

Easton remarks, Economic Science Association

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Thank you for inviting me today to be part of such a distinguished group. As you can see, I'm a bit of an outlier here – I'm not an economist, I'm not presenting data, and you'll notice that a couple decades differentiate me from the others on this panel.

Let me begin by saying a little bit about the Institute of Education Sciences, where I am director. IES was authorized by Congress in 2002 as the Department of Education and the US government's agency for objective, non-partisan education research, evaluation, assessment and statistics. Our mission is to provide reliable information about the conditions and progress of education in the US; about educational practices that support learning; and about the effectiveness of federal and other education programs.

We do our work through four centers. The National Center for Education Statistics, one of 15 governmental statistical agencies, collects education statistics, conducts longitudinal surveys like Early Childhood Longitudinal Study and the High School Longitudinal Study, and administers assessments, primarily but not exclusively the National Assessment of Educational Progress, NAEP, the Nation's Report Card.

The National Center for Education Evaluation and Regional Assistance awards contracts to conduct large-scale impact evaluations of programs and policies. For example, we

are currently evaluating the Race to the Top competition, School Turnaround efforts taking place across the country, and Teacher Incentive Fund grants that support performance based pay systems in school districts. This last evaluation was mandated by Congress, who stipulated an experimental design, “if feasible.” This center also sponsors ten Regional Education Laboratories that provide states and districts with technical assistance in conducting research and evaluation studies and in making use of the findings. Many of you may know the commissioner of this center, Rebecca Maynard.

We also make competitive grants to researchers, through the National Center for Education Research and the National Center for Special Education Research with the expectation that their discoveries will ultimately lead to programs, tools, processes, interventions and curricula that will promote improved student learning. In addition to efficacy and scale-up trials we also fund exploratory research (usually secondary data), development and measurement projects. We now also fund about 12 Research and Development Centers across the country, including one at Harvard on effective math teaching that Tom Kane leads.

IES also funds both pre-doctoral and post-doctoral training grants and summer training institutes In order to increase the supply of scientists who are “prepared to conduct rigorous education research.” There are now over a dozen interdisciplinary pre-doctoral

training programs across the country involving about 500 students. 110 former fellows are now in the field as professors at colleges and universities, researchers and evaluators working in research organizations, in local and state education agencies, and even one or two in the federal government. I was pleased to learn that a recent graduate of the University of Pennsylvania has gone to work for the Providence Rhode Island school district.

There are two of these training programs nearby – one six miles to the south at the University of Chicago, where Steve Raudenbush is the Principal Investigator, and another 12 miles to the north at Northwestern University.

This summer we are sponsoring three one or two week training institutes: one on conducting cluster randomized trials; another on quasi-experimental designs; and a third on rigorous single case research designs, most often used in special education research for low incidence disabilities. I visited two of them a few weeks ago on consecutive days and was really pleased to see the quality of the courses and the enthusiasm of the participants – both students and faculty. What especially pleased me was learning that there were several participants who had applied and been accepted into both the RCT and the single case design workshops.

In fiscal 2011, the IES budget is about \$600 million and I think that we make that amount or money go a very long way.

My predecessor and the institute's first director, Russ Whitehurst, pushed very hard to insist that IES conduct and sponsor rigorous research. His insistence was a response to widespread beliefs that much education research was of poor quality and frequently research studies made unwarranted conclusions about causal linkages. Russ's hallmark belief was that the field of education needed more strong causal evidence and that we need to conduct more experiments to provide that evidence. He and many others believed that educational experiments are both feasible and ethical and that we could and should conduct more of them. So IES has been a leader in conducting well-designed experimental program evaluations, in sponsoring experimental research through grants, and in training the next generation of researchers in the methods they need to do this work well.

But still, we haven't made as much progress as a field as people thought we would by ratcheting up our methods. At a recent meeting of the National Board of Education Sciences, some of our original members recalled their belief that if we conducted enough RCTs we'd learn what works and what doesn't and that we'd be able to provide sound advice to policy makers and practitioners on how to improve student achievement, reduce achievement gaps among racial and economic subgroups, and prepare all students for college and career. Unfortunately it hasn't turned out this way. We still have a paucity of knowledge about "what works," and we have relatively little understanding of why some things do and others don't.

So, given this history, I have two big goals for IES: First, conduct more relevant and useful research and evaluation studies, while retaining IES's rigor. Second, expand the focal question from "what works" to what works for whom, where, when and under what conditions. Our focus on what works, determined by studies with strong internal validity, has had a paradoxical effect. While we are conducting more experiments, we aren't building knowledge, theory and generalizable discoveries the way we need to.

How do we become more relevant and useful and also build a stronger science of education that helps us understand more about the school improvement process, better teaching and more student learning and the policies and practices that we need to put in place to reach these goals?

I think that one key to achieving both of these goals is that the research community needs to work more collaboratively with practitioners and policy makers and build partnerships to engender relevant, useful research that confront the difficult questions of practice and policy. Encouraging these partnerships remains one of my biggest priorities at IES. Let me give you several examples of them, beginning with an organization called the **Strategic Education Research Partnership -- SERP**¹. In their words, "SERP stimulates innovation in education through sustained collaborations among distinguished researchers, educators, and designers. SERP partnerships expand

¹ See <http://serpinstitute.org/about/overview.php>

the capacity for continuous improvement while remaining mindful of what teachers do, how schools operate, and how students learn.” One example of their work is Word Generation – a cross subject instructional program for building the academic language middle school students need to comprehend subject area texts, develop and support arguments, and write persuasive essays. Word Generation was developed and tested collaboratively by researchers and educators. The evidence base is being built through the use of strong experimental designs.

IES has a grant program called **Evaluation of State and Local Programs and Policies** that requires these kinds of partnerships. About a year ago we made a grant to the Michigan Department of Education and researchers at the University of Michigan and Michigan State University to evaluate two recent reforms in Michigan designed to promote college attendance and success. The evaluation project got off to such a strong start that the partnership has broadened its scope for more collaborative work between the researchers and the state department of education.

I mentioned earlier that IES sponsors ten Regional Education Laboratories across the country. In the most recent competition (the proposals were due last week), we required bidders to create “research alliances” around specific topics of interest and to draw a range of stakeholders into these alliances. We also see the labs as working closely with state and local officials to help them conduct more rigorous evaluations of

new programs and policies as they roll them out and in taking best advantage of their increasingly rich longitudinal data systems.

My last example -- close to home -- is the Consortium on Chicago School Research at the University of Chicago. Although fiercely independent, the Consortium sees itself as a partner in Chicago Public Schools' improvement efforts and designs and conducts its studies so that they can provide useful guidance to the school district. My colleagues Elaine Allensworth and Matthew Steinberg just completed a beautiful study on teachers' and students' perceptions of how safe they feel in school². Student poverty, race, crime and social capital in their residential neighborhood, students' incoming achievement level, and peer support for academic achievement all work together to influence students' and teachers' perceived level of safety in their schools. More importantly, the study went on to show how these influences are mediated by how adults relate to each other in the school building and with parents. When these relationships are positive, both teachers and students feel safer in school, regardless of the external realities. Although the study did not make policy recommendations, there are clear implications to guide CPS decisions on the topic of school safety.

² Steinberg, M., E. Allensworth, & D. Johnson (2011). Student and Teacher Safety in Chicago Public Schools: The Roles of Community Context and School Social Organization. Consortium on Chicago School Research. http://ccsr.uchicago.edu/content/publications.php?pub_id=151

Let me conclude by suggesting some ways that we can build better theories of practice and better theories of school improvement.

- Privilege the substance of research on an equal par with its methods;
- Be more ambitious in substantive theory building and testing; build a careful theory of action to help look inside the black box and try to identify the “active ingredients”
- Build a scientific culture of experimentation in partnership with practitioners and policy makers that may result in more, simpler, quicker and cheaper experiments that are designed to lead to improvements in practice and policy and build theory
- Embrace and acknowledge the complexity of teaching and of interventions; learn about how schools and districts operate
- Conduct more synthetic research; think and work across disciplines
- Build a new professional identity in the education research community– the educational equivalent of epidemiology or engineering

And finally, who are the researchers who will do this work?

I’m drawing here from a summary that Catherine Snow made of the skills of researchers at Strategic Education Research Partnership and in other organizations that work in

partnership with schools and districts, like CCSR and the New York City Research Alliance.

- They are action-oriented researchers who seek to both generate longer-term knowledge while also providing short or long-term service to districts.
- They use their formidable technical skills to help design studies and refine research questions rather than to create questions.
- They develop and use their complex communication skills to engage with practitioners and policymakers.
- They recognize the interconnectedness of classroom-level, school building-level and district-level functioning so as not to create interventions that ignore these relationships.
- Finally, they often begin their work with powerful descriptive data to explicate current practices and outcomes in new and useful ways, building a theory of action around the topic of concern.

Let me end by emphasizing this point on the value of studying naturally occurring variation, which we can do extremely well as longitudinal data bases become both better and richer. These data can help us in our theory building, in more thoroughly understanding the problems that schools face. Coupled with field-based input, they can

provide the kind of understanding that we need to guide the design of the experiments that will give us more confidence in finding causal linkages between programs, policies, processes or interventions and improved student outcomes.