



The Strategic Education Research Program and the Public Value of Research

by John Willinsky

The National Research Council seeks to obtain considerable federal funding for its proposal to improve student learning through its Strategic Education Research Program. With its focus on the effective translation of research into practice, however, the proposal fails to acknowledge or develop the public and professional value of research as a source of understanding, reflection, and action. In an effort to extend the proposal in this direction, this article presents the educational, political, and technological arguments for making the knowledge at issue more widely available and accessible, with an eye to increasing educational research's contribution to the quality of public reason and deliberative democracy.

The Strategic Education Research Program (SERP), developed by the National Research Council (NRC), is a far-reaching proposal for establishing a new standard of coordination, integration, and application for educational research that could well change how we study schools and other educational phenomenon.¹ The plan for this SERP, now published in a handsomely produced 76-page booklet entitled *Improving Student Learning: A Strategic Plan for Educational Research and Its Utilization*, is the result of a two-year initiative of an NRC committee made up of scholars, teachers, school administrators, and corporate representatives, led by Richard C. Wallace, of the School Leadership Collaborative at the University of Pittsburgh. After coming to the rather sweeping conclusion that “the potential of research has not been realized,” the committee designed the SERP to be “the first large-scale study of its kind,” consisting of “large-scale, systematic experimentation and demonstration” focused on, above all, “the *translation* of the research findings into forms useful for educational practice” (NRC, 1999, pp. 3, 5, 11, italics in original). They modeled it on the NRC’s successful 10-year, \$150 million Strategic Highway Research Program, enacted by Congress in 1985. And it is certainly hard to imagine how Congress will be able to say anything but yes to this thorough and thoughtful proposal for a 15-year, multimillion dollar Strategic Education Research Program, as if improving the schools today could be construed as any less important than improving America’s highways nearly two decades ago.

With the publication of *Improving Student Learning*, the NRC committee has invited a yearlong “public dialogue” on the plan, prior to its presentation to Congress. Given the scope and po-

tential impact of this initiative, this invitation should be interpreted by the research community, I would argue, as opening the door to a larger discussion on the future of educational research. In that spirit, I want to discuss how, given new technologies of access, we could greatly improve research’s public value, with an expanded, strengthened SERP proposal leading the way. For the SERP will be in an excellent position not only to improve educational practices, but to explore how such knowledge could contribute far more to the public and professional understanding of education than it has in the past. The larger question that I am asking, not only of the NRC but of the educational research community at large, is whether our programs of systematic inquiry should not be serving as an intelligible source of public edification and political deliberation, as well as a means of improving student achievement.²

This is certainly a time of reflection on public support for research. In addition to the appearance of the NRC’s SERP proposal, the National Academy of Education (NAE, 1999) and the National Educational Research Policy and Priorities Board (Hakuta & Bither, 2000; NERPPB, 1999) have both issued major policy statements seeking greater support for research directed at improving student achievement.³ The SERP proposal also follows on the heels of the Brookings Institution Press Forum on increasing research’s contribution to educational policy (Loveless et al., 1999). This convergence of interest in improving educational research recalls the nation-at-risk education panels of the early 1980s, which were not without effect on the academic rigor of the schools, at least one recent report suggests (Zernike, 2000). Has a national resource once again been placed in jeopardy due to a lack of standards? The problem may just be failure to communicate, according to the NERPPB’s *Investing in Learning*: “Rarely . . . is our nation told that research has proved that it can make a difference in the practice of education so that students will learn effectively” (NERPPB, 1999, p. 6). Or it could be, as the SERP plan contends, that something is seriously amiss with how we go about educational research.

While the SERP plan shares many of the concerns expressed in the recent NAC and NERPPB statements, it goes well beyond their recommendations by proposing a well-defined and suitable-for-funding program that seeks to set new standards for research. The SERP plan may acknowledge NERPPB’s contribution of a “broad framework” for research, and it may state that its intent is “not to replace other educational research and reform programs” (NRC, 1999, pp. 5, 58), yet it does not hesitate to identify the considerable shortcomings of such initiatives: “They do not rigorously focus the nation’s knowledge, resources and ener-

gies in order to improve student learning. . . . They do not promote the systematic use of research. . . . They tend not to produce sustained and cumulating knowledge” (p. 5).

In the face of this widespread picture of wasted effort and lost value, the NRC proposes to step in and demonstrate just what a properly focused and well-managed research program can do not only for educational outcomes but for educational research. That is, while improving student learning is the SERP’s strategic educational goal, its “very big ambition,” in the words of Bruce M. Alberts, NRC’s chair and president of the National Academy of Sciences, is “to increase the usefulness and relevance of research to educational practice” (NRC, 1999, p. vii).

It is a very big ambition indeed, and yet I am here to propose that an educational research project of this scope needs to go a step further in defining the usefulness and relevance of this systematic inquiry. The SERP may indeed improve the impact of research on educational practice, but it is equally well situated to create a more useful and relevant source of public knowledge than we have previously seen around this topic of education. This would mean connecting its highly focused research program to the larger complex of theory and practice, critique and validation, that make up this field of educational inquiry. It would mean forging links between research and related classroom practices, teachers’ experiences, curriculum resources, education policies, and public reports, in ways that would enable educators and people generally to make sense and make choices, to take in the broader picture and to focus on the learning experience. How we school the young is a vital, defining quality of democratic life, and to contribute to people’s ability to reflect intelligently on its processes and outcomes, its tenor and values, would add to the stature of educational research.

In this manner, I would hold that the SERP, if not educational research more generally, should aspire to developing more than a useful and relevant source of educational practice. It should be testing whether educational research can serve as a more useful and relevant source of professional development and political deliberation, both of which are no less critical to the future of our schools, I would hold, than improved test scores. This effort to think of research as itself a source of public education calls for an expansion of the SERP’s basic research model.

The Research Model

The SERP plan holds that student learning can be improved by directing a considerable and coordinated research program toward answering four questions: (a) How can advances in research on human cognition, development, and learning be incorporated into educational practice? (b) How can student engagement in the learning process and motivation to achieve in school be increased? (c) How can schools and school districts be transformed into organizations that have the capacity to continuously improve their practices? (d) How can the use of research knowledge be increased in schools and school districts? (NRC, 1999, p. 2). The plan’s authors point out that this final question on research use—“expressed variously as knowledge utilization or knowledge mobilization”—pervades the entire project (p. 2). And it is this fourth question that has encouraged me to reconsider the scope of the SERP’s research plans. For I think that we can do more

with this idea of utilizing and mobilizing research, given the role of education and knowledge in democratic societies.

The SERP plan would certainly strengthen the links between researchers and the communities they would serve. The networks it would set up to address each of the four research questions would include

distinguished researchers working in partnership with practitioners and policy makers and supported by a national coalition of public and private funding organizations and other stakeholders, including legislators, state education agencies, teacher associations, organizations representing the research community, and other groups. (NRC, 1999, p. 3)

And while the SERP’s “core premise” is that its “program of research, synthesis, and implementation activities will be strengthened by the interactions among researchers, practitioners, and policy makers in the networks,” it also reiterates that “a major preoccupation of all four networks, but especially the fourth, would be to find ways to ensure utilization of the research by practitioners” (NRC, 1999, pp. 3–4).

The path to utilization is, as I have already cited, “above all . . . about the *translation* of research findings into forms useful for educational practice” (NRC, 1999, pp. 2–3, italics in original). The goal is “to transform knowledge about human learning and the development of competence into the working vocabulary of teachers and schools” (p. 3). Later in the document, the plan returns to this same metaphor, as it speaks of how it would “translate network findings and recommendations into guidance for users” (p. 57). My concern is that to treat research as a foreign language is to place it outside the comprehension (as well as contribution and deliberation) of practitioners and policymakers. How effective can their proposed collaboration and interaction be when the focus is on improving the impact of this knowledge on their practices? The translation model is not about reflecting on the knowledge, being informed and challenged by it, as well as being able to challenge it back. It protects the research, reducing the scope of practitioner and policymaker participation, as it proceeds to direct “the design of schools to create effective learning environments” and bring “policy into alignment with new strategies for teaching and learning” (pp. 2–3).

This may seem to play a little harshly with what is but a metaphor. Yet consider how, in speaking of research as “one of the most important tools society has for ensuring that government policies and practices are thoughtful and effective” (NRC, 1999, p. 11), the SERP plan offers the example of the polio vaccine, suggesting the white-coated health authority inoculating the young against what they cannot see. They needn’t trouble their pretty little heads, as it were, about such matters. I’m not sure that needs to be case with educational research. We are educators, after all, who are given to believing in people’s capacities and interests in learning. My hope, in fact, is that educational research can contribute more (and more directly) to people’s deliberations over the thoughtfulness and effectiveness of those policies and practices.⁴

There may well be a place for inoculation-like educational treatments, which is how the Head Start program is sometimes cast, and yet here, too, greater public access to research could do much to inform the often heated public and political consider-

ations of such initiatives. Just over two decades ago, Lee J. Cronbach argued how evaluation studies of educational and social programs, which had by then become a primary focus of educational research, needed to offer more than good science, as if reliable measures alone could dictate what must be done in education. Those conducting the evaluations, Cronbach argued, need to support and inform a pluralistic community's "context of accommodation," by playing the role of a challenging and informative educator (1980, p. 100). If this educational and political approach can enhance the contribution of evaluation research—and Cronbach was concerned about the undue isolation of such work—then it should be extended to the larger body of what we contend and contest in our understanding of education.⁵

The SERP appears to be returning to the "top-down, linear" R&D models of the 1950s and 1960s, which historian Ellen Condliffe Lagemann has identified as unsuccessful in their heavy-handed intentions of driving educational practice (1997, p. 14). Education is too complex for such easy riding, and we would do better, Lagemann advises, to seek a means of overcoming the knowledge and action gap in education through democratic forms of collaboration and exchange (p. 15). Toward such an end, I am suggesting in turn, the SERP could do more to help teachers and the public to work more directly with this knowledge and its applications. This might well facilitate change in ways that might otherwise be lost in the translation.

The SERP plan does speak of a need for "the preparation of teachers so that they can be consumers of research" (NRC, 1999, p. 2). Yet this goal of research *consumption* suggests the ready digestion of research-dictated practices rather than teachers' critical engagement with this knowledge. Teacher preparation for research consumption could be mistaken for an act of social engineering intended to expedite implementation rather than professional development and deliberation. Against such tendencies, I would ask the SERP to expand its model of research, so that it more deliberately and explicitly offers both practical and intellectual value for practitioners, policymakers, and the public.

As things now stand, the SERP's research model is focused on the efficient translation of education research into classroom practice, first by creating a synthesis of research results and then directing that synthesis into policymaking and professional development programs (Figure 1). I would counter with an expanded model in which this translation is supported by a website portal strategy for public and professional engagement with the relevant research in the context of policy and practice (Figure 2). While I return to the details of such a portal strategy below, let me simply say here that it would only extend the scope of the collaboration and participation that already forms an important component of the SERP plan, without undermining the policymakers' ability to direct the school curriculum within the scope of this representative democracy.

One danger to the SERP's current translation model is how readily it suggests that research is about determining the natural laws of learning, like those utilized to design an airplane, which then need only be applied to achieve the determined goals. Instead, we need to contend with how teaching and learning are acts of human judgment and expressions of human values. Certain natural laws do come into play in education, of course, which is why we need school-lunch programs and why we can measure response times. But such research does not begin to lay down the law on what should be taught and how students should be treated. In fact, the research itself, people need to appreciate, is often caught up in the same acts of judgment and expressions of value that mark education more generally.

Thus, I am concerned that the SERP plan thinks that it can avoid, in the name of its strategic focus, the productive tensions and radical challenges that mark this play of interpretations within social science research. Although it insists that "strategic research would both advance fundamental scientific understanding and serve practical needs," it appears to be strategically restricting its scope to a well-coordinated set of problem-focused research that will offer, it is assumed, "results that are mutually reinforcing" (NRC, 1999, pp. 15–16). The SERP, no less than other research teams, may well be able to present on occasion

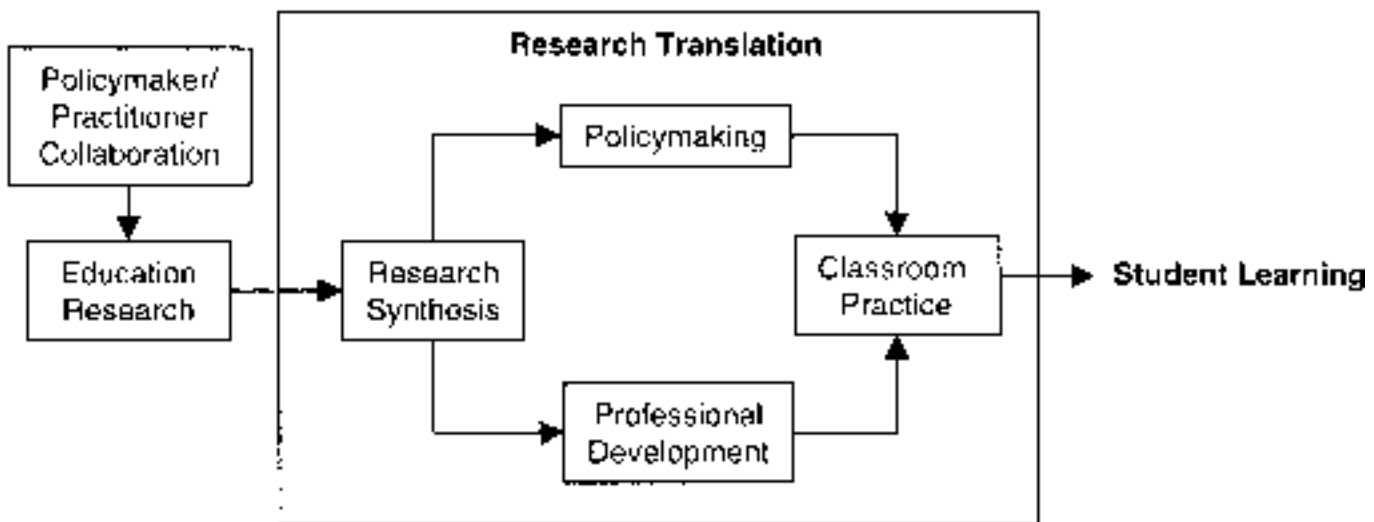


FIGURE 1. *The SERP research translation model (based on NRC, 1999).*

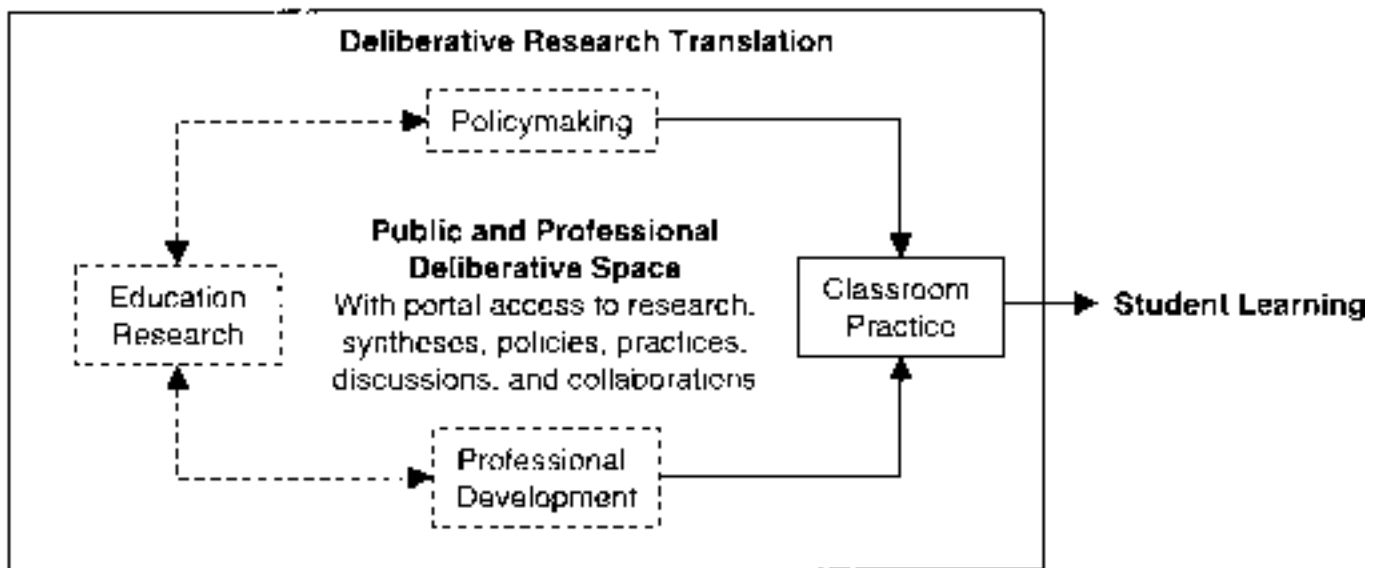


FIGURE 2. *Proposed deliberative research translation model for SERP.*

“authoritative professional consensus on research findings or best practices,” as the plan puts it (p. 55). More often, however, it would do well to provide access to what appear to be leading and promising studies, along with links to the continuing challenges that are being posed to these works. In its efforts to “resolve conflicting claims,” the SERP can help people appreciate why studies differ in their analysis and results (p. 55).

My concern here is that research’s intellectual context should not be lost to the public and the teaching profession. The often uneasy relationship among contending ideas possesses a wonderful educational value in itself. More than that, given the many ways of learning and the many things to be learned, it should hardly disappoint anyone to discover that the research community works with different ideas about learning.⁶ The SERP will need to make it apparent that, amid the continuing rigors of research review, challenge, and critique, the plurality of perspectives that exists among researchers, no less than among other populations, does not diminish but increases the value of research. Most people, I would hazard, think of the world as rarely if ever affording definitive, singular answers to the questions that matter. The world more often gives rise to differences in opinion that are worth thinking about and deliberating over in seeking to build the democratic communities within which we seek to live.

In the past, the National Academy of Science, the parent organization of the NRC, has interpreted its mandate—which refers to “advising the government on scientific and technical matters” and furthering the sciences and technology “for the general welfare”—as a call to synthesize authoritative answers to the issues at hand (NRC, 1999, iv).⁷ For my part, I wonder if the NRC could do more “for the general welfare” by providing a public guide to the variety of perspectives and metaphors that guide such a broad area as the study of learning. Although the range of research insights does not dictate, of itself, what should be done in the schools, it still can inform and inspire people in their efforts to articulate “creative democratic solutions,” in the

words of Yale political scientist Ian Shapiro, who sees a similar supportive and informative role for the Supreme Court in American political life (1999, p. 61).⁸

The SERP plan does, at times, move beyond the translation model. It speaks, for example, of ensuring that “knowledge and expertise move in all directions” and it addresses how teachers can “help define the focus of research,” suggesting the sort of exchange and deliberation that I want to encourage (NRC, 1999, p. 17). But within this section of the NRC book, on the “benefits of a strategic plan,” the emphasis is still on getting across the “strong message that research and knowledge . . . can and do translate into achievement gains for children” (p. 17). In turn, I think it worthwhile to translate research, or rather to organize it into a source of greater understanding for teachers and the larger community, as that would move knowledge and expertise in more directions than otherwise.

For example, by developing the public value of research, the SERP plan could contribute important intellectual content directly to the “new agenda of extending thinking and reasoning abilities to all segments of the population,” called for by Lauren B. Resnick, of the University of Pittsburgh, in her work on metacognitive skills cited in the plan (NRC, 1999, p. 22). By supporting greater public understanding and participation in the schools, the plan could provide, in effect, both a reason and the resources for public thinking more about education. If, as the plan holds, “there is broad consensus that the context of cultural and social norms and expectations influence people’s acquisition and uses of knowledge in powerful ways” (p. 24), then ready public access to educational research could well bolster the norms and expectations that influence people’s acquisition and use of knowledge whether for civic participation or professional development.

When the SERP plan speaks of “the challenge of incorporating even the strongest research into over a million classrooms,” it does identify educators’ lack of “access to research findings” as an issue (NRC, 1999, p. 13). The plan addresses this challenge,

however, not with proposals for improving research's intelligibility by article and topic, but with the need "to systematically train practitioners in [research's] application" (p. 13). Now, educators may well decide, after deliberating with researchers and others over what is to be done in light of both the research and their own knowledge, that such training is precisely what they need and want, as many teachers have done, for example, with the integration of technology into their programs. That is radically different, however, from assuming that researchers can prove or improve the value of educational research by systematically training teachers in the consumption and application of a mutually reinforcing body of research. What it would take at this point for the SERP plan to address this improvement of research's public and professional value is a supplementary question augmenting its original four guiding questions, which I cited above.

A Fifth Question

For all of my concern over how far the SERP plan goes in its strictly instrumental approach to knowledge, it does recognize that "research does not provide answers for all of the questions of practice," citing a particularly apt analysis by Harvard's Carol Weiss (1991) of just what "an extraordinary concatenation of circumstances" it takes for "research to influence policy decisions directly" (NRC, 1999, p. 44). While the plan offers a significant place for the knowledge of experience, which grows out of "the insights and experience of policy analysts and policy makers and among teachers and administrators in schools," it also allows that research offers "enlightenment" in "gradual, indirect, and interactive" ways "that aggregate over time to become significant structural and substantive changes" (pp. 43-44). Although the plan is a little short on how this enlightenment is to happen, this concern with research as a way of knowing and thinking about the world is precisely the direction that I think the SERP could more actively support.

In considering different models of public engagement, I am asking that this public value be counted as a suitable goal, worth researching, in helping us to understand the educational and political role of such knowledge in a democratic society. This is not about the anti-intellectual rejection of research that pays no mind to its possible public value. It is about ensuring that the SERP's strengths in research focus, coordination, and collaboration also be directed toward fostering a greater contribution to public and professional understanding, as well as improving classroom practices and test score results.⁹ I am asking that the plan expand its interest in "understanding when knowledge can contribute to education" (NRC, 1999, p. 49) by thinking of research's educational value as critical to a democratic society. I am asking that SERP include research on this expanded sense of the public value of research, as service and conversation.

This could be achieved by taking an initial step of simply adding a fifth focusing question to the SERP plan, following on the fourth: "How can the use of research knowledge be increased in schools and school districts?" This proposed fifth question would complement research's applied usefulness with its value as a source of public knowledge and engagement. It would be posed, just like the fourth, as an overarching research question: *How can research knowledge contribute more to public and professional understanding and deliberation?* This question calls for educational researchers,

with their expertise in learning, to work with those in the information sciences, communication studies, and computer science in exploring coherent and comprehensible approaches to organizing access to research resources. It takes advantage of the SERP's planned collaboration and participation among researchers, policymakers, practitioners, and the public in seeking effective systems, standards, and interfaces for making that knowledge more widely available.

How will we know whether it is making this greater contribution? If research is to be a greater part of a thoughtful and informed discussion of educational issues, then it should offer an alternative source of public information to the increasing corporate concentration within the media and the commercialization of information economies. It should play a more dynamic role in leveling the informational playing field of an educational politics that is increasingly swayed by interest groups (Judis, 1999). It should raise the level of discussion surrounding state referendums, such as those in recent times on bilingual education and affirmative action. It should provide touchstones for current debates over mathematics standards, the impact of high-stakes testing, and voucher programs. It should fairly serve the class action lawsuits redressing inequities in the availability of educational services, such as the recent California suit over disparities in advanced placement classes among schools (Purdum, 2000). Ready access to what is known and what can be established about student learning, even with the research's rich diversity of perspectives, could well give people hope of making greater sense of what is at risk and what may be possible, as they consider the education of the young. It should be obvious, at this point, that my motives for expanding the SERP's public dimension are not only educational and intellectual, but are political in SERP's strategic sense.

A Strategic Politics of Knowledge

To have the SERP or any program of research support greater public and professional deliberation is bound to slow down the translation of research into practice. That's the thing about democracy. Democratic education is about increasing people's ability to participate in their own governance, and the more of that they do, the more time it takes to get things done. People benefit from the process, it can be said, not just in knowledge, but in rights, recognition, justice, and dignity. For all of its bureaucratic inefficiencies, a more deliberative SERP would provide a strategic check on the idea that the world has grown too complex to be left up to democratic processes, whether representative or direct, and must be guided by research-wielding technocrats. Or at least, I am asking the SERP to test what greater public access to its research could mean for educational deliberations, as part of democracy's ongoing experiment with self-governance.

The public sphere is shrinking and seriously fragmented, and the university's contribution is coming into question, judging by the 1999 declaration, signed by 300 university presidents, calling on postsecondary education "to reexamine its public purposes and its commitments to the democratic ideal" (Wilgoren, 2000). It does seem to me that the SERP could demonstrate how social science research can address the "unavoidable asymmetries in the availability of information," as political philosopher

Jürgen Habermas names the problems faced by deliberative politics in the public sphere; it could ensure that within political and professional deliberations over education, in Habermas's words, "reasonable or fair results are obtained insofar as the flow of relevant information and its proper handling have not been obstructed" (Habermas, 1996, p. 325; see also Habermas, 1989). The learning and knowledge afforded by the SERP's efforts to expand the public value of its research program are nothing less than an entitlement in the equitable distribution of publicly funded resources.

Some years ago, John Dewey wrestled with similar problems in the development and support of public knowledge in his lectures *The Public and Its Problems* (1926). In addressing the democratic need for knowledge "as a precondition of public judgment," Dewey's hope was for the development of "a genuine social science" in which "the highest and most difficult kind of inquiry and a subtle delicate, vivid, and responsive art of communication must take possession of the physical machinery of transmission and circulation and breath life into it" (1926, pp. 180, 184). He was thinking of the printing press, of course, and he did much to artfully bring his own democratic thinking into public forums. Yet Dewey was aware that such knowledge would at best have "limited circulation and a narrow influence," though he added that "even at that, however, the mere existence and accessibility of such material would have some regulative effect" (pp. 183–184).

I would add that the suspicion that few will care about this access to research hardly relieves us of obligations to test the capacity of new technologies to increase its public value.¹⁰ The increased exposure to this knowledge, both as a source of deliberation and as a guide to practice, could well cultivate a significant audience, much as the original introduction of that new technology known as the printing press slowly developed an audience for a wide range of books and ideas in the vernacular languages of the people. It also forms part of the education-for-democracy chain that connects student to citizen. If this research is going to make the schools better for democracy by preparing educated citizens, then it could also make democracy better for schooling, by informing citizens in their deliberations over the schools. As the SERP plan argues that "the nation's vitality as a democracy and its productivity in a global economy will hinge in coming decades on the knowledge and skills of the majority" (NRC, 1999, p. 7), so the SERP could advance not only the skills people need but the corresponding knowledge that serves this democratic vitality.¹¹

Do I really imagine, one might object, that this research could possibly increase the democratic play of knowledge in the face of the notoriously ignorant voter? There seems no end of studies of how little voters know, and these certainly do make for discouraging reading for educators with an interest in democratic vitality.¹² However, in his recent review of "America's ignorant voters," Michael Schudson, a communications professor at University of California, San Diego, points out that while people's rather abysmal lack of knowledge of politics has remained relatively unchanged over 60 years of surveys, their understanding of the critical social issues receiving widespread media coverage can improve, as happened with the civil rights movement and people's knowledge of the Bill of Rights (2000, p. 23). The

Founding Fathers, he adds, had not intended for this representative democracy to be dependent on voters' knowledge. They did hold, however, that "the diffusion of knowledge is productive of virtue, and the best security for our civil rights," as the North Carolina congressman whom Schudson cites put it in 1792 (Schudson, p. 20).

The productive diffusion of knowledge that I am proposing that the SERP take up is not about informing every voter on every educational issue. It is about the virtues of people knowing that this knowledge, which certainly bears on their civil rights, is readily available for them to pursue, whether out of interest or concern. It is about whether, more generally, the social sciences could do more to counter the dumbed-down politics often associated with mass media coverage of election "races" (Anderson, 1998). The decline of public confidence in democratic institutions over the last three decades has been attributed, in part, to the media, with recent work pointing to the positive difference made in people's hopes for such institutions by the quality of the available information (Moy & Pfau, 2000).

When it comes to teachers' possible interest in this research, the SERP plan cites a teacher survey conducted by D. S. Fleming (1988), of the Regional Laboratory for Educational Improvement of the Northeast and Islands in Andover, Maine, in which "less than half of [the teachers] agreed that educational research gave them practical suggestions for improving instruction" (NRC, 1999, p. 43). While the plan finds this "troubling," I am encouraged by the proportion that reported profiting from research in this *practical* way. But of course, my argument is that research should be seen as more than a source of practical suggestions for teachers. Otherwise, I fear that the SERP's educational emphasis on the practical recalls those strands of anti-intellectualism in American life that historian Richard Hofstadter (1963) identified a number of years ago with the rise of the expert and a shortage of opportunities for intellectual engagement among teachers. Now of course, some people would just as soon have researchers simply fix the problem and forget the explanations and consultations, but that may not be what we, as educators, scholars, and democrats, want to encourage. It may not be how we want to cast teachers in developing a strategic plan for educational research.

Our responsibility, as *educational* researchers, to see if people might not be able to take greater advantage of the knowledge we produce, is only heightened by the understated political scope of the SERP's research agenda. The SERP plan is to be admired for taking on the particular "challenge" of improving learning "in high-poverty and culturally diverse contexts," noting that success there will certainly vindicate research's contribution to education (NRC, 1999, p. 48). Yet improving the educational situation of such challenging contexts will ultimately be about the allocation of scarce resources—good teachers, well-equipped classrooms, and other educational opportunities—which will always be about more than translating the best research into the best practice. It will entail the hotly contested politics of equity and entitlement, the advocacy of dedicated leaders and interest groups, all of whom could be better informed, presumably, by better access to the relevant research.

In working with this challenge, policymakers, practitioners, and the public need to see how the focused research on learning

fits within what else we know about schools and society. Imagine, for example, the SERP developing an online system that connected its research on student learning to studies on, for example, how gains in student achievement relate to employment opportunities, economic productivity, and income disparities (e.g., Scott & Bernhardt, 2000). It could connect SERP research, as well, to studies of the continuing educational dynamics of class and race, as a caution against reforms that perpetuate inequities (e.g., Lipman, 1997). It could offer access to the larger picture of international assessments of academic achievement (e.g., Bempechat & Drago-Severson, 1999) and the basic concept of intelligence (e.g., Kincheloe, Steinberg, & Villaverde, 1999). The SERP could augment the intelligibility of these research connections, as well as their practical implications, by developing an open forum, an op-ed page, for readers to post commentaries, proposals, and join discussions (e.g., Botstein, 2000).

Arriving at a fair and effective system for increasing research's contribution to public knowledge and political deliberations would clearly be a major research undertaking in itself, and yet what better means can there be for the SERP to improve research's impact on educational practices than to inform the larger and local political struggles, to encourage public and professional deliberations, over the future of the schools? All it would take is to direct some part of the SERP's "large investment of talent, time and resources" (NRC, 1999, p. 48) toward exploring whether and how research can better integrate the practical and political, the applied and intellectual, interests that it inevitably represents. This experiment in creating a public intellectual resource has everything to do with the SERP's advocacy of learning about "knowledge structures," "mesh[ing] different kinds of information," and "rigorous thinking," as well as the plan's interest in using educational technologies that "make reasoning processes public and inspectable" (NRC, 1999, p. 26). It speaks to the SERP's assumption that "an organization [such as a democratic society] predisposed to learn will develop processes for making tacit knowledge explicit" (p. 39). And those processes are bound to have everything to do with current and future information technologies.

Technologies of Access

In the 1920s, Dewey envisioned "a newspaper which was only a daily edition or a quarterly journal of sociology or political sciences," in which "free social inquiry is indissolubly wedded to the art of full and moving communication" (1926, pp. 183–184). Today, of course, it would seem that our best hope of increasing the public value of scholarship, whether in history, health, education, or other areas, lies in bringing that artful free inquiry to the increased global public access of the Internet. As any use of technology will reinforce continuing divisions between haves and have-nots, the question is not whether everyone has access to computers—access to information resources will always be unequally distributed—but whether the Internet can do significantly better than print, as now appears to be the case, in helping more people gain access to research that can make a difference to their lives.

This is a time of radical change in scholarly communication. The Association of American Universities and the Association of

Research Libraries (ARL) have recently issued an unprecedented joint statement on "Principles for Emerging Systems of Scholarly Publishing" that declares the current system financially unsustainable, with changes required among all the players to take advantage of new technologies (ARL, 2000). The philanthropic sponsors of research, such as the Andrew W. Mellon Foundation, are funding substantial electronic publishing projects (Ekman & Quandt, 1999). The publishers, too, recognize that the times are changing. Jason Epstein, a distinguished editor with Random House for many years, has not only pronounced that his industry's demise is "a likely possibility sooner or later, if not a certainty," but that publisher-less publication could well mean, following the example of the printing press, "narrowing the notorious gap between the educated rich and the unlettered poor and distributing the benefits as well as hazards of our civilization to everyone on earth" (2000, pp. 57–58).

Closer to our particular home in the academy, Gene V Glass (2000), of Arizona State University, is seeking to extend his groundbreaking work in meta-analysis—directed at "the quantitative integration of empirical research"—to scholarly publishing, inspired by developments in physics, for example, that are pushing preprints into e-prints that increase the immediacy of global access.¹³ Meanwhile, the foremost of education's current information systems, ERIC, is in need of "massive restructuring in order to continue to meet the information needs of the education community," according to Lawrence M. Rudner (2000), Director of ERIC Clearinghouse on Assessment and Evaluation. The question of how best to go about this restructuring—not just to improve the indexing of a million research abstracts, but to make the "information needs of the education [and larger] community" integral to the research project—is precisely what I am proposing be included within the strategic research program of the SERP plan.

Up to this point, the technologies used by educational researchers have been largely directed at data-gathering and analysis, with some attention given to supporting scholarly collaboration and publishing (Pea, 1999). The principal focus among educational researchers has been on developing well-researched systems that support student learning, such as Web Constellations (Goldman-Segall, 1998), Knowledge Forum (Scardamalia & Bereiter, 1996), and the Knowledge Integration Environment (Linn, Bell, & Hsi, 1998), with the Center for Innovative Learning Technologies acting as a coordinating body with a focus on the "inclusiveness of diverse researchers, stakeholders, schools, and learners" in its pursuit of "breakthroughs to generate long-term learning gains" (Pea et al., in press).

However, a few innovative educational websites have emerged that represent a portal strategy dedicated to supporting interactive public access to educational research, such as the federally funded *Knowledge Loom* or the privately held *Milken Exchange*.¹⁴ My own modest contribution to increasing the public presence of educational research has taken the form of the Public Knowledge Project with a research program directed at developing and testing experimental website and database designs that connect research and related sources in both policymaking and professional development settings.¹⁵ We have also begun work on the technical, economic, and social dimensions of a new model for scholarly publishing that could perhaps guide the

SERP's efforts at building a far more direct and active connection among researchers, policymakers, and practitioners, as well with the public (Willinsky, 2000b).

For example, the SERP could enable users of its resources to move from research overviews and syntheses to the original studies and relevant meta-analysis, with an option of consulting the research instruments and perhaps the data as well. Users should also be able to follow a given student population, learning paradigm, or research methodology through the relevant research literature. Such a system could connect research studies not only to related work but to the relevant curriculum materials, state policies, teacher reflections, media reports, and support organizations. Imagine being able to review educational programs or policies, knowing that you can also consult the underlying research and theory, as well as the ensuing critical debates. As I suggested earlier, such a system could also enable users to post comments, questions, and proposals, on the big and small questions provoked by this research and its various agendas. This could lead to a far greater sense of collaboration, exchange, and participation among those interested in improving the schools.

Such an approach to research may well lead to new ways of managing, indexing, displaying, designing, and writing up research. Open access to this research would benefit scholars and students on a global basis, while access to related contextual and research materials would support a more rigorous and reliable peer review of the research. While the SERP plan does speak of a database of "theory-based curriculum materials" and "learning activities," as well as "databanks useful for researchers, practitioners and policy makers" (NRC, 1999, pp. 57–58), a more ambitious plan for utilizing new technologies would seem far more appropriate. Given the continuity afforded by its 15-year timeline, the SERP plan would do well to move beyond the tentative language of opportunities and possibilities that it now uses to address technology.

Now, those among you who still doubt the viability of this form of public education should consider how avidly people are pursuing online sources of health information. Thousands are daily finding their way past the questionable health sites to the popular National Medical Library's MEDLINEplus that offers access to basic medical research and clinical trials (including trials still welcoming participants), along with supporting descriptions, dictionaries, and recommended hospitals and physicians in English and Spanish.¹⁶ Doctors and patients are now tapping into such services as e-SKOLAR, a Stanford University Internet spin-off, which "brings one-click knowledge to the point of care," in the words of Eugene Bauer, dean of Stanford's School of Medicine (Mangan, 2000, p. A16). The e-SKOLAR website integrates textbook materials, drug databases, and research journal articles, while offering physicians learning modules for accumulating credits in their required programs of continuing medical education, all for \$240 a year. "It is absolutely wonderful to have all that stuff there at your fingertips," one mother said after her doctor shared with her a printout on her daughter's condition that included recent research and treatment programs. "We could go to see the endocrinologist from a point of knowledge" (Freudenheim, 2000, p. A1). Whether through government-sponsored libraries or dot-com services, this increased access to research is proving a source of consultation, education, and deliber-

ation for physician and patient, encouraging them to weigh what is currently known and knowable. It is bound to change the doctor-patient relationship, altering the balance of power in people's day-to-day lives.

I recognize that health information can have an urgency to it that may be lacking with education—as is the estimated \$14 billion a year currently spent on medical information (Freudenheim, 2000, p. C14)—but that is no reason for the SERP to restrict its efforts at increasing research receptivity to dissemination channels, intermediaries, and, in the case of teachers, training (NRC, 1999, p. 45). The SERP has it well within its reach to establish a global, public resource for improving schools everywhere. It would do more to support the struggle for better schools that is surely as much about political will as cognitive science, even as it demonstrates the public value of diverse, systematic inquiry. It could do so in ways that strengthen the claims of knowledge's public sector within an information economy marked by battles over, for example, the private/public quality of human genome research (Wade, 2000). It would enable educational researchers to develop, on this newly facilitated global scale, their intellectual and practical engagement with the profession and the public in ways bound to change how the researchers think about and conduct research.¹⁷ This global element would also steer the SERP away from the ideologically nationalist themes of earlier initiatives such as the 1950s post-Sputnik educational reforms.

As this SERP will "pursue research and develop strategies for getting the best knowledge used in everyday education practice" (NRC, 1999, p. 53), it is well positioned to enable the larger community of researchers, practitioners, policymakers, and the public to work with this knowledge in seeing through their professional and democratic responsibilities and interests. The future of systematic scholarly inquiry in education could then be judged not only on whether it is "more likely to be used in practice" or whether it can "help with the communication problem" between researchers and policymakers (NRC, 1999, pp. 46–47). Educational research could also be judged on its contribution to the general quality of understanding; it could be judged on what it offers to this larger public and professional conversation over why and how schools matter. This conversation has everything to do with the future of educational research, and I am hoping the National Research Council's invitation for a public dialogue over its vision for that future will draw researchers into considering whether more can be done to enhance the public value of our work, within and beyond the scope of this promising Strategic Education Research Program.

NOTES

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¹ The National Research Council, the principal operating agency of the National Academy of Sciences (NAS), advises the federal government on scientific and technical matters. The SERP is a project of the Commission on Behavioral and Social Sciences and Education, which "focuses the knowledge, analytical tools, and methods of the behavioral and social sciences on some of the nation's most pressing issues in efforts to understand them and to contribute to their solution," according to the NAS website (<http://www4.nationalacademies.org/nas/nashome.nsf/>).

² Recent work on this deliberative tradition within democracy—which is concerned with “rational legislation, participatory politics and civic self-governance,” in the words of James Bohman and William Rehg—is found in their collection (1996, pp. ix–x), as well as in Elster (1998).

³ The National Educational Research Policy and Priorities Board, according to its website, “works in cooperation with the Assistant Secretary and OERI to determine research priorities and evaluation standards. . . . It shall be the mission of the NERPPB to guide the nation’s educational research, development, and dissemination agenda. It will do so by establishing policies and priorities that will enhance high quality, respected research, development, and dissemination and by communicating the value of educational research to the public” (<http://www.ed.gov/offices/OERI/NERPPB/mission.html>). The most recent NERPPB draft policy statement on research goals takes a similar line of recognizing the value of going public—“so that public discussion of education issues in America can be informed with reliable facts and analyses of data”—and of reaching out to educators, while still emphasizing that research dissemination needs to be judged by the “adaptation and use of findings from research” (Hakuta & Bither, 2000, pp. 6–7). See also, “Gorillas in Our Midst: Emerging Themes on How to Improve Education Research,” *AERA Report From the Hill*, (August/September 1999) <http://www.aera.net/gov/rpn/n-06.htm>.

⁴ The SERP plan later rejects the medical research analogy, although still not in favor of research’s educational and deliberative roles: “An educational intervention is not like a drug or serum; in education, even when you have a promising intervention, it has to be incorporated into a highly complex social system” (NRC, 1999, p. 50).

⁵ Cronbach writes, “The evaluator’s responsibility is that of any other social agent who seeks to help in selecting action alternatives: to illuminate the corner of the world where the problem resides. In this, the evaluation research does not differ from basic research on child development or income or delinquency” (1982, p. 22). Elsewhere, I make a case, using the citation and the footnote, for reducing the isolation and fragmentation of social science research (Willinsky, 2000a, pp. 173–191).

⁶ The advantages and compatibility of pursuing more than one metaphor for learning have been well defended in the pages of this journal not long ago by Anna Sfard, a mathematics educator at the University of Haifa (1998).

⁷ Elsewhere (1999, pp. 61–70), I discuss the implications of this one-best solution synthesis in relation to the NRC’s *Preventing Reading Difficulties in Young Children* (1998).

⁸ Shapiro’s (1999) concept of *democratic justice* is especially relevant here, as he would encourage “us to find ways to condition social relations so as to encourage democratic governance and opposition within them” (p. 115) and as he recommends “making use of esoteric knowledge without being held hostage to it” (p. 50).

⁹ See, for example, Mary Kennedy’s (1999) study of teachers’ support for educational research as it “sharpens thinking” and affords “personal relevance” beyond its prescriptive implications for their teaching.

¹⁰ Elsewhere, I engage in a fuller discussion of research’s social contract (Willinsky, 2000a, pp. 130–143).

¹¹ This is also to take a lifelong learning approach to Amy Gutman’s claim, in *Democratic Education*, that democracy requires people who have “the intellectual skills and the information that enable them to think about democratic politics and to develop their deliberative skills and their knowledge through practical experience” (1982, p. 147).

¹² See, for example, the special issue of *Critical Review* (Friedman, 1998) on “public ignorance.”

¹³ For developments on self-archiving systems for scholarly communication that have grown out of the physics preprint service arXiv.org, see the Open Archives initiative (<http://vole.lanl.gov/>). For an effective summary and treatment of issues facing electronic publication, in light of the National Institutes of Health’s development of a comprehensive peer-review and preprint archive, see David J. Solomon (1999).

¹⁴ *The Knowledge Loom*, Northeast and Islands Regional Educational Laboratory, Brown University (<http://www.lab.brown.edu>); *Milken Exchange*, Milken Family Foundation, Santa Monica, CA (<http://www.mff.org/edtech>).

¹⁵ The Public Knowledge Project’s websites are available at <http://www.educ.ubc.ca/faculty/ctg/pkp/pk.htm>.

¹⁶ MEDLINEplus (<http://www.nlm.nih.gov/medlineplus/>): “Good information is the best medicine,” is how Donald A. B. Lindberg, Director of the National Library of Medicine, sums up the site: “Both health professionals and consumers can depend on it for accurate, current, medical information.” Elsewhere, I discuss the use of online medical research (Willinsky, 1999, pp. 7–8) and the relevance of the evidence-based medicine as a model for professional practice in other areas (pp. 115–125).

¹⁷ See Michael Huberman’s study of how “sustained interactions” between education researchers and practitioners “may well lead to conceptual and methodological gains” for researchers (1999, p. 316). As for the dot-com competitors to SERP, “Devoted to understanding the brain and enhancing learning, BrainConnection.com presents the latest advances in neuroscience, including products that actually train the brain to learn faster” (<http://brainconnection.com>).

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