

Speech in Progress

K. Patricia Cross

Harvard Graduate School of Education

The title of this session is "Speech in Progress," and that is quite accurate. Each summer I select a topic that is current in higher education and that I would like to know more about. I do a lot of reading and try to organize my thoughts into a speech on the topic. I then deliver variations on that theme to professional audiences during the year, retire the speech by publishing it in the spring, and start the cycle over again the next summer.

Last summer at IEM, my "speech in progress" was about--what else?--the educational reform movement. At the level of higher education, the reforms were sparked by three major reports-- one called Involvement in Learning, written by a panel of educational researchers convened by NIE, the Bennett report, "To Reclaim a Legacy," and the AAC report on "Integrity in the College Curriculum." The problem identified in these three reform reports--and several more that were to come--was the same. Students weren't learning what they should be learning. The finger of blame was pointed in several directions, but mostly at curriculum and instruction.

I have long been interested in instruction, especially remedial instruction because students who have had trouble learning in the past and whose skills and attitudes toward learning leave a lot to be desired, pose the ultimate challenge to any teacher. So last summer I decided to see

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what the recent literature had to say about college teaching in general. I tried out my partially-formulated ideas on last summer's IEMers, and after a few iterations during the year, the speech appeared in its final form as "Taking Teaching Seriously," which was delivered in March to more than 1000 attendees at the AAHE Annual Meeting in Chicago.

That speech started with a basic premise that is pretty well accepted in higher education--namely what might be called the Rodney Dangerfield syndrome--"Teaching don't get no respect." Mostly, it plays second fiddle to research. The speech ended with a plea to stop wringing our hands about the low status of teaching and try to do something about it. Specifically, my proposal was to train college teachers to conduct classroom research. Classroom research is a simple concept springing from five basic assumptions: that teachers need to know what students are learning, that the quality of student learning is related to the quality of instruction, that the research most likely to improve instruction is that conducted by teachers themselves, that raising questions and collecting information about student learning will make teaching more intellectually satisfying, and that self-improvement is the most effective route to the improvement of instruction.

What I would like to do today is to present to you the state of my current--and I'm sure tentative--thinking about this subject. Frankly I am not very far down the road on this one, and this gives me a great opportunity to try out some ideas and to get some reactions and ideas from you. My goal is to prepare a booklet or a book on classroom research methods, and perhaps to design a graduate course in classroom research methods.

I'm going to organize my remarks around three questions: 1) What is classroom research? 2) What is the rationale for its value to higher education, and 3) What are the problems that need to be overcome?

First, what is it? Although almost any problem faced by a teacher in the classroom is fair game for classroom research, the basic purpose of classroom research is to find out "what works" in a given classroom with a given class of students. "What works" in teaching is complicated. What works in one discipline may not work in another. What works for one teacher may not work for a colleague. What works one semester may not work the next. And to make it even more difficult, what works for one student may not work for another in the same class.

And yet, even with all these complexities --or perhaps because of them-- classroom research is for the teacher rather than for the professional researcher. The research scientist is seeking general principles that apply to all learners, and he needs to have some control over the variables for study. When teachers, students, and subject matter are all sources of infinite variation, the methods of social science research, with their emphasis on sampling, control, and the scientific method--all in the interest of generalizability--are inappropriate and frequently irrelevant to what the classroom teacher needs and wants to know.

Let me give a concrete example of how a classroom researcher and a traditional researcher might approach a similar problem. Let us assume that a classroom researcher wants to know why a small group of students always seem to drop out of class about the fourth week of the term. The research design might consist of interviewing the dropouts, not necessarily a rigorously defined sample, but a sufficient number to provide a range of

perspective. The interviews don't need to be structured, transcribed, analyzed, and tabulated; students can be listened to sensitively for insights. The next step for the classroom researcher is to try out what he thinks he has learned. If dropouts decrease, but are not eliminated, he repeats the process looking for new or further insights into the dropout problem. The strength of classroom research lies in its situation-specific setting --a condition scrupulously avoided by traditional researchers--and in the opportunity it affords for the investigator to be directly involved in a continuous cycle of study, modification of teaching, restudy, further modification, etc.

Now let me describe how a traditional researcher would go about investigating the problem of dropouts. First, she gets a representative sample of dropouts and persisters, usually across a range of classrooms, both because she needs an adequate number of students in her sample and because she is studying the "dropout problem," and wants to avoid contaminating her conclusions with specific situations that may be peculiar to a given classroom. She then determines the differences between dropouts and persisters, inevitably concluding that dropouts come from lower socioeconomic backgrounds, made lower high school grades, work more hours off campus, are commuters, and have lower educational expectations.

While her findings are verified so frequently by researchers that we have to conclude that those are indeed factors in dropping out of college, all of the factors she has identified are what Ben Bloom would call "unalterable variables." There is nothing that the average classroom teacher can do to change any of them. Maybe public policy could do

something about them, but so far it hasn't.

Let us return now to our classroom researcher who finds from interviewing students that a certain amount of discouragement sets in as the semester's work begins to build. Moreover, he usually starts one of the most difficult units in the fourth week. He thinks that he might do something in his own classroom to reduce needless dropouts--perhaps give an especially satisfying assignment about this time, maybe rework or reschedule the difficult unit, offer special encouragement, make a referral for help, give a call, drop a note, schedule an interview. He may encourage others in his department to observe dropout patterns in their classes and to conduct some classroom research of their own. It is not inconceivable that a group of teachers conducting their own investigations on common problems might make a significant dent in problems that have been resistant to the "laws" of social science. Furthermore, they might experience collegiality as they find constructive solutions, and might grow more involved and more interested in the challenges of teaching.

That is one kind of classroom research. Other projects for study might concern learning problems--perhaps consistent misunderstandings of particular concepts, in which case, one research method might be to have students "talk through" their understanding and misunderstanding with teachers taking careful note of the sticking points. An in-depth understanding of one student's problems is more likely to shed light on learning problems than the average of 100 students' learning problems.

In yet another type of classroom research project underway now at Los Medanos College in California, teachers are attempting to determine, through a variety of methods, the prerequisite skills for success in a

course, with the intention of redesigning some of the learning units or teaching strategies to reach more students (Letter from Kate Brooks, 6/16/86).

With that brief introduction to what classroom research is, let me talk a bit about the rationale for it.

The concept of classroom research came from my analysis of the educational reform movement last summer. The reports certainly pointed out some problems and managed to get people excited about them, but the solutions seemed to address largely symptoms. There were few constructive recommendations for change at the point where instruction takes place--in the classroom. Most of the implementation of reform so far has been in the nature of the grand gesture--statewide testing, higher admissions requirements, and modest curricular reform. But the problem that the reports identified and that we are presumably trying to address is the quality of undergraduate learning. I suspect that most of us believe that the quality of learning is intimately linked to the quality of instruction, but we don't seem to know what to do to improve that. True, we are more rigorous in granting tenure today, but that is due more to the laws of supply and demand than to educational reform, and the criteria for tenure are moving more toward the reward of research and measureable scholarly productivity than toward the recognition of good teaching.

If we want to improve learning, we have to find ways to get reforms into the classrooms. The aggregated impact of thousands of changes in the classrooms across the nation is potentially ever so much more powerful than the statewide changes that are being legislated today. If we want change, we're going to have to involve classroom teachers in teaching and

its improvement.

Most college teachers teach as they were taught. By and large, they have no training for their profession of teaching, and few are ever exposed to the findings of educational research. Moreover, the culture of academe disdains learning about teaching methods, and experts in teaching methods get little respect from their colleagues in other departments.

Although it is common to blame the attitudes of college faculty for their failure to use what is known about teaching and learning in the practice of their profession, there is also the simple fact that the questions that interest researchers on learning have little relevance to the daily world of classroom teachers (Bolster, 1983). For one thing, learning theory is *descriptive* whereas theories of instruction are *prescriptive*. A description of the responses of learners in a carefully controlled environment requiring the temporary suspension of real-life variables offers little guidance to teachers who are constantly coping with a maelstrom of variables, few of which can ever be held constant. Putting together a plan for action from research findings about individual components, studied while concomitant events are held in abeyance, is like trying to make a rabbit out of rabbit stew.

There is much concern about "bridging" the chasms that exist between researcher and practitioner. Critics complain that researchers don't ask relevant questions and practitioners don't take the trouble to learn about research findings. The solutions for the past twenty years, at least, have been to propose greater collaboration between teachers and researchers.

Frankly, I don't think that solution is as workable as it sounds. The problems in the application of research to practice are far deeper than

cooperation and communication can solve. Let me give an example of what I ran into in my reading this summer. Since there is very little research on teaching at the college level, I used the extensive research base of elementary education to see for myself why research seems not to affect practice.

Here, in a vastly condensed nutshell, is what I concluded about some of the best-established findings from educational research.

1) That findings that are generalizable are so close to common sense that one wonders why we spent millions of dollars discovering them. For example, time-on-task has been one of the most talked-about discoveries about learning in recent years. The discovery is that the more time students spend on the learning task, the higher their achievement. Apparently the research shows such high agreement that we can assume it is a principle of learning that can be implemented with good results in almost any learning situation. Sounds reasonable enough to me, but hardly what I would call a breakthrough.

2) My second gleaning from the literature is that findings that don't confirm common sense are so specific that there is frequently conflicting evidence and/or findings are so hedged with qualifications that it is virtually impossible to advise Ms X on what she should do with her fifth grade class. Research shows that low-SES children respond to different teaching strategies than high SES; math calls for different approaches than reading; high level cognitive learning makes different demands than memorization, and Ms X is far too busy to keep all the formulas straight--especially when the findings are mixed and just barely statistically significant.

3) Finally, the conclusion for now from the experts seems to be that teachers should not attempt to apply the individual findings from research without taking into consideration the context in which the research was done (Fenstermacher, Vol. 17, No. 2). Personally, I can't see how that can be accomplished short of doing the research oneself or being heavily involved in the conceptualization, all of which makes research findings extremely limited in their application.

This is not to say that knowledge about general principles of teaching and learning is not helpful in the long run. It is to say that it is highly unlikely that even teachers steeped in the research literature of cognitive psychology will get much help from the research in improving their own teaching from that literature-- as many students sitting in the classes of psychology professors will attest.

The goal of classroom research is to increase both the credibility and applicability of research for practice. If teachers do their own research in the context of their own classrooms on questions of interest to them, the likelihood of research affecting practice will be greatly increased.

A second reason for proposing classroom research as an aggregation of small steps toward educational reform is to address the question of faculty demoralization. College faculties, especially those in teaching institutions are, according to a recent Carnegie study "at risk" and "deeply troubled." They are disaffected, we are told, for a number of reasons: because there is little collegiality or identification with the campus, because of heavy teaching loads and poorly-prepared and poorly-motivated students, because there is little faculty mobility today and the route to promotion seems paved with publications in which most faculty profess

little interest. Studies on teacher burnout contend that it is not hard work or even disappointment that causes burnout. Rather, it is the feeling that what one does makes no difference.

For the past decade, attention in higher education has been directed largely toward policy and management issues--budget, survival, access, marketing, recruitment, and a host of other issues in which faculty participate but have little real involvement. Curricular issues have had some attention on some campuses, but classroom instruction takes a back seat to almost everything else--mostly because we don't know what to do about it.

It seems to me important that we get faculty involved in something that matters to them, that we restore the feeling that what they do makes a difference, and that we find ways to boost both the prestige and intellectual challenge of teaching. These issues are related not only to the morale of faculty, but to the preservation of the diversity of higher education.

This brings me to the third reason for promoting the concept of classroom research. The current prestige hierarchy of academe with research universities at the "top" and community colleges at the "bottom" is counterproductive, as is the prestige accorded research over teaching expertise on individual campuses. We should be alarmed by recent studies showing that colleges whose major mission is the teaching of undergraduates are beginning to actively recruit research-oriented faculty. They are encouraged in this direction because the push for "academic excellence" is frequently (and mistakenly) equated with the scholarly productivity of faculty rather than with the scholarly gains of students,

and because in the currently depressed market for college teachers, colleges that formerly concentrated on teaching compete quite favorably for research-oriented faculty members. Some good state colleges are finding that they can court and attract young research-oriented scholars from outstanding research universities, not necessarily because their interests fit the interests and missions of the college, but because their image brings prestige to the institution. If we continue to grant the research model of excellence singular prestige, we may soon find that our strongest teaching institutions have become our weakest research institutions.

One of the goals of classroom research is to add intellectual challenge to the routine of teaching class after class, year after year. The accepted way of dealing with the presumed boredom and routine of teaching is to offer teachers temporary escape from it--through sabbaticals, through discipline-oriented research projects, and other activities that give teachers a "rest" from teaching. I have no quarrel with the notion that renewal frequently requires doing something different for awhile, but renewal also comes from meeting new challenges and becoming intellectually involved in continuing study. The whole purpose of classroom research is continuous study and self-improvement. Instead of offering a diversion from teaching, classroom research hopes to enrich and make more intellectually challenging the task of teaching and teaching improvement.

So far in this "speech in progress," I have been selling the concept of classroom research by extolling its virtues. No one in this audience, I am sure, will be left with the impression that classroom research is the

panacea that will bring excellence to higher education. I am convinced that there are some good reasons for giving classroom research a try, but if it is to work, the problems with the concept must be just as thoroughly examined as its merits. I'd like to use this opportunity to get your reactions to some of the problems with the concept and its implementation.

The big problem that I see is getting the attention and interest of college faculty members in classroom research. Three conditions are necessary: 1) that engagement in the process of classroom research be intellectually challenging and interesting, 2) that the results of classroom research be valid and useful in the classroom, and 3) that the efforts be rewarding and rewarded.

In meeting the first requirement, classroom research has some built-in advantages. The pursuit of questions that we raise ourselves and for which we want answers is inherently interesting. Whether it is challenging and useful depends on the knowledge base. The knowledge base for classroom research would seem to lie in the assessment of student learning and in course and teacher evaluation--fields of study that are not well-developed as yet. Much of the knowledge base will undoubtedly come from the disciplines of psychology and educational measurement. Such a natural relationship to traditional research, while desirable, also poses the risk that classroom research will lose its distinctiveness and become simply a poor imitation of traditional research.

Traditional research, as practiced today in the social sciences, puts heavy emphasis on methods and the replication of findings and less on asking important questions and making significant applications. In fact, a trivial question with a sophisticated design is frequently preferred over an

important question involving messy methodology. Classroom research is the opposite. The practitioners of classroom research should be encouraged to ask important questions and to cast findings in a mode suitable for implementation. Sophisticated design is not as important as in traditional research because classroom research is not searching for eternal verities that hold across all conditions. It is searching for improvements in a specific situation, subject to considerable control by the investigator. Moreover, solutions can be tried and modified as information is accumulated. The aim is not to make a contribution to knowledge through publication; it is to gradually add to one's own store of knowledge about what works with the classes and students of a known teacher in whom the research investigator has great confidence.

In short, the priorities and emphases of classroom research are quite different from traditional educational research, and it would be unfortunate if classroom research gained the reputation as a haven for weak methodologists rather than an activity for intelligent designers and users of research.

This concern came home to me recently when an involved teacher who was investigating a really interesting question via classroom research, said to me apologetically. "Of course, I know that my research isn't very sophisticated, but I'm really interested in knowing why these things happen, and what if anything can be done to change things."

We've seen this problem before. In the 1960's, an excellent case was made for the Doctor of Arts in Teaching degree to replace the research PhD for the majority of future college teachers who would do a lot of teaching but very little research in their disciplines. The rationale was sound,

enthusiasm was high, funding was secured, doctoral programs were launched, good students were recruited. But the Doctor of Arts degree foundered on the shoals of the entrenched status hierarchy of academe.

I'm not sure how to prevent the same fate befalling classroom research. The ultimate proof, of course, lies in its usefulness. If classroom researchers find that they do become intellectually engaged in the investigation of interesting problems, if they build satisfactory networks for communication with one another, if their questions for study are real and their implementations workable, and if classroom research and good teaching are recognized in promotion and tenure decisions, then I think classroom research has an advantage over the ill-fated Doctor of Arts degree because classroom research depends more on the product it delivers than on the status it conveys. That means, however, that classroom research has to work.

Despite what I have said about the relatively low dependence of classroom research on refined methodology, it is clear that classroom research will have to develop the methods that make it useful. One of the immediate problems concerns the breadth of the knowledge base. There are many goals of good teaching and good teachers. Classroom research will have the task of assessing student learning, however that is defined by the classroom teacher.

Past research has shown that college teachers have different learning goals in mind for their students. Two research studies of teaching done in the 1970s turned up virtually identical typologies for college teachers. One done as a doctoral thesis at Michigan State by Hardy and described in Paul Dressel's 1983 book on Teaching and Learning in College reported four

teaching "orientations." The first, they label Discipline-Centered Teaching. It concentrates on mastery of subject matter. The measure of student learning would be the traditional test of subject matter mastery. In the second orientation, called Instructor-Centered Teaching, the goal is to present to students a model of how a well-educated person handles learning and knowledge. The measure of student learning here is the extent to which the student understands and can demonstrate the skills of the master. The third and fourth orientations are both student centered, one focused on the development of the higher level cognitive skills such as analysis, reasoning, and the effective use of language; the other emphasizing affective dimensions and the development of the whole person. the measurement of these accomplishments is more difficult, but the critical thinking movement is developing measures of the higher level cognitive skills, and studies of student development are involved in the assessment of student growth on personal and social dimensions.

Joe Axelrod found essentially the same four types of teachers in his 1973 study of humanities teachers across a number of colleges. He devised easily-remembered mottos for each of the orientations. For the teacher interested in the mastery of subject matter, the motto is "I teach what I know." For the teacher interested in demonstrating how a scholar handles his discipline, the motto is "I teach what I am." The motto of the teacher interested in cognitive growth is "I train minds," and for the teacher interested in the development of the whole person, the motto is "I work with students as people."

While I doubt that there are many teachers who can be considered pure models of these prototypes, Axelrod certainly found individuals who

fit their prototype very well and whose goals for teaching were dramatically different from one another.

Since the major goal of classroom research is to provide feedback to teachers on what students are learning in their class, it is going to be necessary to provide assessments for a rather wide range of teaching goals.

I think this can be done, and it may be a more fruitful division of labor between researchers and teachers than what presently exists, where researchers tend to be the "experts" and teachers tend to be the "collaborators." Let us put teachers in the role of classroom researchers, who define their needs for measurement, while maintaining ownership of the questions for investigation and the interpretation of the findings for practice.