

IT TAKES ONE TO KNOW ONE

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Something (maybe the only thing) that most university administrators and educational reformers agree on is that the teaching evaluation methods used on their campuses leave a lot to be desired. The administrators often use inadequacies in the usual procedure (tabulating course-end student ratings) to justify the low weighting generally given to teaching in tenure and promotion decisions. The reformers (who include many administrators) recognize that their efforts will probably be futile unless they can provide hard evidence that alternative instructional methods really work, which will take better measures of teaching effectiveness than the ones commonly used.

In previous columns, we addressed the validity of student ratings and methods of increasing their usefulness^{1,2} and discussed benefits and potential pitfalls of teaching portfolios.³ This column concerns *peer review*, a teaching assessment technique in which faculty members observe and evaluate classroom instruction. The evaluation may go directly to the instructors to help them improve their teaching, or it may go into a teaching portfolio, a promotion/tenure dossier, or an award nomination package.

Peer reviews can contribute significantly to the evaluation of teaching if they are well designed and conducted, but as a rule they are neither. In most cases, faculty members who have no training and little idea of what to look for—and who might or might not be good teachers themselves—sit in on a lecture and make notes on whatever happens to catch their attention. The validity of this technique is questionable, to say the least, as is its fairness to the observed instructor.

There are better alternatives. Following are some critical questions that should be raised whenever peer review is contemplated and some suggested answers.

- *Is the purpose of the peer review formative (to improve teaching) or summative (to provide data to be used in personnel decisions)?* The recommended procedures for formative and summative evaluation are much different; attempting to do both with a single review is usually a mistake.
- *How should formative peer reviews be carried out?* Reviews intended to improve teaching may be relatively informal. Faculty members might participate in a semester-long program of observation and feedback, or they might simply invite teaching consultants or colleagues with reputations as outstanding teachers to observe one or two classes and offer comments and suggestions. In either case, the feedback goes only to the observed instructor.
- *How should summative reviews be carried out?* A much higher level of structure is needed to make summative reviews fair, reliable (repeated assessments converge on the same ratings), and valid (what is rated as good teaching really is good teaching, and similarly for inadequate teaching). The remainder of this column concerns this type of review.
- *Who should do the reviewing?* Reviewers should be good teachers (see column title) who recognize that different styles of teaching can be equally effective. They should have received training from teaching center staff or education faculty members on what to look for in a classroom. Training dramatically increases the likelihood that evaluations from different reviewers will be consistent with one another (reliability) and with accepted standards for good teaching (validity).
- *How should the review be performed?* The following process, adapted from procedures used at several different institutions, has been found to yield good results. Two or more faculty

members are selected from a pool of individuals who have received peer review training. The reviewers conduct at least two class visits during a semester, preceding each visit with a brief meeting at which the instructor provides pertinent information about the class to be observed and (optionally) copies of relevant course materials such as syllabi, instructional objectives, assignments, and tests. The reviewers observe for the entire class period and independently complete rating checklists. Soon afterwards, they have a post-visit conference with the instructor to discuss their observations and invite responses. After all visits and conferences have been completed, the reviewers compare and reconcile their checklists to the greatest extent possible. They then write a summary report which is placed in the instructor's teaching portfolio or personnel file.

- *What should the rating checklist contain?* The checklist is a collection of statements about the observed classroom instruction. The reviewers indicate their levels of agreement or disagreement with each statement, adding explanatory comments where appropriate. Most such instruments include statements like these.⁴
 - *Organization.* The instructor (a) begins class on time, (b) presents goals or objectives for the period, (c) reviews prior material, (d) presents material in a logical sequence, (e) periodically relates new material to previous learning and experience, (f) summarizes main points at the end of the period, (g) ends class on time.
 - *Knowledge.* The instructor (a) demonstrates a thorough and up-to-date knowledge of the subject matter, (b) answers questions clearly and accurately.
 - *Presentation.* The instructor (a) speaks clearly, (b) holds the students' attention throughout the period, (c) highlights important points, (d) presents appropriate examples, (e) encourages questions, (f) seeks active student involvement beyond simple

questioning, (g) *attains* active student involvement, (h) explains assignments clearly and thoroughly.

- *Rapport*. The instructor (a) listens carefully to student comments, questions, and answers and responds constructively, (b) checks periodically for student understanding, (c) treats all students in a courteous and equitable manner.

Many other statements could be included, some of which might be particularly applicable to laboratory or clinic settings. Weimer, Garrett, and Kerns⁵ provide a comprehensive list of teacher behaviors that can be used to develop a customized peer review checklist. Faculty members in a department might collectively select the behaviors to be included on the instrument. The attendant discussion would promote understanding of what constitutes good teaching and would thereby promote good teaching.

This peer review process requires more effort than the usual unstructured procedure, but the questionable validity and potential unfairness of the latter approach are serious concerns. If peer review is to be done at all, making the effort to do it right is in the best interest of the faculty, the department, and the university.

References

- 1 □ Felder, R. M., “What Do They Know Anyway,” *Chemical Engineering Education*, **26**(3), 134 (1992).
- 2 □ Felder, R. M., “What Do They Know Anyway: 2. Making Evaluations Effective,” *Chemical Engineering Education*, **27**(1), 28 (1993).
- 3 □ Felder, R. M. and R. Brent, “If You’ve Got It, Flaunt It: Uses and Abuses of Teaching Portfolios,” *Chemical Engineering Education*, **30**(3), 188 (1996).
- 4 □ *Peer Observation of Classroom Teaching*, Center for Teaching & Learning at Chapel Hill, North Carolina, CTL 15 (1994).
- 5 □ Weimer, M., J. L. Garrett, and M. Kerns, *How am I teaching? Forms and Activities for Acquiring Instructional Input*, Magna Publications, Madison, Wisconsin, 1988. This reference provides a variety of useful resources for assessment of teaching, including forms for student-, peer-, and self-ratings of classroom instruction and course materials.