

TO: Subcommittee on Research in Education (SCORE)

FROM: Kenji Hakuta, Chair, National Educational Research Policy and Priorities Board (NERPPB)

Date: November 7, 2002

My purpose in this memo is to provide a broad overview of the work of the National Educational Research Policy and Priorities Board (NERPPB) that has led up to the set of issues to be taken up by the Subcommittee on Research in Education (SCORE).

NERPPB was created in the last re-authorization of OERI in 1994, and held its inaugural meeting on March 30-31, 1995. Although our archives would show that we have been engaged in a broad range of issues presented before us by the Assistant Secretary for the Office of Educational Research (OERI) and by the education and research constituencies, we have invested the bulk of our efforts on the following core questions:

- **Focus:** Is the portfolio of research sufficiently balanced between depth and breadth, and not a mile wide and an inch deep? Are the questions important to the key constituencies of educational research?
- **Quality:** Are there appropriate mechanisms in place to ensure research of the highest quality?
- **Continuity:** Is there capacity in the agency, and in the field of educational research more generally, to sustain focused, high quality research?
- **Utility:** Is educational research useful to its constituencies, and how can knowledge use be increased?

The Board has structured its committees and meeting agenda around this simple core. We have taken action, consulted with the Assistant Secretary and with research constituencies, and as bodies such as ours are prone to do, we have commissioned lots of reports and studies.

Focus: The Board cut its teeth in framing research priorities in 1997 in a report that was founded on broad-based consultation with internal and external constituencies of OERI.¹ That statement was a clear signal that we were trying to do too much with too little. A further mapping of the field of education research clearly showed the misalignment of mission and resources.² These provided a clear basis upon which we took action as a

¹ OERI and the National Educational Research Policy and Priorities Board (1997). *Building Knowledge for a Nation of Learners: A Framework for Education Research*. <http://www.ed.gov/offices/OERI/RschPriority/plan/>

² Mathtech Inc. (1998). The educational research development and dissemination system, An analytic mapping. Also, President's Committee of Advisors on Science and Technology. (1997). *Report to the President on the use of technology to strengthen K-12 education in the United States*. Available at: <http://www.ostp.gov/PCAST/k-12ed.html>. [2001, August 21].

Board to recommend reducing the number of research centers, which ranged from a high of 25 in 1991 to 12 today, and concentrate the resources on the centers that remained. We simultaneously commissioned a study from the National Academy of Education, and through deliberation of its recommendations³, articulated a focus on reading, math, second language learning, and teacher development.⁴ Subsequently, we worked with Office of the Assistant Secretary to develop panel groups on reading and math to develop new research priorities within these areas.⁵ A similar effort is presently under way in the area of second language literacy.⁶

Quality: The main area of concern has been peer review, and it has been a front burner issue for the Board since its inception. A precipitating event was a grievance filed in the Adult Literacy Center competition in 1996 that led the Board to look into the qualifications of the peer reviewers, which led to the commissioning of a major systematic study of the practice of peer review at OERI.⁷ One strong recommendation was the need for standing panels similar to NIH study sections. Another issue within quality has been advocating for a more objective process of research design, especially focused on randomized field trials. Our major partner here has been the National Research Council and its issuing of the report on scientific research in education.⁸ Needless to say, this issue has high traction, due in large measure to its eager embrace by *No Child Left Behind*. With respect to program effectiveness, we also commissioned a study to look at the operations of the expert panel process in reviewing applications for promising and effective practice, and determined many areas of needed improvement if a peer review panel process were to be effective in this area.⁹

Continuity: Through discussion with OERI staff and the education and research communities, the Board has identified and highlighted issues in continuity of leadership, staff, and oversight as key structural elements in supporting a strong cumulative record of research.^{10,11}

³ National Academy of Education. (1999). Recommendations regarding research priorities.

⁴ National Educational Research Policy and Priorities Board. (1999). *Investing in Learning*.

⁵ <http://www.rand.org/multi/achievementforall/>

⁶ National Literacy Panel on the Development of Literacy Among Language Minority Children and Youth.

⁷ Diane August and Lana D. Muraskin, (1999). *Strengthening the Standards: Recommendations for OERI Peer Review, Summary Report*. Prepared for the National Educational Research Policy and Priorities Board, U.S. Department of Education..

⁸ National Research Council. (2002). *Scientific Research in Education*. Committee on Scientific Principles for Education Research. Shavelson, R.J., and Towne, L., Editors. Center for Education. Division of Behavioral and Social Sciences and Education. Washington, DC: National Academy Press.

⁹ Caliber Associates. (2001). *Evaluation of the Expert Panel Review System for Identifying Promising and Exemplary Programs*.

¹⁰ National Educational Research Policy and Priorities Board. (2000). *Investing in Research: A Second Policy Statement with Further Recommendations for Research in Education*.

¹¹ *A Blueprint for Progress in American Education*. A White Paper Issued by the National Educational Research Policy and Priorities Board. (2000).

Utility: The Regional Laboratories have been the most visible part of OERI's research dissemination strategies. Evaluation studies of the effectiveness of the labs¹², a commissioned paper on OERI with a significant focus on the labs¹³, and on-going discussions with the National Educational Knowledge Industry Association (NEKIA) have strengthened our appreciation of the power of localized and broad-based constituencies, and in the constraints on top-down assertions about utility. The Board also drew upon the National Academy of Education report's emphasis on collaborative R&D as an important mechanism for dissemination, where the end-user participation in problem definition is the best insurance that the knowledge generated would be used.^{14, 15} Not coincidentally, we have been in close contact with the activities of the National Academies in their Strategic Education Research Plan (SERP) initiative, which independently developed parallel recommendations for action.¹⁶

As you know, we made the request for the present scope of work in the areas of (1) high quality peer review, (2) the ethics and practical issues of random assignment experimentation in education, and (3) capacity building of the field in promoting scientific research in education through communication with university and foundation officials. In our jargon, these fill important gaps in the field of education research in the areas of quality and continuity. In part, this is because we believe that the field is now sufficiently focused on a manageable number of topics. And although a huge amount of progress was made in the *Scientific Research in Education* report in the area of quality -- especially in helping to define and illustrate the point that quality is best seen as the fit between the question and the method -- a large number of unresolved questions remain in the judgmental process that occurs in peer review, and in the practicalities of random assignment studies. Elaboration of these issues, as well as the opening up of a genuine dialogue with the institutions that hold the key to the training of the future brain trust of the field, are key leverage points to making education into a mature science.

That the National Academy of Sciences speak to these issues is important, because you are in the best position to speak about the workings of science with the legitimacy of the voice of real scientists. I say this out of concern that there is an easy retreat into a form of methodological fundamentalism that would brand certain methods better than others on an absolute basis.

¹² Policy Studies Associates, Inc. (1994a). Decision making in regional educational laboratories. An evaluation report prepared for the Office of Educational Research and Improvement, U.S. Department of Education.

Policy Studies Associates, Inc. (1994b). Regional educational laboratories: Some key accomplishments and limitations in the program's work. An evaluation report prepared for the Office of Educational Research and Improvement, U.S. Department of Education.

¹³ Vinovskis, M. (1998). Changing federal strategies for supporting educational research, development, and statistics. Background paper prepared for the National Educational Research Policy and Priorities Board, U.S. Department of Education. Available: <http://www.ed.gov/offices/OERI/NERPPB/>

¹⁴ NAE, op. cit.

¹⁵ Investing in Learning, (1999).

¹⁶ National Research Council. (1999). *Improving Student Learning, a Strategic Plan for Education Research and Its Utilization.*

Although surely unintended, this is the impression that one gains from a powerpoint slide of presentations¹⁶ being made by the current Assistant Secretary Russ Whitehurst and Senior Research Associate Valerie Reyna, who state: “All evidence is NOT created equal” and present a list in the following order: Randomized trial, Quasi-experiment, including before & after, Correlational study with statistical controls; Correlational study without statistical controls, and Case Studies. The slides then go on to point out the virtues of randomized trials as “the gold standard.”

I should say that I am an experimental psychologist by training, and I believe in the importance of looking at the logic of experimental designs to infer validity of the conclusions to be drawn from the research. But I am also aware that educational questions and the data that may illuminate them come in varying forms and compromises, so that methodological fundamentalism for me works only in the context of the question being asked. By presenting a list that is removed from the details of a particular area of inquiry, unsophisticated researchers are likely to draw the conclusion that random assignment studies should be accomplished at any cost, rather than as a highly preferable form of inference *ceteris paribus*.¹⁷

The challenge is how to have a discussion of methodology in a nuanced way, by thinking about how a community of peers would debate and establish rules of evidence around different domains of inquiry, by identifying the conditions under which the best form of inference through randomized trials can be realized, and by identifying conditions where there are threats to its proper implementation. That is what I hope that this committee would do.

As you are aware, the NERPP Board will not be in existence to receive the report of your committee. As soon as the President signs the Education Sciences Reform Act, our board will cease to function, and a transition will be made into a new Institute of Education Sciences with a new governing board. My own opinion of the new law is that it is a good one, and addresses many of the issues that NERPPB has expressed in its policy statements. And I am certain that the new board will find our organizing issues – focus, quality, continuity, and utility – to be a useful framework for its work. But it is that new board and the Institute of Education Sciences that will be receiving your report.

¹⁶ Available at: <http://www.ed.gov/offices/OERI/presentations/evidencebase.ppt>

¹⁷ It is worth quoting at length from the Board’s policy statement that predated but is certainly bolstered by the National Academy’s Scientific Research in Education report: “The power of science comes from a combination of strong theory and data that bear on the theory. This implies endorsement of explicit ideas and agreed-upon methods for exploring and testing these ideas based on observation that has internal and external consistency. Experiments, as a classification of research, should not be scattershot or universal. Rather, they should be justified by a cumulative record of rigorous observation and piloting. This requires knowledge of context in addition to adherence to scientific canons. While experiments in education may not be used as frequently as they should as a preferred means for investigation—for a variety of reasons, but availability of funds is surely one such reason—‘science’ should not be equated with ‘experiments.’” National Educational Research Policy and Priorities Board. (2000). *Investing in Research: A Second Policy Statement with Further Recommendations for Research in Education*.

Thank you for indulging in a little bit of retrospective activity on my part, but I hope that this has been helpful in framing the context for your important work.

Postscript: President Bush signed the Education Sciences Reform Act into law on November 5, 2002.