

RESEARCHABLE QUESTIONS ON FEEDBACK
TO IMPROVE TEACHING AND LEARNING

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Ten minutes isn't very long - at least to the speaker - to pose a set of research questions that might be addressed to the general theme of improving teaching and learning. So I have selected one dimension that seems to offer an unusual number of good researchable questions, to be critically important to the improvement of teaching, and to have the further virtue of having received relatively little attention to date.

The dimension I have selected is feedback. In light of the enormous effort going into assessment today, coupled with the casual assumption that it will somehow improve education, we need to ask, how the results of assessment will improve the quality of student learning.

The quick unexamined answer is that we need to provide feedback on the results of assessment to whoever can use it to improve teaching and learning. Fair enough. But there are any number of interesting researchable questions hidden in that response. Let me start this discussion by turning current assessment procedures on their head.

We usually design an assessment by asking what we need to know and how we will collect the information. When the questions are designed and the data collected and analyzed, we start to

worry about dissemination--about who should receive feedback from the assessment. I suggest that that last question --who should get the results? -- should almost always be our first question.

If the ultimate goal of assessment is to improve the quality of education, then our first question is, Who is most likely to be able to do something about that? Admittedly, statewide policies and institutional practices can provide incentives and rewards that manipulate the amount of attention given to undergraduate teaching. But in the final analysis, classroom teachers hold the key to the quality of education, and the results of the assessment have to be useful to teachers. The first question for assessors, then, is what kind of information should teachers get that will be helpful in improving learning?

The answer to that is probably anything we think we know about student learning, but far and away the most important and useful is information about what their students are learning in their classrooms about their subject matter. The sheer importance of this question to classroom teachers makes unnecessary any complex plans for dissemination of assessment results.

But before we design assessments based on the analysis that I have just made, we need better information about the role of assessment in producing change.

The ultimate point of assessment is not to ^{assess learning & abstract not to} fix blame; it is to provide information to those who can act on the information to improve education. Where does the feedback from a statewide assessment go? Who uses it for what purposes? Where does the feedback from an institutional assessment go? Don't we need to trace the dissemination of assessment results to document what

message is sent to whom, how much of what is sent is received, and with what results?

So far, the assessment movement has been largely concerned about summative evaluation, and attention has been directed toward the collection of data to inform and render accountable. It is time now, I suggest, to direct our attention to the formative uses of assessment. We need to give far more attention than we have given to date to feedback -- its pathways, its power to effect change, and its impact.

I have been talking for the past two years -- at AAHE and elsewhere -- about the necessity of getting faculty members directly and individually involved in the assessment movement by conducting assessments of what students are learning_^ or not learning_^ in their classrooms. I have referred to this as Classroom Research, but at least one part of it might equally well be called classroom assessment.

There are basically two reasons for suggesting that teachers become_^ assessors. The first is the obvious one that in the interests of both academic freedom and respect for_^ ^{Teaching as a} ~~the~~ profession of ~~teaching~~, no one wants external assessors to enter the classroom. If the assessment of classroom learning is to be done, classroom teachers will have to do it.

The second, and almost equally obvious, reason for teachers to assess the effectiveness of their own teaching is that if knowledge about the quality of student learning is to have any impact on teaching performance, the information collected will have to be perceived by teachers as both useful and credible. The best way to accomplish those ends is to help teachers design classroom

assessments that they believe in and can act on.

That means, I think, that the research community needs to give far more attention to the intricacies and skills involved in collaborative research. The equal partners implied in this collaboration would consist of discipline-oriented faculty members, who know little or nothing about the learning process, and educational researchers who know little or nothing about the subject matter of the discipline. That is not a very easy collaboration to achieve, and it means more than using faculty members to advise us on what type of research would be useful. It really means pursuing questions surrounding the improvement of teaching as a joint venture between disciplinary specialists and education researchers.

For too long, we have struggled with the gap between process and content in education. Those of us in education study largely the processes involved in teaching and learning; those who teach direct their attention almost exclusively to the content of the subject matter. Only recently have we started to take serious steps toward joining the two in our research.

We are also trying to join process and content in practice. College teachers constantly update and check their knowledge of content with peers on and off the campus. They are not as prone to check their knowledge of process. One way of getting feedback about ^{The of Teaching} process is to ask students or faculty colleagues to observe teaching performance. We have some research, but not very much, on whether feedback from observers changes teaching practices.

A second type of feedback comes directly from students in the form of learning outcomes. Mid-terms and final exams, for

example, provide feedback information about subject matter mastery, but that information about content is rarely joined to process. What most of us do, if we find that students are not learning what we thought we were teaching, is to--at best, repeat the lesson, and at worst, lower the grades. Relatively few college teachers start the search for more effective pedagogy when learning outcomes disappoint them.

If college teachers had good and continuous feedback on what students were learning, they might be more interested in joining process and content in both research and practice.

Let me wind up these brief observations about some questions that have not been addressed in the general movement toward assessment with some equally brief observations about what we do know about the potential of feedback to improve instruction.

Research to date suggests that teachers can and do change as a result of feedback, especially those for whom change is most indicated. Teachers who rate themselves better as teachers than their students rate them are likely to show improvement in as little as half a semester's time. There is also evidence that improvement is enhanced by the use of consultants ~~who can help interpret student evaluations,~~ and by the appropriate design of evaluation instruments that assess specific alterable behaviors so that teachers know what to do.

In short, we think we know that student evaluations of teaching are promising routes to the improvement of teaching if they are designed and used for that purpose. We need then to know how to present feedback most effectively in the improvement of teaching.

Is there, for example, a best time for feedback? Common wisdom says that feedback should be prompt, as soon as possible after performance. Some experience with training in industry, however, suggests that the best time to give feedback is not immediately following performance, but immediately preceding the next opportunity to practice the new behaviors. This finding, if it applies to teaching, would suggest that our current use of student evaluations is badly designed for improvement. Student evaluations are usually conducted immediately following performance - at the end of the semester, with a full semester or summer intervening before the new behaviors can be practiced. The best time for student evaluations would probably be 2/3 of the way through the semester, when students know enough to evaluate and teachers have some remaining time to practice.

Another question about the effectiveness of feedback is, Is there a best way to give feedback? Common wisdom and most books on supervision and management suggest that criticism should be sandwiched with praise. Not so, say some investigations in industry. One frequently negates the other, they suggest, and we might do better to concentrate on what we want to have happen --whether we wish to motivate through praise or correct through criticism. Perhaps praise works better with certain teachers -young, insecure, highly motivated?--while criticism works better with others. Maybe praise is good for large subjective evaluations while criticism is better for specific behavioral suggestions. There are any number of interesting researchable questions waiting to be investigated with respect to the ~~single~~ questions of how feedback can best be obtained, presented, and used to

improve teaching.

This Research Forum, under the leadership and direction of Maria^C Mentkowski and Art Chickering, has been quite successful over the years in building bridges between research and practice. Maria^C's own institution, Alverno College, has been fantastically successful in joining assessment and teaching to the ultimate benefit of both. My hopes are more modest than that. I hope that we can get assessment and feedback working together to effect change in the classroom.