

Gathering and Using Feedback and Data to Improve Teaching

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One of the things that all great teachers share is the willingness to grow and develop as teachers. This growth is likely most effective and efficient if treated as a scholarly process, basing changes on data rather than only on assumptions. This essay will suggest ways to gather information on ways to develop new strategies and practices, as well as ways to document and share teaching innovations.

Successful university teaching requires both a deep knowledge of a field of study and mastery of a range of pedagogical skills. While there are a few "natural teachers," the traditional view that content expertise is sufficient preparation for university level teaching is just not true for all but a few extraordinary college-level instructors. Prior preparation in a range of teaching methods is important for most instructors to support the learning of their students.

However, teaching at the university is a complex web of skills, knowledge, and abilities. No preparation, no matter how good, will last for an entire career. Not only does the research on teaching and learning continue to grow, but students and their attitudes toward learning also change over time. Ongoing development of the professional skills and knowledge-base is crucial to maintain effectiveness.

In order to decide what information one wishes to collect, one must consider several issues. Initially, it is important to decide the purpose for which the information is primarily used. Also, there are several sources of data that might be mined, each with differing perspectives and values. Finally, depending on how widely one wants to share the outcomes of an exploration of teaching and students' learning, one can structure the inquiry differently. Teaching can be a private, reflective activity, but it can also be a field for scholarly inquiry leading to publications. The following seeks to explore these elements in a way that will be helpful for making such decisions.

Formative and Summative Assessments

The primary purpose to which feedback is to be put is an important distinction. Beginning with Michael Scriven (1967), the terms "formative" and "summative" have been used to differentiate between an evaluation that seeks primarily to support personal improvement and one used to make formal judgments of quality. It is important to assure that data collected by and for an individual faculty member for formative purposes remain confidential and not be commandeered for summative purposes. However, it is equally necessary to assert that any evaluation of teaching that is solely summative fails to address a basic obligation of the institution to its students and other stakeholders to insure that teaching is not only excellent but also that the institution constantly seeks to improve teaching.

It is also important for faculty members in every academic unit (department, school, college, etc.) to discuss openly the range of teaching practices that they wish to include in evaluations of teaching and to develop criteria by which those practices will be judged. Such discussions of teaching encompass such aspects as classroom instruction; course and curriculum development; supervision of independent study including direction of graduate research, theses, and dissertations; advising, development of instructional materials ranging from handouts to textbooks and web sites; and scholarship on university teaching and learning. All of these practices are open to evaluation and any of them might become appropriate parts of any individual faculty member's teaching profile.

Sources of data

Evaluation of teaching, especially a summative evaluation with significant impact on instructors' careers, should neither rest on any single source of data nor on a single point of data from any one source. Also, the data collected for various sources must be appropriately interpreted. The quality of various components of faculty teaching can be adequately evaluated by students, peers, and administrators, and by faculty members themselves. Each of these sources is situated to provide information about different aspects of teaching. For example, students attend most class sessions and can describe the interaction that occurs, but they are not able to comment on the accuracy of the content in the way that peers can. Leaving out any of these four sources risks the possibility of missing or misinterpreting the data available.

Students

Collecting student input using Classroom Assessment Techniques, student evaluation surveys, or focus groups and interviews are all useful methods to gather data for you to reflect upon, as you consider how to improve your teaching practice. Models of classroom assessment with students represent both a teaching approach and a set of techniques. The approach is that the more you know about what and how students are learning, the better you can plan activities to structure their path to your goals. The techniques are mostly simple, non-graded, anonymous, in-class activities that give both you and your students useful feedback on the teaching-learning process. A good, brief sample of these techniques is available at <http://www.ntlf.com/html/lib/bib/assess.htm>.

Some institutions have adopted student feedback instruments for use by all instructors that are appropriate to the teaching styles and situations most common in their courses across all academic departments. It is crucial to insure that such instruments are both valid and reliable.

Feedback from students is widely solicited throughout higher education. This practice has been nearly universal in North America for at least 20 years. There is clearly a value in soliciting commentary from students on their experiences in the classroom, especially as it relates to their perceptions about such elements as a teacher's accessibility, ability to establish a conducive learning environment, and both timeliness of and quality of responses to student work. At the same time, the conversation, both in print and on campuses, suggests that it is widely believed that institutions may rely far too heavily on student responses to courses and instruction in their assessment of the quality of a faculty member's teaching. In some places, for example, student survey results constitutes the whole of the summative evaluation of instruction, with assessment determined solely on whether a faculty member does or does not meet or exceed the institutional mean in the cumulative average.

Moreover, most student evaluation instruments gather information about a small set of teaching behaviors that do not fit all teaching styles or situations equally well. It is important to provide faculty with a flexible evaluation instruments that can gather data on those aspects of teaching on which they are most interested in getting feedback.

Peers

Students, however, are only one source of data. Inviting peers to review teaching can also be very helpful; they are much better able than students to respond to the appropriateness and currency of your content and to help you align your teaching with the curriculum of the program. Members of the faculty in every institution should discuss and adopt policies that answer the following questions:

- who will conduct peer review of teaching?
- on what schedule the review will be conducted?
- what elements of teaching will be evaluated and by what criteria?
- how such evaluation will be documented and interpreted?
- what system of preparation and support will be offered to reviewers?
- how will the data be used?

Classroom observations, taken alone, are neither an appropriate nor comprehensive method of evaluating teaching effectiveness. Successful peer review entails a commitment of time and resources as units train peer reviewers to develop and implement revised policies and procedures. Creating and implementing effective practices requires investments of faculty time and other departmental resources for which institutional administration must provide fiscal support.

Work by Peter Seldin and Associates, Raoul Arreola, Nancy Chism, and others can provide guidance in devising systems for peer review of college teaching (see references).

Administrators

Departmental and college administrators should be responsible for providing significant elements of the context within which data on faculty teaching is to be interpreted. These academic administrators can play a particularly important role in the definition, development, and implementation of appropriate practices of peer review of teaching. On the most basic level, chairs and directors should be engaged in promoting improvement of instruction by providing for the evaluation of each course when offered, including written evaluation by students of the course and instructors, and periodic course review by faculty.

While chairs and directors, given their roles as administrators, cannot function effectively as peer reviewers or mentors (e.g., serving on mentoring committees, reviewing classroom materials), they can:

- provide important corroborating evidence related to the quality of teaching by faculty in a department or school;
- identify particular teaching contributions of the faculty to the teaching mission and mandates of the unit;
- interpret the recommendations of peer review reports;
- speak to the effectiveness of extra-classroom teaching of faculty.

This source of data is frequently ignored in all the literature on the subject.

Self-Assessment

The instructors' own thoughts are also critical to enhancing teaching. Only instructors can define their goals, and only they can determine if the students achieved them. It is often helpful to record thoughts about a course as it is in progress. Many instructors find that keeping a teaching journal, whether formally or as notes, can help them to remember what worked day by day, with a particular group of students. Waiting until the term ends may allow crucial insights to slip from memory. The self-evaluation of faculty members should be treated seriously and looked to for an understanding of the specific context of their teaching practice. Individual faculty members should be given every opportunity to:

- explain the goals and intentions of their courses and assignment designs;
- describe the philosophy of teaching and learning that informs their practice;
- interpret the relationship between student ratings and classroom events;
- reflect on evaluative information to improve their teaching.

Reflective practice and self-assessment by faculty members themselves are necessary components of any legitimate systematic evaluation of instruction. Of course, self-assessment cannot be the only source of data for making credible personnel decisions, but the personal narrative that provides an explanation of a faculty member's teaching career is a valuable source for tenure and promotion decisions.

First the faculty member articulates a thoughtful, reflective, philosophical statement about his/her own teaching. The teaching philosophy and goals of the unit provide guidance to its faculty as to who should provide peer

review, in what courses and teaching environments, and under what pre-established circumstances. The faculty member then is encouraged to use the feedback from student and peer review to revise courses and adapt his/her teaching styles and methods. The faculty member also uses the feedback to refine and expand his/her own teaching goals. This systematic use of a teaching evaluation as a source of teaching growth should be documented in the dossier.

Scholarly Literature

In addition to reflecting on one's own individual experiences, no matter how much feedback one might gather, it is also valuable to learn from the work of others. Sometimes this can be undertaken locally, by consulting with a teaching center, attending a seminar, workshop, or class. However, there is also a vast array of literature on teaching and learning available for teachers at all stages of development, from very practical and accessible information and teaching tips to technical research on all topics in pedagogy. General newspapers and journals on college teaching include *The Chronicle of Higher Education*, *The Journal of Graduate and Professional Student Development*, *National Teaching and Learning Forum*, *New Directions for Teaching and Learning*, and *The Teaching Professor*. A list of many of these journals is available on-line at <http://ftad.osu.edu/toast/>

In addition to "generic" pedagogies that support learning in all fields, there are pedagogies that are especially appropriate to or that are embedded in the culture of a discipline - what Lee Shulman, President of the Carnegie Foundation for the Advancement of Teaching, calls "pedagogical content knowledge." Therefore, a large number of discipline-specific journals on college teaching also exist, such as the *Physics Education*, *Teaching Sociology*, *Journal of Teaching in International Business*, *TESOL Quarterly* [Teachers of English to Speakers of Other Languages], and the *Journal of College Science Teaching*. An abridged list of other discipline-specific journals is available from the IDEA Center at Kansas State University <http://www.idea.ksu.edu/> (see IDEA Paper # 28).

Integration and Interpretation

Data from students, peers, administrators and instructors themselves must be integrated and interpreted within the context of the discipline and the department and used to evaluate faculty work, to improve instruction, and to extend knowledge on effective teaching practice.

For summative purposes, every department and college should be responsible for developing a system to integrate and interpret data derived from all of the relevant sources, to arrive at criteria for judging teaching excellence in an open and collegial manner, and to implement these procedures in a fair and responsible way. Systems of evaluation must make both summative judgments about the quality of teaching and provide timely and formative feedback and the opportunity for faculty members to use this feedback to improve instruction of their students.

Documenting efforts

Even if you never seek to publish about your teaching, you are very likely to want to document your teaching practice and effectiveness. Such documentation can be useful as a tool for reflection and improvement, as support in a job search process, as evidence in tenure and promotion review, or in order to share your teaching practices with colleagues as part of your legacy.

The most common forms for this documentation include the course portfolio, the teaching portfolio, and the professional portfolio. A course portfolio includes information specific to a particular course. Such a portfolio would include syllabi, course materials, sample assignments, and an explanation for the rationale behind assignments, and how teaching methods and course materials are designed to help students learn. The teaching portfolio describes and documents multiple aspects of your teaching ability, including but not limited to a single course. A professional portfolio is a collection of documents that you might submit as part of a job application or as you go through the promotion and tenure process. This type of portfolio would include all of your work as a scholar, including your research progress, your teaching experience and accomplishments, as well as your record of academic service.

See <<http://ftad.osu.edu/portfolio>> for samples and many resources for creating any of these portfolios.

Scholarship of Teaching and Learning (SoTL) In *Scholarship Reconsidered: Priorities of the Professoriate* (1990), Ernest L. Boyer proposed a conception of multiple scholarships: Scholarship of Discovery, of Integration, of Application, and of Teaching. Briefly, the Scholarship of Teaching and Learning (SoTL) is currently conceived of as structured inquiry into our own teaching and our students learning, leading to dissemination of findings.

Boyer's concept was refined over time, particularly by Glassick, Huber, and Maeroff, in *Scholarship Assessed* (1997) and Laurie Richlin in *Scholarly Teaching & the Scholarship of Teaching*, (1995, 2001). More recently, Huber and Hutchings (2005) explore the progress of SoTL work in changing the university in *The Advancement of Learning: Building the Teaching Commons*.

The scholarship of teaching & learning is a fast growing, international movement within higher education. CASTL, <<http://www.carnegiefoundation.org/programs/sub.asp?key=21>> the Carnegie Academy for the Scholarship of Teaching and Learning, is one of the most important organizations in this area. It seeks to support the development of a scholarship of teaching and learning that:

- fosters significant, long-lasting learning for all students;
- enhances the practice and profession of teaching, and;
- brings to faculty members' work as teachers the recognition and reward afforded to other forms of scholarly work.

Achieving these goals involves significant shifts in thought and practice. For faculty in most settings, teaching is a private act, limited to the teacher and students; it is rarely evaluated by professional peers. "The result," writes Carnegie Foundation President Lee S. Shulman, "is that those who engage in innovative acts of teaching rarely build upon the work of others; nor can others build upon theirs." Thus, CASTL seeks to render teaching public, subject to critical evaluation, and usable by others in both the scholarly and the general community.

Continuum of scholarship in teaching

Richlin (1995) conceives of university teaching on a continuum:

- unreflective, rote teaching, doing only what was done to us,
- reflective teaching, using our own and our students thoughts about what does and doesn't work,
- scholarly teaching, seeking out the ideas and methods that other instructors have tested,
- scholarship of teaching and learning, doing structured inquiry into our teaching and our students' learning and adding to the public conversation.

Not every instructor will want to do publishable studies of his or her teaching. Even those who want to do publishable work may not want to study every class or research every element of their teaching practices. Even so, all of us should seek to be at least reflective about our teaching. One can reflect without reference to the opinions or the work of others, but this leaves any change one makes as based on "guesswork."

The scholarly approach to teaching, as to any field, is to seek out the work of others, to base ones' practice on the evidence of what has worked in comparable situations. In addition to published sources, an important resource for all instructors who seek to be scholarly is the International Society for the Scholarship of Teaching & Learning (ISSOTL) <<http://www.issotl.org>>. The society serves faculty members, staff, and students who care about teaching and learning as serious intellectual work. Its goal is to foster inquiry and disseminate findings about what improves and articulates post-secondary learning and teaching.

ISSOTL is organized to:

- Recognize and encourage scholarly work on teaching and learning in each discipline, within other scholarly societies, and across educational levels
- Promote cross-disciplinary conversation to create synergy and prompt new lines of inquiry
- Facilitate the collaboration of scholars in different countries and the flow of new findings and applications across national boundaries
- Encourage the integration of discovery, learning and public engagement
- Advocate for support, review, recognition, and appropriate uses of the scholarship of teaching and learning

ISSOTL was founded in 2004, and has experienced phenomenal growth, doubling in size in its first three years. Over 440 scholars from 8 countries attended 280 presentations, in Bloomington, Indiana. The second conference was held in Vancouver, British Columbia in 2005, with 672 scholars from 8 countries. At the third conference in 2006, in Washington, D.C., close to 800 scholars from 16 countries attended. The 2007 meeting was held in Sydney, Australia, and 2008 is planned for Calgary, Alberta, Canada.

Conclusion

Most university faculty members, even at research extensive institutions such as The Ohio State University, spend a significant part of their working lives engaged in teaching and in supporting student learning. It only makes sense to seek to do this well. Regardless of what activities you choose to undertake in your professional development as a university teacher, the point is to try to continue to improve your teaching and your students' learning.

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