25 TIPS ON COLLEGE TEACHING
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Good Practice...
1. **Encourages Student-Faculty Contact**
   Frequent student-faculty contact in and out of classes is the most important factor in student motivation and involvement. Faculty concern helps students get through rough times and keep on working. Knowing a few faculty members well enhances students' intellectual commitment and encourages them to think about their own values and future plans.

2. **Encourages Cooperation among Students**
   Learning is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one's own ideas and responding to others' reactions improves thinking and deepens understanding.

3. **Encourages Active Learning**
   Learning is not a spectator sport. Students do not learn much just sitting in classes listening to teachers, memorizing pre-packaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences, and apply it to their daily lives. They must make what they learn part of themselves.

4. **Gives Prompt Feedback**
   Knowing what you know and don't know focuses learning. Students need appropriate feedback on performance to benefit from courses. In getting started, students need help in assessing existing knowledge and competence. In classes, students need frequent opportunities to perform and receive suggestions for improvement. At various points during college, and at the end, students need chances to reflect on what they have learned, what they still need to know, and how to assess themselves.

5. **Emphasizes Time on Task**
   Time plus energy equals learning. There is no substitute for time on task. Learning to use one's time well is critical for students and professionals alike. Students need help in learning effective time management. Allocating realistic amounts of time means effective learning for students and effective teaching for faculty. How an institution defines time expectations for students, faculty, administrators, and other professional staff can establish the basis for high performance for all.

6. **Communicates High Expectations**
   Expect more and you will get it. High expectations are important for everyone--for the poorly prepared, for those unwilling to exert themselves, and for the bright and well motivated. Expecting students to perform well becomes a self-fulfilling prophecy when teachers and institutions hold high expectations for themselves and make extra efforts.

7. **Respects Diverse Talents and Ways of Learning**
   There are many roads to learning. People bring different talents and styles of learning to college. Brilliant students in the seminar room may be all thumbs in the lab or art studio. Students rich in hands-on experience may not do so well with theory. Students need the opportunity to show their talents and learn in ways that work for them. Then they can be pushed to learning in new ways that do not come so easily.
Being Organized in Class Meetings

1. **Preparing a class meeting**
   a) Review the readings for main concepts and issues
   b) Define your main goal/s for the lesson
   c) Outline tasks you need to accomplish in the lesson
   d) Sequence tasks in logical order
   e) Define tasks in the form of activities
   f) Prepare more than you will need, but plan where to cut it down
   g) Attach a time frame to each activity
   h) Consider the logistics necessary for the activities
   i) Rehearse the flow of your instructions/actions
   j) Prepare instructional media (e.g., overheads)

2. **Being on time**
   a) Always be in class several minutes before it starts
   b) Make it a habit to start on time; do not wait for stragglers
   c) Let students know that being late will affect their performance

3. **Learning students' names**
   a) Have students introduce themselves in the first class
   b) Memorize names while taking attendance or returning materials
   c) Concentrate on learning several new names each class period
   d) Use students' names frequently

4. **Taking attendance**
   a) In lower-level classes: Unless you want to use a roll call to learn students' names in the first few weeks, take attendance by passing around a name list for them to sign
   b) In upper-level classes: You might want to find other forms of occasionally reminding students of the importance of regular class attendance (e.g., calling them on the phone if you don’t see them in class for two sessions in a row)

5. **Giving instructions before group work**
   a) Plan the instructions you need to give ahead of time
   b) Be explicit and concise
   c) Give all the necessary instructions before students break into groups
   d) Whenever appropriate, provide a brief rationale with your instructions
   e) Repeat instructions for typical classroom procedures until students have habitualized the procedures

6. **Dividing students into groups**
   a) Plan when and how to divide students into groups during a given class period
   b) Give specific instructions regarding the goal of the group time
   c) Give specific instructions regarding the expected group product
   d) Give specific instructions regarding the roles of different group members
   e) Give specific instructions regarding physical arrangements of groups
   f) Give specific instructions regarding time frame
7. **Monitoring group work**
   a) Walk around to ensure every group is on task
   b) Observe group discussions without becoming the center of attention
   c) Intervene only when necessary

8. **Debriefing group work**
   a) Have every group report the results of their discussion
   b) Make sure the viewpoints from different groups are compared
   c) Summarize or help students summarize main points
   d) Draw conclusions about the discussion's relevance for a larger context

9. **Pacing a discussion**
   a) Try to stay within the time frame you had planned for the discussion
   b) Don't spend much time dialoguing with one student
   c) Allow several seconds wait-time after a question
   d) Don't remain seated during the whole discussion
   e) Provoke debate between students

10. **Concluding a class meeting**
    a) Allow enough time to summarize
    b) If possible, briefly preview what's coming up next week
    c) End your class meetings on time

11. **Sticking to course policies**
    a) From the first day of class, know exactly what the course policies are
    b) Avoid making exceptions
    c) Be friendly but firm
    d) Talk to students privately who tend to step over the line (whether they are late for class, come irregularly, hand in assignments late, are disruptive or disinterested in class, etc.)
    e) Don't let yourself be intimidated by students arguing for better grades
    f) Always justify your grading through detailed feedback
First Class Survival Tips

In Sequence:

1. Arrive early and begin to know your students.

2. If feasible, arrange seating in a U-shape. Ask students to help you with this.

3. Start the session by introducing yourself. Write your name on the board, together with your office number and your office hours.

4. Briefly sketch the material dealt with in the course and the products & activities that will be required.

5. Give students an idea of what the classroom style will be like, i.e.:
   - How class activities will be structured,
   - How students will work together in small-groups,
   - When students are expected to take notes,
   - What function the discussion sections have for the lecture/exams,
   - That you expect each student to make an appointment with you during your office hours at least once during the first half of the semester.

6. Give students sufficient time to ask questions.

7. Consider distributing Student Bio Forms asking students to provide information such as the following:
   - their name - student ID - phone number - semester in school - (intended) major - relevant work experience - something that distinguishes them (e.g., a hobby, place of birth, memberships).

8. Have students introduce themselves (e.g., by using an icebreaker activity).

9. Don't dismiss the first class early!

General behaviors:

1. Be enthusiastic about the subject and your role in the course.

2. Let your students know that you are organized.

3. Prepare for predictable enrollment problems and procedures.

4. Ask for student questions and pause long enough for them to reflect.

5. Above all: Don't fill the first class period with a long uninterrupted lecture. Communicate the message that you want them to talk!
On Multi-Method Teaching:


“Teach in multiple modalities. Give students the opportunities to read, hear, talk, write, see, draw, think, act, and feel new material into their system. In other words, involve as many senses and parts of the brain as possible in your teaching and their learning. If, as is commonplace, the students are reading or listening to the material, how them take notes on it, discuss it in pairs or groups, concept- or mind-map it, freewrite about it, solve problem with it, complete a classroom assessment exercise on it, or take a quiz on it.” (p. 5)

“Whatever learning style model you favor, it is important to remember that the students in your classes aren’t one type or another. They use multiple learning strategies and rely on multiple input modes. In fact, all students learn more and better from multiple-sense, multiple-method instruction. People learn best when they receive the new material multiple times in different ways—that is, through multiple senses and modes that use different parts of their brain (Kress, Jewitt, Ogborn, & Charalampus, 2006, Vekiri, 2002). Teaching to multiple styles and modes can also help you revitalize lesson plans and classroom presentations that have become routine through repetition. Adding visual and kinesthetic components, inquiry-guided activities, group work, and experiential learning may take some time and effort, but the change can avert burnout.

To maximize all of your students’ learning and your own professional fulfillment, try to use a rich variety of teaching techniques and learning media in your courses. In addition, acquaint your students with the broad range of learning and studying strategies. Bringing this variety and flexibility into your teaching is the real value of all the learning style models.” (p. 237).
LECTURING

LECTURE COMPONENTS

Lecturing is still the teaching format of choice for most instructors. Good lectures require many skills and consist of a multitude of possible components. Here is a little check list of some of the more important ones. Which ones do you use? Which ones should you pay more attention to?

1. **Grabbers and stabbers**
   Attention-getters (controversial statements, artifacts, newspaper articles, video clips, etc.) help students make the transition to your class and the topic of the day.

2. **Examples and non-examples**
   The use of adequate examples (and non-examples) may be the biggest singular problem in teaching. A good example provides a mental model of what you are trying to explain.

3. **Analogies and metaphors**
   Analogies provide an interpretative bridge between the familiar and the unfamiliar. They stimulate thought and suggest solutions to a problem.

4. **Higher-order thinking questions**
   Good questions provide students the opportunity to integrate and synthesize their prior learning experiences with their current learning opportunities.

5. **Well-constructed definitions**
   Dictionary definitions are rarely sufficient. Good definitions use examples and non-examples and possibly a compare-and-contrast strategy to further clarify the term.

6. **Repetition of key points**
   It helps to use redundancy by repeating earlier points with newly introduced points and by re-using earlier examples.

7. **Transitions and cues to important ideas**
   Transitions are structural signposts within the body of the lecture, consisting of signal words, rhetorical questions, or linking phrases.

8. **Handouts**
   Handouts aid the student to see the structure of a topic and provide a framework for note-taking. They can improve recall and test performance.

9. **Stories and anecdotes to clarify points**
   Students remember and apply facts/concepts better when they are placed within a memorable and interesting context.

10. **Humor**
    Humor invites students to take risks in the classroom, and humor is one of the best ways for teachers to develop a good relationship with students.

11. **Limited key points**
    Research suggests that during a 50-minute lecture, the instructor should cover a maximum of three to five key points, regardless of the subject area taught.

12. **Appropriate vocabulary**
    Learning technical vocabulary is like learning a foreign language. Some disciplines have a lot of new vocabulary. Instructors need to repeat, rephrase, and slow down whenever they use a lot of unfamiliar terms.

13. **Relevant and meaningful content**
    Lecture content becomes more meaningful if it is related to students' lives, to recent events reported in the news media, to how it can affect or improve humankind, or to how it challenges students' longstanding beliefs and attitudes.

14. **Varied pacing**
    Most students are capable of taking notes at only 20 words per minute, yet lecture presentation rates vary from 45 to 240 words per minute.

15. **Student involvement**
    Lectures should include interactive learning activities. Thomas Cyrs provides a list of 110 interactive activities many of which can be used in any type of class.

16. **Enthusiastic presentations**
    Enthusiasm in lectures results in believability. It is often contagious and can excite and motivate students to a higher level of learning.

17. **Specific learning performance objectives**
    Course outcomes should be clarified in measurable language that specifies what the student should be able to do, how it is to be done, and when it is satisfactorily done.

18. **Clear explanations**
    Clear explanations emphasize key ideas, important assumptions, early observations, general principles, and critical insights in a subject.

19. **Stimulus variation to hold attention**
    Students have a maximum attention span of 20 minutes during a lecture. If you don't change the format, activity, or medium of your lecture repeatedly, you will lose the class.

(Many of this list was adapted from Thomas E. Cyrs "Essential Skills for College Teaching," 1994)
Options for Student-Active Breaks during Lecture

While lecturing is not the preferred mode of teaching in the age of student-centered learning, we all know there are occasions where a well-structured presentation becomes the most efficient way of communicating important information to students. However, even then it is important to remember that attention span is limited to 10-15 minutes among all but the most motivated and well-prepared students. Therefore, it is good advice for an instructor to pause about every quarter of an hour and get students involved in some active processing of the lecture material. “Resetting attention span” can take as little as two minutes and will get most students ready for another 10-15 minute lecture vignette. Of course, this too has limits and should not be tried with class periods lasting multiple hours. Most of the following ten teaching techniques are summarized in Linda Nilson’s book Teaching at its Best (2003). Many more techniques are available. The CTL is happy to find others for you if you are looking for more alternatives.

These teaching techniques have in common that they are used after short segments of the lecture. The instructor stops after a fifteen minute vignette and gives students a carefully controlled time limit to perform a task individually, in pairs, or small groups.

SHORT ACTIVE BREAKS (2-6 minutes)

Comparing Lecture Notes

Pair and Compare:  Students pair off with their neighbor and compare lecture notes, filling in what they may have missed. This activity makes students review and mentally process your lecture content. It may also help students improve their note-taking skills when they compare their own notes to what someone else in the class considered relevant.

Pair, Compare, and Ask:  Same as above but with the addition that students jot down questions on your lecture content. You then field questions that students cannot answer between themselves. This is also a good opportunity for formative assessment revealing difficulty patterns in students’ understanding.

Free Recall of Lecture

Periodic Free-recall, with Pair and Compare Option:  Students put away their lecture notes and write down the most important one, two, or three points of your lecture this far, as well as any questions they have. This activity makes students review and mentally process your lecture content. Students may work individually, but if they work in pairs or triads, they can answer some of each other’s questions. This is another technique for helping students improve their note-taking skills because it teaches them to focus on the most relevant parts of the lecture rather than writing down notes indiscriminately.

Listen, recall, and Ask; Then Pair, Compare, and Answer:  Students only listen to your mini-lecture—no note-writing allowed—then open their notebooks and write down all the major points they can recall, as well as any questions they have. Instruct students to leave generous space between the major points they write down. Finally, they pair off with their neighbor and
compare lecture notes, filling in what they may have missed and answering one another’s questions. The technique also sharpens students’ concentration efforts.

**Solve a Problem:** Students solve an equational or word problem based on your lecture content. They can work individually or in *ad hoc* pairs or triads. Put the problem on the board, a slide, or an overhead and, to make class debriefing easier, give four multiple-choice options. Ask for a show of hands for each option. You can also ask student pairs to rate their confidence level in their answer. This activity makes students apply your lecture content while it’s fresh in their minds, and it immediately informs you how well they have understood your lecture material (i.e. formative assessment!). You can then clarify misconceptions before proceeding to new material.

**BIGGER ACTIVE BREAKS (8-25 minutes)**

**Prewrites:** Before discussing a topic or lecturing on it, ask students to write a brief account of what they already know about the subject or what opinions they hold. Then field some of their responses and have a brief discussion. (Source: Tollefson, 1988)

**Quick Case Study:** Students debrief a short case study (one to four paragraphs) that has them apply your lecture content to a realistic, problematic situation. Display a very brief case on an overhead or slide; put longer ones in a handout. You may add specific questions for students to answer, or teach your class the standard debriefing formula: What is the problem(s)? What is the remedy(ies)? What is the prevention(s)? Instruct students to jot down their answers. Consider taking case scenarios from current media reports to increase students’ interest and awareness of the practical relevance of your course material.

**Pair/Group and Discuss:** Students pair off with their neighbor or get into small groups to discuss an open-ended question that asks them to apply, analyze, or evaluate material in your lecture or to synthesize it with other course material. The question should have multiple possible correct answers. Have students outline their answers in writing. This activity makes students examine, extend, and process your lecture content and serves as a perfect prelude to a general class discussion. It also models for students what a critical thinking question looks like.

**Pair/Group and Review:** Same as above but with an essay question designed for pre-exam review. Student pairs/groups present their answers to the class, while you mock-grade them and explain your assessment criteria. You can also have the rest of the class mock-grade pair/group answers to help students learn how to assess their work. This is also a prime opportunity for helping students understand the criteria of a scoring rubric, should you use one for this task.

**Write from a Pro or Con Position:** When an argument has been presented in class, stop for a few minutes and ask students to write down all the reasons and evidence they can think of that support one side or the other. Use these statements as the basis for a brief discussion. Students always benefit from looking at an issue from more than one perspective. (Source: Walvoord, 1986)
Techniques for Active Learning in Large Classes


1. BRAINSTORMING:
   Example: The instructor starts a new topic by asking students to call out "everything you know or think you know about public policy."
   Rationale: Students are invited to help create a lecture by participating in the process of ordering a topic into a coherent, rational pattern. Brainstorming provides an opportunity for many students to participate and for faculty to find out what students already know and don't know.
   Rule: Acknowledge every offering by writing it down, thus providing visual reinforcement and honoring student contributions.

2. IMAGING:
   Example: The instructor starts a new topic by asking students to call out one concrete visual image that stands out from their readings, a film that was shown in class, or a personal experience they have had with the topic at hand.
   Rationale: Spending a few minutes hearing these images activates student energy and enhances the vividness of the day's content. No analysis is necessary, just recollections and brief description. After five minutes, ask the class: "What themes seem to emerge from these items? What connects these images? Is there a pattern to our recollected events? What is missing?"

3. ASSUMPTIONS OF TRUTH:
   Example: The instructor starts a new topic--or checks on learning halfway through one--by asking students to suggest statements they think are true about some particular issue. "It is true about deregulation that..." "We have agreed that it is true about the welfare system that..."
   Rationale: This strategy is useful for dealing with a topic--poverty and crime, for example--where students think they already know a great deal but the accuracy of their assumptions demands examination. It also generates a list of questions and of issues demanding further study.

4. OPEN-ENDED INSTRUCTOR QUESTIONS FOR CLASS:
   Example: The instructor addresses a somewhat open-ended question to the class: "Why should we subsidize mass transit rather than build more streets for individualized traffic?" Or, "what are the major problems of our current health system?" Or, "which are the most pressing environmental problems today?"
   Procedure: A student answer is met with a follow-up question, which is directed at the class generally (don't put one person on the spot). In the end, a number of points or arguments are articulated or even listed on the board. A further question can invite critical analysis: "Which of these arguments makes the most sense to you, and why?"

5. INSTRUCTOR QUESTIONS FOR GROUP EXPLORATION:
   Example: The instructor puts an open-ended question (such as the examples above) to the class and asks three students sitting next to one another to explore it for five minutes.
   Rationale: The best kinds of questions are those not simply seeking information but those requiring students to make judgments and choices among equally compelling alternatives. Enormous energy and interest in the issue can be raised in the 5-minute group discussion. Subsequently groups can present their answers, discuss them with those of other groups, put the various answers to a vote, etc.

6. PREPARED STUDENT QUESTIONS:
   Example: The instructor asks students ahead of time (on Wednesday for Friday's class) to prepare one or two questions about their reading or a topic and bring them to class.
   Procedure: The assignment can be phrased this way: "A question I still have about welfare (business-government relations, urban transportation, etc.) but have been afraid to ask, is ..."
Students put their questions on cards and submit them at the beginning of class, a technique which helps reticent students' questions to be heard.

7. NEGOTIATED STUDENT QUESTIONS:
Example: At some point halfway through a period the instructor divides the class into pairs or small groups of three or four and asks them to "take five minutes to agree on one question that you think is crucial that I respond to."
Rationale: This will sort out fewer, more thoughtful questions. The task also leads to some peer teaching and learning as one member of a group answers another's question in the course of the search for a consensus question. Hearing student questions is an excellent way for a professor to get feedback on how well students are learning.
Variation: A similar procedure can be used at the end of the hour, where students--alone or in small groups--can be asked to write down one or two still unresolved questions they want explored at the next class.

8. PRESS CONFERENCE:
Example: Students are invited, as investigative reporters, to ask questions of their teacher about the topic they have been studying.
Rationale: This questioning variation is well-suited to concluding a unit. Students may seek to clarify confusing material or to find out new information or to press their professor's position on an issue to a point of contradiction or inadequate evidence. The teacher's responses might be crisp and short or might constitute mini-lectures.

9. SMALL GROUP DISCUSSION:
Example: At an appropriate point, the instructor interrupts the lecture to ask two or three students sitting next to each other to discuss an issue or question together for a few minutes: "What's the most important point I've been making for the past ten minutes?" "What's the major policy concern in this case?" "What's the answer to the problem?"
Procedure: After as little as three or four minutes, invite volunteers to stand and report conclusions and concerns.
Rationale: With such brief shifts of energy, students not only experience a variety of voices and a sense of shared responsibility for their learning but also wake up and are more likely to listen attentively to the teacher's next twenty minutes of lecturing.

10. THE PROBLEM-SOLVING LECTURE:
Example: The problem-solving lecture begins with a question, a paradox, an enigma, or a compellingly unfinished human story--some tantalizing problem that hooks student interest.
Procedure: The answer unfolds during the class hour; if the instructor is skillful, the unfolding will be completed with only about ten or fewer minutes left in the period. Solving the problem may require a scientific demonstration, an economic model, or historical narrative. The problem, or question, is woven throughout the lecture, inviting students to fill in spaces in the story or model with their own unfolding solutions to the problem as they listen. "What do you think will happen?" "Which solution, outcome, or explanation makes the most sense to you?"

11. EXPLICATION DE TEXTE:
Example: In introductory survey courses, Peter Frederick regularly spends part of a class period early in the term showing how he would read and highlight a traditional textbook.
Procedure: The procedure includes (a) modeling by the instructor, (b) practice by the students, and (c) feedback. Invite students, either ahead of time or at the start of class, to "find one or two quotations from the text which you found particularly significant," or, "identify a quotation which you think best illustrates the major thesis of the chapter." Upon reaching a particularly ambiguous passage, small groups of three to four students could be asked to struggle with the meaning. After
having struggled with a passage themselves for a few minutes, hearing the teacher's interpretation has more meaning.

12. ANALYTICAL SKILLS TRAINING:
   **Example:** Instead of explaining how to read a difficult passage of text, the instructor may model the quantitative analysis of graphs, charts, tables, or census data, or the qualitative analysis of maps, short historical documents, or photographs.
   **Procedure:** Displaying the stimulus material, the instructor asks the class (or small groups), "what do you see?" Then, after hearing several descriptions: "what does it mean? what implications can you draw from the document on how people lived?"

13. WHOLE CLASS DEBATES:
   **Example:** Divide the class in halves (e.g., by using the central aisle dividing large lecture halls) in order to structure debates. Students can either support the side of an issue assigned to the half of the hall where they happen to be sitting, or as prearranged, can come to class prepared to take a seat on one particular side of a debate.
   **Procedure:** The professor controls the debate from the podium: "From the right side of the hall we will hear five statements on behalf of the current administration's position toward government involvement in the redistribution of wealth, after which we will hear five statements from the left on behalf of the opposition's position." The process can be repeated, including rebuttals, before concluding by asking for two or three volunteers to make summary arguments for each side.

14. CLASS DEBATES WITH MORE THAN TWO PERSPECTIVES:
   **Example:** When some students (quite rightly) refuse to choose one side or the other, create a middle ground and space, and invite their reasons for choosing it.
   **Rationale:** When three groups state different positions, the dimensions of learning increase. The dualistic mode in which many younger students are used to operate ("There is only right and wrong!"), is broken up in favor of a more realistic and socially productive approach to a complex problem.

15. SIMULATIONS & ROLE PLAYING:
   **Example:** The instructor puts students into the many roles represented in some historical or political event and has them discuss or play out the resulting conflict.
   **Procedure:** (1) A minilecture establishes the context and setting for the role playing (defined as a loose simulation of actors and problems). (2) The class is divided into a number of small groups (of varying sizes and including duplicate roles depending on class size), and each group is assigned a clearly delineated role. (3) Each group is given a specific, concrete task--usually to propose a position and course of action. (4) The proposals emanating from different groups will inevitably conflict with each other in some way. One could hear the proposals of different groups and immediately incorporate them into a lecture on how what really happened reflected many of these same conflicts. Or, one could carry out the role-playing process longer by structuring a meeting or convention to consider the differing groups' proposals. The student groups could be instructed to prepare speeches and see the deliberations through to some conclusion, and then to caucus to develop strategies, coalitions, and tactics for achieving their goals. Debriefing the exercise by the professor is essential.
DISCUSSIONS

What to Do When Asking Questions

1. **Ask Open Instead of Closed-Ended Questions!**
   Open-ended questions are usually "How" or "What" questions that allow students to respond freely rather than with a yes or no or a two-word answer.

2. **Don't Ask Recall Questions!**
   Requiring recall of facts may be good for a test but will stifle any class discussion. Use higher-order questions that ask for students' comprehension or evaluation of a phenomenon, their analysis of a situation, or their application of a concept to a new context.

3. **Provide Enough Wait Time!**
   Don't answer your own question. Wait for at least 3-5 seconds. If no one replies, repeat your question, or rephrase it. If necessary, look at a specific student and ask if she or he can give it a try.

4. **Ask Only One Question at a Time!**
   Don't ask a string of questions in the same utterance, such as: "How are apes and humans alike? Are they alike in bone structure and/or family structure and/or places where they live?" Students will be confused as to which question you want them to answer.

5. **Ask Students for Clarification...**
   ...if their comments seem to you (and probably many others) to be incomplete or unclear.

6. **Ask Students to Support Their Opinions!**
   Sometimes students, especially freshmen, think it is sufficient simply to have an opinion. But you are not so much interested in what they think, as why. Make the students go beyond their initial, perhaps superficial reactions.

7. **Use Some Non-interrogative Ways of Gaining Answers!**
   Non-interrogative or indirect question formats (such as: "Tell me more about that!" or nonverbal reactions indicating surprise or uncertainty) avoid the impression of an inquisition.

8. **Challenge the Students, But Do Not Threaten Them!**
   You want to arouse the students enough to stretch themselves, but not so much that it becomes counterproductive. Be careful because what challenges one student may distress another.

9. **Do Not Question a Single Student for Too Long!**
   If the student cannot respond after a second, focusing question, move on to other students.

10. **Avoid Always Looking at the Student Speaking!**
Look at the other students to see how they are reacting to the speaker. Use gestures and nods to direct the speaker's attention to other students; otherwise she or he will only speak to you, not the group.

11. **Plan Key Questions to Provide Structure and Direction!**
A general sequence of key questions must be formulated ahead of time, since it is virtually impossible to do so in the midst of the fast-paced and complex interaction in the classroom. You may deviate from this sequence of questions, and spontaneous questions will evolve based on students' responses; but the overall direction of the discussion has to be planned in advance.

[adapted from W. Cashin & P. McKnight, 1986]
What to Avoid When Leading Discussions

1. **Don't Be a Traffic Cop!**
   Invite students to react to each others' responses rather than merely to your questions.

2. **No Hand Raising Required!**
   If students are seated in a circle, horseshoe, or rectangle, they will be able to see each other and will not interrupt when someone else is speaking.

3. **Don't Belittle Student Questions!**
   Never respond to a student question with "I thought I just answered that question!" or "Is that really relevant?" Instead you may want to announce to your students that you have never met a question you didn't like.

4. **Don't Belittle Student Responses!**
   Create a safe environment for students to speak out and try new ideas. When a student responds in a less than accurate or sophisticated manner, simply offer no comment and invite other student responses.

5. **Avoid the "Yes, but..." Reaction!**
   The overall impact of such a response is negative. Use instead one of the following:
   a. Wait to a count of 5 with the expectation that another student will volunteer a better response.
   b. Ask, "How did you arrive at that response?" but be careful not to react this way only to inadequate answers.
   c. Say, "You're right regarding X and that's great; wrong regarding Y. Now let's deal with Y..."
   d. Say, "Thanks. Is there someone else who wants to respond to the question or comment on the last response?"

6. **Don't Get Sidetracked!**
   When an individual student wishes to plead special interests or probe a point in depth, invite her or him to stay after class or stop by during office hours.

7. **Don't Lapse Into Lecture!**
   Lapsing into lecture is the greatest single obstacle to student participation.

8. **Don't Fake a Reply!**
   When you encounter a student question you can't answer on the spot, simply admit that you don't have the answer. If it seems important enough, offer to find an answer for the next meeting.

9. **Keep Track of Time!**
   Don't waist much time with announcements and housekeeping tasks. Budget your time for each segment of a class period and move on when time is up.
10. **TYPICAL PROBLEMS:**

a. **If One or Two Students Consistently Monopolize the Floor:**
   Use their comments to throw the discussion back to the class/group; e.g., "You've raised an important point. Maybe others would like to comment."

b. **If there is a lull in the discussion:**
   Need to pay more attention to the types of topics you're picking; you may be inadvertently shutting down discussion by dominating rather than facilitating.

c. **If students are talking only to you instead of to each other:**
   Help students talk to each other by leading with your eyes, looking occasionally at others in the room.

d. **If there are students who seldom or never talk:**
   - See if you can find out whether they are shy, confused, or simply turned off.
   - Watch for clues that indicate that they might want to speak up.
   - Make a point of talking to this student before or after class to indicate your interest.

e. **If a fight breaks out over an issue:**
   - Keep the argument focused on the issues. Don't let it turn personal, under any circumstances.

[Adapted from Hyman, 1980, and Allen & Rueter, 1991]
High Mileage Questions

1. **Brainstorm Questions**
   They invite students to generate many conceivable ideas on a topic or many possible solutions to a problem. (e.g., "What trends starting in the 1960s may have negatively impacted American public education?")

2. **Focal Questions**
   They ask students to choose a viewpoint or position from several possible ones and to support their choice with reasoning and evidence. (e.g., "Do you think that Marx's theory of capitalism is still relevant in today's post-industrial societies?")

3. **Playground Questions**
   They challenge students to select or develop their own themes and concepts for exploring, interpreting, and analyzing a piece of material. (e.g.: "What do you think the author is saying in this particular passage?" "What underlying assumptions about human nature must this theorist have?")

Poor Questions

1. **Analytic Convergent Questions**
   Since they have only one correct answer, they make students edgy and cut the discussion short.

2. **Programmed-Answer Questions**
   The instructor, perhaps unconsciously, conveys having only one specific answer in mind. Students regard this as a challenge to read the instructor's mind.

3. **Rhetorical Questions**
   They are usually too obvious for students to take seriously. They tend to be momentary time-fillers.

4. **Quiz Show Questions**
   They have a one- or two-word correct answer and usually elicit only factual recall.

5. **Dead-End Questions**
   They are quiz show questions with yes-or-no answers. Students simply place their bets.

6. **Fuzzy Questions**
   They may be phrased unclearly (e.g., "Who else knows what else falls into this category?") or they may be too global (e.g., "What should we do about the breakdown of the family?").

7. **Chameleon Questions**
   A series of weakly related questions "fired off" one after the other in hopes that one will hit with the students. They change their topical focus through the series until the last one barely resembles the first one.

8. **Shotgun Questions**
   Similar to the previous one, although all the questions may go into the same direction. They just leave the impression of a confused or desperate instructor.

9. **Put-Down and Ego-Stroking Questions**
   They are two sides of the same bad attitude. The former type implies that students ought to know the answer; the latter assumes the superiority of the instructor to the discouragement of the students (e.g., "How about rephrasing the answer the way I would say it?").

*from L.B. Nilson (1996), Teaching at its best.*
General Tips for Implementing Group Work

1. **Generate the belief that students can learn from each other.**
   - Let students discuss their ideas in pairs before presenting them to the class.
   - Engage students in Jigsaw exercises (different group members being responsible for teaching different pieces of content to each other before taking a quiz on the whole content).

2. **Engage students in the development of ground rules.**
   - Discuss students’ positive and negative experiences with group work.
   - Collectively develop a few basic rules that apply to all groups in class.
   - Ask individual project teams to formulate their own procedures for group meetings outside of class.

3. **Enforce individual accountability.**
   - Quiz students individually after select group exercises (such as jigsaws).
   - For team projects, require students to keep a process folder that documents each group member's contribution to the project.
   - For team projects, negotiate a self- and peer-rating procedure that requires team members to assess the quality of their own and the other group members' contributions.

4. **Structure assignments for collaboration.**
   - Avoid assignments that can be fulfilled by mere division of labor.
   - Always require a group synthesis of individual contributions.

5. **Keep project teams small.**
   - Teams working on projects outside of class should have no more than 3-4 members.
   - Encourage students to form such groups on the basis of matching time schedules.

6. **Set limits for informal learning groups.**
   - Avoid self-selection of similar students (e.g., same sex, ethnicity, communication style, friends) into the same group.
   - Depending on the complexity of the group task, allow informal learning groups of no more than 6-8 students in extreme cases, 3-4 under normal circumstances.

7. **Make group work count for the final grade.**
   - If you frequently use group work in your class, don't undermine its importance in the students' eyes by undervaluing it when determining grades.
   - Few team projects are taken seriously if they account for only 10% or less of the final grade.

8. **Provide intermittent feedback on group projects.**
   - If group projects extend over several weeks, ask for written or oral progress reports to help students stay on track...
   - Or divide task into different phases with distinct products required at the end of each one.
Planning for Group Work

1. **Decide how closely students should work together.**
   Will your students work:
   - in small short-term discussion groups?
   - in creative problem-solving groups?
   - in long-term project groups?
   - or in pairs giving each other assistance on individual tasks?

2. **Decide on the training program for collaborative skills.**
   Will your students need special training in order to:
   - recognize the value and benefits of group work?
   - define and structure basic group procedures?
   - know how to assert themselves?
   - know how to ask higher-order questions?
   - use controversy and conflict productively?
   - be responsive to the needs of the group?
   - ask for others' opinions?
   - listen closely to what others say?
   - allow everyone to contribute?
   - pull ideas together?

3. **Create or find the actual tasks the groups will perform.**
   Does your task:
   - have more than one answer or more than one way to solve the problem?
   - have intrinsic interest and reward?
   - allow different students to make different contributions?
   - require a variety of skills and behaviors?
   - involve multiple media or sources of information?
   - require reading and writing?

4. **Lay the logistical groundwork for collaborative activities.**
   - How are the groups to be composed?
   - What instructions and materials must you prepare in advance?
   - How will you physically arrange the classroom?
   - How and when will you assign students to groups?

5. **Decide how you will evaluate student performance.**
   - Which group tasks need teacher feedback?
   - Which group tasks need a grade from the teacher?
   - When should groups discuss/evaluate their own group process?
   - Should groups evaluate each member's contribution?
   - Should there be group or individual grades or both?
   - Should groups compete with each other for grades?
   - Should students use groups in preparing for exams?

[Adapted from E.G. Cohen (1986), Designing Groupwork, Chpt.5]
Teaching Essential Collaboration Skills

Group work has become common practice in college teaching. Faculty use it for a range of purposes: to refocus students’ attention span during what otherwise would mostly be lecture; to stimulate students to share and develop their opinions; to have students in the science lab perform experimental procedures; to work on a group project for a part of the semester; etc. The increased popularity of group work is also due to the demands of the work world which tells us that teamwork, writing, and oral communication skills are the key to success in the job market.

Unfortunately, group work and team skills have traditionally not been part of the graduate training that faculty received and often run counter to the competitive inclinations academic careers have typically favored. It is therefore not surprising that many faculty have difficulties making learning groups work in their classes, since neither the faculty nor the students tend to have a good grasp at what the component skills of effective group work are and how to teach them. As a result, students are often merely instructed to “form groups and discuss.” But sometimes neither the results nor the process are what one might hope for. The following paragraphs try to address this dilemma by providing a breakdown of the skills that need to be considered and some tips for teaching them.

Our main suggestion is: Help students explore amongst themselves and with you, the instructor, what skills they need to learn and how to alter behavior that gets in the way. Collaboration or group work skills cannot be taught directly, they need to be experienced. As with other learning and study skills, collaboration can best be learned by a mixture of doing and reflecting. This starts with a discussion of group norms.

Set Aside Class Time to Determine Group Norms

M.T. Towns, reported in B. Mills (1998), has students first answer questions about group work independently, and then work toward team expectations:

<table>
<thead>
<tr>
<th>Working in Groups—Your Personal Viewpoint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Next class meeting will be our first problem solving session. During these sessions you will work with three or four other students to solve a problem. In order to prepare you for working in a group, answer the questions below:</td>
</tr>
<tr>
<td>1. List what you believe your responsibilities are to your group.</td>
</tr>
<tr>
<td>2. List your group’s responsibilities to each member.</td>
</tr>
<tr>
<td>3. Describe the advantages of working in a group or as a team.</td>
</tr>
<tr>
<td>4. Describe the disadvantages of working in a group or as a team.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Working in Groups—Your Team’s Viewpoint</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. We believe an individual member of our group has the following responsibilities to the group.</td>
</tr>
<tr>
<td>2. We believe our group has the following responsibilities to each individual member.</td>
</tr>
</tbody>
</table>

Names of Group members: _______________        _______________        _______________        _______________

In filling out this form, many groups will establish norms such as “We will respect one another’s opinions”; “We will all contribute our fair share”; “We will come to class prepared and willing to
participate”; “We will contact one another if we must be absent”; “We will help one another succeed”; “We will criticize ideas, not people”; “We will all listen attentively.” Having individually thought through and then collectively agreed upon such norms (in writing!) helps set the stage for what happens in groups throughout the semester.

Student Behaviors Required in Effective Learning Groups

The above discussion of norms already suggests some of the skills/behaviors students need to exhibit in effective learning groups: Asking for others’ opinions – Listening – Reflecting on what has been said – Being concise – Giving reasons for ideas – Allowing everyone to contribute – Pulling ideas together – Finding out if group is ready to make decision (Cohen, 1986). Students must be given opportunities to practice and reflect on these behaviors. Epstein (1972) provides a four-step approach for such practice and reflection. At the same time, these four steps illustrate the key components for effective group discussions: Concisionness, Listening, Reflecting, Contributing.

Epstein has students observe and reflect on their own behavior. Students are placed into five-person groups and given an interesting topic to discuss for five minutes at a time. Throughout the four practice activities, group members take turns being the timekeeper for the task at hand.

Step 1, Conciseness: “Getting quickly to the point and not beating around the bush” During the five-minute discussion, the timekeeper makes sure that each person talks for only fifteen seconds at a time.

Step 2, Listening: “Paying attention to what is being said” During the second five-minute discussion, each person must wait three seconds after the previous person has spoken before he or she may speak.

Step 3, Reflecting: “Repeating out loud to the group something of what the person before you has said” Another five-minute discussion session during which each person talks for only fifteen seconds at a time and waits three seconds after the previous person has spoken. In addition, everyone who speaks must begin by repeating to the group something that was said by the person who spoke immediately before (“reflecting”). The previous person needs to indicate agreement (by head nod) with the summary before the new person can continue.

Step 4, Everyone Contributes: “All the people in the group have to speak” All previous rules apply, as well as a new one: No one may speak a second time until everyone in the group has spoken.

After each step, the timekeeper reports on how well the group did on the skill being practiced. The timekeeper may have other observations to make about how difficult it was and what happened. The exercise is partially symbolic—no real group discussion consists of only 15 second contributions with 3 second wait-times in between. But the experience is important for allowing students to reflect on the key skills it takes for an effective group discussion.

Discuss with the whole class why each skill is important and how common it is that group activities fail because these behaviors are not followed. Of course this procedure will not guarantee that students will continue to exhibit these behaviors throughout the semester. But having had the experience will make it easier to remind students later of the essential skills and allow for occasional self/group-assessments throughout the semester. Having this framework can also positively influence other group behaviors that often impede effective group work, such as coming unprepared, clowning around to disrupt the work of the group, aggressive behavior, blocking or nit-picking, or blaming others for poor group performance.
Managing Group Work

1. **Orient students to the task.**
   - Keep your instructions brief.
   - Use visual aids (maybe a task sheet) whenever feasible.
   - Involve students in a brief discussion on what they are about to experience.

2. **Delegate authority.**
   - Teach students cooperative norms in advance.
   - Let students know which group they are in and where that group shall meet.
   - Inform students who is to play what role and what specific behaviors are expected.
   - Give clear instructions for the task.
   - Orient students to the objectives of the task.

3. **Keep groups self-reliant.**
   - Let students make decisions on their own (even "wrong" ones).
   - Don't be available for solving all the problems.
   - Don't look like an available member of the group.

4. **Observe group process.**
   - Listen to group discussions from a discreet distance.
   - Identify students' strengths and weaknesses.
   - Attend to critical aspects of group dynamics.

5. **Stimulate or redirect groups if necessary.**
   - Reinforce rules, roles, and norms where groups are not operating properly.
   - Ask key questions to stimulate a group that is operating at too low a level.
   - Extend the group task if a group has finished before the rest of the class.

6. **Manage conflict between group members.**
   - Decide which conflict situations don't need your intervention.
   - Involve the group in coming up with alternative strategies for handling the conflict.
   - Take notes on a difficult student to prepare systematic intervention strategies.
   - Decide when to change the composition of groups.

7. **Wrap up the group work.**
   - Have short student presentations about the results of their group work.
   - Give specific feedback to groups and to individuals presenting for their groups.
   - Offer public (and sincere) praise for good work, especially to those who struggle.
   - Comment on what has been learned from this exercise.
   - Comment on the group process.

[adapted from E.G. Cohen (1986), Designing Groupwork, Chpt.7]
Evaluating Student Performance in Group Work

1. **Decide which group tasks need instructor feedback and which need a grade.**
   - Give individualized oral feedback.
   - Give individualized written feedback.
   - Give generic oral and/or written feedback (e.g., in combination with a model paper).
   - Give randomized feedback to select individuals or groups.

2. **Decide if groups should evaluate their own group process.**
   - Provide a self-assessment form.
   - Discuss the groups' self-assessments in class.
   - Evaluate the groups' self-assessments.

3. **Have groups evaluate each member's contribution.**
   - Provide a peer-assessment form.
   - Discuss the rationale for peer-assessment.
   - Design a grievance procedure for group members.
   - Negotiate differences in students' perceptions.

4. **Award group and/or individual grades.**
   - Compromise between rewarding individual and group efforts.
   - Make the group grade count moderately but significantly.
   - Use a "process folder" (with a list of each group member's personal contributions) to judge individual effort.

5. **Consider setting up "competitions" among groups...**
   - for lower-level, rote-learning tasks.
   - for awarding improvement scores to group members.
   - for awarding bonus points for group initiatives.

6. **Consider offering group test taking...**
   - in an oral format.
   - in a written format.

7. **Consider written contracts...**
   - based on a framework of instructor expectations.
   - based on negotiated criteria and procedures for student achievement.
   - resulting in an evaluation of students' self-assessment.
Helping Students Do the Readings

One of the top concerns faculty have about their students is how to get them to do the assigned readings. Linda Nilson (2010) provides references of the steady decline of both reading skills and reading activity by college students. “Just short of half the high school graduates in the United States do not have the reading skills that college-level work requires” (Kuh, a.o., 2005). “Estimated from their performance on pop quizzes, about 80 percent of the students normally did the readings in 1981, but only 20 percent of them did in 1997” (Burchfield & Sappington, 2000). Lack of compliance with reading assignments presents a profound problem for college faculty: They know that interactive classrooms provide the best learning environment and, yet, feel compelled to lecture when they see their students coming unprepared to engage in discussion and active learning activities.

Preparing students for mastery of an academic discipline without being able to count on them for doing their part in the learning process, may very well be the most critical problem in higher education. The following pages provide therefore practical tips on how to counteract this all-too-familiar practice. Most of the recommendations are excerpts from Nilson’s chapter 23 in her 2010 book Teaching at Its Best.

How to Equip and Induce Students to Do the Readings

Nilson starts with three reasons for students not doing the readings: “(1) They don’t want to (due to poor reading skills or compared to other activities), (2) they don’t think they have to, and (3) they really don’t have to—that is they face no dire consequences if they don’t.” Therefore, faculty should be changing their behavior when it comes to dealing with reading assignments:

1. **Stop Lecturing the Readings**
   If we continue to lecture the readings, students see no reason to invest their own time. Instead, we should be leading in-class activities on the material that make students practice and work with it.

2. **Teaching Students How to Read Academic Material**
   Many students don’t know how to properly read a textbook, a research article, a piece of literature, etc. We may have to tell them how each type of reading is organized and what they should be looking for.

3. **Give Students the Grand Tour**
   Make students bring their books to class and show them how the reading you use in your classroom is structured around specific purposes.

4. **Have Students Learn and Use Proven Reading Methods**
   You can find a host of websites recommending different reading techniques for different subjects. Choose one or two and have students practice those techniques in a classroom activity.

5. **Give Students a Purpose for Their Reading**
   Show students what to look for, e.g.: What’s the author’s position? What are the main supporting arguments? What evidence or data are given? And finally, how to evaluate the author’s case?

6. **Teach Students to Watch for Transitions and Verbal Signals**
   Demonstrate to students how to home in on verbal signposts that make logical connections between ideas, using *addition, cause-and-effect, comparison, contrast, emphasis*, and *illustration* words.

7. **Teach Students to Write Marginalia and to Highlight or Underline Wisely**
   Weimer (2002) teaches her students intelligent highlighting or underlining. She has them mark their readings as homework and then has a discussion about what they selected as important and why.

8. **Require Students to Review Their Readings**
Three types of short reading reviews include: Students write out a couple of summary sentences, draw a concept map, or engage in reflective writing about what they learned.

9. Assign Realistic Reading Loads
Avoid the common tendency to assign too much readings and ensure that the readings at the proper reading levels of most students (readability indexes are available on the web).

10. Sell the Readings
Each day or week, we can preview and promote the upcoming reading assignments, or even let students start reading key pieces in class.

11. Hold Students Accountable for the Readings
Most students are motivated by grades as well as by pride. Students decide about doing the readings based on whether they have homework, a quiz, or some public speaking activity in class.

Specific Tools for Holding Students Accountable
The tools below should be utilized on a regular or near-regular basis when readings are due. Students need to learn that they have to come to class prepared, not just occasionally, but always. It might be best to use a few of the below activity formats rather than just quizzes or just homework. The total grade for these activities must be significant, say 20 percent. Plan carefully how to keep the grading manageable. Since you are looking only for evidence of students having done the readings, you can give full credit to a good-faith effort. Using D2L’s Dropbox or quiztool makes the logistics of many small assignments less demanding.

1. Homework
There are lots of options, including creating an abstract or questions about the readings, answers to study questions, solutions to problems, applications of readings, etc.

2. Quizzes
Frequent, regular quizzes are more effective than randomly administered ones; short answer questions may be more effective than m/c quizzes. Any such accountability quizzes should focus only on the readings’ major points and should be easy to grade.

3. In-Class Written Exercises or Problem Solving
Such writing exercises can include: a one-minute paper, a reading-response mini-essay, an audience-directed paraphrase. A particularly motivating format is the “mind dump” which allows students 5-10 minutes to write everything they can remember from the readings. You collect the papers and return them to their authors at the beginning of tests.

4. Oral Performances
These include short discussion sessions or prepared presentations on the readings. Another example is asking students (or groups) to explain their results from a group discussion or problem solving activity to the class. The key to oral performances on readings is to cold-call on students in a way that looks or actually is random. However, the class climate needs to be prepared for this. Otherwise shy freshmen might feel too much pressure and eventually drop the class.

References:
Alternatives to Typical Research and Term Paper Assignments
(B. Gross Davis, Tools for Teaching, 1993)

Abstract for a professional journal: Distribute an article in your field with the abstract removed. Ask students to write the abstract. Then have students compare what they have written. Distribute the published abstract and ask students to write a short comparison of their version and the author’s.

Memo recommending action: Pose a controversial issue or perplexing problem and ask students to prepare a brief memo outlining a course of action and identifying their reasons for selecting that strategy.

Letter to the editor, op-ed piece: To give students a chance to explain technical, abstract, or highly specialized material to an audience of laypeople, have them write a letter to the editor on a topic relevant to the course material. Or have them respond to an editorial by taking the opposite position.

Letter of critique to the author of the textbook: Have students write a letter to the author(s) of the course textbook assessing the book’s strengths and weaknesses.

Microtheme: A microtheme is a very brief essay, two hundred words or less, in response to a narrowly focused question.
Example 1: “From the data in Table 1 (birthrates by ethnicity) extrapolate the significant changes that have occurred in the last 20 years and speculate on the causes of these changes.”
Example 2: “Suppose you put a big block of ice in a bucket and then fill the bucket with water until the water level is exactly even with the edge of the bucket. After several hours the ice has melted. Which of the following will happen? (a) The water level in the bucket will remain exactly the same; (b) the water level in the bucket will drop; (c) some water will overflow the sides of the bucket. Decide on your response and write a brief explanation to a classmate who doesn’t understand flotation.”

Notebook, journal, or reading log: Ask students to keep a journal of ideas, questions, or comments they have as they attend class and do the readings. Or have students daily write a half-page about their lives and activities. Collect the notebooks two or three times a semester.

Invented dialogue: Ask students to write conversations between real or imagined individuals in the same or different time periods (for example, Napoleon and Caesar discussing the difference between leadership skills needed to conquer an empire and those needed to maintain one).

In-class poster session: Students prepare and present a project to their classmates in a poster session format similar to sessions at professional and scientific conferences. Poster sessions are held on sequential days so students get a chance to present their projects and to view the work of other students. Projects, which must be approved in advance, can be traditional papers, research studies, or artistic presentations.
Questions for Collegial Peer Review
Of an Assignment Handout
John C. Bean. (2011)

- Is the assignment clear? How might a student misread the assignment and do something not anticipated?
- Does the assignment focus on an “intriguing problem”—either directly or implied?
- Does the assignment specify a rhetorical context for the writer (that is, a purpose, audience, and genre)?
- Are my grading criteria clear? Does my rubric adequately explain criteria to students? Is my rubric too sketchy or too detailed?
- If you were a student, would you find the assignment interesting and challenging?
- If you were a student, how difficult would this assignment be? How long do you think it would take?
- If the assignment is quite difficult, could it be preceded by a simpler “skill-building assignment” that would serve as scaffolding?
- To what extent does this assignment stimulate critical thinking? Does it cause students to wrestle with key concepts or key thinking skills in the course?
- Is the purpose of the assignment clear? Does it seem to tie into my course goals? Would it seem like busy work to some students?
- Are the mechanics of the assignment clear (due dates, expected length, single versus double spacing, manuscript form, documentation style, and so forth)?
- Is the process students should go through as explicit as possible?
- Should I build more “interactive components” into the assignment to keep students productively on task?

Some possibilities:
  - Class time for brainstorming
  - Submission of a thesis, title, and introduction
  - Mandatory conference
  - Annotated bibliography
  - Opportunities for rewriting

- How easy will it be for me to coach and grade this assignment? What problems can I anticipate?
Responding to Student Writing

Whether you dread or look forward to digging into that pile of student papers, responding to student writing is a time-consuming task that is an important part of the work we do to help our students to learn and to improve their skills as writers. This edition of the CTL Bulletin offers some tips for responding to student writing to help you to respond more efficiently and effectively and perhaps enjoy this task a little more.

General Tips

- **Start with a specific assignment**: Responding to student writing is easier to do when you start with an assignment that provides clear instructions and expectations for students. Provide specific information about what students are being asked to do and how they will be evaluated. Include information about what you comment on and if they will have the opportunity (or be required) to revise their work.

- **Don’t comment on dead drafts**: Research indicates that students do not internalize comments made on final, or dead, drafts and apply them to future writing assignments. Limit dead draft comments to explaining the assignment grade rather than aiming to improve writing skills. These comments are more effective when they are made on drafts that students will be asked to revise or rewrite.

- **Write legibly**: If instructor comments are to have any chance of being read by students, legible handwriting is the first condition for that to happen. If you have horrible handwriting or don’t wish to shrink your writing to fit within margins, think about responding electronically. Using electronic files rather than hard copies allows you to type your responses (e.g., with MS-Word’s “Insert Comments” function or by composing comments within the document in a different font and color) ensuring that they are legible and allowing you to use as much space as you need. Yet another technique involves creating audio comments for students (see Sipple & Sommers reference and link below).

- **Don’t read too many papers at once**: It is better to read a few papers at a time to avoid tiring out and slipping into a less stringent or more rigid commenting and rating routine. After a break, it helps going back to the last paper or two you read before in order to make sure you remain consistent.

- **Have students self-evaluate**: The purpose of giving writing assignments is not just to assign grades but to help students become more self-reflective learners. The best way to do this is by challenging them to become critics of their own work. Give them the criteria you use to assess their work and ask them to apply these criteria before they hand in a paper. Faculty have been successful with this approach by giving students scoring sheets or rubrics that clearly express the expectations for a good paper. (Another CTL Bulletin on how to use such tools will follow later this semester!)

- **Invite students to meet with you**: Make a specific invitation to students to come to you for one-on-one conferences to discuss your comments. These can be brief sessions in which you can explain your comments and discuss any questions the students have. This kind of dialogue is particularly helpful for working on higher-order comments such as the ideas and organization.

Tips for Composing Your Comments

- **Phrase comments as support**: Sarcastic or impatient comments rarely lead to improved student learning. Phrase your criticism as questions or suggestions. Indicate major errors of logic, confusion, or organization, but don’t comment on every point that strikes you as
problematic. Be supportive in your comments to invite dialogue with your students and encourage them to improve as writers.

- **Avoid vague one-word comments:** Given time and space constraints, we are often tempted to react with comments such as “awkward,” “unclear,” and “vague.” Students are often just as confused by such comments as you are by their prose. Be specific about what needs clarification or improvement.

- **Identify strengths and main weaknesses:** Your feedback should help students focus on the most important aspects of their paper, i.e. what it does well and what needs improvement. Those comments should be most prominent and not be buried under lots of detail on grammar, style, and spelling.

- **Avoid over (and under-) marking:** Don’t correct every error and respond to every idea. Treat the student paper as a “teachable moment” that allows you to illustrate the two or three major areas where increased student effort would benefit the most. On the other hand, don’t score a paper without having justified through your comments why the student deserves a particular grade.

- **Focus on errors that indicate cognitive confusion:** Comments in the margins should focus on sentences in which the writing confuses the reader and leads to ambiguity or complete lack of understanding. Avoid commenting on issues related to personal writing style or surface-level issues that do not impede understanding.

- **Write an end comment:** After making marks within the paper or in the margins, compose a short end comment. Begin this comment with a comment related to your interest in the student's ideas or a positive comment on some aspect of the student's work. Conclude the end comment with specific points for revision (e.g., a “next steps” section) that you expect the student to make.

### Dealing With Grammar, Punctuation, and Spelling Errors

- **Don't worry about every error:** Many of the errors that students make in their writing are actually mistakes. They are the result of students not carefully revising and proofreading their work. Many of these errors disappear through multiple drafts without the errors indicated on initial drafts.

- **Don't correct student errors:** Correcting errors on student papers can actually do more harm. Students become overwhelmed by the number of corrections. Students can also be distracted by these surface errors and subsequently do not work on higher-order issues such as organization and development of ideas. Correcting or indicating every error also prevents students from gaining the practice to find their own errors.

- **Resist the urge to identify every error:** Research suggests that students can find their own errors and can improve their grammar, punctuation, and spelling skills if they are required to locate and correct these errors on their own. Rather than correcting or identifying each sentence error, use a mark in the margin to indicate to students that the sentence contains problems or mark a few errors and make a note that other similar errors exist throughout the paper.

### References & Sources

www.users.muohio.edu/sommerjd/ Retrieved from the Web on 2/13/08
General Principles for
Writing Comments on Student Papers

General Procedures

1. Comment first on ideas and organization: encourage students to solve higher-order problems before turning to lower-order problems (such as grammar and spelling).
2. Whenever possible, make positive comments. Praise strong points.
3. Try to write an end comment that reveals your interest in the student's ideas. Begin the end comment with an emphasis on good points and then move to specific recommendations for improvement.
4. Avoid over-commenting. Particularly avoid emphasizing lower-order concerns until you are satisfied with higher-order concerns. If writing lacks focus or a thesis statement and a plan for supporting it, it is premature to worry about paragraphs or sentence structure.
5. As you read the essay, indicate your reaction to specific passages. Particularly comment on the ideas, raising queries and making suggestions on how the argument could be improved. Praise parts that you like.
6. Resist the urge to circle misspellings, punctuation errors, and so forth. Research suggests that students will improve more quickly if they are required to find and correct their own errors.

Marking for Ideas

7. The end comment should summarize your assessment of the strengths and weaknesses of the writer's ideas. Challenge writers to deepen and complicate their thought at a level appropriate to their intellectual development.

Marking for Organization

8. Use marginal comments to indicate places where structure becomes confusing.
9. Praise good titles, good thesis statements, good transitions, and so forth.

Marking for Sentence Structure

10. Although I recommend against marking or circling sentence errors, you might consider placing X’s in the margins where they occur. When you return the papers, either withhold a grade or lower the grade until students who made substantial numbers of errors have reedited their work. Most students should be able to find and fix a majority of their errors. Students with severe sentence-level problems may need to seek personal tutoring.
11. Note places where sentence-level problems cause genuine unclarity (as opposed to annoyance). Marginal comments such as "Tangled sentence" or "This passage is garbled" help the writer see where problems occur.

These principles were taken from John Bean's book "Engaging Ideas: The Professors Guide to Integrating Writing, Critical Thinking, and Active Learning in the Classroom.” San Francisco: Jossey-Bass. 1996.
Assessing Learning Progress

There is more to the assessment of learning than assigning grades. The following classroom assessment techniques (CATs) are not designed for grading purposes but to provide feedback to instructors and students alike. In addition to their value for determining how well students are learning what their instructors are teaching, CATs also provide more variation in teaching and help students become more actively involved in class. The activities can be done individually or in pairs or small groups. In some cases, it may even be useful to first have students work on them individually and then get two or more students together to go over them again. These techniques were compiled from Angelo & Cross’ 1993 book “Classroom Assessment Techniques” and notes from L. Nilson’s “Teaching at its Best” about Angelo’s research.

Four-dimensional assessment:

It is helpful to view students’ learning as four-dimensional:
1. **Declarative Learning** is “learning what.” Learning the facts and principles of a given field.
2. **Procedural Learning** is “learning how” to do something. Its emphasis is application.
3. **Conditional Learning** is “learning when and where” to apply the acquired declarative and procedural knowledge.
4. **Reflective Learning** is “learning why” and engages students in analysis, synthesis, and evaluation. It directs their attention to their beliefs, values, and motives for learning about a particular topic.

The following classroom assessment techniques (CATs) are loosely grouped under these four dimensions of learning, although most of the techniques might be used for assessing more than one dimension.

**1. Declarative Learning CATs**

- **Minute Paper**

  To use the Minute Paper, an instructor stops class two or three minutes early and asks students to respond briefly to some variation on the following two questions: “What was the most important thing you learned during this class?” and “What important question remains unanswered?” Students then write their responses on index cards or half-sheets of scrap paper and hand them in. At the beginning of the next class, students receive the faculty’s feedback on their Minute Papers, which helps them learn how experts in a given discipline distinguish the major points from the details. The Minute Paper also ensures that students’ questions will be raised, and in many cases answered, in time to facilitate further learning. A variation of this technique is the Muddiest Point Paper, where students are asked to write down what was the muddiest point in, say, today’s lecture, discussion, homework assignment, film, etc.

- **Empty Outlines**

  The instructor provides students with an empty or partially completed outline of an in-class presentation or homework assignment and gives them a limited amount of time to fill in the blank spaces. It’s important to make a conscious decision about the level on which to focus the Empty Outline and, thus, the students’ attention. Should students supply the main topics, the main subtopics, or the supporting details? When students are to complete the form without any notes or other information, the number of items the Empty Outline elicits should be fewer than ten. If students have a great deal of difficulty completing the outline, try providing the class with a jumbled list of headings and subheadings from which students can structure the outline. Let students know how much time they will have to complete the outlines and the kinds of responses you prefer--words, short phrases, or brief sentences.
Memory Matrix

The Memory Matrix assesses students’ recall of important course content and their skill at quickly organizing that information into categories provided by the instructor. The Memory Matrix is simply a two-dimensional diagram, a rectangle divided into rows and columns used to organize information and illustrate relationships. The row and column headings are given, but the cells are left empty. For example, in a Biology course, you may put the various digestive organs (stomach, liver, gall bladder, etc.) in the rows, and in the columns ask to fill in the Structure, Functions, and Digestive Processes of those organs. In an art history class, you may create a Memory Matrix that asks students to list major artists according to important movements in art history (Neoclassicism, Impressionism, Postimpressionism, Expressionism, etc.) in the matrix-rows and the countries the artists were associated with in the matrix-columns. Set a realistic lower limit for the number of items you expect students to insert in each cell.

2. Procedural Learning CATs

Pro and Con Grid

The Pro and Con Grid gives faculty a quick overview of a class’s analysis of the pros and cons (in humanities and social science courses), costs and benefits (in business or engineering courses), or advantages and disadvantages (in math and science courses) of an issue of mutual concern. This assessment forces students to go beyond their first reactions, to search for at least two sides to the issue in question, and to weigh the value of competing claims. Focus on a decision, a judgment, a dilemma, or an issue that has teaching and learning implications for your students. Write out a prompt that will elicit thoughtful pros and cons in relation to this issue or dilemma. You may wish to indicate a specific point of view that students should adopt in coming up with their lists. Finally, let students know how many pros and cons you expect and how they are to be expressed.

Concept Maps

Concept Maps are drawings or diagrams showing the mental connections that students make between a major concept the instructor focuses on and other concepts they have learned. An analogy would be to ask students to draw a map of the area in a twenty-mile radius around Boston, putting in only the features they regard as most important. By literally drawing the connections they make among concepts, students gain a better understanding of how key elements in a course are linked. This technique is useful in any course with a high theoretical content, but also in courses where students must learn large numbers of facts and principles. The procedure involves: (1) Selecting the concept you wish to use as the stimulus or starting point for the Concept Map. (2) Have students brainstorm for a few minutes (individually or in groups), writing down terms and short phrases closely related to the stimulus. (3) Students may then draw a Concept Map roughly resembling a wheel with spokes, with the focus concept at the hub. (4) After they have sketched in the primary associations, they add secondary and even tertiary levels of association, if appropriate. (5) Finally, they determine the ways in which the various concepts are related to each other and write those types of relations on the lines connecting the concepts.

Application Cards

After students have heard or read about an important principle, generalization, theory, or procedure, the instructor hands out index cards and asks students to write down at least one possible, real-world application for what they have just learned. This technique is often used in the social sciences, pre-professional studies, and vocational and technical education. The instructor identifies an important—and clearly applicable—principle, theory, generalization, or procedure and decides how many applications he or she will ask for (typically no more than three) and how much time will be allowed for the assessment (maybe three to five minutes). Students should be reminded that the point is to come up with their own “fresh” applications, not to repeat applications they have heard in class or read in the text.
Using Rubrics to Assess Student Work

Rubrics have increasingly become a tool for grading complex work in higher education. Many faculty, especially in Education, have come to like them; some faculty seem mildly amused about them; and others just absolutely can’t stand them because they feel rubrics pretend to quantify expert judgment into neat algorithms. Here is an introduction to scoring rubrics and their benefits to the skeptics among you and to those still unfamiliar with them. It addresses two main points:

1. What are the parts of a rubric, and how are they used for scoring assignments?
2. What are rubrics’ benefits for the instructor and the students?

The Mechanics of a Rubric

First some distinctions are in order: There are Holistic Rubrics, and then there are Analytical Trait Rubrics; there are also Generic Rubrics, and there are Task-Specific Rubrics. The distinctions relate to the task at hand: Holistic rubrics allow you to judge simple products or performances (such as response to an essay question) without going into much detail. Analytical trait rubrics are much more precise and distinguish a variety of dimensions on which you evaluate a student’s performance (e.g. on a term paper). Generic rubrics are used for any number of similar performances, such as the quality of writing across papers in more than one course or even more than one discipline; NEIU’s Gen-Ed Assessment rubrics fall into this category. Task-specific rubrics are created for a single task in a course. They specifically list what the instructor wants to see in a particular assignment, so that scoring is quick and unproblematic. This article focuses on analytical trait rubrics because, while they take more time to develop and apply, their educational value is superior to that of the other types of rubrics.

Analytical Trait Rubrics consist of four elements, the most important one being the criteria into which we break quality performance on a given task. Take NEIU’s Critical Thinking Rubric for General Education assessment (see two pages down). Six criteria characterize what we are looking for in a critical thinker who needs to be able to: (1) Identify and explain issues, (2) Recognize stakeholders and contexts, (3) Frame own and others’ perspectives, (4) Identify and evaluate assumptions, (5) Identify and evaluate evidence, and (6) Identify and evaluate implications. Of course, not all assignments require all six criteria; some may just focus on two or three of these.

Once those criteria have been identified, one needs to determine how many levels of proficiency on each one of these criteria should be used to arrive at meaningful performance distinctions within the group of students one wants to assess. In many cases, four proficiency levels should be enough: High Proficiency, Proficiency, Some Proficiency, No or Limited Proficiency.

Element 3 of a rubric deals with the actual scores assigned to each criterion and the way the various scores are translated into grades. Depending on the purpose of a given assignment, some criteria may be weighted more heavily than others, especially if only two or three criteria are selected for an assignment. For example, early on in a semester, one may want to
emphasize the importance of clearly *identifying the issues* in a complex problem scenario more heavily than *identifying all the implications* derived from this problem. Therefore the former criterion is given twice the weight (and twice the number of possible points) that the latter criterion receives. The more criteria are used for an assignment, the less meaningful it is to assign different weights to each criterion.

Many people stop at this point in their rubric design and leave out the fourth element of an analytical trait rubric: the description of what the students’ performance would look like for each criterion at each proficiency level. Admittedly, such descriptions are quite difficult to construct. They require considerable experience with many students and their typical abilities. It may be best to start with what characteristics one would expect from a “proficient” student (not an exceptional and not a below-average one) on any given criterion. Being able to describe in a sentence or two what typically characterizes performance at a high, medium, and low proficiency level is what makes a rubric more than a grading tool. It turns it into a teaching tool.

**Benefits of Rubrics**

Arter and McTighe in their 2001 book *Scoring Rubrics in the Classroom* list three major goals and benefits of scoring rubrics:

1. They help clarify the targets of instruction, especially those that are complex and hard to define
2. They provide valid and reliable assessment of student learning on these same complex and hard-to-assess student outcomes
3. They improve student motivation and achievement by helping students understand the nature of quality for performances and products. (p. ix)

Experts know a good performance when they see one. Because expertise is usually connected with skills that have become tacit sometime in the past, it can be difficult for an expert to explain the components that contribute to excellent performance. Creating or adapting rubrics is a good exercise for a faculty member to once again uncover what has become tacit.

Breaking a complex performance into several steps or components helps faculty clarify what needs to be made explicit, while it helps students recognize how to make a complex task more manageable. Most faculty using well-designed rubrics agree that this has dramatically reduced student complaints about grading because performance criteria were communicated upfront. In fact, one creative application is to teach students how to use a rubric to score their own papers before they hand them in so they themselves develop the critical judgment for identifying the strengths and weaknesses of their own work. If an analytical trait rubric—such as NEIU’s Critical Thinking Rubric—is utilized repeatedly in the same or in different courses, students will eventually internalize the criteria with repeated applications across different contexts.

The next page presents NEIU’s Critical Thinking Rubric.
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Quality</th>
<th>No/Limited Proficiency (1 point)</th>
<th>Some Proficiency (2 points)</th>
<th>Proficiency (3 points)</th>
<th>High Proficiency (4 points)</th>
<th>Rating (1,2,3,4pts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Identifies &amp; explains ISSUES</td>
<td></td>
<td>Fails to identify, summarize, or explain the main issue. (AND/OR) Represents the issues inaccurately or inappropriately.</td>
<td>Identifies main issues but does not summarize or explain them clearly or sufficiently.</td>
<td>Identifies, summarizes, and briefly explains the main issues, but fails to mention any implicit issues.</td>
<td>Clearly identifies, summarizes, and explains main issues and identifies embedded or implicit issues, addressing their relationships to each other.</td>
<td></td>
</tr>
<tr>
<td>2. Recognizes stakeholders and CONTEXTS (i.e., cultural/social, educational, technological, political, scientific, economic, ethical, personal experience)</td>
<td></td>
<td>Fails to accurately identify and explain any empirical or theoretical contexts for the issues. (OR) Presents problems as having no connections to other conditions or contexts.</td>
<td>Shows some general understanding of the influences of empirical and theoretical contexts on stakeholders, but does not identify any specific ones.</td>
<td>Correctly identifies the empirical and most theoretical contexts relevant to the main stakeholders.</td>
<td>Correctly identifies the empirical and theoretical contexts relevant to the main stakeholders, and identifies minor stakeholders and contexts showing the tensions or conflicts of interest among them.</td>
<td></td>
</tr>
<tr>
<td>3. Frames personal responses and acknowledges other PERSPECTIVES</td>
<td></td>
<td>Fails to formulate a personal point of view and fails to consider other perspectives.</td>
<td>Formulates a vague personal point of view and/or vague alternative points of view.</td>
<td>Formulates a clear personal point of view and considers some other perspectives.</td>
<td>Formulates a clear personal point of view and addresses relevant perspectives successfully.</td>
<td></td>
</tr>
<tr>
<td>4. Identifies &amp; evaluates ASSUMPTIONS</td>
<td></td>
<td>Fails to identify and evaluate any of the important assumptions behind the claims and recommendations made.</td>
<td>Identifies some of the most important assumptions, but does not evaluate them for plausibility or clarity.</td>
<td>Identifies and briefly evaluates the important assumptions.</td>
<td>Identifies and carefully evaluates the important assumptions.</td>
<td></td>
</tr>
<tr>
<td>5. Identifies &amp; evaluates EVIDENCE</td>
<td></td>
<td>Fails to correctly identify data and information that counts as evidence for truth-claims (AND/OR) fails to evaluate its credibility.</td>
<td>Correctly identifies data and information that counts as evidence but fails to highlight its relative importance and/or link them with theoretical concepts and frameworks.</td>
<td>Correctly identifies important evidence, highlights its relative importance, and makes an attempt at linking evidence to theoretical concepts and frameworks.</td>
<td>Correctly identifies and rigorously evaluates important evidence, successfully linking the evidence to theoretical concepts and frameworks while providing new or alternative data or information for consideration.</td>
<td></td>
</tr>
<tr>
<td>6. Identifies &amp; evaluates IMPLICATIONS (&quot;What does this mean?&quot;)</td>
<td></td>
<td>Fails to identify implications, conclusions, or consequences of the issue.</td>
<td>Suggests some implications, conclusions, or consequences of the issue.</td>
<td>Identifies and briefly evaluates many implications, conclusions, or consequences of the issue.</td>
<td>Identifies and thoroughly evaluates implications, conclusions, or consequences of the issue.</td>
<td></td>
</tr>
</tbody>
</table>

* Adapted from Washington State University's Critical Thinking Project
Videos for Lecturing, Discussions, and Group Work

8. Video Clips from Tom Angelo Presentation:
   a. What are Lectures Good For? (7:33)
      https://www.youtube.com/watch?v=Z0y9-aDVHwY
   b. Attention Span (5:46)
      https://www.youtube.com/watch?v=rYHWzPidMmo&index=12&list=PLA7BDB6CF358D3B7F
   c. Deep Learning (6:20)
      https://www.youtube.com/watch?v=Rja4nrmlhDg
   d. Social Engagement (2:04)
      https://www.youtube.com/watch?v=Hr8qLknWJL0&index=8&list=PLA7BDB6CF358D3B7F
   e. Attendance and Assessment (4:57)
      https://www.youtube.com/watch?v=cjZ0i6Hjgoo&index=9&list=PLA7BDB6CF358D3B7F

12. Video: Strategies for Student-Centered Discussion:
   An English teacher in a high school senior class uses her own lesson to illustrate what makes for a good class discussion. Go to:
   https://www.youtube.com/watch?v=zxTuPVTayOI
   (Because the whole lesson is condensed—quite professionally—into a 7-minute video, it’s not easy to follow all the points the teacher makes. But you can rewind it and watch it repeatedly)

18. Video: Effective Group Work in the College Classroom
   This visualizes some of the points the Lieberg chapter makes, and introduces helpful advice from experienced faculty as well as comments from students about what group work does for them. Go to:
   https://www.youtube.com/watch?v=t-_zW4wUI5w