EVALUATING YOUR OWN TEACHING

By L. Dee Fink
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Introduction

Each year faculty members in institutions of higher education take on the task of teaching others. For most of these people, this is a recurring task. In fact, for the majority, this is the central task of a life-long career.

Assuming that no one is perfect and therefore everyone has room for improvement, evaluation is the means by which we try to identify which aspects of our teaching are good and which need to be changed. The question then arises as to who should take responsibility for doing this evaluation. My belief is that evaluation is an inherent part of good teaching. Therefore it is the teacher himself or herself who should take primary responsibility for doing the evaluation.

In this chapter, I will offer a basic definition of evaluation, state a few reasons why one should invest time and effort into evaluation, describe five techniques for evaluation, and identify resources for helping us evaluate and improve our teaching.

A Definition of "Evaluation"

Doing good evaluation is like doing good research. In both cases, you are trying to answer some important questions about an important topic. The key to doing both activities well is (a) identifying the right questions to ask and (b) figuring out how to answer them.

What are the key questions in the evaluation of teaching? Basically they are: "How well am I teaching? Which aspects of my teaching are good and which need to be improved?" The first question attempts to provide a global assessment, while the second is analytical and diagnostic in character.

Before moving to the task of figuring out how to answer these questions, we should look at the reasons for taking time to evaluate.

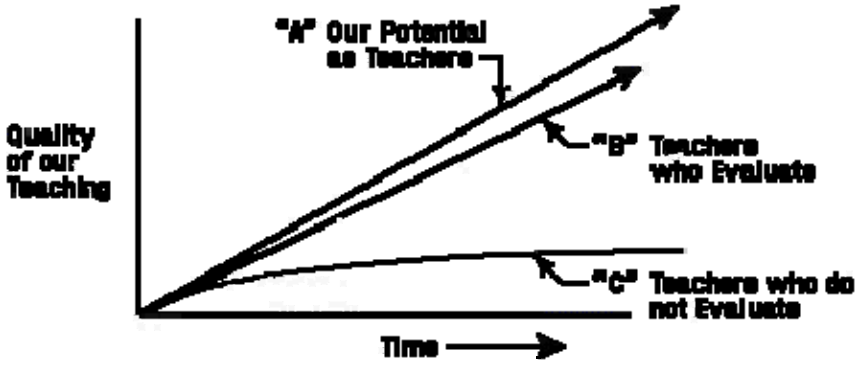
Why Evaluate?

It takes a certain amount of time and effort to effectively evaluate our own teaching. Is this a wise use of time? I would argue that it is, for three reasons.

1. First, consider the following diagram:

Figure 1

The Effect of Evaluation on Our Teaching



Regardless of how good or how poor we are as teachers, we all have the potential to get better over time (see the arrow in Figure 1). Yet some teachers continually improve and approach their potential (see arrow) while others experience a modest improvement early in their career and then seem to level off in quality or sometimes even decline (see arrow). Why? I would argue that the primary difference between those who do and those who do not improve, is that only the former gather information about their teaching and make an effort to improve some aspect of it -- every time they teach.

2. A second reason to evaluate is to document the quality of one's teaching for others. All career professionals have other people who need to know about the quality of their teaching. It may be the person's current department or institution head, or it may be a potential employer. But once people teach, they have a track record, and others need and want to know how well they taught. The only way a teacher can provide them with that information is to gather it, and that means evaluation. Teaching portfolios are becoming a common way of communicating this information to others. As it turns out, putting a portfolio together also helps the teacher understand his or her own teaching better. (See Zubizarreta, this volume.)
3. Third, there is a very personal and human need to evaluate. This is for our own mental and psychological satisfaction. It is one thing to do a good job and think that it went well; it is quite another, and a far more enjoyable experience, to have solid information and thereby know we did a good job. That knowledge, that certainty, is possible only if we do a thorough job of evaluation.

If evaluation is worth doing then, how do we do it?

Five Sources of Information

There are five basic sources of information that teachers can use to evaluate their teaching. All evaluation efforts use one or more of these basic sources. Each of these five sources has a unique value as well as an inherent limitation.

In the following portion of this chapter, I will discuss the unique value, recommended frequency, limitation, and appropriate response to that limitation, for each of the five sources of information.

1. **Self-monitoring**

   Self-monitoring is what people do semi-automatically and semi-consciously whenever they teach. Most of their mental activity is concerned with making the presentation or leading the discussion. But one portion of their mental attention is concerned with "How is it going?" "Are they with me?" "Am I losing them?" "Are they interested or bored?"

   Unique Value. The first value of this is that it is immediate and constant. You do not have to wait a week or a day or even an hour to get the results. It happens right away. Hence adjustments are possible right away.

   The second value is that this information is automatically created in terms that are meaningful to the teacher because it is the teacher who creates the information. It is the teacher, not someone else, who looks at the situation and says "This is what is happening." This does not mean that we always know why it is happening, or what to do about it if it is something we do not like. But we do have our own sense of what is happening.

   Frequency. This does and should happen all the time. We may only take a mental pause every few minutes to size up the situation. But by comparison with the other sources of information discussed below, this takes place continuously.

   Limitation. The very strength of this source is also its weakness. Because this information is created by us for us, it is also subject to our own biases and misinterpretations. I thought they were understanding the material. I thought they looked interested --when in fact they weren't. We all have our own blind spots and lack complete objectivity. This means that, at times, we are going to misread the responses of students to our teaching.

   Appropriate Response. What can be done about the subjectivity of self-monitoring? Turn to an objective source of information, one without subjective bias.

2. **Audiotape and Videotape Recordings**

   Modern technology has given us relatively inexpensive and easy access to audio and video recordings of what we do as teachers. We can put a small audio recorder on the teachers desk or put a video recorder on the side of the classroom and let it run during a class session. Then later we can listen to or view it.

   Special value. The value of this kind of information is that it gives us totally objective information. It tells us exactly what we really said, what we really did, not what we thought we said or did. How much time did I spend on this topic? How many times did I ask questions? How often did I move around? These are questions the audio and video recordings can answer with complete accuracy and objectivity.

Frequency. I had the experience of giving a workshop once that was recorded. Listening to the recording later, I discovered to my surprise that I had some disruptive speech patterns of which I was completely unaware. And I am an experienced observer of teachers! The lesson from this was that, no matter how good we are at monitoring others, we can only devote a certain amount of our mental attention to monitoring our own teaching; hence we miss things.

As a result of that experience, I now try to do an audio recording at least once or preferably twice in each full-semester course I teach. This gives me a chance to see if any speech problems are still there or if new ones have cropped up. If they have, the second recording tells me if I have gotten them under control.

Video recordings are probably useful once every year or two. What do we look like to others? As we grow older, we change, and we need to know what the continuously anew me looks like to others.

Limitation. What could be more valuable than the objective truth of audio and video recordings? Unfortunately the unavoidable problem with this information is that it is true but meaningless -- by itself. The recordings can tell me if I spoke at the rate of 20 words per minute, or 60 words, but they can't tell me whether that was too slow or too fast for the students. They can tell me whether I moved and gestured and smiled, but it can't tell me if those movements and facial expressions helped or hindered student learning.

Appropriate response. To determine the effect of my teaching behavior, rather than the behavior itself, I need to find another source of information. (Are you starting to see the pattern here?)

3. **Information from Students**

As the intended beneficiaries of all teaching, students are in a unique position to help their teachers in the evaluation process.

Special value. If we want to know whether students find our explanations of a topic clear, or whether students find our teaching exciting or dull, who else could possibly answer these kinds of questions better than the students themselves? Of the five sources of information described here, students are the best source for understanding the immediate effects of our teaching, i.e., the process of teaching and learning.

This information can be obtained in two distinct ways: questionnaires and interviews, each with its own relative values.

a. **Questionnaires.** The most common method of obtaining student reactions to our teaching is to use a questionnaire. Lots of different questionnaires exist but most in fact ask similar kinds of questions: student characteristics (e.g., major, GPA, reasons for taking the course), the students characterization of the teaching (e.g., clear, organized, interesting), amount learned, overall assessment of the course and/or the

teacher (e.g., compared to other courses or other teachers, this one is ...), and sometimes, anticipated grade.

The special value of questionnaires, compared to interviews, is that they obtain responses from the whole class and they allow for an anonymous (and therefore probably more candid) response. The limitation of questionnaires is that they can only ask a question once, i.e., that cannot probe for further clarification, and they can only ask questions that the writer anticipates as possibly important.

Questionnaires can be given at three different times: the beginning, middle and end of a course. Some teachers use questionnaires at the beginning of a course to get information about the students, e.g., prior course work or experience with the subject, preferred modes of teaching and learning, and special problems a student might have (e.g., dyslexia). Many use mid-term questionnaires to get an early warning of any existing problems so that changes can be made in time to benefit this set of students. The advantage of end-of-term questionnaires is that all the learning activities have been completed. Consequently, students can respond meaningfully to questions about the overall effectiveness of the course.

b. **Interviews.** The other well-established way of finding out about student reactions is to talk to them. Either the teacher(if sufficient trust and rapport exist) or an outside person (if more anonymity and objectivity are desired) can talk with students for 15-30 minutes about the course and the teacher. As an instructional consultant, I have often done this for other teachers, but I have also done it in some of my own courses. I try to get 6-8 students, preferably a random sample, and visit with them in a focused interview format immediately after class. I have some general topics I want to discuss, such as the quality of the learning thus far, reactions to the lectures, labs, tests, and so forth. But within these topics, I will probe for clarification and examples of perceived strength and weakness. I also note when there is divergence of reactions and when most students seem to agree.

   The special value of interviews is that students often identify unanticipated strengths and weaknesses, and the interviewer can probe and follow-up on topics that need clarification. The limitation of course is that a professor can usually only interview a sub-set of the class, not the whole class. This leaves some uncertainty as to whether their reactions represent the whole class or not.

   As for the frequency of interviews, I would probably only use a formal interview once or at most twice during a term. Of course, a teacher can informally visit with students about the course many times, and directly or indirectly obtain a sense of their reaction to the course.

General limitation. Returning to the general issue of information from students, regardless of how such information is collected, one needs to remember that this is information from students. Although they know better than anyone what their own reactions are, they can also be biased and limited in their own perspectives. They occasionally have negative feelings,

often unconsciously, about women, people who are ethnically different from themselves, and international teachers. Perhaps more significantly, students usually do not have a full understanding of how a course might be taught, either in terms of pedagogy or content. Hence they can effectively address what is, but not what might be.

Appropriate response. As with the other limitations, the appropriate response here is to seek another kind of information. In this case, we need information from someone with a professional understanding of the possibilities of good teaching.

4. **Students' test results.**

Teachers almost always give students some form of graded exercise, whether it is an in-class test or an out-of-class project. Usually, though, the intent of the test is to assess the quality of student learning. We can also use this same information to assess the quality of our teaching.

Special value. The whole reason for teaching is to help someone else learn. Assuming we can devise a test or graded exercise that effectively measures whether or not students are learning what we want them to learn, the test results basically tell us whether or not we are succeeding in our whole teaching effort. This is critical information for all teachers. Although the other sources of information identified here can partially address this question (I think they are learning, The students think they are learning.), none address it so directly as test results: I know they are learning because they responded with a high level of sophisticated knowledge and thinking to a challenging test.

Frequency. How often should we give tests? Many teachers follow the tradition of two mid-terms and a final. In my view this is inadequate feedback, both for the students and for the teacher. Weekly or even daily feedback is much more effective in letting students and the teacher know whether they are learning what they need to learn as the course goes along. If the teacher's goal is to help the students learn, this is important information for both parties. And remember, not all tests need to be graded and recorded!

Limitation. It might be hard to imagine that this information has a limitation. After all, this is what it's all about, right? Did they learn it or not?

The problem with this information is its lack of a causal connection: we don't know why they did or did not learn. Did they learn because of, or in spite of, our teaching? Some students work very hard in a course, not because the teacher inspires or motivates them but because their major requires a good grade in the course and the teacher is NOT effective. Therefore they work hard to learn it on their own.

Appropriate response. If we need to know whether one's actions as a teacher are helpful or useless in promoting student learning, we need a different source of information, such as the students themselves.

5. **Outside observer**

In addition to the two parties directly involved in a course, the teacher and the students, valuable information can be obtained from the observations of a third party, someone who brings both an outsider's perspective and professional expertise to the task.

Special value. Part of the value of an outside observer is that they do not have a personal stake in the particular course, hence they are free to reach positive and negative conclusions without any cost to themselves. Also, as a professional, they can bring an expertise either in content and/or in pedagogy that is likely to supplement that of both the teacher and the students.

A variety of kinds of observers exist: a peer colleague, a senior colleague, or an instructional specialist.

a. Peer colleagues, e.g., two TA's or two junior professors, can visit each others classes and share observations. Here the political risk is low and each one can empathize with the situation and challenges facing the other. Interestingly, the person doing the observing in these exchanges often finds that they learn as much as the person who gets the feedback.
b. Senior colleagues can be of value because of their accumulated experience. Although one has to be selective and choose someone who is respected and with whom the political risk is low, experienced colleagues can offer ideas on alternative ways of dealing with particular topics, additional examples to illustrate the material, etc.
c. A third kind of outside observer, an instructional consultant, is available on many campuses. They may or may not be able to give feedback on the clarity and significance of the content material, but their expertise in teaching allows them to comment on presentation techniques, discussion procedures, and ideas for more active learning.

Frequency. Beginning TA's and beginning faculty members should consider inviting one or more outside observers to their classes at least once a semester for two or three years. They need to get as many new perspectives on teaching as soon as possible. After that, more experienced teachers would probably benefit from such feedback at least once every year or two. We change as teachers; as we do, we need all the feedback and fresh ideas we can find.

Limitations. Again, the strength of being an outsider is also its weakness. Outside observers can usually only visit one or two class sessions and therefore do not know what happens in the rest of the course.

Apart from this general problem, each kind of observer has its own limitation. The peer colleague may also have limited experience and perspectives; the senior colleague may be someone who makes departmental decisions about annual evaluations and tenure; and the instructional consultant may have limited knowledge of the subject matter.

Appropriate response. As with the other sources, the response to these limitations is to use a different source, either a different kind of outside observer or one of the other sources described above.

A Comprehensive Evaluation Scenario

The thesis of this chapter is that a comprehensive plan of evaluation for improvement requires all five sources of information. Each one offers a special kind of information that none of the others do. How would this work out in action?

To answer this question, I will describe a hypothetical professor who is not a perfect teacher and therefore has some yet-to-be identified weaknesses in his teaching, but he also wants to improve his teaching. What steps should he take to evaluate his teaching as a way of identifying those aspects that need changing?

The Case of Professor X

Professor X is a relatively young person, only two years into his tenure track position at University Would Be Good. This fall he will be teaching a junior level course on International Trade. He once attended a workshop on Evaluating Your Own Teaching, so he knows what he should do.

On the first day of class, he keeps his eyes and ears open (self-monitoring) to see what sort of personality this year's class has. In addition, he asks students to fill out a short questionnaire about business or international experience they have had, prior course work in related areas, and what they hope to get out of the course. From this he discovers a wide range of backgrounds. Some students have extensive international experience and others have none at all. Perhaps he can use the former as a resource for the latter.

A few weeks into the course, he brings a small cassette recorder into class and makes an audio recording. After listening to it, he feels reasonably good about his presentation but notes there is little student participation. Class time consists mainly of "teacher-talk."

The weekly quizzes are turning out okay, but he had hoped that, since they were upper division students, the class would be getting into it a bit more.

After thinking about this awhile and talking to one of his departmental colleagues, he decides to call the university instructional development program and request a class review. His colleague said these people actually make some good suggestions once in awhile.

The consultant, who was recently hired into the program because of her doctorate in instructional communication, meets with the professor, visits his class twice, and then shares her observations with him. Her reaction is that the lectures seem good enough, but there is just too much of the same thing day after day: lecture, lecture, lecture. She suggests using some active learning strategies.

After hearing the reaction of the consultant, Professor X decides to use a mid-term questionnaire available from the instructional development program to see if the students feel the same way. The consultant helps him interpret the results, which indicate a degree of boredom with the steady diet of lectures. The consultant gives him a handout on "enhanced lectures" that shows how to intersperse some active learning activities in between shorter lecture segments. They also discuss some possible larger modifications for next semester.

On the end-of-semester course evaluation, Professor X adds some special questions about the changes he has made. The responses indicate that students like the changes, and the overall results, while not yet outstanding, are appreciably higher than in previous terms.

The point of this scenario is to illustrate that a thorough evaluation of teaching can be effective in identifying important changes that can be made, and that such evaluation is much more extensive than simply looking at one comparative statistic on an end-of-semester questionnaire.

But how costly is a comprehensive evaluation plan in terms of the time required? The case study above is a composite of actual cases. Based on these cases, I would make the following estimate of the time required beyond what happens anyway in normal teaching:

Task	**Additional Time (hrs)**
Self-monitoring	0 (did automatically anyway)
Initial questionnaire	1 (writing, interpreting)
Audio-recording	1 (reviewing afterwards)
Weekly quizzes	0 (did this anyway)
Visit with consultant	3 (three times)
Mid-term questionnaire	1 (constructing, interpreting)
End-of-term questionnaire	1 (for added questions)
Total	**7 hours**

The seven hours required for a comprehensive evaluation is an addition of about 5% to the total time required for teaching one three-credit hour course in one semester. This amounts to less than 1/2 hour per week for the whole term. This is a small but wise investment that informed Professor X of an important area of his teaching that needed improving. This investment will pay big dividends in effectiveness and satisfaction in a major area of his professional life for many years.

Sources of Assistance

Professors should not think that they have to do it alone when it comes to evaluating their teaching. I will describe some sources of assistance that are available for two important activities: constructing or selecting a questionnaire and figuring out how to make needed improvements.

Student questionnaires.
The first option for getting a questionnaire to use in class is to write it yourself. At institutions with instructional development programs, consultants can help in this process. Custom-made questionnaires can focus on specific questions the professor has about his or her teaching. Or they can be open-ended, asking questions like: How satisfied are you with what you are learning? What

do you like most about the course? If you could change one thing about the course, what would it be?

A second source is often the institution itself. Many institutions have questionnaires that are available, or required, for end-of-term use. These have the advantage of being ready-made, but they also frequently allow the professor to add his own questions.

The third option is to use a nationally available questionnaire. The two I recommend on our campus are the TABS for mid-term use and the IDEA system for end-of-term use. The TABS questionnaire was developed at the University of Massachusetts at Amherst and is based on 20 common problems in teaching. The recommended use is for the professor to assess the course in terms of these characteristics, and then to compare his/her assessment with student reactions. The IDEA system is available from the Center for Faculty Evaluation and Development at Kansas State University. Its central criterion for assessing effectiveness is whether or not students learned what the professor was trying to teach. It also includes a diagnostic section and national norms that incorporate class size and initial student interest.

Ideas for improving.

The primary thrust of this chapter is on how to find out what one's strengths and weaknesses are as a teacher. But having identified them, a professor still needs ideas and assistance on how to make needed improvements. Four resources can be helpful with this: selected colleagues, books and journals, institutionally-based instructional development programs, and off-campus workshops.

The handiest resource is undoubtedly colleagues who are creative and effective in their own teaching. They are usually flattered by requests to visit their classes, review their course materials, and discuss their teaching strategies and philosophy. (See the chapters by (a) Sorcinelli, (b) Millis and Kaplan, and (c) Gmelch, this volume).

A wide variety of reading material is available on teaching and ways to improve it. Several disciplines have journals with articles on teaching a specific subject matter. Some are focused specifically on college-level teaching. One journal, *College Teaching*, is not subject-specific but contains high quality articles that are relevant to essentially all subjects. As for books, three that I often recommend to teachers are *Teaching Tips* by Wilbert McKeachie, *Mastering the Techniques of Teaching* by Joseph Lowman, and *Active Learning* by Eison and Bonwell.

A third resource, which is available on many campuses, is an instructional development program. During the last two decades more and more institutions have seen fit to sponsor such a program as an appropriate investment in the single most costly and important factor in a university's quality: the faculty. The professional staff in these programs can offer selected reading material, share their own ideas, and provide classroom observations and feedback to faculty members. (See the chapters by (a) Simpson and Jackson and (b) Wadsworth, this volume.)

Finally, a number of disciplinary associations, regional consortia, and entrepreneurial persons at various universities now offer workshops, often in the summer, for regional and national audiences of faculty members wanting to learn how to become better teachers. These range from a few days to a few weeks in length. They give participants a chance to hear new ideas, systematically study a

wide range of issues and topics, and practice new possibilities in a low-risk setting with feedback from understanding and sympathetic peers.

Conclusions

People who have chosen careers as teachers in higher education owe it to themselves, to their students, and to their institutions to fulfill their responsibilities as effectively as possible. The thesis of this chapter is that the only way to improve one's teaching over time is to continuously monitor and evaluate that teaching, and then to use the information obtained to make needed changes. The various techniques described in this chapter, especially when used together, can give us the deep personal and professional satisfaction of being able to say, after a single course or after a career of teaching, "I did my best, and it was good!"

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