

Research and Practice: Universities and Schools¹

Gene V Glass
Nelle Moore

Division of Educational Leadership & Policy Studies
College of Education
Arizona State University

Thesis: The Universities, through their efforts in research and scholarship, do not contribute materially to the practice of education. The soft social sciences (social psychology, behavioral psychology, clinical psychology, sociology and the like) are incapable of significantly advancing the practice of the minor professions (teaching, social work, counseling, and nursing, to name a few). The schools' hope that the universities will advance knowledge and make discoveries that will solve education's problems is a vain hope.

One of us believed what will be said here today in 1972 when he read the following remarks made by the philosopher of science Thomas Kuhn: "I'm not sure that there can now be such a thing as really productive educational research. It is not clear that one yet has the conceptual research categories, research tools, and properly selected problems that will lead to increased understanding of the educational process. There is a general assumption that if you've got a big problem, the way to solve it is by the application of science. All you have to do is call on the right people and put enough money in and in a matter of a few years, you will have it. But it doesn't work that way, and it never will." (Quoted in Dershimer, 1970, p.79.) This belief was given an intellectual foundation by Paul Meehl's classic "Two Knights" paper in 1978, in which he enumerated twenty reasons why fields like educational research do not make progress. After thirty years in the academic world, one of us now believes this thesis even more confidently, because he has seen how the culture of the research university molds its faculty into researchers who have little hope of improving the practice of education.

The wide gulf between research and practice arises from two sources, basically: the near impossibility of productive elucidatory inquiry on the practice of schooling and the culture of universities in which the minor professions have had to subjugate themselves (intellectually and professionally) to the social and behavioral sciences. Let's examine each source in turn.

Why Soft Science Doesn't Progress.

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Two scholars stand like lamp-posts illuminating the path we walk. Paul Meehl and Lee Cronbach's contributions to our thinking about the problems of research in the soft sciences go back over thirty years to their collaboration on the construct validity of tests. Though they never collaborated again to our knowledge, in recent years their assessment of the scientific enterprise in the soft social sciences, and in education, have converged on a sort of doom—or perhaps "modesty" is a better word—that the profession largely wishes to ignore.

Lee Cronbach spoke on "Prudent Aspirations for Social Inquiry" on the occasion of the 50th anniversary of the dedication of the Social Science Research Building at the University of Chicago in December of 1979: "The profession is proud of much work old and new and of the influence social inquiry has had, yet is troubled that little theory cumulates and distressed that many recommended practical actions fail. The persons most disappointed are the ones in the profession and in the world of action who hoped that our conclusions would directly indicate what social policy should be. Findings of social science can rarely or never identify 'right' courses of action. Fortunately, today's profession is coming to see the rationalist, scientific ideal as no more than an infantile dream of omnipotence. The present mood, one hopes, bespeaks an institution on the brink of adulthood, ready to claim a role within its capabilities and aware that waiting for its Newton is as pointless as waiting for Godot." (p.61)

Elucidatory inquiry ("science") on education runs aground of a host of difficulties that have daunted attempts to control and predict human enterprises. The record of success in these areas (the sciences of the artificial, to use Herbert Simon's phrase) has not been good. Our attempts to build a scientific basis for technical advancement of education encounter the following problems, according to Meehl: the difficulty of slicing and naming the raw behavioral flux, problems of naming situations, open constructs, individual differences in response, the absence of meaningful units of measure, divergent causality, unknown critical events, nuisance variables, feedback loops, autocatalytic processes, essentially random influences, the sheer number of variables affecting behavior, culture, intentionality, and the uniqueness of context. There is scant cause for optimism about the scientific enterprise in education. Related fields (nursing, social work, counseling, law enforcement) have no great successes to point to for encouragement. The idea that universities will discover knowledge that practitioners will apply dies hard, but its demise is certain.

There is a sense in which research, scholarship, and science shape practice in education, but only very remotely and over decades; this happens through the creation and promulgation of metaphors and images that are taken up as popular knowledge and then guide action. But we do not speak of this interpretation here since it is not the sense of research into practice that practitioners expect. They expect to read directions in the form of propositions on what to do to make things better. (Glass, Cronbach, Lakoff & Johnson).

What Universities Do to Education Faculty

Professional school faculty in the modern American university are pressured to adopt a style of research that stands little chance of contributing to improved practice. The

pressure is exerted primarily at the points where faculty stand for tenure and promotion to "full"; and it is applied by faculty in the social and behavioral sciences. One of us has sat on faculty promotion and tenure committees in three different universities for a quarter century. The experience has been absolutely the same in every place and at all times. Sooner or later, before an aspirant for tenure is granted the prize, that person's "papers" (it is assumed that what a person contributes can be captured in print) must pass a committee of faculty drawn from throughout the university.

Engineers are sometimes loathe to judge artists, and historians occasionally demur when the candidate's accomplishments disappear into some uncharted recess of the atom. But the social sciences speak with authority when the case before the committee comes from one of the minor professions—indeed, some psychologists, economists and what-have-you virtually regard professions as little more than arenas for the application of social science knowledge. The record of publishing that one must present to win this group's approval is one of several short (six to ten printed pages), empirical reports of experiments or surveys; if the topic of the works changes too frequently the work is said to be "not programmatic," a stinging indictment for which the candidate may not be able to advance an adequate defense.

This entire sub-culture of brief, written research reports in archival journals reveals the concept of inquiry which its guardians hold. Knowledge is established through a series of well-controlled empirical forays and is packaged in the form of verbal propositions which are general and last forever: "Do A when confronted with circumstances X and desirous of achieving state Alpha; do B under circumstances Y." Much has been written in our professional house organs in recent years about the historical origins of this particular view of the world and inquiry into it. Suffice it to say that this simplified perspective on knowledge discovery and use is under withering attack everywhere and loses defenders almost daily. Kenneth Prewitt, in testimony to the House Subcommittee on Science, Research and Technology (Items, Vol. 34, No. 1, March 1980, pp.1-4), spoke of the diminished aspirations of the contemporary social sciences: "The complexity of the problems for which the social and behavioral sciences might be helpful are always going to be one step ahead of the problem-solving abilities of those sciences.... They are sciences whose progress is marked, and whose usefulness is measured, less by the achievement of consensus or the solving of problems than by a refinement of debate and a sharpening of the intelligence upon which collective management of human affairs depends." (p. 3)

The reasons why professional school faculty are subjected to this influence stem from the history of the development of the professions and the universities in this country. Researchers and scholars in Europe, for example, do not suffer as greatly the unhelpful influence of the norms that prevail in American universities. We shall spend a little time recapping this history.

The pressures which education faculty feel as members of both a profession and an academic community have their roots in the circumstances surrounding the rise of the large state universities in the United States around the turn of the 20th century. It is important that we understand these circumstances and how they predisposed professional schools to be what they are, otherwise we--university-affiliated researchers on the one hand and practicing educators on the other--will continue to attribute stupidity and malevolence to each other as the causes of our inability to talk to and help each other. We can not do better in sketching this historical account than to quote Donald Schön at length and verbatim from

his book *The Reflective Practitioner* (1983); indeed we shall quote him at such length as to be unseemly were it not that we are receiving no pay to give this talk and Schön might sell a couple of books if you are convinced by these words that he has written something worth reading further:

"Universities came of age in the United States, assumed their now familiar structure and styles of operation, in the late nineteenth and early twentieth centuries when science and technology were on the rise and the intellectual hegemony of Positivism was beginning to be established. Although other traditions of thought were never wholly extinguished in American universities—indeed, in some places managed to preserve a kind of local dominance—nevertheless, in the United States more than in any other nation except Germany, the very heart of the university was given over to the scientific enterprise, to the ethos of the Technological Program, and to Positivism.

"Indeed, it was from the Germanic tradition, carried to the United States after the Civil War by young American graduates of the German universities, that the new concept of the university as a multidisciplinary research institution took root in the United States, first in Johns Hopkins University, the founding of which was 'perhaps the most decisive single event in the history of learning in the Western hemisphere.' ... " (p. 34)

"With the coming of the new model of the university, the Positivist epistemology found expression in normative ideas about the proper division of labor between the university and the professions. As Thorsten Veblen argued in *The Higher Learning in America*, 'The difference between the modern university and the lower and professional schools is broad and simple; not so much a difference of degree as of kind.' The universities have a higher mission to 'fit men for a life of science and scholarship; and [they are] accordingly concerned with such discipline only as they will give efficiency in the pursuit of knowledge'; whereas the lower schools are occupied with 'instilling such knowledge and habits as will make their pupils fit citizens of the world in whatever position in the fabric of workday life they may fall.' The proper relation between the higher and lower schools is one of separation and exchange. Quite simply, the professions are to give their practical problems to the university, and the university, the unique source of research, is to give back to the professions the new scientific knowledge which it will be their business to apply and test. Under no conditions are the technical men of the lower schools to be allowed into the university, for this would put them in a false position

which unavoidably leads them to court a specious appearance of scholarship and so to invest their technological discipline with a degree of pedantry and sophistication; whereby it is hoped to give these schools and their work some scientific and scholarly prestige.

"Veblen's battle was, of course, quixotic. The evils against which he railed at the University of Chicago in 1916 were harbingers of a general trend. The survival-

oriented interests of the professions reinforced the interest of university boards of governors in appropriating schools of useful knowledge. The professions did enter the new universities, in increasing numbers, until by 1963 Bernard Barber could write in *Daedalus* that 'nearly all the well-established professions are located in the universities.'

"But for this, the professionalizing occupations paid a price. They had to accept the Positivist epistemology of practice which was now built into the very tissue of the universities. And they had also to accept the fundamental division of labor on which Veblen had placed so great an emphasis. It was to be the business of university-based scientists and scholars to create the fundamental theory which professionals and technicians would apply to practice. ...

"But this division of labor reflected a hierarchy of kinds of knowledge which was also a ladder of status. Those who create new theory were thought to be higher in status than those who apply it, and the schools of 'higher learning' were thought to be superior to the 'lower.' (pp. 34-37)

Permit us to paraphrase Schön briefly and somewhat more bluntly: American universities took shape at the same time the professions were being born. It was in the financial and general survival interests of the professions to align with this powerful new institution, but the price for "buying in" was subservience to the traditional bosses of the institution, namely, the basic disciplines. This subservience, seen in the attempt of the professions to better themselves by means of adopting the style of inquiry popular in the basic disciplines, has stunted the evolution of the professions. The values and the style of the sciences have been taken on by the professions as their world view. It is hardly safe in the Academy to question this arrangement.

Myriad anecdotes of not just the discontinuity between academic research and practice but its actual conflict could be advanced in illustration of the distance between these two worlds: the world of theory and the world of practice. But consider just one. The many members of Maya Ying Lin's architecture class at Yale submitted designs for the Vietnam War Memorial to the professor, who incidentally had himself submitted a design to the national competition along with 14,000 other contestants. The professor was brutal in his evaluation: "Washington is full of white memorials rising. This is a dark memorial receding." The grade? B. The professor's design was not accepted; and, yes, Maya Ying Lin's was.

It would be false to argue that the universities have not benefited many practical endeavors in the 100 year history of the land grant system in this country. The counter-examples are virtually legion. Indeed, it is the distinctive difference between modern American and European universities that the former were designed to advance the quality of life of the nation. Our point is, instead, that the modern faculty member in an education college in an ambitious university is discouraged by the reward structure from any genuine contributions to the practice of schooling. It is not that we do not hear sermons calling us to the field; it is that young faculty risk their tenure and promotion and old faculty risk prestige if they respond. The modern academic scholar is not adverse to giving practical affairs a nudge toward perfection; to be sure many of them have private fantasies of doing just that,

and successful grant-getting depends on facility in invoking the possibility of practical gain for one's researches. But if practice is to benefit from these scholarly endeavors, it will have to read about them in brief, written accounts published in archival refereed journals. (One of us no longer reads academic journals—the same one who has, in the past 25 years, edited three of them; and that same one has acquired a sense from his colleagues recently that they don't read them either. They appear to those who have watched them for some time to be arenas in which young people struggle for tenure or where old people pontificate.)

Is There Anything That Can Be Done?

If not science-building, then what can the universities do for the schools? What "research" will help practice? We're uncertain, but we have three things currently in mind that are just enough different from the way we in universities have traditionally conducted our business that they might be promising: action research (yes, shades of the 1950's, action research is making a come-back); Donald Schön's ideas about reflection-in-practice; and the qualitative or naturalistic movement in educational research.

"Action research" has a curious ring to it. Many of you in the profession today are too young to remember when something called "action research" came around the first time. In the 1950's and early '60's a movement to locate educational research in the schools with contributions and some participation by teachers arose out of Teachers College, Columbia, with roots in the work of Kurt Lewin (or so I have been told). One of my earliest recollections from graduate school is of a student asking a professor about action research and seeing the professor curl his lip and spit invective at the scurrilous misadventure. Today, the movement returns to the U.S. riding on the shoulders of British Socialism. British scholars and researchers are seeking to vest the power for educational research in teachers, not in professional outsiders who would make teachers mere objects of study. [References] There is much to heed in this development. It is remarkable how few teacher concerns are taken up by educational researchers, who often gain the where-with-all to undertake investigations not from teachers but from teachers' adversaries. There is another commendable feature of the new Action Research movement, namely, its that research of our kind is highly politicized. There are no politically neutral research questions (except trivial ones), there are not even neutral methods for investigating research questions. There is always a question of who owns a research agenda. Not remarkably, perhaps, research often supports or exonerates those individuals and organizations who have the power to set the research agenda. Where, for example, is the research on the benefits of allowing teachers greater autonomy in choosing curriculum, organizing their workday, supervising and monitoring each other? Why is there volumes written on principals evaluating teachers and little written on teachers evaluating principals. To be the object of study in this society is to be placed in some jeopardy. Those who decide who studies and who gets studied command a significant measure of political power. The new Action Researchers remind us of all this. Now if the movement's epistemology can become as enlightened as its politics, it may stand a chance of catching on and changing our notion of teachers as researchers rather than as objects of research. There is a huge difference between being the arrow and being the bull's eye.

Donald Schön's reflection-in-practice is an epistemology of practice which takes into account the tacit knowledge and artistry inherent in professional practice. The need for reflection-in-practice arises when practitioners face situations of uncertainty, instability, uniqueness, or value conflict. Under these divergent situations, technical rules and procedures based on general principles and standardized knowledge are not applicable. To cope with these conditions in practice, professionals sometimes engage in spontaneous intuitive action and on-the-spot experiments which lead to new "theories-in-use". However, because these impromptu experiments usually lack scientific rigor, the knowledge generated in practice is not accepted as legitimate knowledge. Practitioners intuitive and artistic judgments and actions are often impossible to justify in words. This feature of reflection-in-practice only further convinces those who are rooted in Positivism of the unscientific nature and therefore the unimportance of the knowledge of practice. The model of technical rationality depends on stable, routine conditions and fails to account for the ways in which practitioners are able to cope with divergent situations.

Reflection-in-action is the process which is central to the art of practice under divergent conditions. By reflecting on action, even in the midst of it, the practitioner tries to make hidden assumptions explicit, to examine them critically in the context of the situation, to make sense of the problems encountered, to restructure and develop new theories, and to test these new theories in further action. The reflective practitioner must be willing to experience confusion, to question prior beliefs, and to invent new strategies on the spot. By testing these new strategies, the practitioner gains both new understanding of the situation and at the same time affects the situation. In reflection-in-practice, there is no problem with implementing the results of research because the implementation is a part of the research; the exchange between research and practice is immediate. When a professional reflects in action (s)he becomes a researcher in the practice setting.

Reflective research can also take place outside the immediate context of practice. This kind of research requires a partnership between researcher and practitioner. The researcher cannot maintain a distance from practice but instead depends on the practitioner to supply the material which needs to be researched. Rather than doing research at the expense of the practitioner in an adversarial context, reflective research is designed to support the efforts of the reflective practitioner. Research which focuses on enhancing the practitioner's ability to reflect-in-action can be of four types, frame analysis, repertoire-building research, research on fundamental methods of inquiry and overarching theories, and research on the process of reflection-in-action. Frame analysis is the study of the ways in which practitioners frame a problem. Problems usually do not come in neat, labeled packages but are usually first experienced as "messes". Frame analysis studies the process of problem identification, conceptualization, and definition. Repertoire-building research helps to identify and accumulate a portfolio of cases as examples of the evolution of a problem from framing of the situation to its eventual resolution. Research on fundamental methods of inquiry is different from the perspective found in technical rationality. In Schön's sense, these are the methods and theories of practice which are used as guidelines for making sense of new situations. This is a form of "action science" which aims to develop themes or metaphors to help practitioners understand situations of uniqueness, uncertainty, and instability. Research on the process of reflection-in-action is an effort to understand the

conditions that encourage or inhibit the development of reflection-in-action as a style of learning.

Research in education suffers the same ills as the other minor professions. The context of educational practice is full of instability, uncertainty, uniqueness, and value conflicts. Therefore, educational research will not be able to develop a firm base of scientific knowledge. For this reason, reflective research in support of reflection-in-practice is a hopeful approach if we want to improve educational practice. "The dilemma of rigor or relevance may be dissolved if we can develop an epistemology of practice which places technical problem solving within a broader context of reflective inquiry." (Schön,1979).

The qualitative movement in educational research is nothing short of revolutionary. We needn't cast our minds even as far back as graduate school to recall the time when qualitative methods (call them naturalistic, ethnographic, anthropological or whatever) were excluded from our journals, our seminars and our dissertations. In the span of ten years all that has changed. The graduate program without qualitative training in it today is viewed as seriously behind the times. There are many grounds on which the naturalistic approach to research on schools stands a better chance of affecting practice than the traditional preordinate, quantitative, hypothesis-testing model of times gone by. For one, it rejects the idea that a complex social system can best be understood when conceptualized in terms of what behavioral and social sciences call "variables." One of the clearest illustrations of how deeply ingrained is the social science mentality is the tendency to confront practical situations, problems, episodes or phenomena and to see only "variables." And the very existence of "variables" prompts a host of attendant concerns: their reliability, their factorial purity, their construct validity, whether they are endogenous or exogenous, dependent or independent. This tendency was once an unnatural and foreign style of thinking that had to be trained into us; we have largely forgotten that we once had to learn it and now consider it natural and common sense. Yet it is far from clear that the conceptualization of the world in terms of variables is even productive, let alone the most productive way of thinking about and coping with the world. Historians, for one, do not use variables to explain things, and for significant events and trends they do a better job of predicting than social scientists. Qualitative researchers, to name another, are apt to view situations as settings, or scenes or episodes rather than as models of variables causing and being caused by one another. It is an article of faith that the qualitative approach will lead to a greater understanding of our business--educating children--and an increased ability to move the enterprise in more favorable directions, but it is a faith born of the experience of reading naturalistic accounts of classrooms and school offices and seeing in them a verisimilitude lacking in the sterile accounts of experiments and surveys that emanate from the social science tradition.

One more story illustrates the problems we in universities are having in attempting to think about the world of practice and our relationship to it, and at the same time the story touches on the matter of the qualitative methods and the role they will be allowed to play in the Academy. Word circulated recently that the School of Education at the University of Michigan had resolved a long arduous battle over the distinction between the EdD and the PhD by deciding that dissertations for the EdD would be qualitative and those for the PhD would be quantitative. The story, whether it remains the policy or not, says

much about our inability to think clearly about the practice of education and reconcile it with the pressures we feel in the universities.