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THE EDUCATIONAL ROLE OF RESEARCHERS

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Is the gap between research and practice analogous to the gap between teaching and learning? Just as there are questions today about whether students are learning what teachers think they are teaching, there are doubts about whether practitioners are using knowledge that researchers think they are providing.

It was assumed, not so very long ago, that the job of teachers was to present knowledge in a clear and organized fashion, and it was up to students to learn it.. In one of the most frequently-quoted articles in Change Magazine in recent years, Barr and Tagg claim that a dramatic shift is underway that makes colleges and teachers accountable for student learning. They write,

A paradigm shift is taking hold in American higher education. In its briefest form, the paradigm that has governed our colleges is this: A college is an institution that exists to provide instruction. Subtly but profoundly we are shifting to a new paradigm: A college is an institution that exists to produce learning. (Barr & Tagg, 1995, p. 13)

Is there -- or should there be -- an analogous paradigm shift in educational research? Is the role of research to provide information or to produce change? Some will argue that the role of the college teacher -- or analogously, educational researcher-- is to provide high quality information. Whether students or practitioners

2

learn/use what is provided is up to them. That position, however, is not persuasive anymore. Many people, including legislators, are holding educational institutions accountable, not just for teaching, but for student learning. While an occasional ardent defense of research as an activity that exists *to provide knowledge* still appears, it is generally conceded that in applied professional fields such as education, research is an activity that exists *to produce improvement* -- if not immediately as a result of the research findings, then certainly in the long run, as a result of the knowledge.

The title of the federally-funded higher education research center located at Stanford University is the National Center for Postsecondary *Improvement* (emphasis added), and among the explicit criteria for judging the effectiveness of the Center is the utility of the research and the degree to which it meets the needs of practitioners. The expectation is clear: Federally-funded research should result in the improvement of education. Such improvement is most likely to come about, not necessarily in the implementation of particular "findings," study by study, but rather in the improvement of knowledge of those who are in a position to make change -- largely policy makers and practitioners, including college administrators and faculty. That, I submit, is a teaching/learning function. If research is to lead to improved knowledge, researchers are "teachers," and practitioners are "learners."¹ Demands for accountability have raised what we expect from college teachers.

¹ No hierarchy is intended. The role of researcher as "teacher" is to facilitate the learning of practitioners in the particular knowledge of the researcher. At times, of course, practitioners will play the role of educators in teaching their specialized knowledge to researchers.

Should we raise our expectations for educational research?

Certainly we expect it to be responsibly and capably done, and we expect the findings and implications to be made available to practitioners. Should we also expect it to produce change in educational practice?

I will argue that good researchers like good teachers can be held accountable for both the quality of their research and their ability to produce change. Unlike many of the critics of educational research, however, I am less concerned about the quality of the research produced than about the ability of research to produce educational improvement -- not so much because I think the quality of the research is unassailable, but because I believe that the safeguards are more adequate in the area of quality than of accountability for improvement.

The most vigorous criticism of the quality of educational research comes from inside the academy, and that is probably as it should be. One harsh critic of educational research complains that the research is "profuse," "picayune," and "often the subject of ridicule." (Keller, 1985, p. 7) Another complains that current research methods "trivialize educational questions into oblivion by reducing data only to what is measurable . . ." (Eisner, 1992, pp. 8-9)

While there is plenty to criticize in the nature and quality of educational research, I believe that peer review is alive and well in educational research. The research establishment does consider itself accountable for the quality of research. Researchers review the work of their peers and are in turn reviewed through juried journals, and local, national, and international forums. As critics, researchers

are fearless and without peer. They are reasonably articulate, careful, and analytical regarding the work of fellow researchers -- albeit never reluctant to state that they would have done it differently, used a different methodology, operated with a different set of empirical assumptions, or followed a different epistemology altogether. There is ample -- and, in my opinion, quite justified -- criticism of the overemphasis on positivistic, quantitative studies. And methodology receives near- obsessive review and criticism. Indeed, I suspect that peers are more likely to criticize methodology than they are to criticize the topic or question under investigation. We leave it to those external to the educational research establishment to ridicule and belittle the questions for investigation.

The model that has been established for the peer review of research has an enviable record in academe. Indeed, advocates for the improvement of college teaching contend that current models for evaluating the scholarship of research might serve as useful models for evaluating the scholarship of teaching. Lee Shulman, President of the Carnegie Foundation for the Advancement of Teaching, writes that if teaching is ever to be regarded as scholarship, "It should be public, susceptible to critical review and evaluation, and accessible for exchange and use by other members of one's scholarly community." (Shulman, 1998, p. 5). Those criteria are in place for the review of research as scholarship. So, while much remains to criticize in the quality and questions of educational research, the appropriate review processes appear to be in place. Researchers are judged by their peers as researchers, but their effectiveness as teachers receives little or no attention -- despite the fact that, unlike

classroom teaching, the teaching of their research to practitioners is public, subject to critical review, and accessible for exchange and use by others.

There are interesting parallels between holding institutions of higher education accountable for the learning of their students, and holding the educational research community accountable for the improvement of education. Institutions are meeting the demands for accountability for student learning in three ways -- by improving the teaching of individual classroom teachers, by recognizing the collective responsibility of the total faculty for the quality of undergraduate education, and by devising appropriate measures of student learning outcomes. It might be instructive to apply these three action steps to the role of researchers as educators.

The Educational Role of Individual Researchers

Critics complain that educational researchers cannot, or at least do not, communicate their research so that practitioners learn from it. Researchers, they charge, are not interested in addressing the problems that practitioners must solve, nor in cultivating understanding on the part of practitioners, nor are their teaching skills adequate to the task. These are basically the same criticisms that are prevalent today in the criticisms of classroom teaching to produce learning. They fall into the general concerns about ineffective teaching methods, inadequate teaching skills, and insufficient motivation and rewards.

Ineffective Methods. It is ironic that researchers have developed knowledge as scholars that they fail to use in practice as educators. Researchers would be the first to caution that lectures

6

and reading assignments are overused in college teaching because they fail to engage learners actively in constructing their own understanding. Yet when it comes to educating practitioners, researchers rely heavily on written reports, lectures, and other methods of dissemination that follow the formula of "teaching as telling." The problem ought to be painfully clear to researchers -- the gap between knowing something and putting it into practice is a chasm that is not easily bridged by dissemination of research results through the traditional channels of lectures and research reports.

One thing we know with a high degree of confidence is that "telling" learner/practitioners what we know is not likely to result in major changes in practice. Learner/practitioners need to be actively engaged in making the knowledge their own. Practitioners seem to recognize this need. There is a growing demand for workshops, collaborative learning groups, and other forms of active learning, and professional associations are requiring more interactive sessions at their conferences. Many conference sessions, however, are superficially interactive, with a few minutes added to the end of the PowerPoint lecture for questions and answers. Questions are random, frequently unheard by many in the "audience," and rarely do the questions build on one another to create a theme or a focused discussion. But the demand is present, and researchers are trying with varying degrees of success to engage learner/practitioners in active learning. The problem is that researchers, like the professors that most of them are, have very little training in conducting productive learning sessions. They lack the skills for effective teaching.

Teaching Skills. What skills does it take to be a good teacher, and can researchers develop those skills? It is not very popular these days to talk about teaching skills. The swinging pendulum now favors language about "producing learning." Indeed some people, jumping with a certain amount of irrational exuberance on the learning bandwagon, speak of the need to turn our attention "from teaching to learning." There is, of course, a point to be made, but it takes a skillful teacher to produce learning. And researchers could well give serious attention to the development of teaching skills.

A decade or so ago, it was popular to study the characteristics of "good" teachers, usually as defined by students. Students rated high teachers who were enthusiastic, knowledgeable about their subject matter, showed concern for students, stimulated interest, were available, encouraged discussion, and explained clearly. (Abrami, 1985; Feldman, 1976; 1978; 1988) There is nothing especially surprising about that list of desirable characteristics. Moreover, it is probably reasonable to conclude that practitioners would apply pretty much the same characteristics to researchers that they appreciate and are likely to listen to. They would rate highly researchers who know their subject matter, explain clearly without excessive use of jargon and technical phrases, stimulate interest, show concern for practitioners, encourage discussion, and are available. Thus, one way to approach the topic of the educational role of researchers is to apply the characteristics of the "good teachers" model and implore researchers to observe and develop the characteristics of good teachers. While some researchers make a real effort to make their work clear and understandable, it is generally

conceded that researchers write and speak primarily for the limited audience of fellow researchers.

The most basic of instructional skills includes the requirement that the message must be presented in clear, understandable language free of jargon and appropriate to the backgrounds and interests of the learners. Admittedly, written reports will continue to play an important in the role of researcher as educator. Yet, complaints about research writing continue unabated. Keller (1985, p. 8) claims that "research in higher education is crippled by its expository defects," its "use of jargon and the passive voice, and its lack of literary grace." Well, yes, research writing in education is not going to win any prizes for "literary grace." Perhaps we can hope that the attention given to improved writing throughout the school system will eventually appear in the writings of researchers. But certainly graduate schools which train the researchers must demand better writing. All too often, graduate schools ruin a potentially good writer by insisting on passive voice, "scientific objectivity," four-syllable words when simple words will do, third person references to "this researcher" and other horrors associated with academic writing. It is my impression, not always enhanced by reading the products of professional and research journals, that journal editors are giving increased attention to written exposition, and book publishers tell me that poorly written books do not sell.

Just as written reports will continue to play a role in the learning of practitioners, so too will oral reports at professional conferences, and researchers are showing marked improvement in presentation skills. While "reading papers" at professional

disciplinary meetings is still done, there is an explosion of visually impressive and audience-friendly techniques in evidence at most conferences these days. PowerPoint and other "presentation enhancements" are common, and graphs, outlines, even cartoons, enliven presentations. But aids such as PowerPoint have also contributed to the demise of thoughtful lectures that engage the audience intellectually. Too many presenters use visual aids as a public outline -- and little more. They simply read their outline of notes from the screen to the audience. While teaching theory would commend the use of both visual and auditory channels to convey information, the intellectual challenge that would engage the audience in active thinking is replaced by a mundane presentation of information.

Good teachers possess a wide variety of teaching methods and skills. Their artistry comes in selecting the method appropriate to the situation. Some research information, such as figures and tables, is probably still best presented in print or in simple overheads. A provocative, challenging lecture that engages the audience is still in style, despite prevailing criticism of "teaching as telling." Small group interactions are effective when there is adequate time and space and the task assigned is appropriate to audience needs and experience. In sum, many researchers are "presenting" their information well, and a few are truly great teachers, their passion and engagement with their subject matter an inspiration to learners everywhere, but it may be time for some new models of researchers as educators.

We have created an artificial gap between researchers and practitioners by assuming that researchers address universal issues whereas practitioners address local problems. In truth, if research is going to improve practice, it must be applied locally. Moreover, "local" issues are repeated hundreds of times at campuses all across the country. Right now, almost every campus wants to know how to assess student learning, whether "learning communities" really work, how to improve student writing skills, how to restructure a reward system to recognize good teaching, and a host of other issues that are universal across higher education.

Judith Ramaley proposes in Chapter ____ the creation of an Institutional Studies Office on campus where researchers give particular attention to helping administrators interpret and apply national research findings locally. I would go further and suggest that campuses might establish one or more "learning communities" consisting of researchers and administrators who sit down together on a regular basis to learn from one another what issues need study, whether relevant research already exists and if so how it can be applied to the local situation, and how the campus might be involved in continuing scholarly inquiry into its own effectiveness. The learning community would follow the known principles of small group learning-- i.e. participants contribute their particular knowledge and skills in a way that makes them **interdependent** in solving a problem or addressing an issue. This is a quite different model from practitioners "telling" researchers what needs to be studied, and researchers "telling" administrators what is already known through research.

A learning community consisting of researchers and practitioners on a single campus has certain undeniable pragmatic virtues mentioned by Ramaley, but it also has a persuasive cognitive rationale. Learning from diversity is widely supported for students - albeit too often narrowly associated primarily with race and ethnicity -- but the cognitive virtue of diversity is its requirement to view something from another's perspective. Rather than assume that the human mind is a logical machine that inevitably reaches "truth" through "rational" procedures, taking the viewpoint of the other reminds us that every interpretation is embedded in a particular situation. Practitioners see issues differently from researchers, and the diversity of perspectives should enrich the learning of both. In the past, researchers have felt virtuous if they consulted practitioners about the problems to be studied; this is a different proposal. It requires practitioner and researcher to see the issue from the perspective of the other, and to operate interdependently in analysis and problem solution.

A problem with the proposal for local researcher/practitioner learning communities is that rewards for practitioners are local while the rewards for researchers are usually national and international. Is there an appropriate reward for researchers who participate in local learning communities?

Motivation and Rewards. Problem-solving seems to be a intrinsically rewarding activity for human beings. Thus, one could contend that working together on a local problem could be one of the most intrinsically rewarding activities of academic life. Extrinsic rewards may be a different matter. Historically, university-based

research "centers" funded by external sources have had a fear of being co-opted by their administrations to work on local problems; thus the common practice has been to distance themselves from administrators and "their" problems.

I am going to argue, however, that the rewards for researchers as educators can and should operate quite effectively, in both traditional and non-traditional ways. In the traditional reward structure, the question is, Is there a national and international market for research on local problems that rewards the scholarship of the research? Can researchers working on "local" problems gain disciplinary recognition? In a less traditional mode, the question might be, how can institutions reward scholars working collaboratively with practitioners in learning communities on their own campuses?

In general, the personal reward for scholarship is national recognition and tenure. National recognition brings mobility and offers from other institutions. Tenure, at present, is heavily dependent on national recognition, but it is locally granted. There is no obvious reason why an outstanding professor/researcher should not be granted tenure for scholarship that is recognized by his or her local faculty colleagues as contributing to the improvement of education/learning on that campus. Can a so-called "local" researcher get published and gain recognition from disciplinary colleagues? I believe that the answer is a clear "yes." There is a need, and I believe, a ready market for the kind of work that could be generated by researchers working in the context of learning communities on educational issues. Who would not be interested in the scholarship

and research generated by a local learning community consisting of a psychologist, anthropologist, ethnic studies specialist, student-affairs administrator, and academic affairs officer? Or how about a learning community that included an economist, business management professor, demographer, and academic and business affairs administrators? The combinations of academic and administrative talents that could be put together is endless, and it is highly likely that the research emerging from such collaborative efforts would be of great interest to national, and international audiences as well as local constituents.

In sum, rewards for addressing educational issues through research on local issues do exist, but they are not currently exploited. If a campus made a unified commitment to recognize and reward researchers who conducted good scholarship on educational matters of concern to the campus, there is no good reason why rewards -- extrinsic as well as intrinsic -- should not be forthcoming.

The Educational Accountability of the Research Community

So far I have addressed the adequacy of teaching methods, skills, and rewards for individual researchers, but a larger question concerns the responsibility of the research community for the improvement of educational practice. Two examples will illustrate some encouraging efforts to make research useful to practitioners. One is the trend to integrate and synthesize research studies across a broad array of disciplines and topics to derive some general principles for "good practices." The other is the trend toward developing "exemplary models" that can be used as ready-to-adapt improvements. Both are designed to reduce the work of

practitioners in translating the findings of research into applications, and they have been at least moderately successful in getting the attention of practitioners. While they represent a start toward assuming a collective responsibility for improving the practice of education through research, both have problems when it comes to applying the best that we know about how people learn.

Integrating and synthesizing research. Educational research has been criticized because it is not cumulative; instead of building a temple of knowledge brick by brick, social scientists tend to scatter ever more bricks around the brickyard. In recent years, however, there has been a determined effort to gather the bricks together to build upon past research. Meta-analyses has become a respected and valued method within the research community for integrating the findings of hundreds of separate studies into at least a tentative conclusion about what we think we know about a given topic. The next level of integration is illustrated by the prodigious efforts of some researchers to synthesize the state of knowledge in higher education in large books covering almost every realm of practice. Feldman and Newcomb (1969) performed this service in 1969 for the significant research done in higher education in the previous 40 years. Pascarella and Terenzini (1991) performed a similar service, reviewing over 2600 studies relevant to higher education, in 1991. These tomes are too large, too detailed, and too honed in the precision of research language to be very useful to practitioners, hence the appearance of the super-condensed, bulleted lists of "principles of good practice."

In 1987, a group of researchers with special dedication to the application of research to practice gathered at Wingspread with the daunting assignment to synthesize the research on student learning over the past 50 years into easily understood principles for good practice. The result, probably the most widely distributed list of research findings in the history of higher education, is known as Seven Principles for Good Practice in Undergraduate Education (Chickering & Gamson, 1987; 1991) and the success of this list of bulleted practices has spawned a generation of highly condensed, easily digested, sound-bites freely distributed to a wide variety of practitioners (See, for example, American Association for Higher Education and Associates, 1998; Angelo, 1993; Education Commission of the States, 1996; McCombs, 1992; Oxford Centre for Staff Development, 1992). Such lists represent a step in the right direction in three respects: They communicate with practitioners in a language that is easily understood; they integrate research across disciplines and projects; and they assume a collective responsibility for the responsible uses of research to improve practice. Used well, the bulleted principles serve as a highly useful starting point for discussion. Used poorly, they can circumvent learning for deeper understanding by grasping at a quick and too-simple conclusion to be implemented whenever and however possible. Consider an example.

The first principle of Good Practices is "Good practice encourages student-faculty contact." (Chickering & Gamson, 1987). Researchers know that much lies behind that conclusion, most of it in the climate and attitudes that exist on a campus where student-faculty contact is prevalent. But practitioners looking for a quick fix

may interpret the finding quite literally and implement the research by funding faculty meals in the dormitories, for example. That may be a good thing to do, and it may provide the impetus for growing a healthy campus climate. But by itself, it is not likely to produce the greater student satisfaction, retention, and learning that seems implied by the research. A good discussion of the many factors that lie behind this finding is probably more likely to result in honest change than is a quick program for funding , but the realities of practice operate poorly in such a trade-off. Administrators can implement, on their own, the funding of faculty meals with students. Convening groups of faculty members to discuss the creation of a campus climate for meaningful student-faculty contact is an altogether different matter.

What responsibility does the research community have for "deeper learning" i.e. for creating an understanding of what lies behind the bulleted principles? Some dedicated researchers would say that it raises a new question for investigation, namely, does faculty discussion of the principle result in more meaningful change than administrative funding of an implementation? That is not only a tough question to investigate -- and quite possibly not worth the effort -- but it is also an abdication of the role of meaningful learning in favor of "empirical evidence." Empirical evidence inevitably comes in bits and pieces, and it is hard to put it all together without the glue of common sense. Just as the primary responsibility of a good teacher is to connect bits of isolated information into meaningful relationships that form an understanding of the discipline, so the responsibility of researcher/educators should be to

create an understanding of the meaning behind research findings. Cognitive scientists would be pretty disdainful of a teacher who pulled together the major premises of their discipline into a neat set of principles that encapsulated the research of the past 50 years and distributed it to their students! So while the Seven Principles, and the numerous progeny they have spawned in every aspect of educational research, have been a significant advance, they should not be considered a final answer in fulfilling the role of researchers as educators. They are very useful as the *starting point* for discussion; they are incomplete as conclusions to be implemented.

Exemplary Models. A second approach to the problem of putting the knowledge generated by research into practice is the development of "exemplary models." The initial development of an exemplary model applies the very best of what we know about learning-- it requires critical analysis, is problem based, collaborative, active, involves frequent assessment and feedback, is situation-based, and actively self-monitored. Understandably, it is often a rich learning experience for those actively involved in developing the model. Creators of the exemplary model may take pride in their achievement to the point of becoming "stars" in the educational firmament, with enviably heavy calendars for travel and speaking engagements, but their audiences are often just that -- audiences. Active learning to solve a problem that has high relevance for the developers of the model becomes a passive learning experience for those "told" about it..

The problem with exemplary models is that its adoption by others is frequently disappointing, and it is expensive when the

"exemplary practice" fails to spread beyond funded projects. Given some concerted attention and adequate funding, research projects could be designed to build in good teaching practices from the beginning by involving consortia of practitioners who work as teams to solve a problem. To their credit, funding agencies are beginning to involve consortia in translating research into practice. But operating consortia is a complicated teaching/learning business on campus and off. On campus, it requires working teams, coming together from different parts of the campus to solve an institutional problem -- or to improve the institution's accountability for the learning of its students. Off campus, operating an effective consortium requires inter-institutional teamwork to apply a common knowledge base to campuses with different climates and histories. The challenge is not unlike teaching the different personalities and learning backgrounds that populate college classrooms today, but the very diversity of different viewpoints and perspectives may be of as much value to the scholarship of applied research as it is to the learning of students.

Accountability Measures for Educational Research

Just as student outcomes measures are being devised to help colleges and universities fulfill their obligation to produce learning, so measures should be devised to assure the accountability of research to produce improvement. The objections to this proposal will be familiar -- especially to researchers who have been in the forefront of helping institutions devise measures of student learning. They include complaints that improvements in learning (or educational practice) occur over a long period of time, are multifaceted and too complex to be measured, depend on the situation

(mission) and intent, and similar arguments against making the effort to measure outcomes. Granted, the student learning outcomes that have been devised to aid institutional improvement and assure accountability are far from perfect, but the serious search for measures of accomplishment has stimulated an awareness and purposefulness that was not present when it was simply assumed that colleges were producing learning. Through experience and many false starts, the assessment movement has moved away from externally imposed measures of achievement toward institutionally-devised measures that show institutions (and external constituents) how well they are accomplishing their purposes. While it is common for funding agencies to request a plan for dissemination in the proposal, there has been little insistence that dissemination efforts be specifically designed to produce improved practice beyond the funded project, nor has there been the kind of follow-up that we are seeing in the assessment movement. If the purpose of educational research is to produce improvement,² should not the educational community insist on evidence? Evidence is a familiar and revered term to researchers, yet there is precious little evidence collected and disseminated by researchers to demonstrate that they are making a difference in educational practice. Higher education has been accused for generations of wanting to reform everyone except themselves -- of resisting the look in the mirror that would tell them how they are doing. Is it time for researchers to look in the mirror?

² If the purpose of the research is not to improve practice, then researchers should, of course, be encouraged to state what the purpose is, and how we will know whether they have achieved it.

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