Evidence Grand Challenge

Foundations 2022

Team 18:
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Session	Paper	Description
1: Descriptive quantitative	CMS Breaking the Link 2019 Report	Stats about CMS
2. Descriptive quantitative	Reardon et al, Patterns of literacy among US students. *The Future of Children*, 2012.	Nationwide literacy statistics
3. Descriptive qualitative	"Social reproduction and child-rearing practices: Social class, children's agency, and the summer activity gap" by Chin and Phillips 2004, pp. 185-210	Summer activity gap and social class
4. Descriptive qualitative	None	
5. Causal Evidence	Banerjee et al. From proof of concept to scalable policies: Challenges and solutions, with an application. Journal of Economic Perspectives, 2017.	Teach at the Right Level in India
6. Quasi-experimental	Dee & Penner. The causal effects of cultural relevance: Evidence from an ethnic studies curriculum. *American Education Research Journal*, 2017. Pp. 127-150 only.	Ethnic studies curriculum in LA
7. Synthetic	Kraft et al. The effect of teacher coaching on instruction and achievement: A meta-analysis of the causal evidence. *Review of Education Research*, 2018, pp. 547-588.	Meta-analysis of 60 coaching studies
8. Process	Coburn & Woulfin. Reading Coaches and the Relationship Between Policy and Practice. *Reading Research Quarterly*, 2012.	

Components

1) The challenge in CMS

2) Teaching literacy

3) Teacher coaching

4) Additional evidence

1) Framing the Issue at CMS

- Charlotte-Mecklenburg schools has a racial gap in their achievement outcomes. In their summative report, "Breaking the Link," they state:

- *"More than 80 percent of the black juniors who took [state competency tests to graduate high school], twice the number of whites, failed either the math or the reading components...The problem was simple in its broadest sense: there were still – after all the turmoil and noble hopes of desegregation – too many students who were not being taught," ("Breaking the Link", 2019).*

- To rectify these disparities, our team will present how summer schools and teacher coaching can help turn around these numbers at the onset: elementary school.

2) Direct Literacy Instruction:
Teaching at the Right Level

Recommendation:

Bihar summer camp model

➢ One-month

➢ School buildings, school teachers

➢ Materials provided, trained volunteers

Banerjee et al. 2017

2) Direct Literacy Instruction:
Evidence for TaRL - Bihar

Why summer?

"We found little evidence that these social-class differences in summer experiences stemmed from social-class differences in parents' preferences."

(Chin and Phillips, 2004)

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Evidence for the Bihar model

➤ RCT: .12** higher on four-point literacy test
  ➤ .5 for treatment-on-treated

➤ Summer > school year: Teachers free to focus

(Banerjee et al. 2017)

2) Direct Literacy Instruction: Counterpoints

Haryana in-school camps had larger effect sizes:

- Came at the cost of extra hour in the school day

	Language
A. Haryana	
Teaching at the Right Level	0.20***
	(0.023)
Control group mean	2.4
Observations	11,963

"They have a lot of different programs, like Boys and Girls Clubs and YMCAs that the kids can go to while school is out, but the times don't work around the times that you work. So you have to bring 'em and pick 'em up at 3 o'clock. If you're a single parent, and you work from 8 to 5, 9 to 6, it's not—it doesn't work like that. It's just not convenient." (Chin and Phillips, 2004)

3) CMS has decided to implement teacher coaching.

3) Why did they choose teacher coaching?

Teacher coaching is particularly effective in the realm of reading (Kraft et al., 2018) (synthetic).

TABLE 2

Pooled effect size estimates of the effect of teacher coaching on instruction and achievement

Coaching Model Type	Teacher instruction	Student achievement			
	Classroom observations	All subjects	Reading	Math	Science
All studies	0.488*** (0.056)	0.178*** (0.037)	0.163*** (0.032)	0.044 (0.042)	0.352 (0.242)
k [n]	186 [43]	113 [31]	87 [26]	20 [5]	6 [3]
Content specific (all)	0.512*** (0.061)	0.197*** (0.041)	0.186*** (0.035)	0.050 (0.041)	0.352 (0.242)
k [n]	119 [27]	102 [26]	78 [21]	18 [3]	6 [3]
Content specific (reading)	0.513*** (0.064)	0.185*** (0.036)	0.186*** (0.035)	NA	NA
k [n]	113 [25]	82 [21]	78 [21]		
General practices	0.466*** (0.109)	0.068 (0.056)	0.066 (0.048)	NA	NA
k [n]	67 [16]	11 [5]	9 [5]		

Note. Pooled effect size estimates with robust variance estimated standard errors reported in parentheses. For sample size, k is the number of effect sizes and n is the number of studies. Cells with "NA" are not estimated due to too few or no data.
*$p < .05$. **$p < .01$. ***$p < .001$.

3) Why did they choose teacher coaching?

Teacher coaching is particularly effective in the realm of reading (Kraft et al., 2018) (synthetic).

- Teacher coaching helps teachers construct congruence (Coburn & Woulfin, 2012) (process evidence).

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And talking to [one of the coaches]—because I have a few concerns—and I talked to [the coach] about it, and she said mainly "You're already doing what the grant is going to be. Don't worry." So I was like "OK."

3) What are some potential problems with teacher coaching?

There is no data on "effect per capita" (descriptive quantitative evidence).

"Unfortunately, the existing literature lacks the necessary information about program costs to conduct a reliable cost–benefit or cost-effectiveness analysis." (Kraft et al., 2018)

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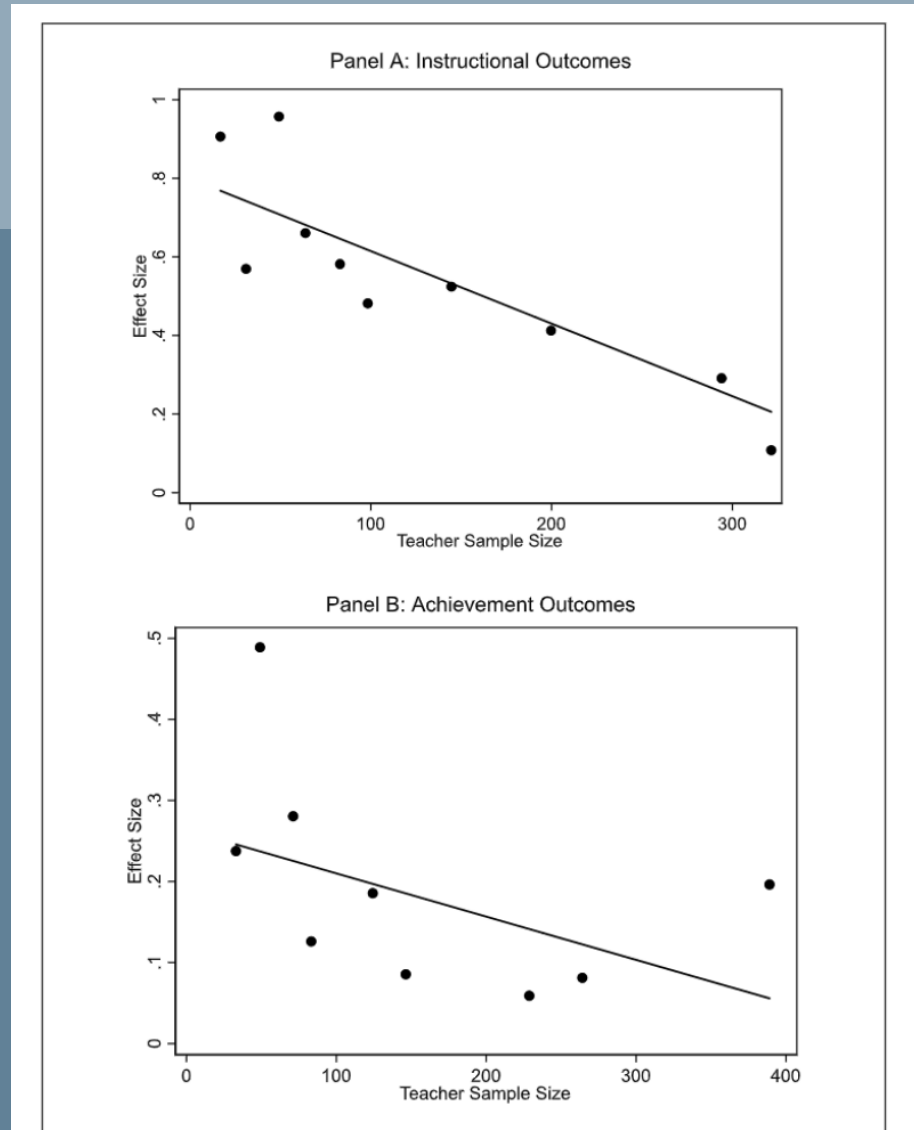

FIGURE 4. *The relationship between effect sizes and the number of teachers participating in a study: (Panel A) Instructional outcomes; (Panel B) Achievement outcomes.*

- CMS has 96 elementary schools ("Breaking the Link", 2019). The highest sample size shown in this study is ~400 teachers, and we see how student achievement outcomes go down as the size of the program goes up. (Kraft et al., 2018) (descriptive quantitative evidence)

- How do we equitably decide what teachers get the coaching?

4) What next? Additional Evidence

One suggestion for <u>qualitative analysis</u> is collecting data on how students feel about the curriculum (Reading) and whether it is helping them improve their literacy skills.

Affordances: Gets students direct thoughts, first-person perspective.
Limitations: Will students take the feedback seriously since they are elementary students? Harder to identify similarities.

Focusing on summer camps in a <u>quantitative analysis</u>, we can identify how students were able to get to campus (i.e the amount of students walking to school, takes the bus, parent drives them, etc.).

Affordances: Helps inform administration on how to provide better transportation infrastructure. Pinpoints what struggles or advantages students face in order to attend summer camps.
Limitations: Students experiences can vary. For instance, they are continuously changing schools or how they may get to campus -- can walk to campus at one point and the other has someone drive them.