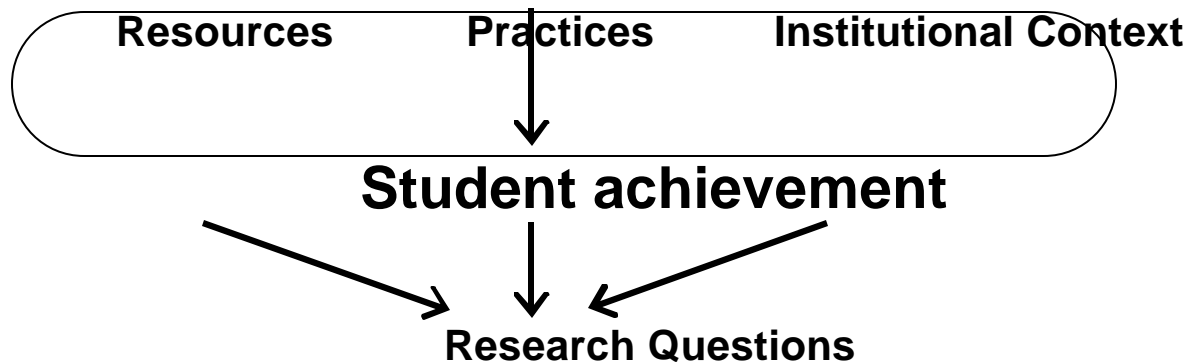


Helen Ladd's Presentation on Research Questions at the Workshop on Understanding and Promoting Knowledge Accumulation in Education

Conceptual framework

Family background of students



I. What is the impact of school resources on educational outcomes? (EFFECTS)

Standard production function approach:

$$A_t = f(A_{t-1}, \text{school resources}_t, \text{family background}_t, \text{peers}_t)$$

Where A refers to an outcome such as student achievement

Note ambiguity about the question vis-à-vis practices and institutional context.

II. What resources would be needed to achieve a given level of output? (ADEQUACY)

Economists' approach. (1990s): District level analysis.

Start with desired outcomes

$$\text{Expenditures} = f(\text{desired outcomes}, \text{cost factors})$$

Where cost factors are such as the percent of students in poverty or percent of special needs students.

Cohen, Raudenbush, and Ball (2002 proposed approach)

Start with instructional goals

Instructional approach needed to attain goals?

Resources needed to implement the approach?

III. How can a given amount of resources be used more productively to increase student achievement? (PRODUCTIVITY)

Starts with resources but focuses on practices and institutional context.

Example: Effective schools research and school improvement models (1970s and early 1980s)

Other examples: Research on catholic schools, whole school reform models, governance reform. See NRC, *Making Money Matter* (1999).

Big literature. Not my focus today.

Historical Overview of Research on Direct Effects of Resources

1. *Equality of Educational Opportunity* – Coleman Report 1966 (and Jencks et al. reanalysis 1972) – sociologists

Survey mandated by Civil Rights Act of 1964.

**2. Production Function Research – mainly economists
1970s – present**

Based on economic theory of production

Opportunistic data sets

**3. Tennessee Class Size Experiment
1985, with ongoing analysis of the data**

Motivated by a policy problem

4. Teacher Effects – based on state administrative data

1990s and early 2000s, mainly economists

Conclusions about the resource effects literature

Progress is being made.

Off track a bit with the Coleman Report and the Hanushek

summaries.

State administrative data sets have great potential.

Even more so if states were to gather information data on family background.

Potential for more experiments related to resources.

Need to be careful about generalizing the results when using them to make policy recommendations.

Would be useful to do more explicit experimenting with policy packages that include various combinations of additional resources and new practices or incentives.