

The SERP Partnership Model

Boston

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S E R P

Two types of partnerships to improve science education

1. Supplying science expertise to individual schools and teachers
2. Supporting systemic change in science instruction

Each has strengths and weaknesses

Teacher- or School- as- Partner Model: Strengths

- Scientists provide a place to turn when students have questions that teachers can't answer, giving teachers safety to open up instruction to student thinking
 - Is gravity matter?
 - If water cycles between clouds and lakes, where did the water come from to begin with?
- Deep expertise is required to explore and adapt; novices rely on recipes. Scientists in the classroom can create opportunities for exploration.

Teacher- or School- as- Partner Model: Weaknesses

- Impact is limited in scope because:
 - The number of students reached by each scientist is small
 - The contribution is not “taken up” by the system beyond the classroom
- Scientists know the science, but not necessarily how students learn and how best to support the existing instructional program.

School System- as- Partner Model: Strengths

- Broader reach at the outset, e.g.:
 - Preparing new science teachers or providing summer institutes
 - Providing and supporting science programs across a school system
- Possibility of sustained impact through ongoing commitment of the school system

School System- as- Partner Model: Weaknesses

- It's challenging to design effectively from outside the system:
 - Outside experts and practitioners inside the system do not always have the same definition of the problem to be solved.



THANKS... UM...
WHAT WE REALLY
NEEDED WAS A NEW
SET OF WINDSHIELD
WIPERS...

School System- as- Partner Model: Weaknesses

- Experts design programs for expert teachers. Novice teachers tend to focus on the basics of classroom management (Schoenfeld, 2011). They are often unable to handle the complexity of high quality programs.



DASHBOARD-PALOOZA

SERP Goal

To create a network of school district “field sites” where the research and development to support education practice is located *inside the school system*:

- Priorities are defined by school district leaders
- Interdisciplinary teams are recruited to help frame the problem and potential solutions in light of research knowledge
- Solutions are identified/ developed and tried as prototypes; revised in response to observations of practice
- Contours of the problem are followed to identify barriers and challenges that need attention

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SERP Origins

National Research Council Report (2003):
Strategic Education Research Partnership

National Headquarters in D.C.

Field sites: Boston, San Francisco, Oakland,
Minority Student Achievement Network

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Lessons Learned:

1. Working inside practice settings changes the focus and the products

- Example: To support a shift to CCSS-M and NGSS practices, principals need to change what they look for when they visit classrooms. Led to the development of the 5x8 card
 - Designed to shift attention to what students are doing (rather than what the teacher is doing)
 - Designed to focus on core features of instruction, not content that principals aren't familiar with
 - Targets what principals can easily see

Vital Action 1 on the 5x8 card

- Students *say a second sentence* (spontaneously or prompted by the teacher or another student) to explain their thinking and connect it to their first sentence.
 - Differentiates classrooms where the teacher is doing the thinking from those where the students are doing the thinking.
 - Easy for principals to see
 - Catalytic in its effect on teaching

Lessons Learned

2. Working in different content areas in different locations has surfaced similar challenges, including:

- Importance of student talk; productivity of focusing on student practice rather than teacher practice
- The importance of finding a point of entry for teachers to engage in a new practices in a limited way in order to allow for learning without major disruption
- The critical role of school/district coherence

Lessons Learned

3. Sticking with the multiple dimensions of a problem can allow for programs of work that provide coherence for the student

- E.g., “students can’t read their content area textbooks when they reach high school” led to curriculum and assessment development that deployed common design features across 4th-8th grades, and across content areas.



Strategic Education
Research Partnersh

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