

RESEARCH PANEL AAHE 1986

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If we are serious about improving the quality of undergraduate education, then I can think no more urgent agenda item than for researchers to study what goes on in the classroom.

I am going to start with some observations about what educational research has done to improve teaching and learning that may sound, on first blush, somewhat gloomy. Actually, I am optimistic about the potential of research to improve practice at the college level, but only if we make radical changes in the way we pursue research.

Let me first make some assertions about the general state of the art in research on teaching and learning, and then I would like to suggest a possible solution.

1. For the past decade or so we in higher education have steered clear of studying the heart of the educational enterprise--teaching and learning. Instead we have devoted our attention to the study of organizations, policy, planning, finance, management, and other topics that have to do with the techniques of managing institutions.

While there is a body of knowledge about cognitive psychology, mostly on young children, we have very little research on how college students learn, and we really have no research on what I shall call teaching for learning. One of the first lessons learned by budding researchers in graduate schools is to beware of attributing causation; but I contend that we need to

know how to teach so as to cause learning. This suggests not only new topics for the research agenda, but also new methods and new attitudes.

2. There is no reason to think that there are common teaching methods that are broadly applicable across all fields of study. Teaching objectives and teaching methods differ, depending upon subject matter, teacher, and students. What works for one teacher may not work for another; what works in physics will probably not work in history; what works for honor students does not seem to work for remedial students.

The result is that information from research is necessarily either so fragmented as to address a very specific situation or so broad as to be useless in the classroom. Researchers in the social sciences seem to follow one of two routes: either they simplify the variables in order to subject them to systematic study, or they develop broad theories about cognitive development. But practitioners do not work in a simple world, and theories of cognitive development are hard to apply in the average classroom.

3. Benjamin Bloom has made the insightful observation that for the past four decades educational researchers have spent much of their time studying unalterable variables--characteristics of students and teachers, for instance, most of which are not subject to change by educators. What we should be studying, says Bloom is alterable variables--those variables that can be altered to make illiterate students literate, indifferent students motivated, and passive students active.

Research relating the characteristics of teachers--their

age, gender, teaching experience, etc.--to student learning has been disappointingly low, with correlations hovering around .20. Bloom urges us to move from the study of teachers to the study of teaching, that is, from the easily quantifiable static characteristics of teachers or students, to the rather messy interactive process variables of the classroom.

4. There is a whole body of literature on how to bridge the gap between research and practice. It has been a perpetual problem, and millions--probably billions--of dollars has been spent on R & D Centers. Researchers work very hard to develop products and disseminate research findings, with relatively little payoff in the changed practices of teachers.

The R & D concept, like so much of social science research, apes the models from the physical sciences where development has had huge payoffs in the form of products that can be made, sold, and used by people who do not understand the research that led to the product. The problem in education is that selling pre-packaged methods and techniques treats teachers as consumers rather than as professionals. The whole point of professional training in law, medicine, or education is to prepare people to use judgment and knowledge to deal with the situation at hand. Developing products that are resistant to teacher modification has in general proved counter-productive and is perceived as especially intolerable to the highly professionalized faculty of higher education.

Our answers to these well known problems is to work harder--to do more research to help us understand why practitioners do not use research, to improve communication between researcher

and practitioner, to work harder on converting research findings into useful products, to improve our dissemination strategies, etc. While minor victories will probably continue to be won on these fronts, I am not optimistic that current R & D models will make major strides in improving the practice of college teaching.

My proposal, which some of you may have heard in the morning session, is to eliminate the gap between researcher and practitioner by uniting these functions in the same person. Teachers should be researchers on student learning, and classrooms should be laboratories for the study of teaching and learning. This calls for a new breed of college professor, which I have dubbed a Classroom Researcher.

Teachers of hundreds of different subject matters in higher education have hunches, intuitions, and direct observations about the teaching of that subject that is difficult to duplicate by outside researchers--even if we had a huge army of researchers standing by ready to study the teaching of physics, history, art, ethics, writing, and all the other subjects that quite legitimately have different learning goals and respond to different teaching methods.

There is nothing so esoteric about research that people who have managed to earn masters and doctors degrees in their subject matter fields cannot learn some useful research tools for studying the impact of their teaching methods on student learning. The constant feedback and evaluation of the effectiveness of their own teaching would certainly improve their understanding of themselves as teachers and has the potential in the aggregate to add to our knowledge about teaching for learning.

The NIE Report on educational reform synthesized the research of the past twenty years and came up with three critical conditions for excellence: student involvement, high expectations, and assessment and feedback. From those conditions, they devised a principle that makes the perfect starting point for classroom research on teaching. It is that "The effectiveness of any educational policy or practice is directly related to the capacity of that policy in practice to increase student involvement in learning."

I can think of no more useful research than for researchers to develop the methods and tools that would enable classroom researchers to monitor the effects of their teaching on student involvement. These methods might then be taught to every potential college teacher now in graduate school and also be made available through summer workshops to teachers now teaching in college classrooms.

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