

Scaling School System Capacity for Low Cost Experimental Evaluations of Local Programs

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Through deployment of stimulus funds, the US Department of Education (ED) has the opportunity to improve the efficiency and effectiveness of K-12 policies and programs by instituting a process of research-based continuous improvement in school systems to identify what works and doesn't work *in the local setting*. Scaling local capacity for rigorous research is now possible with the growth of longitudinal data systems (LDS) and web-based analytic tools and support. These can be paid for through stimulus funds allocated for LDS, technology, and teacher incentives.

Shifting From a Centralized to a Local Research Paradigm

This opportunity requires rethinking how research is funded and conducted. This applies to randomized experiments as well as other kinds of rigorous quasi-experimental research. While maintaining high standards, we must change the beliefs that research has to be enormously expensive and must take years to complete.

The current model for ED-contracted research is a single "national" experiment aimed at finding definitive evidence for the program or policy under study. This type of experiment is expensive and time consuming. We propose an alternative: experiments conducted within a state or local jurisdiction. Not only are these more timely and far less costly, they are far more useful for local decision-makers. With improvements in LDS and with expansion of web-based support, local capacity for high quality research can be easily scaled up.

Cost Comparisons of National to Local Experiments

Below we present "cost-per-teacher" estimates based on 1) published costs and reports on several recent experiments contracted by ED; 2) our experience in conducting experiments funded by commercial publishers; and 3) our findings from a three-year ED-funded R&D project to develop rigorous low cost methods for local experiments (Newman, 2008).

Government-contracted experiments:	\$20,000
Experiments funded by commercial publishers:	\$5,000
Experiments initiated by school systems:	\$2,000

What can account for these enormous cost differentials? Consider the following:

- **Recruiting the sample.** Federal-contract research typically samples a large number of school districts while commercially-funded research often works in a smaller number of sites, resulting in lower costs for recruiting and data collection. Locally-initiated experiments eliminate the cost of recruiting entirely, and data are usually more accessible.
- **Program costs.** Federal-contract research may pay the cost of implementing the program or policy being investigated, while commercial entities obtain it at cost. For local experiments, the school system may already have committed to pay for a pilot implementation, so costs are not charged against the research. Also, it is less common for local systems to pay teacher incentives, and the cost of professional development is often covered as an ongoing expense.
- **Data collection.** Federal-contract research often employs extensive on-site observations while commercially-funded and locally-initiated research relies on more efficient survey methods with observations limited to verifying survey results. Local research makes use of locally administered tests, seldom paying for additional testing.
- **Time and effort in review process.** For government-contracted research, there is an extensive review process both before and after the experiment is conducted resulting in considerable delay in delivering findings to the stakeholders. These reviews are, in part, driven by the high profile nature of the results, and are often legally required. Commercially-funded research can commence within months of the

contract and can be reported within a few months of final data collection. Local research typically provides interim reports on implementation even before final outcome data are collected. The faster turn-around incurs less expense.

There are also research design options available for local studies that require fewer teacher participants, which can lower costs even further. We believe that the tenfold advantage in cost efficiency for local experiments is a very conservative estimate.

Advantages of Local Experiments for Educators

The cost advantage of local experiments demonstrates that they would be a cost-effective use of federal research dollars. More importantly, rigorously obtained local evidence has greater information value. For example:

- The local experiment tests the new program or policy against what is already in place, so that the estimate of effectiveness directly addresses the local decision. A national study provides an average over a large number of different school systems, so the result is of little value to any particular decision-maker.
- The local experiment can examine achievement gaps and the ways in which a program interacts with characteristics of students and teachers that may be unique to, or are of critical importance to, the local school system and that may not be measurable in the more diffuse national sample.
- The outcomes of particular interest to a district may not be measured in a national study. These may include dropout or course progression rates.
- Measures of local implementation can be provided to stakeholders in time to make decisions for the following school year.

We should also note that the synthesis of ten local studies provides richer information at the national level than what would be available from a single national study.

Calling for Local Experiments as a Systemic Reform

The most important advantage of putting federal research funds into conducting local experiments rather than single “national” studies is *not* that educators obtain ten times as much evidence. The real opportunity is that a process is put in place that engages educators in examining the evidence for the effectiveness of their own policies and programs. This is a fundamental change in the way most school districts view scientific evidence. Rather than being the object of exhortations to use evidence, educators become the producers of evidence.

Is there capacity within school districts to make this happen? No one will benefit if local research is poorly designed and incorrectly analyzed. Consider that there were about 780 large school district researchers who were members of, or presented research, at the 2008 meetings of the American Educational Research Association. There is already a core capacity in district research departments to initiate local experiments. Bringing district researchers up to speed with current tools and methods will expand this capacity, which can extend well beyond the short-term availability of stimulus funds. This would constitute a systemic reform and bring to districts participating in the stimulus a mechanism for continuous improvement as well as an ongoing capacity for evidence-based accountability.

Specific Recommendations for ED Administration of Stimulus Funds

- Set the expectation that all programs with stimulus funding will be evaluated—even those that have been “proven” in prior studies. Nothing is proven until it is shown to work in local practice.
- Direct IES to scale up support for local evaluations through professional development workshops and tools that can be put to immediate use.
- Build into the grants for longitudinal data systems the requirement that the funds support state and local studies of policy and program effectiveness.

Newman, D. (2008) *Toward School Districts Conducting Their Own Rigorous Program Evaluations: Final Report on the “Low Cost Experiments to Support Local School District Decisions” Project*. Empirical Education Research Reports, Palo Alto, CA: Empirical Education Inc. (www.empiricaleducation.com)