

INSTRUCTIONAL DEVELOPMENT PROGRAM

Collecting Feedback That Improves Teaching and Learning: A Sampler of Effective Practices

At the heart of effective teaching is an ongoing process of self-evaluation and obtaining feedback from others. When data are collected during the semester, when suitable kinds of questions are posed, and when the procedures used provide sufficient detail to help teachers determine what is and is not working, the result can be extremely helpful. There are many different kinds of data you can collect, some less formal than others. But generally speaking, those data that ultimately prove to be the most useful share the following characteristics: they are (1) timely, (2) systematic, and (3) descriptive.

One obvious source of information about teaching is students themselves. As part of our consultative services, the Instructional Development Program maintains a file of activities for obtaining effective student feedback. The following is a brief description of three kinds of activities that have been tried and tested in Penn State classrooms. Obviously, these procedures can be used at any point during the semester, but they have the greatest potential to improve teaching and learning when used early. You might consider administering at least one of these feedback instruments as early as the third week of class.

IDP staff are available to consult with instructors about any of these activities. We particularly recommend a consultation for first-time participants. The spirit of the discussion involves a mutual exploration of what the data may mean and what future actions are possible.

TEACHER DESIGNED/SCORED QUESTIONNAIRES

Designing your own questionnaire, especially one that includes some open-ended questions, can be an extremely effective way of obtaining feedback if you ask questions that solicit moderately focused responses. Very broad and general questions (e.g., "What did you like most, or least, about this class?") may result in irrelevant or vague responses ("I liked your yellow shirt," "I don't like the lectures"). In contrast, specific questions (e.g., "What kinds of comments on papers and quizzes do you find most useful? Least useful?") will for the most part elicit more informative feedback by encouraging students to describe the kinds of behaviors that are working in a particular instructional situation ("I don't understand the symbols you use in your comments"). Some students will also offer very simple and concrete suggestions for how to make things work better ("Leave the overheads up longer so we can copy from them). Sample questionnaires of this sort are included on pages 3-10. In addition to providing a small file of sample questionnaires, IDP is happy to assist as needed, either in designing a questionnaire or interpreting the results.

CLASSROOM ASSESSMENT TECHNIQUES

All too often, what goes on in the mind of the learner remains an enigma to those who teach. Cross and Angelo (1988, 1993) compiled a set of structured assessment activities gleaned from a variety of sources in order to better illuminate this frequently unknown territory. The most widely known and used of these activities is often referred to variously as the Half-Sheet Response, the One-Minute Paper, or the Minute Paper. Simple in its design yet profound in its outcome, this procedure has students write brief responses to two questions: (1) What is the most important thing you learned in class today? and (2) What important questions remain unanswered for you? The responses enable the instructor to assess what students have actually learned and to respond appropriately (for example, by providing additional explanation if necessary). Although the core questions may need to be adjusted, the basic concept is one that has utility within virtually every classroom. Moreover, it is an activity that can be as informative for students as it is for instructors.

A description of the One-Minute Paper is included on pages 11–12. You can also obtain a sample of additional classroom assessment techniques based on the Cross and Angelo study by calling IDP at 863–2599.

MACHINE-SCANNED QUESTIONNAIRES

For those teaching large class sections, the prospect of reading and interpreting hand-scored questionnaires can be fairly daunting. Although you can get a quick idea of the basic patterns by reading a subset of the questionnaires, there are occasions when you need a summary of all student data but do not have the time or resources to do these tallies by hand. In addition, some new teachers are unclear about what questions to ask and would prefer to use a well-established instrument. In such situations, a standardized questionnaire can be an effective way to begin the process of obtaining feedback from students.

IDP has used one such form for nearly a decade with consistently good results. A sample of our 40-item, standardized, machine-scanned form is reproduced on the back page of this booklet. If it seems suited to your needs, you can get additional forms by calling IDP. We will supply forms for your students, an instructor's self-evaluation form, directions, data analysis, and an optional consultation (free of charge). When we receive the completed forms, they will be processed as quickly as possible, and a single copy of the printout will be returned to you with the complete set of student response sheets. Participants may share the results with appropriate administrators or colleagues, but that is a personal decision.

For additional information or to request materials, call or write the Instructional Development Program, 401 Grange Building, University Park, 863–2599.

Midsemester Student Feedback Questionnaire

Instruction is most effective when there is a good fit between student and teacher. Creating a good fit requires feedback—both from teacher to student and from student to teacher.

This questionnaire has been designed to help me learn about those aspects of my teaching that have been the most and the least useful to you thus far. Most of the questions are fairly open-ended, so please be as descriptive and constructive as possible. Thank you.

1. How do you feel about the pace of this course? Is it (circle one) too slow? too fast? about right? If you circled either "too fast" or "too slow," what would you like to see changed?
2. Do you generally feel encouraged to ask questions in class? If so, what has encouraged you the most? If not, what could I do to make it easier for you to ask questions?
3. Do you generally find the text to be useful and easy to follow? What aspects of the text, if any, are confusing or difficult to follow?
4. When I use the board, what is my greatest strength? My greatest weakness?
5. When you go over the homework and quizzes that are returned to you, do you understand the comments and corrections that have been made? What kind of feedback has been the most helpful? The least helpful?
6. Do you find that my office hours are ones that would be convenient for you if you needed to see me? If not, what hours might be more convenient?
7. Do I have any annoying habits that I should know about (e.g., do I say, "um," six times in every sentence)? (Please use the back to answer this question.)

A Guided Self-Analysis for Beginning Instructors

Teaching is a complex process that rests in large part on the quality of the exchanges between student and teacher. As is true of any complex skill, becoming a good teacher requires both careful self-analysis and feedback from others. Getting feedback from your students is a good way to develop better teaching skills. However, before asking your students for feedback about your teaching, it will be helpful if you first take a few minutes to analyze, or reassess, your goals and teaching strategies by asking yourself questions such as the following:

1. How did I decide on the pace of this course? Do I have the sense that it is about right or is there some indication that things are going too slow or too fast?
2. Do I generally encourage students to ask questions in class? If so, how? If not, why not?
3. When I respond to questions raised in class, do I try to ascertain exactly why the question has been raised, especially when an initial response appears to be unsatisfactory?
4. When I use the blackboard, do I make an effort to write clearly, carefully, slowly, and from the left to right?
 - a. Do I repeat *aloud* what I have written on the blackboard?
 - b. Are the problems and solutions that I put on the board sufficiently complete that I would give them full credit if they occurred on a student's exam; that is, am I giving my students a good model to follow?
5. Have I made an effort to help my students understand how to use their textbook most effectively?
6. Do I consider carefully why I am assigning a particular problem? Do I work them before I assign them?

Student Perceptions of Learning and Teaching
W. J. McKeachie
The University of Michigan*

The items on this questionnaire ask you to comment on various aspects of your course.

The questionnaire has eight brief parts. The first part is intended to assess your perception of your own learning; the second part is your perception of characteristics related to instructor effectiveness. Other parts are not evaluative, but are intended to assess aspects of teacher style. They ask for a description, not evaluation. For example, either a high or low degree of structure may be effective.

Thank you for taking the time to fill this form out thoughtfully. Your answers and comments will help your teacher improve the course.

Date: _____

Your Class Standing (Circle):

Course: _____

FR SOPH JR SR GRAD

Instructor: _____

Your GPA in all courses at this college:

3.5-4.0 _____

2.0-2.4 _____

Sex: Male Female

3.0-3.4 _____

0-1.9 _____

2.5-2.9 _____

Use the following scale:

1-almost never or almost nothing

4-often or much

2-seldom or little

5-very often

3-occasionally or moderate

6-almost always, a great deal

If not applicable, leave blank

Impact on Students

1. My intellectual curiosity has been stimulated by this course.

Comments:

* From: W. J. McKeachie, *Teaching Tips*, 9th Ed., 1994. Teachers are welcome to use this form or items from it without requesting permission from the author.

2. I am learning how to think more clearly about the area of this course.

Comments:

Student Information Processing

3. My mind wandered a good deal during class.

Comments:

4. The instructor introduced new concepts so fast that I could not grasp them.

Comments:

5. I tried to relate the course material to other things I know.

Comments:

6. The course is increasing my interest in learning more about this area.

Comments:

Instructor Effectiveness

7. The instructor is enthusiastic.

Comments:

8. The instructor gives good examples of the concepts.

Comments:

9. The instructor goes into too much detail.

Comments:

10. The instructor is helpful when students are confused.

Comments:

11. The instructor seems knowledgeable in many areas.

Comments:

Rapport

12. The instructor knows students' names.

Comments:

13. The instructor is friendly.

Comments:

Group Interaction

14. Students volunteer their own opinions.

Comments:

15. Students discuss one another's ideas.

Comments:

16. Students feel free to disagree with the instructor.

Comments:

Difficulty

17. The instructor makes difficult assignments.

Comments:

18. The instructor asks for a great deal of work.
Comments:

Structure

19. The instructor plans class activities in detail.
Comments:

20. The instructor follows an outline closely.
Comments:

Feedback

21. The instructor keeps students informed of their progress.
Comments:

22. The instructor tells students when they have done a particularly good job.
Comments:

23. Tests and papers are graded and returned promptly.
Comments:

Notice!!! This Scale is Different!!!

Student Responsibility

- | | |
|------------------------|--------------------------------|
| 1—definitely false | 4—more true than false |
| 2—more false than true | 5—definitely true |
| 3—in between | If not applicable, leave blank |

24. I had a strong desire to take this course.
Comments:

25. I actively participate in class discussions.

Comments:

26. I try to make a tie-in between what I am learning through the course and my own experience.

Comments:

27. I attend class regularly.

Comments:

28. I utilize all the learning opportunities provided in the course.

Comments:

29. I have created learning experiences for myself in connection with the course.

Comments:

30. I have helped classmates learn.

Comments:

Overall Evaluation

Indicate your evaluation of characteristics below, using numbers based on the following scale:

1 Poor

2 Fair

3 Good

4 Very Good

5 Excellent

31. Rate the instructor's general teaching effectiveness for you.

Comments:

32. Rate the value of the course as a whole to you.
Comments:

Added Comments Below

ONE-MINUTE PAPERS

■ DESCRIPTION:

One-Minute Papers, a technique also known as the Half-Sheet Response, provide a quick and extremely simple way to collect written feedback on student reactions. The teacher stops class a few minutes early and poses one or two questions to which students are asked to react. The students write their reactions on half-sheets of paper (hence the second name), or index cards, the teacher has handed out.

■ PURPOSE:

One-Minute Papers elicit timely and limited student feedback on one or two specific questions about the course in general or a specific class session. That feedback will help teachers decide if midcourse corrections or changes are needed and, if so, what kinds to make.

■ SUGGESTIONS FOR USE:

One-Minute Papers are probably most useful in large lecture or lecture/discussion courses, although the technique can be easily adapted to other settings. The questions that teachers pose may concern class procedures, content, materials, activities and assignments, or any other specific element that the teacher wants to examine. One-Minute Papers work best at the end—or the beginning—of a class session. It is a productive warm-up or wrap-up activity.

■ EXAMPLE:

After the first three weeks of the semester, a chemistry teacher has the feeling that the students in her undergraduate chemistry class—a lecture and lab class with 150 students—may not be getting all that they should from her lectures. Ten minutes before the end of the class period, she quickly passes out 3-by-5 index cards to the class. She then asks them to write a very brief answer on the cards to the following two questions:

1. What was the most important thing you learned in today's class?
2. What question or questions that you have from today's class remain unanswered?

■ PROCEDURE:

1. Write down one or two questions about the course content, activities or materials to which you'd like your students to respond. Are they questions that the students can answer quickly and briefly? To what extent are you willing to act on the students' responses? If you decide your question is appropriate and if you are willing to respond to the One-Minute Papers, plan to set aside five to ten minutes of your next class to use the technique.
2. During the first or last few minutes of the class session, hand out index cards or ask students to take out a half-sheet of paper.
3. Unless there is a very good reason to know who wrote what, direct students to leave their names *off* the paper or card.
4. Write one or, at the most, two questions on the chalkboard and ask students to respond to them frankly and concisely—in single words, short phrases, or very short sentences, as appropriate.

5. Let the students know how much time they will have—five to ten minutes is usually enough.

■ **ANALYZING THE DATA YOU COLLECT:**

Simply tabulating the answers and making note of any useful comments is probably all the analysis needed.

■ **IDEAS FOR EXTENDING AND ADAPTING:**

- Give students a few extra minutes to compare and discuss their responses with their classmates.
- Give groups of students the opportunity to suggest questions for the One-Minute Papers and let them tabulate, analyze, and present the results to the whole class.
- Use the technique to collect quick feedback on knowledge or understanding, values and opinions, reactions to teaching, or any of the other topics mentioned in this handbook.

■ **PROS:**

- This technique can provide valuable self-correcting feedback that results in more effective teaching and learning.
- One-Minute Papers provide immediate midcourse feedback to teachers and allow quick response to students. This is especially important in classrooms, where so many issues have limited life spans and time is always in short supply.
- The responses—even from a very large class—can be read, tabulated, and analyzed in a short time and with limited effort.
- By demonstrating respect for and interest in student reactions, this technique encourages active engagement in the class process—something that's often lacking in large classes.
- It allows individual students to compare their responses with those of the class as a whole. Students can find out the degree to which their reactions or opinions are shared by their classmates.

■ **CONS:**

- If One-Minute Papers are overused or poorly used, the technique can degenerate into a gimmick or a *pro forma* exercise in polling.
- It may elicit feedback that teachers or students don't want to hear or don't want to act on.
- It's more difficult than it may seem to prepare a question that can be immediately and clearly comprehended and quickly answered.

■ **CAVEATS:**

- Asking students to respond to questions about your course is likely to raise expectations that you are planning to make changes. If you're not sure why you want the information you are about to collect or what you will do about it once you've got it, you're better off *not* using this technique.