

A Miniature Guide
For Those Who Teach
On

How to Improve Student Learning

30 PRACTICAL IDEAS

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Based on
Critical Thinking Concepts & Principles

A Companion To:
A Miniature Guide on How to Study and Learn,
A Miniature Guide to Active and Cooperative Learning,
A Miniature Guide to Critical Thinking

Why A Mini-Guide for the Improvement of Instruction?

This list of instructional ideas is based on the goal of teaching all subjects so that, as a consequence, students take ownership of the most basic principles and concepts of the subject. Most of our suggestions represent possible teaching strategies. They are based on a vision of instruction implied by critical thinking and an analysis of the weaknesses typically found in most traditional didactic lecture/quiz/test formats of instruction. We begin with two premises:

- that to learn a subject well, students must master the thinking that defines that subject, and
- that we, in turn, as their instructors, must design activities and assignments that require students to think actively within the concepts and principles of the subject.

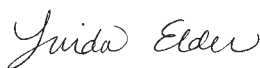
Students should master fundamental concepts and principles before they attempt to learn more advanced concepts. If class time is focused on helping students perform well on these foundational activities, we feel confident that the goals of most instruction will be achieved.

It is up to you, the instructor, to decide which of these ideas you will test in the classroom. Only you can decide how to teach your students. Our goal is not to dictate to you, but to provide you with possible strategies with which to experiment. The specific suggestions we recommend represent methods and strategies we have developed and tested with our students. Judge for yourself their plausibility. Test them for their practicality. Those that work (i.e., improve instruction) keep; those that do not work, abandon or re-design.

The suggestions overlap each other and make most sense when taken together, as an interrelated network. Often one suggestion is made intelligible in the light of two or three others. So if one is not clear to you, read on. The strength of each of them, in re-enforcing each other, will then become increasingly clear.



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Idea # 2

Teach students how to assess their reading

In a well-designed class, students typically engage in a great deal of reading. Hence, it is important that they learn to “figure out” the logic of what they are reading (the logically interconnected meanings). Good reading is a dialogue between the reader and the text. The writer has chosen words to convey his/her thoughts and experiences. The reader must translate from those words back into his/her own thoughts and experiences, and thereby capture the meaning of the author. This is a complex process. One effective way to teach students this process is by modeling it as follows:

Place the students into groups of three, each with a letter assigned (A, B, or C). You then read a paragraph or two out of the text aloud slowly, commenting on what you are reading as you are reading, explaining what is making immediate sense to you and what you need to figure out by further reading. After modeling in this manner for a couple of paragraphs, you ask A to take over and read aloud to B and C, explaining to them, sentence by sentence, what he/she is able to figure out and what he/she is not. After A is finished with two paragraphs, then B and C comment on what they do and do not understand (in the paragraphs that A read). Then you read aloud to the whole class the two paragraphs that A read, commenting as you go. Then B takes over and reads the next two paragraphs to A and C. Then A and C add their thoughts. Then you read aloud what B read. Then you go on to C who reads the next two paragraphs to A and B. And so on. As the students are reading in their groups of three, you are circulating around the room listening in and getting an idea of the level of proficiency of their critical reading. The more you use this process, the better students become at critical reading. When they become proficient at it, they begin to ask questions in their own minds as they read, clarifying as they read, questioning what they do not understand. See also the thinker's guide to *How to Read a Paragraph (The Art of Close Reading)* inside back cover.

Idea # 3:

Teach students how to assess their writing.

Good thinking is thinking that (effectively) assesses itself. As a critical thinker, I do not simply state the problem; I assess the clarity of my own statement. I do not simply gather information; I check it for its relevance and significance. I do not simply form an interpretation; I check to make sure my interpretation has adequate evidentiary support.

Because of the importance of self-assessment to critical thinking, it is important to bring it into the structural design of the course and not just leave it to random or chance use. Here are a variety of strategies that can be used for fostering self-assessment through peer-assessment:

Assessing Writing

When students are required to bring written papers to class, the activities below can be used as strategies for fostering high quality peer- assessment:

- (1) First Strategy. Working in groups of four, students choose the best paper (using standards of clarity, logic, etc. as well as any other criteria you have given them). Then they join with a second group and choose the best paper of the two (one from each group). These papers (chosen by the 8-person groups) are collected and read to the class as a whole. A class-wide discussion is held, under your direction, to make clear the strengths and weaknesses of the competing remaining papers, leading to the class voting on the best paper of the day (again, always using explicit intellectual standards in the assessment).
- (2) Second Strategy. Working in groups of three or four, students write out their recommendations for improvement on three or four papers (from students not in the group). The written recommendations go back to the original writers who do a revised draft for the next class. Using this method every student receives written feedback on their papers from a "team" of critics.
- (1) Third Strategy. Working in groups of three or four, students take turns reading their papers aloud slowly and discussing the extent to which they have or have not fulfilled the performance criteria relevant to the paper.
- (2) Fourth Strategy. One student's paper is read aloud slowly to the class while the instructor leads a class-wide discussion on how the paper might be improved. This discussion serves as a model of what is expected in the assessment process. Then the students work in groups of two or three to try to come up with recommendations for improvement for the students in their group (based on the model established by the instructor).

See also the thinker's guide to "*How to Write a Paragraph*" (*The Art of Substantive Writing*) inside back cover.

Orientation (first few days)

Idea #10: Give students a thorough orientation to the course.

Students should know from the beginning how a class is going to be taught, how they are going to be assessed, and what they should be striving to achieve. They should know, from the beginning, what they are going to be doing most of the time and what exactly is expected of them in that process. The aim of the course should be carefully spelled out. If you are emphasizing critical thinking, it is helpful to contrast the aim and design with that of standard didactically taught courses. You might begin the course with something like the following introduction:

"This class is going to be different from any class you have taken thus far because the emphasis will be on actively developing your thinking. Everything we do in this class will be designed to help you become better and better at thinking within the subject. You will therefore not be asked to memorize information rotely. Instead, you will be required to internalize information by using it actively in every class and in class assignments. Each day we will be attempting to improve your thinking. Think of learning about thinking (within the field) as you would of learning a sport. To learn to play tennis, you need to first learn the fundamentals of tennis at an elementary level and then practice those fundamentals during every practice session. The same is true of learning to think better within this field. You must be introduced to the fundamentals of sound thinking. Then you must regularly practice those fundamentals. Therefore I will design every class day with the primary purpose of helping you develop your thinking or reasoning skills. Why is this important? The quality of every decision you make will be directly determined by the quality of your reasoning abilities. In fact the quality of your life in general will be determined by how well you think in general."

Idea # 14:

Explain to the students, when orienting them to the class, what will happen on a typical class day (and why).

In planning what happens on a daily basis in class, we suggest you develop a routine that directly involves students in thinking. What most students are used to doing is sitting back passively and listening impressionistically to a lecture, taking some notes as the spirit moves them. This is usually an ineffective way to internalize class content. In most classes students need practice in active listening, active reading and writing, and disciplined discussion. Designing a typical class day so that students are required (by the design) to be actively and thoughtfully involved is important.

Here is a possible format you might want to use in creating your "typical day:"

- 1) At the end of each class period, assign some section from the textbook for students to read.
- 2) Where possible, ask students to write out their answers to key question within those sections.
- 3) When students come to class on the next class day, place them in pairs or triads.
- 4) Have each student read his/her paper aloud to the group.
- 5) As the student is reading his paper aloud, have the other students in the group give the reader feedback on his paper, focusing on two or three intellectual standards such as clarity, relevance, depth.
- 6) Then lead a brief discussion of the chapter or section you are focused on, using an engaged lecture format or Socratic dialogue.
- 7) At the end of the class period, assign another section for the students to read and on the next class day begin this process again.