

# “How am I doing?” Early feedback from instructors to students and from students to instructors

### **Why Use Diagnostic and Early Feedback Techniques?**

Drop deadlines at UC Berkeley have changed for Fall 2005—the end of the fifth week of classes for most courses, and at the end of the second week for selected impacted courses. Providing some diagnostic and early feedback techniques will allow your students to assess their ability to succeed in your class early enough so they can decide whether to stay in or drop your course. Regardless of the drop deadlines, **students want to know how they’re doing**, and do not want to wait for a first midterm to find out.

In addition to providing students with valuable information, assessing your students’ progress early in the semester enables you to make early or mid-course revisions in your teaching or the nature of the material while there is still time to improve students’ learning and their subsequent performance on tests and final exams. (Relying only on end-of-semester course evaluations may help the next set of students, but not the ones in your current class.)

Therefore, assessment techniques used early in the course can serve two purposes: feedback from you to your students about how they’re doing in the course and from students to you about how they feel the course is “going.” In addition to helping students make informed decisions about courses, early feedback techniques should function as a continuing dialogue between students and you about the teaching-learning process as a course progresses.

**When you are providing feedback to students on their progress, be sure to respond promptly and with a response that is detailed enough to be helpful.**

Besides formal quizzes, tests, and final exams, there are a number of ways to find out how well your students are understanding the material in your course. Below is a selection of assessment techniques that can be used for classes in almost any discipline. Before deciding on a particular technique, you should decide whether it’s right for your class and right for the time of the semester. Before implementing any technique, be sure you have identified what it is you hope to learn from using it.

### **Feedback from instructors to students: “How well are you doing so far in this course?”**

**Administer a diagnostic questionnaire or quiz at the beginning of the semester.** These tools can elicit from students how much they know about the subject and whether they are prepared to tackle the course. These tools can also help you learn more about the general background and skill level of your students so that you can make early adaptations to the organization and/or presentation of course materials. Diagnostic questionnaires and quizzes are usually not given for a grade.

For example, the Mathematics Department at Berkeley typically gives diagnostic tests to students at the beginning of every semester. Faculty in various departments also give tests; for example, Professor Caroline Kane in Molecular and Cell Biology asks students in MCB 110L a short series of questions about molecular genetics to assess the knowledge they bring to the course; Professor Robert Beatty, also in MCB, asks each student to list previous science courses taken; Professor Michael O’Hare in the Goldman School of Public Policy asks students in one of his courses about their various approaches to uncertainty and risk to see what level of thinking they bring to the class.

For more examples of first day questionnaires and quizzes and other diagnostic ideas from Berkeley faculty, consult: [http://teaching.berkeley.edu/first\\_day\\_questionnaire.html](http://teaching.berkeley.edu/first_day_questionnaire.html).

**Give early quizzes.** You can give graded quizzes to students early in the semester, even in the first week. This gives students a sense of their performance to date and where they may need additional help.

**Meet with students individually in office hours to discuss results of diagnostic quizzes.** Talking individually with students, if possible, is an important way to let them know how well they are doing in a course and whether their diagnostic or quiz results indicate they are prepared for the course.

**Meet with all students individually, if possible, early in the semester.** In some courses, students are given an assignment for the office hours, e.g., reciting the first fifteen lines of the General Prologue of the *Canterbury Tales*, or identifying African capital cities. This can provide substance for a first meeting.

**Ask students to list key concepts or ideas.** At the conclusion of a series of lectures or readings about a particular topic, ask students to write short phrases summarizing the three to five key concepts or main ideas about the topic. You can review these lists to verify whether your students have grasped the important ideas. Students can also use their lists to review for exams. You may want to initiate a class discussion that asks students to compare and contrast their entries or define and apply the concepts.

**Have students briefly paraphrase a lecture or a reading assignment, or to restate the significance of a point you have just made.** At the beginning of the class period, you can request oral or written paraphrases and then judge whether students have understood the assigned reading or the last lecture. Or you can request paraphrases at the end of the period to check on whether students understood the material you presented. Finally, you can stop after a particularly important point and ask for volunteers who can restate the significance of the point.

**Ask students to provide a closing summary.** At the end of a class session, ask students, individually or in pairs, to write a very brief summary of the main ideas you covered in class. Have students turn in their summaries—making sure they understand this is not a quiz. Or at the beginning of class, ask students to summarize the main ideas from the previous class or the reading and to write one question they expect to be answered during class.

**Ask students to write a "minute paper."** In the late 1970s, Berkeley physics professor Charles Schwartz developed this technique, which can be used in any discipline. At the end of a class period, ask your students to write for a minute or two on the following two questions: "What is the most significant thing you learned today?" and "What question is uppermost in your mind at the end of today's class?" The resulting minute papers, submitted anonymously, will enable you to evaluate how well you have conveyed the material and how to structure topics for the next class meeting. A Harvard statistics professor, Frederick Mosteller, asked students, "What was the 'muddiest point' in my lecture today?" Stanford History professor Estelle Freedman reviews students' most common "misunderstandings" from weekly lectures and uses these to guide her lecture revisions for the next year.

**Ask students to write a "microtheme."** This is a variation on the "minute paper," an essay so short that it can fit on a single 5x8 notecard. It can be graded (as long as you set criteria in advance) or not. Using simple rating scales, instructors can grade large numbers of microthemes in a short time. Rather than grading all submissions, some instructors duplicate some of the best to hand out for class discussion. Some suggestions for microtheme assignments:

**SUMMARY MICROTHEME.** Summarizing an article in an extremely short space requires students to use their best reading comprehension skills and their ability to determine main and subordinating ideas while eliminating supporting details. This exercise also forces the student to report the material and not to respond to it. Thus, summary microthemes are particularly beneficial in courses where conflicting world views clash—sociology, political science, and so on.

THESIS SUPPORT MICROTHEME. In this microtheme, students must choose one of the alternative propositions for an issue, often for which there is no "correct" or clear answer. These force students to muster fact in support of their arguments. Two examples:

- Random portfolio diversification (is/is not) more reliable than selective diversification.
- Mutual fund performance (is/is not) superior to the average investor's performance.

DATA-PROVIDED MICROTHEME. In some respects, this is the opposite of the thesis-support microtheme. Students must examine data, either from a list of facts or from a chart or table. The topic can be specific, such as "Based on the facts below, is the energy crisis real?" or more general, such as "Your task is to explain clearly any changes in death rates and highlight what you think is significant about the data. Imagine an audience who have never seen this table. Be engaging, informative, and accurate."

QUANDARY-POSING MICROTHEME. Studies have shown that college students can gain mastery of a concept if a Socratic dialogue technique is used to help them to articulate a concept in their own words. Example from introductory physics:

Suppose that you are Dr. Science. Readers of *Practical Science* write to you and you answer them "Dear Abby"-style in the magazine. You have received the following letter:

*Dear Dr. Science: You've got to help me with my girlfriend. We were at a baseball game and someone hit a pop fly. My girlfriend said that when the ball stopped in midair just before it started back down, its velocity was zero, but its acceleration was not zero. I said she was stupid. If something isn't moving at all, how could it have any acceleration? Ever since we started this argument, she won't kiss me, and said she wouldn't even believe Einstein unless he could explain it clearly. Sincerely, Baseball Blues.*

Your task is to respond to this letter as clearly as possible. Avoid physics terms unless you explain them clearly.

Second example from introductory physics:

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. The ice of course is now floating in the water. Now we will wait for several hours for the ice to melt. Which of the following will occur? (Neglect evaporation.)

1. The water level in the bucket will remain the same.
2. The water level in the bucket will drop.
3. Some water will overflow the sides of the bucket.

Your task is to explain your answer in writing to a classmate who doesn't understand and who is arguing for what you consider to be the wrong answer. Explain your answer so clearly that it serves as a little textbook that will explain the physics principles involved. Your theme will be judged not solely on whether you have the right answer, but also on whether you explain it enough to teach a classmate.

Adapted from "Microtheme Strategies for Developing Cognitive Skills," Bean et al., 1982.

**Make use of technology.** At Berkeley, thanks to bSpace and the online evaluation project, you will be able to administer online quick feedback instruments. In the meantime, you can use a free online

instrument, zoomerang (zoomerang.com) to develop your own surveys. You can, for instance, create your own version of the Stanford "Lecture Gauge," an online survey instrument.

The Lecture Gauge is a good way for you to get immediate feedback on what students retained from a lecture.\* Directly after a lecture, students provide feedback about their experience of the lecture.

Students go to a web page and record their experience of the lecture, as either too challenging, just right, or not challenging enough. Students also write what they felt was the most important point of the lecture, as well as the least clear part of the lecture (sometimes called the "muddiest point"). The web page records their responses anonymously.

As the students in the course fill out this quick survey, you can go to another page (to which you have sole access) and get an immediate sense of how the class responded to the lecture. This feedback includes aggregate information about the perceived level of difficulty of the lecture, as well as all students' responses about the most important points and the most confusing or difficult parts of the lecture.

\*The Lecture Gauge is adapted from two standard classroom assessment techniques: the minute paper and the muddiest point. This description is from the Center for Teaching and Learning, Stanford University, <http://ctl.stanford.edu/>.

As with other uses of technology, with the Lecture Gauge or some similar survey tool, you might want to make a certain number of responses throughout the semester a course requirement.

**Encourage graduate student instructors to give you comments about the course.** If you have GSIs, they can be a valuable source of information on how the course is progressing and whether students are learning the material. Most student complaints eventually find their way to a GSI. Ask GSIs to give you brief written reports on any problems the students may be having in the course (for example, have them list the one or two things that caused students the most difficulty in class last week).

**Encourage students to form study groups.** Invite representatives of the study groups to meet with you to discuss any difficulties with the subject matter. Study groups provide students with opportunities to learn from one another, and some students may find it easier to seek assistance as a group rather than as individuals. While this technique seems more workable in small classes, it in fact can be more effective in large classes where students may feel less connection with their peers. If you form study groups in class, it's important to help all students feel included; for more information about techniques for inclusion, see [http://teaching.berkeley.edu/classroom\\_groups.html](http://teaching.berkeley.edu/classroom_groups.html).

**Consider additional ways to assess whether students are learning the course content.** These have been provided by the faculty of the College Writing Programs at Berkeley.

- After you've handed out a homework assignment, ask students to recap the assignment orally.
- Ask students to post responses to readings on Blackboard.
- Ask students to generate two or three study/discussion questions. Either bring to class or post on Blackboard. Then follow up with a discussion about what you're seeing in the questions.
- Have small groups discuss a reading or portion of a text, and then present their conclusions to the class.
- Arrange students in small groups with a set of questions to answer/discuss, then listen to their discussion to find out where they are having difficulties.
- Assign students to provide short oral summaries of the previous class topic.
- Develop a "Taboo"-like game: e.g., in a writing class, the player has to get her team to say "fragment" but cannot use the following words: sentence, run-together, short, incomplete, subject, verb.

## **Feedback from students to instructors: “How is the course going for you?”**

Evaluations at the end of the semester come too late to benefit the students enrolled in that particular course. Formative evaluation techniques that take place during the semester can give you valuable information about how well students are learning. Given this information, you can make mid-course corrections to improve student learning. Below are examples of techniques that can be used.

**Designate student class representatives.** For large enrollment courses, designated students in each class solicit informal oral feedback from classmates and meet with the instructor regularly to give feedback on the course. This technique has been successfully implemented in the Haas School of Business at Berkeley.

**Ask for student opinions about the course.** During the last five minutes of class, you can distribute a very brief questionnaire about the course or pass out blank index cards and ask students to answer one or two questions about what is going well and what could be changed to improve their learning. These questions can be general, such as “Do you have any suggestions for improvement?” or be directed toward specific aspects of the course. You should leave the room while students are completing this task; have a student volunteer collect the questionnaires or cards and return them to you. Another technique is to set up an email account where students can offer comments throughout the semester or use the feedback tool in course management systems such as bSpace, Blackboard, or WebCT.

**Have someone else ask for opinions about the course.** Arrange for a colleague or staff member from the Office of Educational Development to conduct an evaluation with your students during the last few minutes of class. After you leave, the students are asked to cluster into groups of five or six to: select a spokesperson who writes down the groups’ comments; name something in the class that they have found helpful; name something in their class they would like to see changed; and suggest how the course could be improved. The evaluator then asks each spokesperson to report on the group’s findings, and summarizes for the class the points of consensus and disagreement. The evaluator then collects written comments and prepares a summary for you.

**Administer a “midsemester evaluation.”** The campus now has available a short online questionnaire that you can administer in the middle of the semester. You may download a generic midsemester evaluation from <<http://teaching.berkeley.edu/teaching.html>> which you can distribute in class and summarize yourself. Or you can contact Steve Tollefson, [tollef@berkeley.edu](mailto:tollef@berkeley.edu), about participating in the campus’ continuing pilot of an online early feedback questionnaire in which the survey will be distributed online and summarized for you.

### **Midsemester Evaluations: What Do I Do with the Information?**

A midsemester evaluation is good in and of itself—it gives you feedback and reminds the students that you are interested in what and how they are learning. However, you will also want to report back to your students on the evaluation itself: it lets students know that you have considered what they have said; it helps students to see that not everyone in the course may feel the same way they do; and it reinforces for students that filling out evaluation forms thoughtfully is appreciated and valued. Here are some tips on responding to students’ feedback.

**Respond quickly to students’ feedback.** Ideally, you will want to respond to your students’ comments as soon as feasible. So schedule mid-semester activities at those times during the term when you will have the opportunity to immediately review the class’s comments.

**Consider carefully what students say.** First, look over the positive things your students have said about the course. This is important because it is too easy to get discouraged by negative comments. Then read their suggestions for improvement and group them into three categories:

- Those you can change this semester (for example, the turnaround time on homework assignments)
- Those that must wait until the next time the course is offered (for example, the textbook)
- Those that you either cannot or, for pedagogical reasons, will not change (for example, the number of quizzes or tests)

You may want to ask a colleague or a teaching consultant from the Office of Educational Development to help you identify options for making changes.

**Let students know what, if anything, will change as a result of their feedback.** Thank your students for their comments and invite their ongoing participation in helping you improve the course. Students appreciate knowing that you have carefully considered what they have said. Clarify any confusions or misunderstandings about your goals and their expectations. Then give a brief account of which of their suggestions you will act upon this term, which must wait until the course is next offered, and which you will not act upon and why. Let students know what they can do as well. For example, if students report that they are often confused, invite them to ask questions more often. Keep your tone and attitude neutral; avoid being defensive, indignant, or unduly apologetic.

**Select a method for responding to student feedback that works for you.** Most faculty simply discuss the results with the class as a whole. At least one faculty member provides a handout of salient responses to questions, deleting those that are clearly idiosyncratic (e.g., if there is just one comment that says “this classroom is too hot”). Another faculty member does a short PowerPoint presentation, complete with graphs and charts of responses. Other faculty post summary responses on Blackboard so students can see what others have written. Whichever method you select, the most important factor in responding is to do so thoughtfully, and in a timely fashion.

### **Where do I get more information about early feedback?**

For more help on early feedback techniques or other aspects of your teaching, contact Steve Tollefson of the Office of Educational Development, 642-6392, [tollef@berkeley.edu](mailto:tollef@berkeley.edu). Or go to [teaching.berkeley.edu](http://teaching.berkeley.edu).

### **References**

- Angelo, Thomas A. & Cross, K. Patricia. (1993). *Classroom Assessment Techniques*. San Francisco: Jossey-Bass.
- Bean, John C., Drenk, Dean, & Lee, F.D. "Microtheme Strategies for Developing Cognitive Skills." In *Teaching Writing in All Disciplines*, Number 12 (December 1982) in the series *New Directions for Teaching and Learning*. San Francisco: Jossey-Bass.
- Davis, Barbara Gross. (1993). *Tools for Teaching*. San Francisco: Jossey-Bass.
- In addition to the above sources, material has been gathered from faculty at Berkeley and other universities, as well as UC Berkeley undergraduates.

-----  
 Prepared by The Early Feedback Working Group and  
 Steve Tollefson, Office of Educational Development  
[tollef@berkeley.edu](mailto:tollef@berkeley.edu)

September 26, 2005