Student Ratings of Teaching Effectiveness: Creating an Action Plan

400 Ostrom Avenue
Syracuse, New York 13244
315-443-8700
http://oira.syr.edu

Student Ratings of Teaching Effectiveness: Creating an Action Plan

Strategies to Enhance Your Teaching Effectiveness

Student ratings of teaching effectiveness provide feedback that can be used to identify your teaching strengths and weaknesses, as perceived by your students. Analyzing this information objectively provides valuable insights that can be used to make positive changes in your teaching and lead to enhanced student learning. Taking that next step, however, and determining how to act on your analysis of student feedback can be difficult. Faculty commonly ask:

- Now that I know the areas that I would like to address, what do I do?
- What changes do I make?
- How do I make the changes?
- What strategies do I implement?

The purpose of this document is to offer teaching strategies to faculty who are committed to using student feedback to improve their teaching effectiveness. Although the focus of the teaching strategies is on practical application, they are grounded in an extensive research base reflecting the areas of effective teaching, student learning, principles of good teaching practice, and evaluation. The strategies have been selected from a variety of published sources, as well as the extensive experiences of faculty on this and other campuses.

Dimensions of Effective Teaching

The rationale for selection of the teaching strategies and their organizational presentation reflect the research that supported the development of the OIRA Item Bank, which describes how to create your own student rating form. Research indicates that effective teaching is a complex, multidimensional process that should be reflected in the design of student rating instruments. Consequently, most published student rating forms have a well-defined factor structure and provide measures of distinctive dimensions of teaching effectiveness. The organizational scheme of the OIRA Item Bank was modeled on this work. The teaching strategies suggested in this document are organized, therefore, around these same dimensions of effective teaching. These include:

- Student Learning
    - Learning Outcomes
    - Student Effort and Involvement
- Teaching Practice
    - Organization and Preparation
    - Communication
    - Faculty/Student Interaction

- Course Elements
    - Grading
    - Examinations
    - Assignments

Appropriate ***student learning*** outcomes focus on the results of effective teaching. Students report learning more in courses that provide an intellectual challenge, include meaningful learning experiences, and lead to an increased interest in the subject. Actively engaging students in the learning process stimulates their thinking and leads to learning that is "deeper" and more lasting. Additionally, when students understand that they are active participants in the teaching/learning process, their sense of responsibility for their own learning often increases, leading to greater motivation and enhanced learning. It is important, however, to ensure that student learning is consistent with course objectives. Furthermore, flexibility in teaching approaches permits faculty to enhance student learning by responding to diverse student backgrounds and learning styles.

Organization and preparation are key components of several information processing theories of learning. Regardless of teaching style, the essential aspects of structure and clarity are related to student learning. Consistency across course objectives, instructional activities, and evaluation efforts enhance student motivation and performance. Organization and preparation are reflected through the course objectives, syllabus, assignments, activities, use of class time, and evaluation methods.

Effective ***communication*** is important in all types of educational settings ranging from large lectures to one-on-one conversations. Arousing and holding students' interest enhances their motivation to learn and leads to an increase in their knowledge and understanding. Communication is manifested through good speaking, writing, and listening skills, and incorporates presentation of different points of view, implications of various theories, use of relevant examples, discussion of current developments, and demonstration of the information's relevancy to the learner. Communication also occurs through a variety of other means including the course syllabus, presentations, explanations, and course activities.

Interaction between students and faculty has been identified as one of the key factors in student motivation, involvement, and intellectual development. Students report a greater sense of value in their learning and earn better grades when the professor is willing to help them learn and creates an environment conducive to learning. A teaching environment that supports student learning and provides a positive self-image for students is reflected in mutual respect and rapport, concern for students' learning, professor availability outside of class, and encouragement of students to participate in discussions and other active learning experiences.

Course elements (grading, examinations, assignments) should be viewed by students as fair and relevant to course objectives, with feedback valuable to the learning process. Fairness in evaluation and grading is reflected in the consistency between course objectives, course content, assignments, and assessment strategies. The standards for

grading should be clear and consistent, feedback timely and useful, and the equity of the workload appropriate for the credits received. When these factors are in place, student motivation to learn is enhanced.

Getting Started – Creating Your Action Plan

The list of suggested teaching strategies presented in this document is not intended to be exhaustive. It includes a sample of strategies supported by the educational research and proven successful by faculty in enhancing student learning. After reviewing the appropriate section(s) of teaching strategies:

1. Select the strategies that comfortably address your concerns.
2. Adapt the strategies to more specifically meet your needs, if necessary.
3. Limit yourself to implementing three or four strategies over the course of the semester.

This should be a thoughtful process in which you consider the impact of your selections on the learning process. Planning to follow-up with an evaluation of their effectiveness will provide additional useful feedback.

Reflecting on your teaching and using student feedback to select new teaching strategies will help to enrich your conceptional view of teaching and learning and also expand your repertoire of teaching skills. Improving one's teaching, however, is an on-going process. Many of the highly effective faculty, who contributed suggestions for this document, are continuously fine tuning their teaching skills.

Additional Help

Some individuals may desire additional guidance beyond the content contained in this document. A variety of other resources are available to help you address concerns and incorporate changes in your teaching. These include:

- Meeting with a teaching consultant who will work with you to develop teaching strategies based on your needs.
- Discussing strategies with your colleagues or mentor.
- Observing a colleague in a teaching setting.
- Referring to items in the reference section for a more extensive selection of teaching strategies.

OIRA Resources

The OIRA website provides additional Student Ratings of Teaching Effectiveness resources (http://oira.syr.edu):

- If you are uncertain how to interpret your student ratings in order to determine the focus of your teaching enhancement, you may want to refer to *Interpreting and Using Student Ratings of Teaching Effectiveness*.

- If you plan to modify your current student ratings form or create a new form, you may want to refer to *Student Ratings of Teaching Effectiveness: Using the OIRA Item Bank to Create Your Own Form*.
- If you are interested in a general discussion on the uses and common questions associated with student ratings, you may want to refer to *What's the Use of Student Ratings of Teaching Effectiveness?*

An Invitation to You

As you work to improve your teaching effectiveness, you will develop certain teaching strategies that work well. If you would like to share a practical application with fellow colleagues, I would be glad to facilitate the process. I would like to make this document a work in-progress and continue to add teaching strategies that reflect your successes. Share your success by emailing (nbgaubat@syr.edu) or calling me at 443-8700.

References

Examples used throughout this document are referenced from the following sources:

Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques*. San Francisco: Jossey-Bass.

Davis, B. G. (1993). *Tools for teaching*. San Francisco: Jossey-Bass.

Feldman, K. A. (1996). Identifying exemplary teaching: Using data from course and teacher evaluations. In M. Svinicki & R. Menges (Eds.), *Honoring exemplary teaching, New Directions for Teaching and Learning*, 65, 41-50. San Francisco: Jossey-Bass.

Hatfield, S. R. (Ed.) (1995). *The seven principles in action: Improving undergraduate education*. Bolton, MA: Anker.

Marsh, H. W., & Roche, L. A. (1994). *The use of students' evaluations of university teaching to improve teaching effectiveness*. Canberra: Department of Employment, Education, and Training.

McKeachie, W. J. (2002). *Teaching tips*. New York: Houghton Mifflin.

Walvoord, B. E., & Anderson, V. J. (1998). *Effective grading*. San Francisco: Jossey-Bass.

Additionally, I would like to express my appreciation to the faculty members who contributed effective strategies from their own personal teaching experiences.

For more information on student ratings, contact:
Noreen Gaubatz at the Office of Institutional Research and Assessment, 443-8700

Table of Contents

Student Learning

The suggestions described below may be helpful in addressing your students' learning if student ratings reflect the following types of concerns:

- The course was not challenging for the students.
- The students indicated that they did not learn much in the course.
- The students did not develop an understanding of major course concepts.
- The students' critical thinking skills were not further developed.
- Time spent in class was not worthwhile to the students.
- The students' interest in the subject area was not enhanced.

1. Select the most appropriate teaching strategies to facilitate student learning.

Faculty members indicate that many courses are taught using the traditional lecture approach when other strategies may be more effective. "Traditional lecturing methods are often used by default, in situations where the possibility of more effective alternatives either have not been considered, appear to be 'too uncomfortable,' or involve too much time and effort to establish," reports an Education professor.

While it is important to be comfortable with your teaching strategy, it is also necessary to consider potential advantages in terms of the quality of student learning. Research indicates that student engagement often results in a deeper understanding of the course concepts. Learning is enhanced when students are actively "doing something" to learn rather than passively listening to the professor. "A lot of careful planning goes into developing an appropriate activity," a professor of Finance concedes, "but the enhanced student learning is a great payoff!"

See also suggestion #6 of the Organization and Preparation section and suggestion #5 of the Communication section.

2. Hold high but realistic expectations for your students.

Research has shown that a professor's expectations have a powerful effect on student performance. If you convey to your students that you expect them to be motivated, hardworking, and engaged in the course, they are more likely to be so. Set realistic expectations that are high enough to motivate students to do their best work, but not so high that students will inevitably be frustrated in trying to meet those expectations. To develop the drive to achieve, students need to believe that achievement is possible.

3. Engage your students in a variety of cognitive activities.

Summarize

Have students summarize or paraphrase what has been discussed in class. “Asking your students if they understand gets you only so far,” a History professor explains. “Asking Ms. Jones to summarize the main things to remember about X, and then asking other students to help out if she is having difficulty is a far better check on your students’ understanding.” A Religion professor uses five minutes at the beginning of the class period to have students summarize in writing the main ideas from the reading assignment for the day. She then uses this “as a springboard for class discussion.”

Ask students to list key concepts or main ideas. Near the end of class, ask students to write down three or four key concepts or main ideas about the topic just discussed. A Philosophy professor explains, “I use the students’ lists in a variety of ways. Sometimes I simply collect them to get an understanding of what the students are getting from class. Other times I will have them share them in a small group of two or three individuals so they can check for themselves on how they are doing. Occasionally, I will have the students use them at the beginning of the next class in a quick review discussion.”

Role Playing

An Engineering professor makes use of role-playing to encourage his students to develop the broad range of skills necessary for their careers. “I give my students copies of an Engineering report, for example. Then one half of the class is asked to assume the role of the authors of that report and prepare an oral presentation for the client or funding agency. The other half of the class is assigned to act as representatives of the client or funding agency and to prepare questions to be asked of the engineers,” he explains.

A History professor reports that she used to give rather standard writing assignments, “compare author X and Y’s views on A,” where the two authors tended to be professional historians. “Most undergraduates, however, find the arguments of current historians somewhat arcane,” she claims. “Therefore, most recently I have asked my students to read a collection of the 18th century speeches on why Louis XVI should be killed and assigned them the task of writing their own speech as if they had been living during the French Revolution. Undergraduates really are enthusiastic about this kind of assignment and do an incredibly good job. It helps them to identify with the issues of the time; in fact many of my students went to great lengths to research the authenticity of their own empathic interpretations. I intend to take this assignment a step further by dividing my students into small groups and having them deliver their speeches to the group.” By giving her students assignments that put them in the role of another, she is helping them to view a situation from a different perspective.

Problem Solving

A Chemistry professor emphasizes conceptual understanding by challenging his students with apparent paradoxes. “Several times each semester,” he explains, “I set up a demonstration to give a visual result that is at variance with what is described in the textbook. My students then explain the paradox by applying a variety of problem solving techniques. This kind of demonstration really gets my students thinking,” he says. “Furthermore, many of my students tell me that they learn more from seeing than from reading. It gives them another way of understanding and helps them gain self-confidence that they do in fact understand.”

A Forestry professor uses weekly problems that are typical of those faced by professionals in the field. After describing a scenario, he will ask his students, “What is killing that tree?,” rather than, “Name six factors which can kill trees." Using real-life problems to encourage thoughtful reflection and discussion helps students apply their knowledge and realize how course content will transfer to their professional careers.

Case Studies

Use case studies to introduce your students to real-life scenarios. A professor of Anthropology prepares case studies to provide her students with exposure to primary research techniques and strategies. Her students are presented with a collection of photos, maps, and narrative information which depict a site as an archaeologist would see it. This serves as the basis for class discussion and an ensuing group project. She notes, “I ask students to address questions that an on-site anthropologist would consider. For example, what changes in eating habits can you infer from the artifacts found at two different levels?”

An Engineering professor also presents his students with problems based on real cases. “For example, my students are told that a ball bearing failure has occurred in an airplane. They are asked to outline the steps they would take in determining the cause and correcting it. They tell me what tests they would perform and using simulation techniques, I tell them what the results of those tests would be and ask what they would do next. This continues until my students have either solved the problem or are stumped. Their results are then compared with those from the actual case study. The value of this approach is to give my students experience solving the type of practical problems they will encounter as professionals,” he explains. “Also, because the problems are based on actual cases, it gives my students a chance to compare their own problem-solving skills with those of practicing engineers.”

Assign projects that provide your students with experiential learning. A Political Science professor always includes at least one experiential assignment in his courses. For example, he recently required his students to interview a local politician, as well as his or her spouse, children, staff members, and several constituents, in order to get a better understanding of the daily life of a politician and the issues and problems he or she faces. “My students were then asked to tell the class about their experiences so that generalizations could be drawn. They

compared their own conclusions with those presented by both the theoretical and the popular conceptions of politicians represented in their reading assignments. My students are so experience-poor and theory-rich," he explains, "that I find as many ways as possible to get them to use the local area as a laboratory for enriching their understanding of course concepts and theories."

Application

A Mathematics professor has students share applications for course concepts. Near the end of class, she gives each student a brief questionnaire asking the following:

- As I understand it, the main idea (concept or point) of today's class was …
- A good example of an application of this idea is …
- In my mind, the main point of today's class is most closely related to the following concepts, ideas, people, places, processes, events, or things …

She uses these responses "to check on my students' understanding, but also to focus my next class. If necessary, I correct any misunderstandings and then discuss some of the suggested applications with the class. Students so often have very good ideas that go unrecognized. This gives me an opportunity to share some of those with the class, and it really helps those students who have trouble looking beyond the book."

Encourage your students to conduct research and write reports for specific "real world" clients. Some professors select a current problem in the field and have their students design a research project, gather the relevant data, and write up the results in a form appropriate for the "client." Other faculty find actual clients who are willing to work with the students. For example, a professor of Natural Resources has his students participate in all phases of the research, report writing, and oral presentation to client agencies for environmental impact studies. Similarly, a Social Work professor has her students help local agencies define their needs and write grant proposals for submission to foundations and federal agencies. An Education professor frequently has his students meet with top-level university administrators to define current evaluation or informational needs on campus. Each student then designs and conducts a small-scale evaluation project and writes a report for the client-administrator. He notes, "You get better results from your students if they feel there is a real audience for their ideas."

Help students apply abstract concepts to new situational experiences. A Political Science professor uses the concept of licensing to guide his students through the steps involved in creating a regulatory commission to license prostitution. "What would such a commission look like?," he asks. "Who would want to serve on it? What problems would it encounter? I force my students to apply abstract concepts and principles from their readings to new situations," he explains. Later in the semester, his students actually simulate the workings of a particular regulatory commission and engage in debates on the pros and cons of particular policy solutions.

Analysis

Challenge students to develop their analytical skills. A professor of English assigns the work of a literary critic and then asks his students to write an essay taking an adversary position. “If my assignments are provocative,” he indicates, “I get better results. They should enjoy doing the paper; it should provide them with a personal learning experience.” A professor of Business Administration shares, “The quality of the papers I get often depends on the quality of the assignment I give.” For example, in a recent assignment he asked his students to respond to the question, “If you were working in a company that illegally pollutes the environment, what would you do and why?” A Psychology professor asks his students to critically review a paper written by a professional psychologist. “The process of analysis and evaluation captures what I am trying to do in the course,” he explains.

Integration

Ease course barriers by using an interdisciplinary approach and encouraging your students to integrate knowledge from their major area of study with the new information they are learning in your course. A professor of English encourages his students to make use of knowledge and skills developed in other courses in combination with those emphasized in his course. “I strongly encourage my students to write papers on interdisciplinary topics,” he states. Recent student papers include: “Shakespeare and Plants” by a Botany student, “Folk Tales in King Lear” by an Anthropology major, and an analysis of the connection between the paintings of Watteau and imagery in Pope's “Rape of the Lock” by an Art major. “If you can get your students to realize that they each bring different kinds of talent and expertise to the course and encourage them to apply these, that goes a long way towards integration of knowledge,” he notes.

Collaborative Work

Students often report having their best educational encounters and achieving their greatest understandings of diversity as side effects of naturally occurring meaningful educational experiences. Consider students’ opportunities for group projects in which three to five students complete a specific task during and/or outside of class. Collaborative learning can also be as simple as randomly grouping two or three students in class to solve a particular problem or to answer a specific question.

Reflection

Help your students to reflect on their learning experience by keeping a journal throughout the course. A journal can be a very effective way to facilitate students’ reflection on their own learning and lead to a greater understanding and appreciation of the subject. It is important, however, to ensure that students are familiar with the process of journal writing and the benefits they can expect. A Writing professor keeps her own journal along with her students. “I share my entries at the beginning of each class for the first few weeks of the semester, so students can get a better understanding of the type of journal entries that are most beneficial to the goals of the assignment,” she indicates. Some faculty require reflective journals as a component of the course grade, while others simply

recommend them as effective preparation for class discussions, presentations, reflective papers, and essay exams.

Organization and Preparation

The suggestions described below may be helpful in addressing your level of organization and preparation if student ratings reflect the following types of concerns:

- The course objectives were unclear to the students.
- It was difficult for students to follow the syllabus and/or you did not follow the syllabus.
- The students' responsibilities for the course were vague.
- The students found you unprepared for class.
- The course lacked structure from the students' perspective.
- Your lectures, discussions, etc. appeared to be disorganized to the students.
- The students were unable to understand the relationship between various aspects of the course content.

1. Prepare a detailed course syllabus for your students.

Many faculty members state the objectives of their course in a syllabus. Some include major themes for each class session, how they are incorporated into the activities and assignments, and the ways student learning will be assessed. A professor of Physics states, "I like to lay out the course in some detail for my students. I think it helps students feel more organized."

"My syllabus usually runs about 15 pages," notes a professor of Education. "It is organized by class session and each section consists of a major topic with four to eight important study questions or issues my students are expected to understand or be prepared to discuss. Required reading and recommended supplemental readings are included. The syllabus also describes assignments, grading procedures, and competencies my students are expected to have (i.e., things they are expected to be able to do) by the end of the course."

Faculty agree that the more information you provide to students in writing, the fewer issues you may encounter during the semester. If you must deviate from the syllabus, make it clear to students how and why the changes are being made. "I have been reworking my syllabus for several semesters based on my experiences in the classroom. The number of organizational and process problems that I have to address has greatly decreased. It is all explained in the syllabus," reports a Biology professor.

Some faculty indicate that it is more helpful for students when the course objectives are stated as observable skills or attainable knowledge, rather than as broad generalizations.

See also suggestion #1 of the Grading section.

2. Communicate the objectives for each class session to your students.

Preparing for each class session enables you to have a clear idea of what is supposed to happen. Keep in mind that no matter how organized you are, it does not help unless you communicate it to your students. A key organizational strategy is to tell students what you expect to accomplish during the class and how that will be accomplished. What will you be doing? What will they be doing? Many faculty list their objectives on the board, overhead projector, or PowerPoint slide.

A Geology professor believes that, "A beginning statement of objectives or directions is one of the most important aspects of teaching. Students need to know where you are going, so that they can understand where they are going."

A professor of History explains, "I come to class a few minutes early and write three to five objectives on the board. As class begins I present my objectives for that day to the class. During my presentation I make specific references to my objectives as I go along." Other professors modify this technique slightly by having their first PowerPoint slide include the objectives for the day. This slide is projected onto the screen as students arrive to class.

An Engineering professor refers to this as his battle plan. "At the beginning of the hour, I give my students a battle plan so they know where the discussion is going and can follow it more easily," he says. "For example, I tell my students that I'm going to discuss such-and-such a topic for the first twenty minutes, show them how to use it in the next twenty minutes, and then take questions in the last ten minutes. By laying out exactly what I am going to do, I eliminate a lot of student confusion."

A Psychology professor indicates, "I share with my students at the beginning of the class the activities we are going to engage in that day. I explain not only what we will be doing or discussing, but also why we are looking at the topic in this particular way, and how it relates to other topics within the unit and the course as a whole. I don't want them just going through the motions, but would rather have them actually understand how and why we are doing this."

3. Create a sense of order for your students.

Many faculty recommend giving students a conceptual framework on which to hang major ideas and factual information. Jumping from one topic to another makes it difficult for students to assimilate and retain the material. To understand the relationship among concepts, students need a framework – a basic theory, a theme, a conceptual typology, or a controversial issue – rather than simply memorizing dozens of discrete points. A professor of Physiology notes, "To the uninitiated, our field looks like a mass of facts; by establishing a conceptual framework, I minimize the amount of rote memorization my students have to do."

Examples of course organizational patterns include:

- Topical – A Psychology course examines how four groups of theorists approach human behavior: social learning theorists, developmental theorists, psychoanalytic theorists, and cognitive theorists.
- Causal – An Economics course explores various factors that affect the distribution of wealth: the labor market, tax policy, investment policy, and social mobility.
- Sequential – A course on Education in the United States covers the school system from preschool to elementary school, secondary school, college, and graduate school.
- Structural – An Anatomy and Physiology course approaches the anatomical systems in a consistent format: the organs, the functions of the organs, how the organs are regulated, and the relationship of the system to other systems.
- Problem-solution – An Engineering course looks at a series of structural failures in various types of buildings.

A number of faculty begin each class period with a brief summary of the main points covered in the last meeting and then ask for students' questions. The advantage of summarizing and asking questions at the beginning of a class period is that, "students are fresher and after a brief recapitulation, they are more likely to realize and acknowledge if they have any problems," a Design professor claims. A variation on this technique is to summarize and ask for questions whenever there is a major transition from one topic to another within the class period.

In written texts, organization is indicated by paragraphs and headings. In lectures, verbal cues help convey the organizational structure. An Education professor shares the following suggestions. Forecast what you will be discussing – "Today I want to discuss three reasons why states are mandating assessments of student learning in higher education." Indicate where you are in the development of your ideas – "The first reason, then, is the decline of funds available for social and educational programs. Let's look at the second reason: old-fashioned politics." Restate main ideas – "We've looked at the three pressures on colleges and universities to institute assessment procedures: the legislature's desire to get maximum effectiveness for limited dollars, the appeal of campaign slogans such as 'better education,' and public disenchantment with education in general. We've also explored two possible responses by colleges and universities: compliance and confrontation."

A professor of History suggests structuring the class as you would a journal article. "Each lecture should have a clearly defined beginning, middle, and end," she notes. A Computer Science professor concurs, indicating that he prepares his class presentations so that they have the oral equivalents of an introduction, headings, subheadings, summary, and conclusion. "Orally highlighting the structure of a lecture serves the same communication functions as using paragraphs and different

type faces in a journal article," he says. "It tells the audience what the topic is, why it is important, what its chief components and their relationships are, and what conclusions we can draw. I firmly believe in sharing the structure and reasoning of my lectures with the students," he explains. "I begin each lecture by stating my objectives. For example, "Today we are going to discuss X and its effects on Y and Z. I make frequent transitional phrases and I leave time to summarize the major points at the end of the hour."

Research indicates that students generally remember facts and principles better if they are presented first with general statements, which are then followed by specific examples, illustrations, or applications. To present a difficult or abstract idea, experienced faculty recommend first providing students an easy example that illustrates the principle, then offering a more complex example or illustration.

4. Use various organizational strategies during class.

Many faculty suggest organizational strategies that include putting an outline on the board or on a PowerPoint slide at the beginning of class, outlining the development of ideas as they occur, developing a concept map or chart, or giving students a handout of the major points or topics. Outlines help students focus on the progression of the material and also help them take better notes. You do not want students spending the hour wondering, "Why is the professor talking about that?" or "Where does this fit in?" If their attention does wander, students can more readily catch up with the lecture if they have an outline in front of them. Refer to the outline to alert students to transitions and to the relationships between points.

A professor of Physiology uses a technique he learned from a colleague when they were team-teaching several years ago. "I put the outline of my lecture in a corner of the blackboard when I first come into class," he says. "That way students can tell at a glance when I've shifted topics and where we are in the day's discussion. I also make frequent reference to the outline to alert students to transitions and the relationships between topics."

Many professors prepare lecture outlines, group activity projects, lecture notes, definitions of new terms, complex equations, discussion questions, illustrations, etc. as handouts for students or have them available for students to download from the course's website. "My handouts include the essential points of my lecture, including definitions, notations, important formulas and derivations," says one professor of Business Administration. "Students could not cut class and rely solely on the notes, however, because they are not self-explanatory. They are designed to help students follow the main structure of my lecture and to keep them from getting bogged down in copying details."

Not everyone favors handouts, however. "Analytic material can't be learned by watching and reading alone," claims an Engineering professor. "It must be learned by doing; by writing it out." He prefers to write important material on the board,

discuss the steps, and analyze them as he lectures. This approach helps students to understand the process and not just memorize the steps.

A Biology professor reports that she outlines her lectures on the board as she goes along, using colored chalk to differentiate major and subordinate points and to diagram relationships. On a separate section of the blackboard she also lists technical terms. “The outline serves to reinforce visually what I am saying,” she explains. “Furthermore, it makes clear to everyone where we have been and where we are going.” Other faculty substitute PowerPoint slides for the chalkboard.

Some faculty give students a list of questions which cover topics to be addressed during class. One History professor does this routinely. “By outlining my lecture as a series of questions, I hope to stimulate students to think actively during the presentation. The questions are designed to give them a conceptual framework and guide, so they can identify where we are and where we are going in the overall discussion. I realize that it is difficult for students to listen attentively for a full hour. Providing them with an outline of the lecture in question format allows them to pick up the thread of the discussion more quickly as their attention fades in and out,” she explains.

5. Provide closure for your students.

Although it may appear to be an oversimplification, many professors cite the old adage, “tell’em what you’re going to tell’em; tell’em; then tell’em what you told’em.” A History professor finds it helpful to place his watch in full view on the desk or lectern. “I watch the clock carefully to be sure that there is time to summarize the day’s discussion. Then, at the beginning of the next class session, I sum up the previous lecture once more before moving on to a new topic.”

“Students crave both continuity and sense of closure,” a Reading professor explains. “They do not like unfinished presentations. At the same time, because none of us likes repetition, I try hard to use different words and examples in each summary. The best way I have found to avoid redundancy is to note on an index card the exact words I have used at the end of a lecture, so that I am reminded to vary them in the brief recapitulation I give at the beginning of the next class meeting.”

A professor of Business Administration also uses this technique. “Because each concept in this course builds upon what has gone before, it is important for students to see how each new topic relates to what they have already learned, as well as to what they will be learning in the coming weeks. I find the most effective way of doing this is to begin with a brief summary of what came before, followed by a brief preview of what will come next.”

Drawing conclusions helps students see that a purpose has been served and something has been gained during the class session. A well-planned conclusion

rounds out the presentation, ties up loose ends, suggests ways for students to follow up on the lecture, and provides a sense of closure.

Placing the concept in the larger context of the course gives students a sense of continuity and meaning. A brief summary can help the students see the relevance of the new concept and its relationship to the course's main themes. It can also inform students as to their progress towards achieving the course goals. An Education professor notes, "I relate the topic we are addressing to the overall goals of the course, as well as the profession."

6. Select appropriate instructional methods for each class meeting.

Although the lecture approach is commonly used, attempt to develop activities that lead students to an understanding of the concepts or issues in the class. Several outstanding lecturers found that issues become more clearly understood when students are actively "doing something" to learn rather than being told or shown by the professor. A Special Education professor has her students use wheelchairs for a day to develop a better appreciation of the experience of being disabled. "It can take a lot of thoughtful planning to devise a suitable activity, especially given the restrictions of a lecture session," an Economics professor concedes, "but the resulting improvement in learning is well worth it."

Instead of asking, "What am I going to do in each class session?," focus on, "What are students going to do?" Identify topics that lend themselves to classroom activities and select one or more instructional methods for each class session: lectures, small group discussions, independent work, simulations, debates, case studies, role playing, demonstrations, experiential learning activities, instructional technologies, collaborative learning work, etc. For each topic, decide how you will prepare the class instruction (e.g., review, preview), present the new concepts (e.g., lectures, demonstrations, discussions), have students apply what they have learned (e.g., discussion, in-class writing activities, collaborative work), and assess whether students can put into practice what they have learned (e.g., testing, discussion, problem solving).

When possible, demonstrate a concept rather than simply describing it. "For example, don't tell students how to present a logical argument; present a logical argument and help them to analyze it. Don't describe how to solve a problem; demonstrate how to solve it, and label and describe the steps and your reasons for them as you go," suggests a Chemistry professor.

Some faculty regularly make use of visual imagery. Taking examples from everyday experiences, even if they cannot be demonstrated in class, will help students to visualize them and reinforce their learning. The use of metaphors and analogies that give students a mental image to draw upon can help reinforce their understanding and recall. Additionally, professors often make use of slides, maps, tape recordings, live or filmed dramatizations, charts, diagrams, videos, DVDs,

websites, demonstrations, and actual cultural artifacts to illustrate the subject matter.

See also suggestions #1 and #3 of the Student Learning section and suggestion #5 of the Communication section.

7. Become a reflective practitioner.

A History professor has found it very effective to keep a brief journal or diary for each course. "After each lecture, I jot down a few notes about how the class went: explanations and examples that worked well and those that didn't, students' difficulties with the text, techniques for generating discussions, and so forth. If something went very badly, I correct it at the next meeting. For the most part, however, I keep the journal to help me improve the course next time." Although a journal of this type could be beneficial to any teacher, its value is greatest for new instructors or for faculty teaching a new course or a course taught only every few years.

"I make notes to myself about what went well in the course and what didn't as it goes along," an Interior Design professor shares. "For example, I might make a note saying 'Don't forget to emphasize this point before that point.' Executing these suggestions the very next semester reinforces my own learning."

By looking back at journal entries, an Economics professor is able to incorporate his reflective ideas the next time he teaches the course. "It's important to completely redo my notes each time I teach the course," he shares. "It helps me rethink the material so that the ideas seem fresh and new to me as well as to my students. This increases my enthusiasm for the subject matter which I think is communicated to my students."

Some professors keep separate files for each course objective, theme, or topic. "To these I add research articles, newspaper clippings, cartoons, ideas for assignments or exam questions, and notes to myself for improving the lecture or discussion," reports a professor of English. This approach makes it much easier to incorporate more effective examples, assignments, explanations, activities, group projects, teaching approaches, assessment strategies, etc. the next time the course is taught.

Communication

The suggestions described below may be helpful in addressing your communication skills if student ratings reflect the following types of concerns:

- Your lectures, discussions, labs, studio work, etc. were not clear to the students.
- You appeared to be unenthusiastic or bored.
- The examples used in class did not help students to understand the course concepts.
- Practical applications of the course concepts were not provided for the students.
- Important points were not emphasized for the students.
- Students indicated that main ideas were not summarized.

1. Capture your students' attention at the beginning of class.

An attention getter does not have to be "gung-ho" or "whiz-bang." Carefully planned questions or statements that are provocative, controversial, or paradoxical can also be quite effective in developing the curiosity necessary to get students' attention.

A professor of History reports that he often begins class by reading aloud a short passage from a primary source or a story to illustrate his major theme or point for the day. "For example, I start out by stating that the *Wizard of Oz* is a parable for progressivism and read passages from it to illustrate my major thesis. I then get my students to help identify the different characters and what they represent."

"The opening should secure students' attention and give them the desired mental set. Have some form of attention-getter - a gadget or piece of hardware whose operation depends upon the principles of the day's lesson usually excites attention," shares an Engineering professor.

2. Emphasize important information for your students.

Faculty members in several disciplines stress the need to call students' attention to the most important ideas being presented. Some professors announce the importance of an idea before presenting it. "This is really important, so you have to be alert." Others emphasize the most important ideas when summarizing, saying "The most important thing to remember here is..." "This is so important that everyone of you should have it engraved on a gold plaque and hung over your bed!," states a professor of Computer Science. "I began to emphasize the main points about ten years ago," indicates a Political Science professor, "when I discovered that you can't rely on undergraduates to intuitively know what the most important points are. You have to tell them."

Since no single explanation will be clear to all students, it is important to rephrase explanations of major points several times. "Repetition leads to learning," a Chemistry professor claims. "I repeat major points several times from a different

direction or in different words." "No single explanation will be clear to all students," points out a professor of Business Administration. "By using different language or different examples, I maximize the chances that every student will eventually understand." A Political Science professor also consciously alters the words he uses. "I have a tendency to say things twice; first, formally and then colloquially." An Engineering professor reports that he develops the same point in two or three different modes (e.g., verbally, mathematically, and graphically).

Several faculty define technical terms and review key terms from previous lectures. A professor of Biology points out that you cannot assume that students know or remember concepts and terms from previous courses. "If I use a word for the first time, I write it on the board and define it. I do this even if it is a concept or term that students have presumably learned in introductory biology and chemistry courses." Another faculty member underscores the importance of giving students a clear definition of terms. "If the term is not defined or is poorly defined in their textbook, I point that out and then give them the clearest definition I have been able to find." He frequently looks at three or four introductory texts to find the clearest definition of a term.

Dramatic pauses are another way to highlight important ideas. A History professor used to tell her students, "The main point is...," in a matter-of-fact manner, almost as an aside. "I discovered that many of my students did not get the message," she explains. "Now I indicate a main point by pausing to get my students' full attention and then saying emphatically, 'This is the really important consideration!' Then I pause again to be sure they are prepared to write it down. If not, I restate the importance of what is to follow."

Several faculty report that they cue their students' attention to the significance of an idea by showing the role it plays within the course content and appropriate applications. "I think it is crucial for students to know why a concept is important," explains a Physiology professor. "Just saying that it is important is not enough. You need to put the concept in some perspective, to show why it is important. Explaining why an idea is important not only gets your students' attention, it gives them a framework on which to hang the idea." An Engineering professor concurs. "I follow the introduction of a major concept with lots of specific examples, including anecdotes which show applications of the concept in current professional practice. You must show your students why it is important to know a particular concept if you expect them to master it," he explains.

3. Use relevant examples.

Using specific and familiar examples will enhance your students' understanding of the course topics. A repertoire of examples that link ideas and images can be quite beneficial.

Develop examples that do the following:

- Draw upon your students' experiences or are relevant to their lives. To explain depreciation, a professor of Business uses the drop in price of new versus used textbooks.
- Represent the same phenomena. To explain aerodynamic oscillation, an Engineering professor cites a scarf held out a window of a moving car, a thin piece of paper placed near an air conditioner, and a suspension bridge battered by gale winds.
- Dramatize concepts. In defining a particular body organ, a Biology professor compares its size or texture to familiar objects, such as a walnut or grapefruit. An Economics professor defines a trillion by stating, "It takes 31,700 years to count a trillion seconds."

Many faculty agree that the choice of examples is very important, favoring those that are anecdotal, personal, relevant, or humorous as students tend to remember them best.

An Economics professor places great importance on using examples that are relevant for her students. "I use specific examples whenever I can. In talking about inflation and price controls, I'll use an MP3 player or palm pilot rather than apples or a general product." A Forestry professor uses the same strategy. "In talking about acre-feet of water, first I define it formally and then I give several examples which will help them appreciate the amount of water represented, such as 'equivalent to 77,000,000 ice cubes.' Students tend to remember examples like that," he explains.

Do not assume that all students will recognize cultural, literary, or historical references familiar to you. As the diversity of the student and faculty populations increases, you may find that you and your students have fewer shared cultural experiences, literary allusions, historical references, metaphors, and analogies.

4. Consider various perspectives.

Ideally, a college curriculum should reflect the perspectives and experiences of a pluralistic society. At a minimum, creating an inclusive curriculum involves using texts and readings that reflect new scholarship and research about previously underrepresented groups, discussing the contributions made to your field by women and various ethnic groups, and describing how recent scholarship about gender, race, and class is modifying your field of study.

A professor of Education makes a point of inviting guest speakers whose viewpoints differ from his, enabling his students to be exposed to a variety of perspectives. "I want them to understand what the different points of view are," he claims, "and one of the best ways I have found to do this is to invite a colleague or

practitioner whom I know to be an adherent of each view to make a presentation to the class."

Several faculty assign multiple readings that represent a variety of viewpoints. "Because the most controversial issues covered in a course are ones on which my students have strong opinions but little information, I try to expose them to diametrically opposite positions or theories," says one professor of Political Science.

Assigning readings directed toward revealing the reasons behind differing points of view raises the students' level of understanding. A professor of Business Administration shares, "I use a semi-Socratic technique to lead my students through an analysis and critique of each theorist's position. The focus is not on opinions but on the reasons behind them." A Psychology professor comments that, "Sometimes it is not possible to find a reading which gets at the basis for a particular point of view. However, any reading that presents a clear statement of the features of the theory is useful. Students can be directed to a lively discussion of reasons that are tenable. It gives them experience in learning the criteria of a good argument."

Several faculty draw upon the diverse backgrounds and experiences of their students in order to introduce different points of view. At the beginning of the semester, a professor of Business Administration asks his students to give written answers to questions about their backgrounds and reasons for taking the course. He asks students to focus particularly on experiences that might give them a particular viewpoint on the social, political, and economic issues to be covered in the course. As these various issues are discussed throughout the semester, he is able to draw on varying experiences and interests of his students. In this way a full range of views is introduced in the course. "Often, with little or no effort, I am able to get students debating between themselves. In fact, I rarely give my own point of view until there has been a full discussion of the different points of view within the class itself," he explains. This technique has an additional advantage since introducing personal experiences and opinions makes the discussion more realistic and engaging.

A professor of Economics explicitly states that there are alternative points of view. "I indicate the polar principles which guide much of the research in the social sciences. In doing so, I point out that they should be mindful that there may be good reasons to believe the opposite of what I say; that they should analyze all arguments in terms of their opposites," he explains.

One of the primary goals of education is to show students different points of view and encourage them to evaluate their own beliefs. Thus, many faculty emphasize the importance of considering different approaches and viewpoints. They help students begin to appreciate the number of situations that can be understood only

by comparing several interpretations and how one's premises, observations, and interpretations are influenced by social identity and background.

As appropriate to your field, develop paper topics or group projects that encourage students to explore the roles, status, contributions, and experiences of groups traditionally underrepresented in scholarly research studies or in academia. For example, a Nursing professor teaching a course on medical and health training offers students a variety of topics for their group project, including one on alternative healing belief systems. A Marketing professor gives students an assignment asking them to compare female-only, male-only, and male-female work groups.

5. Vary the pace and type of instructional activities in your course.

Students tend to be more attentive when exposed to a variety of learning experiences. Using various teaching strategies, therefore, helps to keep students intellectually engaged and enhances learning.

A Family Studies professor conducts each class meeting differently "to keep my students off balance. Students always know what topic will be covered in a given session, but they don't always know how it will be handled," he indicates.

An English professor believes that his wide variety of teaching strategies accounts for his high ratings on interesting style of presentation. "I read whatever I can find on teaching in my discipline, and I borrow shamelessly from other instructors when it comes to pedagogical strategies," he admits. By engaging students in active learning strategies (e.g., discussions, debates, group work, team projects), he requires them to address the content in greater depth.

See also suggestions #1 and #3 of the Student Learning section and suggestion #6 of the Organization and Preparation section.

6. Expose your students to outside enrichment sources.

A number of faculty include current journal articles, periodicals, newspapers, and websites in their curricula. "It's important for my students to be exposed to state-of-the-art ideas even in a lower division course," notes one Political Science professor. "I try to make sure that my reading list contains at least a few recent journal articles." A professor of Biology also believes strongly in making use of articles from current periodicals. "I keep my eyes open for stories on recent developments which have become part of the 'current events' literature," he explains. A professor of Economics assigns the Tuesday editorials of the Wall Street Journal each week. She uses them as a basis for discussion and has students relate them to course content.

A professor of Education shares his professional "junk mail" with his students. He routinely shares program announcements for local conferences, program

proceedings, and advertisements for new books and journals in the field. “In this way I inform my students about professional activities and recent developments of which they might not otherwise be aware,” he says. “I also encourage my students to attend professional meetings and conferences and to request papers on topics of interest to them. It’s simply another way to socialize them to the profession.”

Several faculty share local events with their students in an effort to expand and enrich their understanding of the subject matter. “Every Monday I distribute a calendar announcing course-related events not only on the campus but in the area,” a History professor shares. "The events include dance troupes, plays, lectures, poetry readings, demonstrations and so forth. In this way the content of my course is expanded far beyond what I can actually cover in class. I also encourage my students to use these local resources in their research and writing assignments.”

A Language professor shares copies of newsletters, newspaper clippings, and announcements of French movies, plays, or other cultural events in the area. “My students are often amazed and delighted to learn that there are so many opportunities to strengthen their language skills and to expand their understanding and enjoyment of French culture,” she explains.

7. Involve students in your research and scholarly activities.

Whenever you allow students to see or contribute to your own work, you are not only teaching them about your field’s methodology and procedures, but also helping them to understand the dimensions of faculty life and feel more a part of the college community. Consider sponsoring students in an independent study, arranging internships, and providing opportunities for undergraduates to participate in research.

Faculty/Student Interaction

The suggestions described below may be helpful in addressing your interactions with students if your ratings reflect the following types of concerns:

- The students felt that you did not get to know them as individuals.
- The students indicated that you were rude or disrespectful.
- The students felt that you treated them unfairly.
- The classroom environment was seen as uncomfortable by the students.
- Diverse perspectives were not welcomed in the class.
- Many of the students' questions were answered unsatisfactorily.
- Successful student learning did not appear to be a priority for you.
- Your sensitivity to the difficulty of some course content was not apparent to the students.
- The students reported that you were not readily available to them outside of class.

1. Get to know your students.

Knowing your students is important for a number of reasons. Several faculty members stress that new learning must begin from what students are already familiar with. "Otherwise they quickly become confused, disinterested or anxious," an Education professor explains. "Students will also open up more in class discussion if they feel a comfortable rapport with the professor."

Learning your students' names helps to create a comfortable classroom environment that will encourage student interaction. It also tells students that you are interested in them as individuals. A variety of strategies for learning students' names include:

- Photographs: Consider grouping students for pictures during the first or second day of class. The act of posing for a picture breaks the ice and creates an informal, relaxed environment. Circulate the photographs and have students write their name underneath their picture. Place these photos on students' information sheets or introduction cards.
- Name cards: For a seminar class, use the United Nations model of place cards in front of each student. In a studio or lab course, post students' names above their workstations.
- Seating chart: Ask students to sit in the same seats for the first few weeks and prepare a seating chart. Try to memorize four or five names at each class session.
- Name game: In small classes, ask the first person to give her name. The second person gives the name of the first person and his own name, and the third person gives the names of the first two people followed by her own

name. The chain continues until it returns to the first person, with the instructor preferably near the end.

- Introductions: For large lecture classes ask six or eight students to introduce themselves at the beginning of each class period.

Try to consciously use your students' names whenever possible. "I call roll several times during the beginning of the term to connect faces and names as soon as possible," a professor of English reports. A professor of Entomology admits, "in a class of 100, there are always three or four names that I don't seem to be able to learn. Nevertheless, my students greatly appreciate the effort." A Religion professor walks around the class while his students work on a project, quiz, or problem and tries to match faces with names. He then goes back to his desk and tries to write everyone's name down. "This really reinforces my memory," he claims.

A professor of Writing stresses the importance of knowing and treating students as people. "This is central to making the material relevant, opening up discussion, and generally meeting their learning needs," she reports.

A Statistics professor requires each of his students to sign up for an individual ten-minute appointment. "I found that this was a real ice-breaker," he explains. "Even though most of our discussions are mainly chit-chat, some of my students use the opportunity to indicate problems they are having in the course or to make suggestions about course improvements. Perhaps the greatest benefit is that it gives me an opportunity to get to know my students. As a result, they seem to feel more comfortable asking and answering questions in class."

Even in large lecture classes, it is possible to make personal contact with many of your students. A Physiology professor, for example, meets a few of her students for lunch each week. "In that way I get to know at least 30 of my students in the class fairly well," she notes. "Knowing these students helps me to better understand the interests and abilities of students in my class." A Business Administration faculty member uses a similar technique. "I set aside three luncheon dates during the semester and invite my students who would like to meet with me informally for lunch at the Faculty Club to sign up. Each semester 15 to 20 of my students avail themselves of this opportunity," she reports.

2. Establish a comfortable learning environment for your students.

Students are more likely to participate in class if they feel they are among friends rather than strangers. At the beginning of the semester, ask students to introduce themselves and describe their primary interests or background in the subject. One faculty member asks students to form groups of three to five and introduce themselves to each other. Another professor groups students by residence halls, living groups, or learning communities so that they can identify nearby classmates to study with. Ask students to also address questions, such as, "What's the one

thing you really want to learn from this course?" or "What aspect of the course seems most appealing to you?" A professor of English has students pair up for a few minutes to interview each other about their backgrounds, literary interests, and expectations from the course. He then asks members of each pair to introduce each other to the group as a whole. "I think this approach helps students feel free to talk," he notes. "It also helps set a pattern for discussion in which students are expected to listen to one another and to address their comments and questions as much toward one another as toward me."

Allowing each student an opportunity to talk in class during the first two or three weeks encourages all students to participate in class discussion. The longer a student goes without speaking in class, the more difficult it will be for him or her to contribute. You may want to have students initially work in small groups, as this may make it easier for them to later contribute in a larger group setting. During the first weeks of the term, you can prevent any one group of students from monopolizing the discussion by actively soliciting alternate viewpoints.

Students need to feel free to voice an opinion and empowered to defend it. Try not to allow your own difference of opinion to prevent communication and debate. Step in if some students seem to be ignoring the viewpoints of others. For example, if male students tend to ignore comments made by female students, acknowledge the overlooked comments. A professor of Engineering shares, "Thank you, Steve. Karen also raised the issue earlier, but we didn't pick up on it. Perhaps now is the time to address it. Thank you for your patience, Karen."

Some faculty invite their students to share examples of work done in previous classes (e.g., term papers, examinations, designs, lab reports) during the first few weeks of class. An Architecture professor has his students bring slides of design projects from prerequisite courses and present them to the entire class. In this way his students show each other their work and ideas and get to know one another better.

3. Welcome your students' questions.

Several faculty show their genuine interest in having students ask questions by giving them prompts. "What questions do you have about …," gives students time to formulate their questions. If no questions arise, ask for a volunteer to summarize a particular point that was made in class. In this way, students may become more aware of questions they have.

Students ask questions because they want a response. By responding directly you indicate that the question is worthwhile. "Yes, I do think that historians have portrayed the 'trail of tears' inaccurately," responds a History professor. If you redirect a question to the class at large, let the questioner know that you are not avoiding or dismissing the question. "After we hear what everyone else has to say, I'll see if there's anything left to add," an Exercise Science professor indicates. A Sociology professor also tries hard not to answer his students' questions directly.

"Even in lecture classes, I often use this technique," he indicates. "It tends to involve the other students more with the question and it illustrates how fellow students can be a resource for learning."

A professor of Business Administration finds that the way he moves around the room alters the kinds of interaction he is able to generate among his students. "When a student asks a question, it is natural for an instructor to move toward that student," he points out. "However, this tends to exclude the other students and focuses the interaction on the teacher and the one participating student. In order to draw my other students into the discussion and to get them to address their comments to one another as well as to me, I find that it helps if I move away from the student who asks a question rather than toward him or her. This forces the student to project so that everyone is drawn into the conversation. It also makes it more likely that the student will address fellow students."

A professor of Chemistry moves around in his large lecture sessions consisting of 200-250 students and involves them in his lecture. While it is not generally recommended that students be put "on the spot" in ways that pose a threat to their self esteem, he manages to keep the atmosphere nonthreatening by encouraging questions and opinions rather than "right or wrong" answers. He finds students are far more interested in the lectures when the "spotlight" occasionally moves to include a different character, and they know that they could be part of the "action."

By anticipating students' questions, you will be better prepared to respond. "Prior to our class discussions, I imagine the types of questions students may have about a particular topic. I often look at it from the larger context of the course and anticipate where difficulties might occur in their thought process. In this way I feel better prepared to address whatever questions may arise in our discussions," shares a Music professor.

Sometimes students refrain from asking questions because they sense that the professor does not want to hear them. It is important, therefore, to be aware of how your behavior and offhand remarks set the tone for students' questions. A professor's negative response to students' questions – "We discussed that last time," or "That question is not really on point" – discourages future questions. Other discouraging behaviors include looking at the clock while students ask questions, avoiding eye contact, answering questions hurriedly or incompletely, and treating questions as interruptions rather than as contributions to the learning process.

4. Facilitate class discussions.

Keep in mind that the purpose of discussions is to actively involve students in learning. Through discussion, students gain practice in thinking through problems and organizing concepts, formulating arguments and counterarguments, testing their ideas in a public setting, evaluating the evidence for their own and others' positions, and responding thoughtfully and critically to diverse points of view.

A stimulating discussion can be spontaneous and unpredictable, yet a good discussion requires careful planning. You will want to devise assignments to prepare students for discussion, develop a list of questions or topic ideas to guide and focus the discussion, and prepare specific in-class activities such as pair work, brainstorming, or other small group activity. Your plan should also allow time for a wrap-up so that students can synthesize what they have discussed.

To involve your students in class discussion, it may be helpful to explain the value of their participation and what they can expect from the experience. Many faculty members find it valuable to teach students how to listen to others, paraphrase others' thoughts, constructively react to differing views, politely take a different position, and involve other members of the group. "Students have to understand that they share the responsibility for making the discussion a worthwhile experience for us all," explains a Literature professor. "This is a new idea for most of them."

Defining the role that discussion plays in the course makes students aware of your expectations. Carefully describe the students' responsibilities, which may include: everyone participates, class time is a "safe place" to test ideas and react to new perspectives, and discussion will be more worthwhile if students come prepared.

Faculty use several strategies to help students prepare for discussion sessions. Some distribute study questions on the material to be discussed, while others may ask students to come to class with a one or two paragraph position piece or several questions they would like to have discussed. A professor of Business Administration assigns weekly reaction papers, one to two pages on a specific topic, which are then used as the basis for class discussion. "In my Education course," a professor explains, "I give my students a series of four to eight discussion questions on each week's reading assignment. These questions serve both as study aids and stimuli for discussion."

5. Acknowledge difficult concepts for your students.

"Acknowledging difficulty avoids the risk of belittling the students' efforts in mastering the concept, or the students themselves if they do not master the material easily," shares a Chemistry professor. "It is important to admit to the difficulty of understanding material for the first time, but not to make that difficulty an excuse. A good way of achieving this aim is to offer a specific strategy for mastering the material."

"It is important to distinguish between appreciating the difficulty students have in understanding new material, and the rather simpler but less effective option of allowing the subject difficulty to act as an excuse for the students' quality of learning," comments an Education professor.

A professor of Astronomy observes that he teaches a course better the first time than he does the second time. "When I asked myself why, I realized that in

preparing the course for the first time, I really had to work hard to master certain parts of the material in order to explain it to my students. The next time, however, these concepts no longer seemed difficult to me. Unfortunately, I forgot that they would still be difficult for the students. Now I color-code all of my notes, keying the parts that students are likely to find difficult and making a special effort to make points very clear," he explains.

A Physics professor shares, "After I have finished writing up a set of lecture notes, I review them carefully, asking myself: What might my students find hard to follow in that line of reasoning? What examples might make that more clear? This has now become the most important part of my lecture preparation."

Several faculty members report keeping track of the kinds of errors students most commonly make in assignments and exams as a reminder of what students find most difficult to understand.

6. Make an effort to help students having difficulty with your course.

A Biochemistry professor administers a diagnostic test covering knowledge and skills prerequisite to the course. The test, which is given in the first week, is not graded. "Its sole purpose is to help me identify those students who need extra help, so I can begin working with them early in the course. Students need to recognize their weaknesses and begin to correct them if they are to succeed in my course, but they have to be given the means for correcting deficiencies," she explains.

Some faculty provide tutorials based on principles and skills needed to succeed in their course. A professor of Chemistry developed science and math computer-assisted review units for students deficient in these areas. "I give a short diagnostic test at the beginning of the course to help identify students who need this kind of review in order to keep up with my course," he explains.

A professor of Geology gives the first of two midterms early enough in the course to allow him to identify those students who may be having difficulty. After the first midterm, he asks each of his students who did not pass to talk with him about the exam results. In these meetings he tries to discover each individual student's problem. He concludes each meeting by telling his students that he is certain they can do better and makes a deal with them. "Usually, I tell them that I'll forgive the first midterm and let their grade be determined solely on the second midterm and final," he explains, "on the condition that they agree to meet with me weekly to go over homework assignments and to get additional help. About nine or ten students take advantage of this help each term. As a result of this technique, in the ten years I have been teaching I have not had to flunk a single student in a course. Giving students a second chance, I find, is a powerful motivator."

A Communications professor requires all her students who fail assignments or quizzes to meet with her. A professor of Nutrition writes, "Please see me," on the weekly quizzes of students who score below 70. "It's important to find out why

students score low," he explains. "If they are having difficulty understanding the material, I offer to help them. If it's a question of motivation or a student placing less priority on my class, that's all right too. It helps me as a teacher to know the reasons for the poor performance. Showing concern is also a powerful motivator for some students; they begin to do better."

A Nursing professor concurs. "I call students in who get less than 50% on the biweekly quizzes," he says. "In a way, I play parent with them; I 'sit on' them a little. I think I understand better now, than when I began teaching, the need some students have for external motivation."

A History professor believes that students often need help with specific skills in order to succeed in a particular course. Simply telling students to "work harder" or "put in more time to the course," does not prove very helpful. She offers a series of supplemental two-hour workshops during the first few weeks of the semester based on topics that she feels are essential for the success of her students: reading text material, note taking, studying, and taking exams. During the workshops students practice these skills on actual course materials (i.e., critically analyzing a journal article, writing a thesis statement for a research paper, creating an outline for a response to an essay exam). By offering strategies for success she feels that she is providing the means for her students to succeed in her course, as well as other courses to which these skills easily transfer.

Some faculty make a special effort to integrate their weaker students into the class through small group work. A Language professor divides his students into small groups. "I pose a question to each group," he explains. "One student in each group gives the answer orally; a second student corrects the first student, if necessary; and the third student writes the answer out. Each student has a role, and these roles are rotated throughout the semester. Initially I assign my weaker students to do the writing, although I am careful not to do this in an obvious way. This allows the weaker students to participate, but in a way that reinforces their own learning without holding back the others. Also I often ask a better student to help out if a weaker student is having difficulty responding. Peer teaching can be extremely effective, especially when a class takes responsibility for its weaker members. I find this approach superior to one-on-one tutoring during office hours."

Several other faculty members also report forming small peer teaching groups in discussion/tutorial classes or labs. They integrate their weaker students into groups of average and above average ability students. Some explicitly suggest ways in which their better students may help other students or ways in which students who are having difficulty may learn from others.

7. Be accessible to your students.

Many faculty arrive at class a few minutes early each day and talk with their students. "I try to target a different group of students each day and talk with them about the course or more general topics, get to know their names, or learn

something about them as individuals," a History professor indicates. A Retailing professor makes a point of going to her class early to talk informally with her students. "Five or six students come early to the class each time to ask questions, share ideas, or just talk," she reports.

Some faculty stay after class to talk with their students. "The biggest turn-off for students is for a professor to immediately gather up his notes and virtually beat the students to the door after class," a professor of Public Health points out. "This suggests that he is too busy for students. I have developed a technique of loitering after class and talking with students as they leave. The result is that after the first few days of class, more and more of my students linger as well, and I get to know many of them in that way."

If another class is scheduled in the room immediately before or after your class, then do as a Biochemistry professor suggests and stay in the hall for ten minutes before or after class to respond to students' short questions.

Several faculty explain the purpose of office hours to their students. New students may only have a vague notion of what office hours are for. Let students know that they can come to talk to you informally, to ask questions about the material or assignments, to review graded work, to get suggestions for further reading, or to discuss other topics related to the course or to your field. Include your office hours in your syllabus and remind students of them occasionally during the semester. A Political Science professor encourages student turnout during office hours by placing an invitation within the course syllabus. It reads, "You are encouraged to stop in during office hours to talk about any problems or suggestions you may have concerning the course; about careers (especially graduate school, law school, or the benefits of majoring or minoring in political science); or just about politics or things in general. If you want to talk to me and find the schedule hours to be inconvenient, feel free to schedule an appointment."

Being disciplined on keeping your office hours reflects the importance you place on being available to meet with students. If you will be unavailable during a scheduled office hour, announce it in class or put a note on your office door. Students get upset with faculty who are not present for their posted office hours and these feelings can impair their motivation to succeed in the course.

A Nutrition professor schedules his office hours immediately following the class session. "That way students who bring up more complicated questions right after class are invited to accompany me back to my office. I've found that my students are more likely to have questions or comments at the end of a class when the material is still fresh. This strategy lets me address their concerns immediately," he notes.

Several professors work in their office with an open-door policy. "I tell my students that if the door is open, they should feel free to come in and ask whatever questions

they have," a Dramatic Arts professor shares. "On the other hand, if the door is closed, it means either that I am not in or I prefer not to be disturbed." A Marketing professor tells his students that even outside formal office hours, "If you catch me in my office, I'm fair game."

Many faculty try to keep their office door open unless they really cannot be disturbed. "I always keep my office door open when I am in and am willing to stop whatever I am doing if one of my students comes by. It's important not to appear stand-offish, to act put-upon, bored, or too busy to spend time with your students out of class," an Earth Science professor shares. When he is working in the lab, he leaves a note on his office door inviting his students to drop by the lab if they want to talk. "Actually, I like to have students visit me in the lab, because there they can really see me at work, and can get some idea of what I do," he adds.

Students may be intimidated by the thought of speaking directly and privately to their professors. The more approachable you are, the more likely students will be comfortable seeing you during your office hours. A Physics professor explains that she makes a point of never making students feel unwelcome. If a student drops in at an inappropriate time, she maintains a positive attitude, saying, "I'd love to see you, how about 4:30?," rather than, "I can't see you now, I'm busy, try again later."

Some faculty indicate that since many of their students never come to their office or lab, they try to spend several hours a week in the department course center where students study, socialize, and eat lunch. They are able to talk with students informally and get to know them better.

A large number of faculty report using email to increase their accessibility to students. They include their email address in the course syllabus and set aside a certain time each day to read and respond to students' emails. Many recommend responding to students' emails in a timely manner (i.e., within 24 hours).

Several faculty members give their home phone numbers to students and encourage them to call if they have questions or problems. "Just not after 2:00 a.m.!" warns an English professor. He finds that his students rarely abuse this invitation. "I usually get about six calls per term out of several hundred students. It is a lot less time consuming to clarify an assignment the night before it's due than to negotiate a grade or an incomplete for a student who did the wrong assignment. I've found it's cost effective to be a bit more cooperative and flexible at the front end," he adds. A professor of Political Science agrees. "Even in my large classes (over 450 students) I rarely get more than a dozen calls, but the fact that I give out my number lets my students know I am available if they need me," he reports.

Grading

The suggestions described below may be helpful in addressing your grading practices if student ratings reflect the following types of concerns:

- The grading policy was unclear to the students.
- The students had limited assessment opportunities.
- The students felt their work was not evaluated fairly.
- Your feedback on student work was not prompt.
- Your feedback on student work was not helpful.
- The students were not aware of their progress in the course.

1. State your grading procedures in the course syllabus and review them with your students.

Many faculty recommend describing the grading policy clearly so that students understand how their grade will be determined. If you intend to make special allowances (e.g., extra credit, late assignments, paper revisions) clearly state your policies. Explain your policies on attendance, participation in class, and anything else pertinent to your course.

An English professor indicates that she views the grading policy portion of her syllabus as one of the most important sections. “It is only fair that students know the grading expectations placed upon them from the beginning of the course,” she explains.

A Writing professor concurs that, “the students have a right to know the assessment process and grading system from the get-go. If you are seriously concerned about their success in your course, you need to make them aware of how their grade will be determined from the first day of class.”

See also suggestion #1 of the Organization and Preparation section.

2. Provide enough opportunities for students to show what they are learning.

Giving students many opportunities to show what they are learning provides a more accurate assessment picture. It is important, however, to use methods (i.e., exams, papers, projects, group presentations, other types of assignments) that are closely tied to your course goals. Scheduling some form of assessment every two or three weeks is especially important for students in lower division courses.

A Religion professor indicates that she tries to give her students various and numerous opportunities to show what they are learning. “I provide at least five major grading opportunities and several smaller assignments for my students every semester. The grades that I use to provide a semester grade reflect individual work,

group work, research, and exams. This provides a more complete picture of my students' learning," she notes.

A Chemistry professor includes a wide range of student learning assessments within his course design. "I don't believe in penalizing students by asking them to only 'be on' two days out of the semester. I know that I have bad days and so do my students. Between lab work and classroom assignments, I have about twelve grades for each of my students. Now that is a much fairer assessment of their ability and their learning," he states.

3. Provide your students with prompt and constructive feedback about their learning.

Research indicates that students are motivated to learn by constructive feedback and evidence of progress. "Students need to know what they are doing well in addition to what they need to improve," says a professor of History. "I am always careful to praise their strengths and to be as constructive and helpful as possible in pointing out their weaknesses." A Philosophy professor adds, "Unless students know how to improve their work, what is the point of grading? It is not just a numbers game; it is helping them to learn."

A Geography professor includes his grading schedule in the course syllabus. "If my students are expected to meet deadlines for the completion of their work, then so should I. My syllabus tells students not only when their work is due, but when my work is due! They know exactly when their graded work will be returned to them. In this way I stay on track, and the students receive their work back while it is still fresh in their minds and when what they learn from my feedback can still help them in the learning process for my course," he explains.

"When I schedule student assignments, I block out my own time to grade them immediately," reports an Engineering professor. "This is important for two reasons. First, the quick turn around time ensures that my students are still thinking about the assignment. Thus, any criticism or feedback is likely to have a stronger impact than if it were delayed a week or more. Second, prompt feedback indicates to my students the importance of what they are doing and my concern for their learning the material."

An English professor concurs. "The impact is enormous when you return assignments at the next class session. Students are still anxious to know how they have done. That's a tremendous advantage in maximizing the impact of feedback on their learning," she reports.

A number of faculty provide their students with a standard against which they can compare their work. They distribute a copy of a good (A-B range) assignment (e.g., paper, lab report, book review, critical analysis) to students along with their graded work. Students use the faculty comments to understand the strengths of their work, as well as areas needing improvement. They can then use the sample piece as

a guide for improving their work. Some faculty also provide sample copies of previous students' work when an assignment is initially introduced, as a means of conveying expectations.

A Computer Science professor uses peer editing of students' work to enhance feedback. "In my upper division courses, I have my students submit two copies of each computer program they write," he explains. "One copy goes to me and the other copy is assigned to another student in the class to evaluate and edit." He believes that learning to program is like learning to write short stories; you learn not only by doing it but also by reading programs other people have written. Peer editing gives his students yet another opportunity to demonstrate their understanding of the material.

A professor of Architecture uses the same strategy with student papers. He has students exchange papers to edit. "The final paper is submitted along with a copy of the first draft with its edited corrections in red," he explains. "Each paper then receives two grades, one for the author and one for the editor." In this way students receive prompt informal feedback from a peer, followed by a grade and formal critique from the faculty member.

See also suggestion #3 of the Examinations section and suggestion #4 of the Assignments section.

4. Keep students informed of their progress throughout the semester.

By keeping students aware of their progress, you help them to appreciate their own achievements, as well as to understand what is needed to improve their overall grade.

A Forestry professor periodically gives his students a list of their grades to date on their quizzes, midterms, group projects, laboratory reports, and homework assignments. "I keep all my students' grades on my computer," he says. "Two or three times a semester I print out scores for each student so they are aware of how they are doing and the progress they are making in the course."

A History professor provides a grading template for her students to download to their computers. "They are able to add to their grading list everything that they complete throughout the semester. This not only provides them with a list of their grades, but also serves as a check on making sure no assignments or grades are missing," she explains.

Examinations

The suggestions described below may be helpful in addressing your examination procedures if student ratings reflect the following types of concerns:

- The students were not clear as to the content coverage of the exams.
- In-class and out-of-class activities did not prepare the students for the exams.
- The exams did not reflect the important aspects of the course.
- The focus of the exams was memorization.
- The exams were not returned promptly.
- Your feedback on the exams was not helpful.

1. Develop your exams conscientiously.

Many faculty indicate that one of the most critical aspects of creating an assessment tool (i.e., exam, critique, laboratory practical, presentation rubrics) is that it reflects the course goals and learning outcomes. Ideally, assessment tools should measure students' achievement of the goals and outcomes of the course. A Women's Studies professor keeps track of how well her exams reflect her objectives by constructing a grid. She lists the learning outcomes along the side of the page and content areas along the top. For each test item, she checks off the objective and content it covers.

In addition to determining the learning outcomes you wish to measure, consider the type of items best suited to those outcomes, the range of difficulty of items, the length and time limits for the exam, the format and layout of the exam, and your scoring procedures. "Since I want my students to be successful as well as intellectually challenged, I estimate how long it will take students to answer essay questions and make a point of minimizing the number of questions that call for simple recall of information," shares an Anthropology professor.

Many faculty members create exams that require an appropriate level of mastery of the subject matter. These and other measures of learning require students to think critically and creatively about the course content rather than display mere memory of facts and concepts. "I really believe that by college, students should be challenged to think and not just memorize information," states an International Relations professor.

Several faculty members stress the importance of showing exam questions to tutors or other colleagues. A Chemistry professor explains, "Tutors are very helpful in identifying exam questions which may be too difficult for my students. They often see things that I don't when I make up the exams."

Creating an exam that "looks" familiar to students helps relieve the test anxiety often experienced by students. "Questions on midterm and final exams should not take a form radically different from those which you use in quizzes, homework assignments, lecture, or discussion," states a Political Science professor. "I try to

generate exam problems that are similar to my homework problems so there are no surprises," comments a Mathematics professor. "When students can see a link between the things they are asked to do during class and their private study time, and the things they will be asked on the exam, they are more motivated to make the effort," a professor in Psychology observes. "Students also seem to rate the exams as being fairer and more appropriate when this link is clearly established."

A number of faculty members balance the difficulty of items on their exams. A professor of Business Administration distributes exam items as follows: approximately 35% are reasonably easy questions that nearly everyone gets correct; about 50% of the questions require a little more sophistication but can be answered by students who have kept up with the course material; and 15% of the items are more challenging and generally are answered completely correct by the top students in the class. "A balanced exam with easy, moderate, and difficult items gives my students an opportunity to show whether they have mastered the fundamentals of my course or have gone beyond the minimum," explains an Accounting professor. "I also try to include problems everyone should be able to do, as well as questions that require more thought and really make my students go beyond the material," shares a History professor.

Some courses do not lend themselves to exams, such as laboratory or studio, however, assessment methods should still reflect the course objectives and learning outcomes.

2. Prepare your students for exams.

Many faculty members prepare study sheets and review questions for their students before an exam. A professor of Near Eastern Studies indicates, "This helps relieve test anxiety, especially in a lower division course where students are less sure what to expect." An Exercise Science professor states, "I organize my study questions so that it is apparent not only what is most important, but how the parts of the course fit together. I think this helps my students synthesize the material which is what most of my actual exam questions require them to do."

Several professors conduct review sessions before exams. A Biology professor states, "Either my TAs or myself hold two or three review sessions before an exam. Each session focuses on a specific topic. About one-third of the session is spent presenting a short lecture highlighting the major points of the topic and then the remaining time is for student questions. We are amazed at the number of students who attend these sessions. We feel they are well worth both our time and the students'." "Many freshmen have not really developed good study skills," claims an Economics professor. "I try to help by giving them study questions for reviewing the content of my course and by reviewing these questions in the last session of class before the exam." A professor of Mathematics tells students, "If you can handle the examples on these problem sheets, you can pass the exam. People who have trouble with these examples can ask me for extra help."

A number of faculty provide students with examples of exam questions. “It is only appropriate for students to be informed as to the type of questions they will be asked. If they are prepped in this way for tests like the SAT and ACT, why not for my tests?,” comments a professor of Education. “I share a few examples of multiple choice and essay questions with my class. This helps to relieve some of their anxiety, especially on the first midterm. I will sometimes include different types of questions on my exams that involve ranking or cause and effect determinations. The students never see these types of questions for the first time on an exam. We always discuss how to approach these in review sessions,” he shares.

In helping students prepare for challenging exam questions, a History professor tells her students that their best preparation is to compare X with Y, which may be, for example, two playwrights or two orators. In this way she informs her students about the comparative nature of her exam. Although her actual midterm and final examination questions are not the standard “compare X’s views with those of Y’s regarding Z,” students who are prepared to make such comparisons are able to do very well. The actual questions are more creative. For example, “Suppose that the main character in Molier’s play was to appear in Beaumarchais’ *The Marriage of Figaro*. How would X (Beaumarchais’ main character) react to Y (Moliere’s main character)?” or “If X and Y (from the 17th or early 18th century) had met Rousseau, how would they react to his theories?” Questions of this type not only require students to understand two historical periods and major changes that took place between them, but to use that knowledge creatively.

3. Provide timely and helpful feedback to your students.

A number of faculty members prepare answers to exams and quizzes to hand out as soon as students turn in their work. A Chemistry professor prepares a handout of correct answers that he gives to students as they turn in their answer sheets. “There is no point in making students wait several days or weeks to find out how they did,” he explains. “They are most interested in the results at the time of the examination, and this is the time that the greatest reinforcement of the learning can take place.” He notes that this method gives students immediate feedback, even though it may be a week or more before the assignments can be returned with comments or grades.

Discussing the answers to exams, quizzes, projects, or assignments at the next class meeting is a common practice among many faculty members. An Engineering professor discusses the answers at the next class meeting even if he cannot return graded assignments or exams. “I want to correct any misunderstandings and reinforce their learning as soon as possible,” he says. “Students are much more receptive to this right after completing an assignment or exam.”

Another common strategy among faculty is it to return a “perfect” essay exam to students along with their own corrected exams. A professor of Business Administration likes to provide a great deal of feedback to his students after exams as a way of reemphasizing the themes of the course. “I generally spend about half

the class period walking my students through a ‘perfect’ midterm that I distribute to them along with their own corrected exams. I hope that it helps them to do better on the second exam.”

See also suggestion #3 of the Grading section.

Assignments

The suggestions described below may be helpful in addressing your selection of assignments if student ratings reflect the following types of concerns:

- The students could not relate the assignments to course content.
- The assignments did not enhance student learning.
- The directions for the assignments were confusing to the students.
- The assignment work load was unreasonable.
- The criteria for grading the assignments were unclear to the students.
- The assignments were not returned promptly.
- Your feedback on the assignments was not helpful.

1. Select assignments that are relevant to the student learning outcomes.

Establish a student centered approach to your teaching by focusing on what the students will be doing to attain the desired learning outcomes. As you design your course, select the type of assignments that will help students accomplish the established learning outcomes. Assignments should not be an afterthought, but an integral part of the planning and learning process. An International Relations professor asks herself, "Do my assignments fit the kind of learning I want for my students? Do they help them to attain the student learning outcomes?," as she reviews her course syllabus each semester.

Assignments should be designed so they actually assess the learning you want your students to achieve. A Mathematics professor realized that his grading process was placing the emphasis on getting the right answer to the problem. His student learning outcomes, however, included students developing the ability to explain the process, not just solve the problem. "To address this, on some assignments I require the students to divide their paper into two columns. They solve the problem in column one and in column two include a verbal explanation of what they did and why for each step of the problem. This helps me to check on the accuracy of their thinking process. Many students can solve a problem, but I want them to know why they got a particular answer. This is the true proof of learning in mathematics," he explains.

As one of her learning outcomes, a Psychology professor states that students will develop their critical thinking skills. Upon reviewing the assignments and papers she requires for the course, she realized that they simply require a mastery of facts and basic concepts. In order to align her assignments with the desired learning outcomes, she reduced the number of assignments and redesigned them to require synthesis and evaluation skills.

A Sociology professor routinely required a research paper from his students. Realizing that the research paper was not fulfilling the type of learning he wanted

his students to achieve, he changed his assignments to reflect the learning outcomes. “I want them to be able to analyze and apply what they are learning to everyday situations. That wasn’t happening within the context of the research paper. So, now I have my students write several sociological analyses throughout the semester. I ask them to analyze an event they experience or an observation they make in light of the sociological viewpoints we are studying in class. If they go to a family birthday party, an athletic event, a cultural event, or simply observe the activity within the cafeteria at dinner, they analyze it in terms of a sociological perspective. The results have been amazing! Of course, some students initially struggle with the assignment but they get better as the semester progresses. The analytical skills that this type of assignment requires is really what I want them to develop. In retrospect, the research paper was more of a library exercise and did not help the students to attain my stated learning outcomes,” he concludes.

2. Provide clear directions for the assignments.

Clearly define the assignment so students understand the expectations from the beginning. Some professors provide an assignment sheet to ensure that the instructions are clear. “Creating an assignment sheet for the students actually helps me,” claims a Biology professor. “It forces me to think through each aspect of the assignment before I share it with the students. This allows me to design the assignment so that it measures the knowledge and skills I want it to,” she explains.

An assignment sheet should list all the essential information for the specific assignment. An Economics professor’s handout includes a description of the task, the objective of the assignment, the role that the student should assume, and the report requirements (e.g., format, due date, length, etc.). A Chemistry professor includes the audience to whom the student is writing, the purpose of the paper, procedure, standards, and grading criteria in her assignment sheet. “I always include a grading rubric with the assignment sheet so students understand as they begin to create the project what I will look for in the grading process,” shares a Drawing professor.

Discussing the assignment sheet with the students is a common practice among faculty. “After I pass out the assignment sheet, I take 10 to 15 minutes to discuss it with the students. The time is well spent since it avoids student confusion and stress over the duration of the project,” states an Architecture professor. “Questions students ask during our discussion of the assignment help them to begin to frame the work. I also use this time to share problems they may encounter and ways to avoid them,” shares a Sociology professor. A Writing professor has the class work in small groups after the initial discussion of the assignment. This allows students to brainstorm and begin to formulate ideas and explore possible topics. “I circulate to see where the students are and help to redirect them, if necessary. It also allows me to address the class regarding concerns or misunderstandings that I hear from various groups,” she explains.

Students often find it helpful to see examples of previous work of the type that is expected in the assignment. “I share a few examples of my previous students’ work to get the creative juices flowing,” states a Mechanical Engineering professor. A European History professor shares with students suggested topics and then describes creative approaches that students have used in the past. Some professors place copies of previous work on reserve in the library, while others will share one or two previous assignments in class and explain what makes these pieces good. “Being able to describe why a particular paper is good helps the students to more fully embrace the scope of the assignment,” states a Philosophy professor.

3. Be reasonable in terms of student work load.

Looking at the big picture (i.e., the semester) during the planning stages helps to maintain reasonable expectations in terms of work load. “While planning the course and drafting the syllabus, I ask myself if the work load is reasonable, strategically placed, and sustainable not only for my students but for me. This is something I consider greatly when designing and planning a course,” shares a Geology professor. A Retail Management professor maps out the proposed pacing of her course on a calendar using different colored markers to record dates of exams, quizzes, assignments, larger projects, and campus events (i.e., Parents Weekend, Homecoming). “This helps me to avoid scheduling conflicts for both my students and myself. In order for my students to have the opportunity to provide me with their best work, I intentionally avoid scheduling large projects close to exam dates and try to avoid having projects due or exams scheduled immediately after Parents Weekend or Homecoming. It’s important for students to participate in these events and I am pleased to allow them that time,” she states.

A Women’s Studies professor also attempts to distribute the work load evenly throughout the semester. “I try to space out the students’ work in order to avoid having a large amount of their grade determined during the last few weeks of the semester. I want to see the results of their best effort, not something that has been compromised by time constraints. There is too much demanded of students at the end of the semester and simply not enough time to produce quality products. I want my students to show me what they can do when they have the time and appropriate conditions in which to work,” she claims.

An Economics professor creates the appropriate environment for students by spanning their research paper out over the course of the semester. “I break the project down into manageable pieces for the students. It is important for them to learn from each step of the process and actually perform and understand all phases of the research process” he states. He sets up due dates throughout the semester for topic identification, reference list, outline, first draft, and rewrite. “This not only addresses the work load issue, but avoids an entire research paper being completed in the last week of the course. Feedback is provided to the students after each step, which enhances the learning process and the quality of the final product. As a side benefit, it actually serves as a lesson in time management for some students,” he adds.

Other professors have found that by making the work load more manageable, they enhance the learning process. A Business professor used to have his students analyze ten case studies over the course of the semester. With a case study coming in almost every week, he did not have the time to correct and return them to the students before the next one was due. Consequently, several students wrote one mediocre case study after another. “I was so frustrated with not being able to provide the guidance these students needed to improve. So, I decided to focus the earlier case studies on building the skills necessary to conduct a thorough analysis. These assignments were shortened and more focused in design. My students now write fewer full case studies, but the ones they do write are so much better than before. They have sharpened their writing and analytical skills as a result of reducing the workload and focusing on the development of appropriate skills. I could not be more pleased with the results,” he concludes.

In a similar scenario, a Biology professor was not pleased with the quality of lab reports she was receiving from her students on a weekly basis. She decided to focus on lab writing skills. “On the first lab, students only wrote the introductory section. I explained and demonstrated the qualities of a good introduction. We repeated this for the second lab so that they could take advantage of the feedback provided on their first lab. It was exciting for me to see the improvements on their second lab. Previously, when I was grading the entire lab, I was never able to return them before the next one was due. So, mistakes were often repeated,” she indicates. She proceeded to add the second lab section, methods and materials, by the third lab exercise. She was able to provide focused feedback and proceeded in this manner having students master one section at a time. This reduced the work load and allowed her feedback to be timely and effective. “By midterms my students were writing full lab reports of much better quality than I had received in previous semesters,” she shares. By teaching the process she was able to help students master it one step at a time. This also reduced the work load and allowed for her feedback to enhance their future work.

4. Provide timely and helpful feedback to your students.

Providing feedback to students from sources other than yourself is a technique used by some faculty. A Public Affairs professor requires his students to select someone from the class to read the first draft of their paper. “I provide the students with a checklist for peer reviewing the papers. The checklist needs to be completed and signed by the reviewer and turned in with the first draft. Students take their responsibility as a peer reviewer seriously and are usually very thorough in their review. I have also found that students are quite accepting of a critique from their peers,” he reports.

Similarly, a Psychology professor uses peer response groups to provide feedback to students. Small groups of three or four students collectively review a paper and complete a group review of the draft. “I ask the group to determine the strongest and weakest parts of the paper and why; identify confusing sections; and discuss transitions, referencing techniques, introduction, and closure. This exercise

routinely creates meaningful discussion within groups and really helps students to look at their work from a different perspective. The feedback provides insights and suggestions that students can integrate into their final paper," she explains. "It is also important for students to realize that writing is not just an exercise that takes place between me and each individual student," she adds.

A Writing professor routinely has her students discuss their current writing assignment in small groups. "I have them share what they are writing about and why, problems they are having, roadblocks they are experiencing, and any other aspects of their writing. It is important for students to talk about their writing. It helps them to generate ideas, focus their topic, work through difficult areas, and most importantly motivate them to keep on trying," she notes.

In an effort to create a more manageable project, some professors break a paper down into various sections, each with distinct due dates. By receiving feedback at several steps throughout the process (e.g., thesis statement, introduction, outline, sources, rough draft), students have the benefit of enhancing their final paper.

Praising the strengths of an assignment is as critical as identifying areas for improvement. "I always reinforce what they did well in the assignment. I write positive comments in the left margin of their paper and note points of concern in the right margin. This helps me to visually see that the comments are balanced or skewed one way or the other depending upon the quality of the paper. I also note improvements that a student has made since the previous writing assignment," shares a Communications professor.

Some professors distribute and discuss a rubric (grading criteria) along with the details of the assignment. An Interior Design professor indicates, "I have the students self assess their project by filling out the same rubric that I use when I review their project. I have found that students are quite honest in their self assessment and sometimes even harder on themselves than I am! We then discuss the results of the two assessments, which helps students to identify what specifically needs to be worked on and addressed in future assignments."

Discussing the assignment when it is returned to students provides them with a frame of reference. "I provide the students with a sense of how the class did on the paper. I share the strengths that I saw within the group as a whole and also some of the common shortcomings. As a class we discuss how to address the areas for improvement so they are not repeated on the next paper," remarks an Advertising professor.

Some professors ask students to assess the assignment. "I ask students to provide me with feedback about the assignment. They complete a short evaluation which asks them to address the difficulties they had with the assignment, ways to improve it, and the learning that occurred as a result of completing the assignment. This helps me to assess if the assignment is getting at the type of learning that I want to

have occurring. It also allows me to modify the assignment for future use, if necessary," a Marketing professor explains.

As a way to maximize the learning process, allow students to share their final piece of work with the class. The day that his students turn in their papers, an Anthropology professor has each student spend three to five minutes sharing their work with the class. "This is nothing formal or graded; just an opportunity for students to benefit from the work of their peers. I cannot possibility cover in my lectures and discussion sessions, all the wonderfully related topics that they explore through their papers. This is a great time to learn from each other," he shares.

See also suggestion #3 of the Grading section.

Additional Resources

1. Discipline Specific Journals on Teaching

Accounting
- *Accounting Education*
- *Issues in Accounting Education*
- *The Journal of Accounting Education*

Anthropology
- *Anthropology and Education Quarterly*

Architecture
- *Journal of Architectural Education*

Art
- *Art Education*
- *Journal of Aesthetic Education*
- *Journal of Aesthetics and Art Criticism*
- *Studies in Art Education*

Behavioral Science
- *Behavioral Science Teacher*
- *Journal of Applied Behavioral Science*
- *Small Group Behavior*

Biochemistry
- *Biochemical Education*
- *Biochemistry and Molecular Biology Education (BAMBED)*

Biology
- *Advances in Physiology Education*
- *American Biology Teacher*
- *Cell Biology Education*
- *Journal of Biological Education*
- *Journal of College Biology Teaching*
- *Microbiology Education Journal*

Business
- *Business Education Forum*
- *DPE Journal (Delta Pi Epsilon)*
- *Journal of the Academy of Business Education*
- *Journal of Applied Finance (*Formerly *Financial Practice and Education)*
- *Journal of Education for Business*
- *Journal of Financial Education*
- *Journal of Management Education*

Journal of Marketing Education
Journal of Organizational Behavior Education
Journal of Teaching in International Business
Marketing Education Review Business Education Forum
NABTE Review (National Association of Business Teacher Education)
Teaching Business Ethics

Chemistry
Journal of Chemical Education
The Chemical Educator

College Student Personnel
Journal of College Student Development
NASPA Journal (National Association of Student Personnel Administrators)

Communications/Speech
Communication Education

Computer Science
Computer Science Education

Counseling
Counselor Education and Supervision
Journal of Counseling and Development
Journal of Counseling Psychology

Design and Graphics
Representation

Dietetics
Journal of the American Dietetic Association

Economics
Journal of Economics and Finance Education
The Journal of Economic Education

Education
Action in Teacher Education
Journal of Teacher Education

Engineering
ASEE Prism (American Society for Engineering Education)
Chemical Engineering Education
International Journal of Electrical Engineering Education
International Journal of Engineering Education
International Journal of Mechanical Engineering Education

The Journal of Engineering Education

English
College Composition and Communication
College English
Research in the Teaching of English

English as a Second Language
ELT Journal (English Language Teaching Journal)
Teaching English as a Second or Foreign Language
TESOL Quarterly (Teachers of English to Speakers of Other Languages)

Family Studies/Human Development
Family Relations Interdisciplinary Journal of Applied Family Studies
Journal of Extension

Geography
Journal of Geography
Journal of Geoscience Education

Gerontology
Educational Gerontology
Gerontology and Geriatrics Education

History
Teaching History: A Journal of Methods
The History Teacher

Hospitality/Tourism
Hospitality and Tourism Educator
Journal of Hospitality and Tourism Education

Instructional Design
Syllabus
THE Journal: Technological Horizons in Education

Interior Design
Journal of Design Communication
Journal of Interior Design Education and Research

Journalism/Mass Communication
Journalism and Mass Communication Educator
Journalism Educator
Media and Methods

Law
Journal of Legal Education
Learning and the Law

Library Science
Journal of Education for Librarianship

Mathematics
Arithmetic Teacher
Journal for Research in Mathematics Education
Mathematics Education Research Journal
Mathematics Teacher
School Science & Mathematics
The College Mathematics Journal

Modern Languages
ADFL Bulletin (Association of Departments of Foreign Languages)
Canadian Modern Language Review
Foreign Language Annals
International Review of Applied Linguistics
Modern Language Journal

Music
Council for Research in Music Education
Instrumentalists
Journal of Research in Music Education
Music Educators Journal
Research and Issues in Music Education (RIME)
UPDATE: Applications of Research in Music Education

Nursing
Journal of Nursing Education
Nurse Educator
Nursing Education Perspectives

Philosophy
Metaphilosophy
Philosophical Studies in Education
Teaching Philosophy

Physical Education
Journal of Physical Education, Recreation, & Dance
Journal of Teaching in Physical Education

Physics
American Journal of Physics

Physics Teacher

Political Science
Teaching Political Science

Psychology
Educational Psychologist
Journal of Educational Psychology
Teaching of Psychology

Regional and Community Planning
Journal of Planning Education and Research
Journal of the American Planning Association

Religion
Journal of Moral Education
Religious Education
Teaching Theology and Religion
Theological Education

Science
Instructional Science
Journal of College Science Teaching
Journal of Research in Science Teaching
Journal of Science Education and Technology
Science & Education

Social Studies
Social Education/The Journal of the National Council for the Social Studies

Social Work
Journal of Social Work Education
Journal of Teaching Social Work

Sociology
Sociology of Education Journal
Teaching Sociology

Statistics
Journal of Statistics Education
Statistics Education Research Journal
The American Statistician

Theater
Theater Topics

Women's Education
Feminist Teacher

2. Current Books on Teaching

Bain, K. (2004). *What the best college teachers do*. Cambridge, MA: Harvard University Press.

Brookfield, S. D. (1995). *Becoming a critically reflective teacher*. San Francisco: Jossey-Bass.

Donald, J. G. (2002). *Learning to think: Disciplinary perspectives*. San Francisco: Jossey-Bass.

Fink, D. (2003). *Creating significant learning experiences*. San Francisco: Jossey-Bass.

Finkel, D. (2000). *Teaching with your mouth shut.* Portsmouth, NH: Boynton/Cook Publishers.

Grunert, J. (1997). *The course syllabus*. Bolton, MA: Anker Publishing Company, Inc.

Lowman, J. L. (2000). *Mastering the techniques of teaching (2nd ed.)*. San Francisco: Jossey-Bass.

Menges, R. J., Weimer, M., & Associates. (1995). *Teaching on solid ground: Using scholarship to improve practice*. San Francisco: Jossey-Bass.

Palmer, P. J. (1997). *The courage to teach*. San Francisco: Jossey-Bass.

Paulson, M. B., & Felman, K. A. (2000). *Taking teaching seriously: Meeting the challenge of instructional improvement.* San Francisco: Jossey-Bass.

Silverman, S. L., & Casazza, M. E. (1999). *Learning and development: Making connections to enhance teaching*. San Francisco: Jossey-Bass.

Tagg, J. (2003). *The learning paradigm college*. Bolton, MA: Anker Publishing Company, Inc.

Weimer, M. (2002). *Learner-centered teaching: Five key changes to practice.* San Francisco: Jossey-Bass.