

AERA

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Since I have just 15 minutes to make a case for the interdependence of research and practice from the perspective of the practitioner, I am not going to take time developing the niceties of my theme which is, bluntly stated, that practitioners should not only be involved in research on teaching and learning, they should be doing their own. Specifically, I am suggesting that discipline-oriented college teachers should be doing research in their own classrooms on the impact of their teaching on students' learning.

I use the term "classroom research," not to suggest highly trained researchers pushing at the frontiers of knowledge, but in the simple dictionary definition of research -- "careful, systematic, and patient study and investigation." Classroom Research, as I define it, differs in two major respects from traditional educational or social science research. First, Classroom research is **integrated** into teaching rather than added onto it. Teachers collect data continuously throughout the semester, not with the primary intention of adding to the knowledge of the ages or publishing the results, but for the purpose of understanding and improving the learning of the students in their classrooms.

A second and related characteristic of classroom research is that its purpose is not to generalize from a sample to some larger

population, nor to conduct experiments that are replicable in other classrooms. Thus, classroom research does not require sophisticated statistics or advanced knowledge of experimental design. Any person capable of teaching at the college level can obtain feedback on what students are learning without becoming a social scientist. Feedback from students can be simple, direct, and easily collected and interpreted by teachers trained in any subject from anthropology to zoology. Classroom research, in its simplest and most important format, addresses the very specific question, What are **my** students learning in **my** classroom as a result of **my** efforts? Given that level of specificity, you might well ask, what does the higher education community stand to gain from such research?

First and foremost, classroom research starts with an assumption that underlies one reason for this year's AERA theme and today's panel. That is that a major purpose of educational research is to improve practice. If research findings move directly from knowledge to improved practice without passing "publication," then classroom research has accomplished its purpose. Although classroom research may be published or otherwise widely shared, publication and generalization are not prerequisites. We are finding in our work with college teachers, however, that they are eager to discuss designs and findings; they really do not want to do research in the privacy of their own classrooms. They seem to seek, not only social stimulation from their colleagues, but also the affirmation that what they are doing is important and worthwhile to others as well as themselves.

A second reason why we in the community of higher education should be interested in encouraging our colleagues in the disciplines to engage in research on teaching and learning has its roots in the assessment/ accountability concerns of today. Ironically, research in higher education has made a more substantial contribution to knowledge about student development **outside** the classroom than in it. In some 25 years of intensive study of college student development, we have learned quite a bit about the impact of the total college environment on students. What we seem to have concluded, for the moment at least, is that it is students' **out-of-class** experiences-- interaction with peers, out-of-class contacts with faculty members, and involvement in campus extra-curricular activities -- that make the greatest contributions to student development. Viewed from the perspective of current concerns about accountability, it is ironic that we know relatively little about those things for which we spend the most money. The lion's share of institutional budgets goes for instructional costs, that is to say, faculty salaries for teaching classes. Yet we know relatively little about the impact of teachers in their classrooms on the education of students.

True, the assessment movement is now giving long overdue attention to students' acquisition of skills and knowledge of subject matter, but do we know or can we find out what impact classroom teachers have on student values, intellectual growth, and motivation for learning? Do we know what day-by-day classwork contributes to our cherished concepts of the "educated person?" If immersion and involvement are critical concepts, do we know or can we find out

what classroom teachers can do to immerse students in the learning experience? In short, if we are to be held accountable for what students learn in college, shouldn't we be about the business of finding out what the classroom experience contributes to the overall education of students? Although I am using the editorial "we," I am suggesting that classroom teachers should be primary rather than secondary investigators of those questions. They should be more than cooperating or even collaborating researchers, and certainly more than recipients of research findings.

The involvement of classroom teachers as researchers in simple, possibly inelegant research that they design and conduct themselves is, I believe, a powerful and underutilized route to raising the interest of college teachers in effective teaching. Establishing knowledgeable practitioners in the classroom is especially critical today, given the changing demographics of the student population. The major advances in research on student development were made in the 1960s when the majority of college students were full-time, 18-24 years of age, and free to immerse themselves in the college experience. Today's new majority of commuting, part-time, working students do not participate extensively in extra-curricular activities, do not live on campus, do not see much of their teachers out of class, do not generally establish close and intimate associations with their classmates. In fact, most of today's college freshmen attend community colleges; the classroom is their window to education, and whatever they learn in college will be learned in classrooms or not at all. What do we think they should learn in the classroom? Most would agree that they should learn

subject matter, but should they learn more than that? Will mastery of subject matter, in even the most carefully balanced curriculum, make them "educated persons?" If the burden of education is falling increasingly on classroom teachers, what do we know about teachers' perceptions of their role in the education of college students?

What I know about the teaching goals of college professors, after administering a Teaching Goals Inventory to nearly 2000 college teachers in 22 two- and four-year colleges, is that teachers feel little obligation to adopt, in their own classrooms, the goals found in the mission statement of the college catalogue. I found highly significant differences, by discipline, in what teachers said they were trying to accomplish in their own classrooms. Even though the goals of the Teaching Goals Inventory are generic, consisting of items such as "teaching students respect for others, including those from different backgrounds" and "developing the creative talents of students," physics teachers espoused goals very different from those of their colleagues in the English department.

If the ultimate purpose of research on teaching and learning is to improve learning through more effective teaching, then college teachers are going to have to be able to assess whether they are accomplishing **their own** goals, which are individualistic and strongly influenced by their teaching discipline. Nevertheless, I hope it is reasonable to expect that as classroom researchers become more aware of what students are learning from them, they will become more interested in what students are learning from the college experience and what a program of courses, with its inevitable diversity of goals, contributes to that experience.

So far, I have argued largely for the **integration** of research and practice in the person of the classroom researcher. I have deliberately interpreted "interdependence" as used in today's topic, to refer to the interaction between the **activities** of research and practice. My conclusion is that the easiest way to reduce the gap between research and practice is to reduce the gap between researcher and practitioner. When they are one and the same, the distance between research and practice is reduced to zero.

But I'd like to spend the remaining few minutes addressing what I really think is meant by "interdependence" in the context of an AERA convention. My bet is that what most of us here are striving to do is to reduce the gap between **us** as researchers and **them** as practitioners. -- or since I am charged with representing the perspective of practitioners today, between **us** as practitioners and **you** as researchers.

While I do believe that classroom research is an effective rapprochement of research and practice for the improvement of teachers, I also believe that we need collaboration between researchers and practitioners for the improvement of teaching.

I think it is fair to say that teaching as art or science or voo doo is in an essentially primitive state of development. We are not standing on the shoulders of giants in advancing knowledge and improving practice with each generation of teachers. It is a fairly good guess that teachers coming out of graduate schools today are not doing any better job of teaching than those graduating 50 years ago. That is not to say that their field of study hasn't made advances; it is simply to recognize that each young teacher starts from the

beginning to learn how to teach. While classroom research will presumably help individuals to assess and improve the effectiveness of their teaching from year to year, it will not do much to advance knowledge from generation to generation. For that, we need true collaboration between educational researchers and college teachers.

Research on teaching and learning has moved rather rapidly in recent years from the search for general laws of learning to the study of discipline-specific structures and students' internal representation of those structures. Clearly, that is a task requiring the joint expertise of college teachers, with specialized knowledge of the structure of their disciplines, and educational researchers, with specialized knowledge of cognitive structures and how to represent and reveal them. Interesting our discipline-oriented colleagues in the careful and systematic collection of data about the learning process is perhaps a first step toward closer collaboration in the long-term search for knowledge about how students learn the subject matter which most teachers struggle so hard to teach.

For the most part, we have not make good use of our opportunities to learn about effective teaching and learning as they occur day-by-day in discipline-oriented classrooms. Most of us, researchers and practitioners alike, have spent a good share of our lives in classrooms, both as students and as teachers. I figure that by the time we finish our doctorates, we have had roughly 90 different teachers, an opportunity to observe them for thousands of hours, and to make some assessment of the impact of their teaching on at least our own learning, and usually plenty of hearsay about their impact on the learning of our classmates. That data base would be an

incredible luxury to any educational researcher. To my knowledge, none of my colleagues doing research on teaching has ever received a grant that would permit such close observation of such a wide variety of teachers over such a long period of time. And yet, as individual teachers and as a collective teaching profession, we know very little about the impact of classroom teaching on learning.

We need to be about the business of establishing relationships between teaching and learning, and happily a window is now opening on the relatively new and vigorous field of instructional psychology. It is a prime example of the rich interaction that can take place between classroom teachers, concerned about students' learning in their discipline, and cognitive scientists, interested in learning more about the structures of knowledge. Perhaps it is fortunate that the primacy of the roles of researcher and teacher are reversed in instructional psychology. Whereas conventional wisdom has teachers looking to researchers for knowledge about how to improve practice, here it is a case of researchers looking to practitioners for knowledge about how to improve research. Not a bad note on which to conclude a practitioner's perspective of the interdependence between research and practice.