the semester. Have each rewrite them in his or her own words then seek examples for those ideas from prior learning and experience.
2. Have students relate the Big Ideas to content of previous course work they have experience.
3. With each new chapter read, have students develop hierarchical concept maps of new material demonstrating linkages to the Big Ideas.
4. Give students Scenarios (brief sets of specific information) relating to new information or examples which they have not seen. Have them link a specified number of concepts from their course to the scenario and describe the relationship to it. Then have them link as many of the Big Ideas as they can to the scenario, again, describing the relationships. Finally, have them describe links among the Big Ideas and the concepts.



## Big Ideas for Western Civilization

John Newell and Kate Van Liere, College of Charleston

1. Knowledge of the past arises from studying the remains (art, architecture, laws, literature, philosophy, religion, etc.) of previous cultures and societies.
2. While any study of the past is always at least partially subjective, the student must attempt to examine past cultures and societies as dispassionately, as objectively, and as free from bias as is possible.
3. In studying the past, we become aware that people in the past are in many ways more like us than we had imagined.
4. In studying the past, we become aware that people in the past are in many ways less like us than we had imagined.
5. People do what they do because they see the world the way they see it. Or to put it more prosaically, the way people act arises from their beliefs, feelings, and thoughts about the nature of reality.
6. A people's ways of thinking, believing, and perceiving are at least in part the product of the physical, social, and political environments in which they live.
7. One era's heresy is another era's orthodoxy.

### What Are Your Big Ideas?

**Pick a course you teach and begin listing your big ideas.**

Course \_\_\_\_\_

- 1.
- 2.
- 3.
- 4.
- 5.

#### Did These Things Happen to Socrates?

Greg Franzwa

Scholars don't know. Perhaps he too sat grading tests at night, saying to his wife, Xanthippe: "You know, I thought that Plato kid was going to do great on the final, but then he tubed it completely. Now that Alcibiades, he wrote a hell of a test--that guy's going places,"

I don't know, it's possible, I suppose.

# The Big Ideas of Teaching

Big Ideas Contributed by Louis Schmier, Professor of History,  
Valdosta State University, Valdosta, Georgia



1. Students have one thing in common. They're all different.
2. I don't think making a mistake in class is fatal, but worrying about making a mistake and what others think is.
3. A teacher is not a person for a student to lean on but a person who makes leaning unnecessary.
4. If all we do is count student faults, things never will add up right to make us seem right.
5. The two biggest obstacles we teachers face has to do with us, not the students, believing there are new things about teaching to learn and having to unlearn the old ones.
6. Tell me, if you choose to hike a new path, why should you not expect to chance a stumble over a rock or get muddied in a puddle or come upon unexpected twist and a turn. Is it any different in the classroom?
7. I think supposed problem students are opportunites; you just have to get out of your suit or dress and into your workclothes.
8. I wonder if a teacher who says of a student, "he doesn't belong" or "she can't..." or "he won't" is really looking in a mirror.
9. When helping a student, I'd rather call upon my conscience than think about my reputation. The former is about me, the latter about others.
10. We teachers, like students, must always change, renew, rejuvenate ourselves in our teaching; otherwise we lose our dexterity and harden.
11. When a teacher is wrapped up in him/herself, in only what he or she does, it is a lousy looking and poorly wrapped package.
12. I think teaching is like the sun in the sky; it's in constant motion creating a warm, nourishing, and nurturing light for things to grow into what they are capable of becoming.
13. A teacher who is afraid to make a mistake usually doesn't create anything.
14. What we model for students in the classroom, they will take with them out into society.
15. No great achievement in the classroom is accomplished suddenly; a miracle occurs with a lot of hard work and taking risks.
16. Show me someone who never takes a risk in the classroom, and I will show you someone not really interested in either themselves or the students.
17. Successful teaching is not a gift; it's an accomplishment.
18. Innovation and risk-taking are inevitably controversial and people so often defensively denounce them as deviant from the accepted norm.
19. I think too often we teachers unthinkingly try to make our students replicas of ourselves and too often think that students learn best the way we learn best.
20. I want to be a visionary whose vision I can shake hands with.

# What Learning Environment Do You Want To Create?

What can you do to make your class a  
totally unenjoyable learning experience?



Which of the above approaches can we change  
to create a positive learning environment?

## Random Thoughts

“If it’s sanity and health you’re after, there is no escape like laughter.  
Laughter is internal jogging.

--Shirley MacLaine

“Tired happens when fun doesn’t”

--five-year old



## Thinkers Anonymous

It started out innocently enough. I began to think at parties now and then to loosen up. Inevitably though, one thought led to another, and soon I was more than just a social thinker.

I began to think alone - "to relax," I told myself - but I knew it wasn't true.

Thinking became more and more important to me, and finally I was thinking all the time. I began to think on the job. I knew that thinking and employment don't mix, but I couldn't stop myself.

I began to avoid friends at lunchtime so I could read Thoreau and Kafka. I would return to the office dizzied and confused, asking, "What is it exactly we are doing here?"

Things weren't going so great at home either. One evening I had turned off the TV and asked my wife about the meaning of life. She spent that night at her mother's.

I soon had a reputation as a heavy thinker. One day the boss called me in. He said, "I like you, and it hurts me to say this, but your thinking has become a real problem. If you don't stop thinking on the job, you'll have to find another job."

This gave me a lot to think about.

I came home early after my conversation with the boss. "Honey," I confessed, "I've been thinking..." "I know you've been thinking," she said, "and I want a divorce!"

"But Honey, surely it's not that serious."

"It is serious," she said, lower lip a quiver.

"You think as much as college professors, and college professors don't make any money, so if you keep on thinking we won't have any money!"

"That's a faulty syllogism," I said impatiently, and she began to cry. I'd had enough. "I'm going to the library," I snarled as I stomped out the door. I headed for the library, in the mood for some Nietzsche. I roared into the parking lot and ran up to the big glass doors... they didn't open. The library was closed. As I sank to the ground clawing at the unfeeling glass, whimpering for Zarathustra, a poster caught my eye.

"Friend, is heavy thinking ruining your life?" it asked. You probably recognize that line. It comes from the standard Thinkers Anonymous poster.

Which is why I am what I am today: a recovering thinker. I never miss a TA meeting. At each meeting we watch a noneducational video; last week it was "Porky's." Then we share experiences about how we avoided thinking since the last meeting. I still have my job, and things are a lot better at home. Life just seemed... easier, somehow, as soon as I stopped thinking.

# Let's Examine Some Critical Thinking Concepts



1. Which is more important in the educational process, knowledge or thinking?

"I'm only going to say this once, okay?  
I'm only going to say this once."

- **Dr. Haworthe,**  
**Chemistry prof.**

2. In a sentence, how would you define critical thinking?

"Theories and goals of education don't matter a whit if you do not consider your students to be human beings."

--**Lou Ann Walker**

3. How do you react to the statement, "Knowing something and understanding something are interchangeable concepts."

"What if the hokey pokey really \*is\* what it's all about??"

--**student**

"Education's purpose is to replace an empty mind with an open one."

--**Malcolm Forbes**

## **Did These Things Ever Happen to Socrates?**

Greg Franzwa

Socrates didn't operate in an institutional context.

Socrates taught in the street, thereby eliminating, among other things, the need to submit departmental schedules eight months, in advance.

Socrates didn't have a Registrar's Office, a Controller, Student Life or Housing Office. He lacked developmental people, a food service, an Admissions Office, and a P.R. Department. The man didn't even have a lawyer. Of course, he didn't need all of these things because **he didn't have a computer.**

# Teaching for Understanding

by *David Perkins*  
in "American Educator," Fall 1993



Knowledge and skill have traditionally been the mainstays of American education. So with knowledge and skill deserving plenty of concern and getting plenty of attention, why pursue understanding? While there are several reasons, one stands out: **Knowledge and skill in themselves do not guarantee understanding.** People can acquire knowledge and routine skills without understanding their basis or when to use them. And, by and large, knowledge and skills that are not understood do students little good!

In the long term, education must aim for active use of knowledge and skill. Students garner knowledge and skills in schools so that they can put them to work--in professional roles--scientists, engineer, designer, doctor, businessperson, writer, artist, musician--and in lay roles--citizen, voter, parent--that require appreciation, understanding, and judgment. Yet rote knowledge generally defies active use, and routine skills often serve poorly because students do not understand when to use them. In short, we must teach for understanding in order to realize the long-term payoffs of education.

At the heart of teaching for understanding lies a very basic question: What is understanding? Ponder this query for a moment and you will realize that good answers are not obvious. To draw a comparison, we all have a reasonable conception of what knowing is. When a student knows something, the student can bring it forth upon call--tell us the knowledge or demonstrate the skill. But understanding something is a more subtle matter. A student might be able to regurgitate reams of facts and demonstrate routine skills and with very little understanding.

In summary, understanding something is a matter of being able to carry out a variety of "performances" concerning the topic. This performance perspective says that understanding a topic of study is a matter of being able to perform a variety of thought-demanding ways with the topic, for instance to: explain, muster evidence, find examples, generalize, apply concepts, analogize, represent in a new way, and so on. The more thought-demanding performances the student can display, the more confident we would be that the student understands.

In summary, **understanding something is a matter of being able to carry out a variety of "performances" concerning the topic.** We call such performances "understanding performances" or "performances of understanding."

# Critical Thinking Definitions



A critical thinker is labeled as one who refuses to complacently accept conclusions, one who analyzes and evaluates evidence in order to distinguish strong reasoning, unlike the uncritical thinker who accepts or rejects conclusions, often on the basis of egocentric attachment or unassessed bias.

Kathleen Murphy, Humanities  
El Camino College-California

## California State University Mandate

"...instruction in critical thinking be designed to achieve an understanding of the relationship of language to logic, leading 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 and belief."

There is no such thing as thinking about nothing...Thinking requires content, substance, something thought about. On the other hand, content is parasitic upon thinking. It is discovered, created, by thought. Analyzed, synthesized, by thought. Organized, transformed, by thought. Accepted, rejected by thought. To teach content without regard to thinking is to prevent that content from being transformed, in the mind of the student, into knowledge.

**Richard Paul, Director of the Center for Critical Thinking & Moral**

## Critique

### Critical Thinking" What Every Person Needs To Survive In a Rapidly Changing World

"...Critical thinking is a call to think for oneself and without prejudice. Enlightenment is liberation from prejudice. From here we may attain a perspective from which to reflect upon human affairs, so as to come to an understanding of how we should act."

### **The top of a box of Celestial Seasonings herbal tea**

"...critical thinking involves a persistent effort to examine any belief or supposed form of knowledge in the light of the evidence that supports it and the further conclusions to which it tends, as well as the ability to recognize problems, to weigh evidence, to comprehend and use language with accuracy and discrimination, to interpret data, to recognize the existence (or nonexistence) of logical relationships between propositions, to draw warranted conclusions and generalizations and to test the conclusions by applying them to new situations to which they seem pertinent."

**Goodwin Watson and Edwin Glaser 1939**

Critical thinking is the process of purposeful, self regulatory judgment. This process gives reasoned consideration to evidence, to contexts, to conceptualizations, to methods, and to criteria.

**The Delphi Report  
quoted by Dr. Facione**

"Education is like a war. You have to expect some casualties. Just don't be one of them."

--Mr. "The Major"  
Williams

"The biggest thing I've learned this year is that there is no 'right answer', but there are a billion wrong ones."  
--freshman art student, Miami of Ohio

"I have no money, no education, no skills, and no property. But I do have a laptop. Hot damn! That's what I call liberty!"  
--Emily,  
Wacky  
Bunch



## Student Critical Thinking Problems Identified

“Nothing in education is so astonishing as the amount of ignorance it accumulates in the form of facts.”  
**Henry Adams**

Education makes you smart,  
Experience makes you wise,  
Knowledge is from your brain,  
Wisdom is from your heart.  
**-Eric Emmons**

“It is possible to store the mind with a million facts and still be entirely uneducated.”  
**Alec Bourne**

Illiterate?  
Write today for free help.

1. Students expect well defined problems. If the definition is little fuzzy, they have a more difficult time proceeding with a solution.
2. Students expect problems to have one correct known answer. They are more concerned with getting the "right" answer than with the process.
3. Students tend to think of information as compartmentalized (different classes) and don't apply all resources to a particular situation.
4. Students are too quick to make judgments/evaluations without thinking at all -- critically or otherwise.
5. Students cannot distinguish between subjective responses and objective information/analysis.
6. Students fear being wrong; therefore, they refuse to address the issue.
7. Students fail to consider problem solving in relation to their personal needs.
8. Students fail to use a step-by-step process in problem solving.
9. Students fail to fully understand the problem before attempting to solve it.
10. Students do not address more than one way to solve the same problem.
11. Students can't apply critical thinking process to a new situation (can't transfer application of skills).
12. Students do not think conceptually.
13. Students never have to evaluate anything except for "off the cuff" student evaluations of instructor.
14. Students are not in the habit of looking up words to understand their full meaning of words.
15. Students lack historical perspective and cannot interrelate ideas.

## Why College Professors Do Not Use Humor in Class



1. Belief that being a professional and being humorous is incompatible.
2. If one is not serious, then one cannot be taken seriously by students.
3. If students are happy and having fun at work, then they are less productive than those who are serious and worried about their job performance.
4. You need to be serious in order to solve serious educational problems.
5. The belief that only a select few can be humorous while the rest must take things more seriously.
6. You have never been trained or educated to be humorous. Instead school graduate schools have been a pretty serious process.
7. The belief that as long as stand up comedians don't become colleges professors, then we vow not to become stand up comedians.
8. The annoying occurrence that everytime we try to be funny, someone always tells us not to give up our day job.
9. Belief that if I get too good, I'd get my own situation comedy and have to leave education, and my students could never survive without me.
10. The belief that I'll never once get to the punchline without someone saying, "Oh, I've heard that one before."
11. The fear that Jay Leno will hound you for comedy tips.
12. Comedy classes constant victims of shortsighted, arbitrary graduate schools' budget cuts.
13. (yours)
14. (yours)
15. (yours)

**So let's start class and set the fun mood....Does your syllabus indicate the mood of the class?**

# Speech Communication 104

## Communicating Critical Thinking

### Fall 1998



**Instructor:** Jim Marteney  
**Office:** Humanities Building room 108B.  
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*The main part of intellectual education is not the acquisition of facts, but learning how to make facts live.*  
--Oliver Wendell Holmes

**COURSE DESCRIPTION:** Welcome to the wonderful world of communicating critical thinking. This course explores the process of communication, critical thinking, decision making, and argumentation. During this semester we will look at how we think and make decisions, how we can improve our critical thinking skills and how communication effects the entire process.

**Thinking is a skill.** This class is designed to improve that skill and put us in charge of our lives.

**Before** learning critical thinking.  
**A total loser.**



**After** learning critical thinking.  
**In control of his life.**



### You'll Need One of These:

**TEXTBOOK:** To aid in your learning of the content of the course you will need the required book for Speech Communication 104, **Communicating Critical Thinking**, the Spring 1998 edition. The book has changed from last semester so a current textbook is needed. Besides the information needed to understand the course, the textbook contains class exercises, activities, a study-guide for each chapter, and sample test questions.

**EARNING A GRADE IN SPEECH COMMUNICATION 104:** You should be able to earn the grade you desire **if** you make the time commitment. Each assignment is worth points. These points are totaled at the end of the semester to determine a grade. Extra credit will be offered.

### You'll need to Take A Chance:

I can't learn for you. To actually learn the skills necessary to be a better critical thinker will require you to be an **active** member of the class. I will not stand up here and "cover" information, I will instead help you "uncover" the information. I'll be your critical thinking coach.



# THE CRITICAL THINKER

A Periodic Newsletter for Speech 104



## *Our Leader Speaks*

I hope you have been enjoying the wonderful world of critical thinking. So far you have spent almost five weeks of intensive sessions attempting to provide insights into advanced critical thinking skills.

Remember, all grades are determined by the number of points you earn. Everyone of you should be able to earn the grade you want, provided you make the effort. How many of the chapters have you read? What grade did you tell me you wanted to earn? No excuses! Remember, **There are always options!**

Do your best! Make the commitment to learn and manage your time to reach your goals and be ready for your **First Knowledge Festival!**

## Critical Thinking Chapter by Chapter

The goal of the this class is to introduce each of you into those communicating and thinking skills that will allow you to be a better critical thinker. Each chapter provides a part of the insights needed to improve your ability to make decisions.

**Chapter 1**--Communication and validity vs. Truth  
Remember a Critical thinker can change his or her mind.

**Chapter 2**, The Toulmin model allows us to understand the overall structure of the argument including its strengths and weaknesses.

**Chapter 3**--Voluntary and Involuntary decision making,  
How much control do **you** have over your decision making?



*"My only regret is that I have never been able to take Jim Marteney's Speech 104 class. I can't think of any better preparation for a successful life. He is the master of Critical Thinking"*

*--President, Geroge Bush*

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## Have fun with your tests!!

Always include questions which evoke a smile or at least relaxation to help your students. I have included some that I have used to finish up a Knowledge Festival (test).

**50. Life would have little meaning without:**

- A. Jim Marteney's incredible sense of humor
- B. Jim Marteney's amazing insights into the world of critical thinking
- C. Jim Marteney's acute awareness of current events
- D. Jim Marteney's dashingly good taste in clothing
- E. Absolutely none of the above

**50. Now that I have been in the Critical Thinking Class for around 5 weeks, I am really...**

- A. grateful to Mr. Marteney for adding at least one small ray of sunshine into my life.
- B. amazed at the complexity of critical thinking
- C. sorry that this is not a year long course
- D. All the above
- E. None of the above, I just want to get this test overwith.

**50. Winter recess is only 2 weeks away, I should:**

- A. Thank Mr. Marteney for such a great class
- B. Get Mr. Marteney a card for such a great class.
- C. Get Mr. Marteney an expensive present for such a great class
- D. All the above.
- E. Forget Mr. Marteney get myself a present, hey, I did all the work didn't I?

# From Sage on the Stage to Guide on the Side

by Alison King  
from College Teaching Vol 41/No. 1



In most college classrooms, the professor lectures and the students listen and take notes. The professor is the central figure, the "sage on the stage," the one who has the knowledge and transmits that knowledge to the students, who simply memorize the information and later reproduce it on an exam--often without even thinking about it. This model of the teaching-learning process, called the transmittal model, assumes that the student's brain is like an empty container into which the professor pours knowledge. In this view of teaching and learning, students are passive learners rather than active ones. Such a view is outdated and will not be effective for the twenty-first century, when individuals will be expected to think for themselves, pose and solve complex problems, and generally produce knowledge rather than reproduce it.

According to the current constructivist theory of learning, knowledge does not come packaged in books, or journals, or computer disks (or professors' and students' heads) to be transmitted intact from one to another. Those vessels contain information, not knowledge. Rather, knowledge is a state of understanding and can only exist in the mind of the individual knower; as such, **knowledge must be constructed--or reconstructed--by each individual knower** through the process of trying to make sense of new information in terms of what that individual already knows. In this constructivist view of learning, students use their own existing knowledge and prior experience to help them understand the new material; in particular, they generate relationships between and among the new ideas and between the new material and information already in memory.

When students are engaged in actively processing information by reconstructing that information in such new and personally meaningful ways, they are far more likely to remember it and apply it in new situations. This approach to learning is consistent with information-processing theories which argue that reformulating given information or generating new information based on what is provided helps one build extensive cognitive structures that connect the new ideas and link them to what is already known. According to this view, creating such elaborated memory structures aids understanding of the new material and makes it easier to remember.

In contrast to the transmittal model illustrated by the classroom lecture-note-taking scenario, the constructivist model places students at the center of the process--actively participating in thinking and discussing ideas while making meaning for themselves. And the professor, instead of being the "sage on the stage," functions as a "guide on the side," facilitating learning in less directive ways. **The professor is still responsible for presenting the course material, but he or she presents that material in ways that make the students do something with the information**--interact with it--manipulate the ideas and relate them to what they already know. Essentially, the professor's role is to *facilitate* students' interaction with the material and with each other in their knowledge-producing endeavor.

# Paradigms of Teaching

from University of Phoenix



	Old	New
<b>Knowledge</b>	Transferred from Faculty to Students	Jointly Constructed by Students and Faculty
<b>Students</b>	Passive Vessel to be filled by Faculty's Knowledge	Active Constructor, Discoverer Transformer of own Knowledge
<b>Faculty Purpose</b>	Classify and Sort Students	Develop Students Competencies and Talents
<b>Relationships</b>	Impersonal Relationships among Students and between Faculty and Students	Personal Transaction among Students and between Faculty and Students
<b>Context</b>	Competitive, Individualistic	Cooperative Learning in Classroom and Cooperative Teams among Faculty
<b>Assumption</b>	Any Expert Can Teach	Teaching is Complex and Requires Considerable Training

# Active Learning Strategies That Enhance Critical Thinking



To enhance critical thinking skills, college students must be actively involved in the learning process rather than passive recipients of lecture material. They must talk and write about what they are learning while relating it to past experience and applying it to daily life. This dynamic participation in the learning process is called "active Learning." Although college teachers generally see themselves as good lecturers, lecturing does not guarantee learning.

## Importance

1. Student concentration during lectures has been shown to decline after 10 to 15 minutes. (Stuart and Rutherford, 1978)
2. In those experiments involving measures of retention of information after the end of a course, measures of problem solving, thinking, attitudes change, or motivation for further learning, the results tend to show differences favoring discussion methods over lecture. (Teaching and learning in the Classroom: A Review of the Research Literature, McKeachie, et., 1987)
3. When students are actively involved in the learning task, they learn more than when they are passive recipients of instruction. (Cross, 1987)
4. Learning is not a passive process. Students learn most effectively when they are actively engaged with their work in the classroom and in student life. (National Association of Student Personnel Administrators, 1987)

## Methods

1. **Call on students randomly** (Not just those eager to discuss)
2. **Utilize "think-pair-share" groups.**  
Allow two or three minutes of time to think, followed by two or three minutes of discussion with a partner. Then open up the entire class to discussion.
3. **Allow for "wait-time"**  
After asking a question that requires thought, wait ten seconds **or more** to give students time to formulate a response.
4. **Ask follow-up questions**  
Why? Do you agree? Can you elaborate? Tell me more. Can you give an example?
5. **Withhold judgment**  
Respond to students in a non-evaluative fashion
6. **Help students become active listeners**  
Ask students to put down their pencils and listen to the lecture for 10 minutes. Request that students not take notes, just listen. After the presentation, ask students to recall or write everything they can from the lecture. Students could also work together in small groups to determine major points.



**7. Maintain student journals**

Ask students to make daily entries in response to classroom activities. For example, ask students to relate the class material to their personal experiences, or to summarize the main points of today's class, or to evaluate their progress in the course. Instructors should read and comment on the journals periodically.

**8. Play devil's advocate.**

Help students learn to defend their own reasoning against different points of view.

**9. Ask students to think about their own thinking.**

"Describe in specific detail how you arrived at your answer." (Think Aloud)

**10. Encourage students to develop their own questions related to a particular lesson.**

**11. Cue student responses**

Tell students that there is no one single correct answer to the question.

**12. Promote open discussion in groups of three to five.**

**13. Model thinking values and attitudes yourself**

**14. Ask for a summary**

"Jane, could you please summarize John's point?"

**15. Encourage thinking out loud.**

**16. The pause procedure**

Every 12 to 18 minutes, at an appropriate place, stop three times for two minutes to allow students to work with a partner clarifying their notes.

**17. The split-it-in-two lecture**

a. Lecture for 20 minutes.

b. Ask students individually to summarize the main points. Then ask them to work with a partner to see if they can reach a consensus. Finally, have a large group discussion to reach consensus. (10 to 15 minutes)

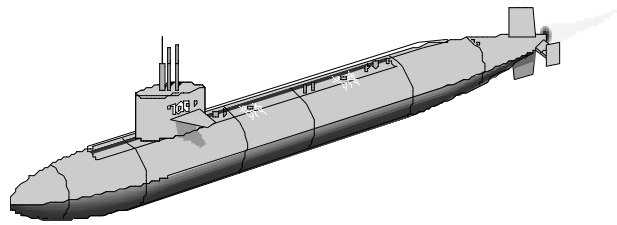
**18. Use a consistent thinking skills vocabulary.**

**19. Explain to students what values, attitudes, and skills you are trying to help them develop in a particular lesson.**

**20. "Force" students to take a position on a statement.** On each of the four walls put a sign. These signs say; Highly Agree, Agree, Disagree and Highly Disagree. Then make a statement such as, "Nurses should always follow hospital procedures." The students then move to the wall with the sign that best reflects their feelings. Students then explain why they selected their position. As they argue other students may change their position.

**21. Use classroom assessment techniques to evaluate the effectiveness of your teaching.**

# Critical Thinker “Crimson Tide”



You are about to see excerpts from the movie *Crimson Tide*. The movie features a conflict between the Captain and the Executive Officer concerning whether to initiate a nuclear missile launch. Using the concepts from the textbook, answer the following questions.

1. What is the claim being argued by the captain and the executive officer? What is the status quo?
2. What is the threshold each officer has for their decision on the claim? Why are they different?
3. How is each of the officer's decision a valid decision? That is, what data do each of the officers use to make his conclusion?
4. How do each of the two officers display the qualities of a critical thinker?
5. While they both display the qualities of a critical thinker, each is also dogmatic about his decisions, how does this effect each officer's critical thinking process.
6. The two officers have a difficult time communicating with each other. Explain this difficulty using the concept of encoding and decoding.

A critical thinker is labeled as one who refuses to complacently accept conclusions, one who analyzes and evaluates evidence in order to distinguish strong reasoning, unlike the uncritical thinker who accepts or rejects conclusions, often on the basis of egocentric attachment or unassessed bias.

Kathleen Murphy, Humanities  
El Camino College-California



## Examples of C.A.T.S.

1. **Empty outlines**--partially completed outline
2. **Pre test**--series of questions which tests the initial knowledge of the students. The instructor can ask for specific answers, true false or highly agree down to highly disagree type questions.
3. **Memory matrix**--a two-dimensional diagram, a rectangle divided into rows and columns used to organize information and illustrate relationships. This allows the instructor to access students' recall of important course content and their skill at quickly organizing that information into categories provided by the instructor.
4. **Clearest/muddiest point**--an index card with one side asking for what the learner found the clearest part of the class while on the other side, what was the least clear part of the class.
5. **One minute paper**--gives students one minute to write a paper which can answer one of the following questions; "What was the most important thing you learned during this class?" or "What important question remains unanswered?"
6. **Pro and con grid**--a list of pros and cons to help understand the implications of a policy action or attitude.
7. **Analytic memo**--a writing exercise where a simulated memo is written to a fictional person who needs the student's analysis to make an informed decision.
8. **Word journal**--a two-part response beginning with the student summarizing a short text in a single word. Second, the student writes a paragraph explaining why she chose that particular word to summarize the text.
9. **Approximate analogies**--making completing the second half of an analogy--A is to B as X is to Y for which the instructor has supplied the first half. From a sociology class---Income is to social class as \_\_\_\_\_ is to \_\_\_\_\_.
10. **Concept maps**--are drawing or diagrams showing the mental connections that students make between a major concept the instructor focuses on and other concepts they have learned.
11. **Invented Dialogues**--writing a dialogue between two people. The people could be real or fictitious. The student must invent reasonable quotes that fit the character of the speakers and the context.
12. **What's the Principle?**--after they identify what type of problem they are dealing with, they often must then decide what principle or principles to apply in order to solve the problem.
13. **Student-generated test questions**--gives students the opportunity to create questions illustrating what they know and what they think may be important.
14. **Classroom opinion polls**--ask students to raise their hands to indicate agreement or disagreement with a particular statement.
15. **Everyday ethical dilemmas**--create ethical dilemmas in order to understand the students moral and ethical decision making.



# Andragogy

M. Knowles

## Overview:

Knowles' theory of andragogy is an attempt to develop a theory specifically for adult learning. Knowles emphasizes that adults are self-directed and expect to take responsibility for decisions. Adult learning programs must accommodate this fundamental aspect.

Andragogy makes the following assumptions about the design of learning:

- (1) Adults need to know why they need to learn something
- (2) Adults need to learn experientially,
- (3) Adults approach learning as problem-solving, and
- (4) Adults learn best when the topic is of immediate value.

In practical terms, andragogy means that **instruction for adults needs to focus more on the process and less on the content being taught**. Strategies such as case studies, role playing, simulations, and self-evaluation are most useful. Instructors adopt a role of facilitator or resource rather than lecturer or grader.

## Strategies to Enhance Adult Motivation to Learn

by Raymond J. Wlodkowski summarized from

Adult Learning Methods: A Guide for Effective Instruction by Michael W. Galbraith, 1991

### Teacher Beliefs

Teacher's best initial preparation for working with adults is to be personally convinced and readily able to demonstrate that what is being learned could not possibly be considered a waste of time or unrelated to the lives and values of the learners. Teachers must ask two questions:

1. How will my learners consistently know that what they are learning is vitally important to them?
2. How will my learners consistently know they can effectively use or apply what they are learning?

**Make the first experience with a new subject or topic safe, successful, and interesting**

**Stress the importance of the amount and quality of effort needed for success in learning.**

### Make the Learning Goal as Clear as Possible

- Distribute instructional objectives
- Write purpose on chalkboard
- Hand out list of learning outcomes
- Clearly inform learners of learning expectations

### Make the Criteria of Evaluation as Clear as Possible

# 30 Things We Know For Sure About Adult Learning



By Ron and Susan Zemke  
Innovation Abstracts Vol VI, No 8, March 9, 1984

A variety of sources provides us with a body of fairly reliable knowledge about adult learning. This knowledge might be divided into three basic divisions: things we know about adult learners and their motivation, things we know about designing curriculum for adults, and things we know about working with adults in the classroom.

## Motivation to Learn

1. Adults seek out learning experiences in order to cope with specific life-changing events—e.g., marriage, divorce, a new job, a promotion, being fired, retiring, losing a loved one, moving to a new city.
2. The more life change events an adult encounters, the more likely he or she is to seek out learning opportunities. Just as stress increases as life-change events accumulate, the motivation to cope with change through engagement in a learning experience increases.
3. The learning experiences adults seek out on their own are directly related - at least in their perception - to the life-change events that triggered the seeking.
4. Adults are generally willing to engage in learning experiences before, after, or even during the actual life change event. Once convinced that the change is a certainty, adults will engage in any learning that promises to help them cope with the transition.
5. Adults who are motivated to seek out a learning experience do so primarily because they have a use for the knowledge or skill being sought. Learning is a means to an end, not an end in itself.
6. Increasing or maintaining one's sense of self-esteem and pleasure are strong secondary motivators for engaging in learning experiences.

## Curriculum Design

1. Adult learners tend to be less interested in, and enthralled by, survey courses. They tend to prefer single concept, single-theory courses that focus heavily on the application of the concept to relevant problems. This tendency increases with age.
2. Adults need to be able to integrate new ideas with what they already know if they are going to keep - and use - the new information.
3. Information that conflicts sharply with what is already held to be true, and thus forces a re-evaluation of the old material, is integrated more slowly.
4. Information that has little "conceptual overlap" with what is already known is acquired slowly.
5. Fast-paced, complex or unusual learning tasks interfere with the learning of the concepts or data they are intended to teach or illustrate.
6. Adults tend to compensate for being slower in some psychomotor learning tasks by being more accurate and making fewer trial-and-error ventures.
7. Adults tend to take errors personally and are more likely to let them affect self-esteem. Therefore, they tend to apply tried-and-true solutions and take fewer risks.
8. The curriculum designer must know whether the concepts or ideas will be in concert or in conflict with the learner. Some instruction must be designed to effect a change in belief and value systems.



9. Programs need to be designed to accept viewpoints from people in different life stages and different value “sets.”
10. A concept needs to be “anchored” or explained from more than one value set and appeal to more than one developmental life stage.
11. Adults prefer self-directed and self-designed learning projects over group-learning experiences led by a professional, they select more than one medium for learning, and they desire to control pace and start/stop time.
12. Nonhuman media such as books, programmed instruction and television have become popular with adults in recent years.
13. Regardless of media, straightforward how-to is the preferred content orientation. Adults cite a need for application and how-to information as the primary motivation for beginning a learning project.
14. Self-direction does not mean isolation. Studies of self-directed learning indicate that self-directed projects involve an average of 10 other people as resources, guides, encouragers and the like. But even for the self-professed, self-directed learner, lectures and short seminars get positive ratings, especially when these events give the learner face-to-face, one-to-one access to an expert.

### **In the Classroom**

1. The learning environment must be physically and psychologically comfortable; long lectures, periods of interminable sitting and the absence of practice opportunities rate high on the irritation scale.
2. Adults have something real to lose in a classroom situation. Self-esteem and ego are on the line when they are asked to risk trying a new behavior in front of peers and cohorts. Bad experiences in traditional education, feelings about authority and the preoccupation with events outside the classroom affect in-class experience.
3. Adults have expectations, and it is critical to take time early on to clarify and articulate all expectations before getting into content. The instructor can assume responsibility only for his or her own expectations, not for those of students.
4. Adults bring a great deal of life experience into the classroom, an invaluable asset to be acknowledged, tapped and used. Adults can learn well -and much - from dialogue with respected peers.
5. Instructors who have a tendency to hold forth rather than facilitate can hold that tendency in check—or compensate for it—by concentrating on the use of open-ended questions to draw out relevant student knowledge and experience.
6. New knowledge has to be integrated with previous knowledge; students must actively participate in the learning experience. The learner is dependent on the instructor for confirming feedback on skill practice; the instructor is dependent on the learner for feedback about curriculum and in-class performance.
7. The key to the instructor role is control. The instructor must balance the presentation of new material, debate and discussion, sharing of relevant student experiences, and the clock. Ironically, it seems that instructors are best able to establish control when they risk giving it up. When they shelve egos and stifle the tendency to be threatened by challenge to plans and methods, they gain the kind of facilitative control needed to effect adult learning.
8. The instructor has to protect minority opinion, keep disagreements civil and unheated, make connections between various opinions and ideas, and keep reminding the group of the variety of potential solutions to the problem. The instructor is less advocate than orchestrator.
9. Integration of new knowledge and skill requires transition time and focused effort on application.

# Creative Association



Here's a chance to associate a specific class lesson with a variety of activities. First, state a the lesson or point you want to convey to your students.

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**Now, make some associations.**

Movies	Field Trips	Group Work
	<b>Class Lesson</b>	
Writing Assignments		Current Event
Tape/Video Recorder	Your strategy	Oral Performances



## The Courage to Teach

The word "courage" comes from a root that means "heart," and I like to transpose the words. How can we develop and sustain, in ourselves and each other, the heart for good teaching (assuming that the mind is already available)? Good teaching requires courage--the courage to expose one's ignorance as well as insight to invite contradiction as well as consent, to yield some control in order to empower the group, to evoke other people's lives as well as reveal one's own. Furthermore, good teaching sometimes goes unvalued by academic institutions, by the students for whom it is done, and even by those teachers for whom it is done, and even by those teachers who do it. Many of us "lose heart" in teaching. How shall we recover the courage that good teaching requires?

At its original meaning, a "professor" was not someone with esoteric knowledge and technique. Instead, the word referred to a person able to make a profession of faith in the midst of a dangerous world. All good teachers, I believe, have access to this confidence. It comes not from the ego but from a soul-deep sense of being at home in the world despite its dangers. This is the authority by which good teachers teach. This is the gift they pass on to their students. Only when we take heart as professors can we "give heart" to our students--and that, finally, is what good teaching is all about.

by *Parker J. Palmer*  
Teaching Excellence  
Vol.3, No.3, 1991-1992

## **Jim's Top Ten Teaching Tips**



**10. Start with the end product.**

What do you want your students to really learn?

**9. Teach skills, not just data**

**8. Create a class you would like to attend.**

Realize that you control the mood of the class.

**7. Have Fun**

**6. Have high expectations.**

**5. Be a professional.**

**4. Realize that your students are not you.**

**3. Tear Down the Student Professor Wall.**

Show them you are human.

Use your sense of humor.

**2. Allow your students to succeed.**

**1. Be Enthusiastic about your subject  
and your teaching!**



## Attitude

The longer I live, the more I realize the impact of attitude on life. Attitude, to me, is more important than facts. It is more important than the past, than education, than money, than circumstances, than failures, than appearance, giftedness, or skill. It will make or break a company..a church..a home. The remarkable thing is you have a choice every day regarding the attitude you will embrace for that day. We cannot change our past. We cannot change the fact that people will act in a certain way. We cannot change the inevitable. The only thing we can do is play on the one string we have, and that is our attitude. I am convinced that life is 10% what happens to me and 90% how I react to it. And so it is with you...

You are in charge of your attitude.

---Author Unknown

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# **Faculty Successes and Challenges**

## **Getting Students to Think**

**Antelope Valley College**  
**November 8, 2003**



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