

Inside In-Service Teacher Training: What Works and How Do We Measure It?

Anna Popova, David K. Evans, and Violeta Arancibia

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In-service teacher training can be effective

Individualized, repeated

- Train teachers and provide them with regular mentoring to implement early grade reading instruction in local language in Uganda (Lucas et al. 2014)
- Provide local contract teachers with two weeks of initial training but reinforcement throughout the year in India (Banerjee et al. 2007)



Associated with a specific task

- Combine student reading groups with in-school supervisors to provide ongoing guidance to group leaders in Chile (Cabezas et al. 2012)
- Help teachers learn to use storybooks and flash cards in India (He et al. 2009)



But...

It certainly isn't always effective

- Early literacy program in northern Uganda (Kerwin & Thornton 2015)
 - Worked well when NGO-implemented
 - Some significant negative impacts with government trainers
- Three-month English training program for teachers in China (Zhang et al. 2013)
 - No impact on teacher English scores
 - No impact on student English scores
- Many other examples...maybe most!

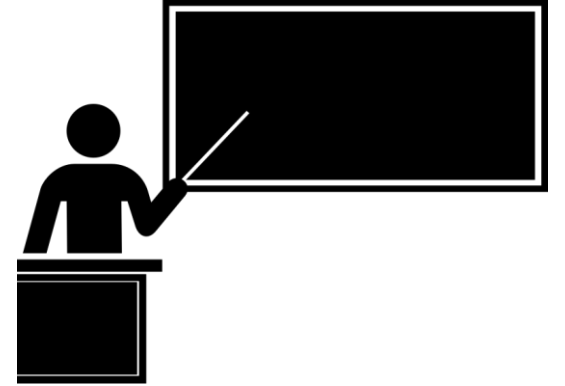
Lots of resources are expended on it

- At the World Bank
 - 171 World Bank projects between 2000 and 2012 had education components
 - 63% had professional development to support teachers



Twin objectives of this project

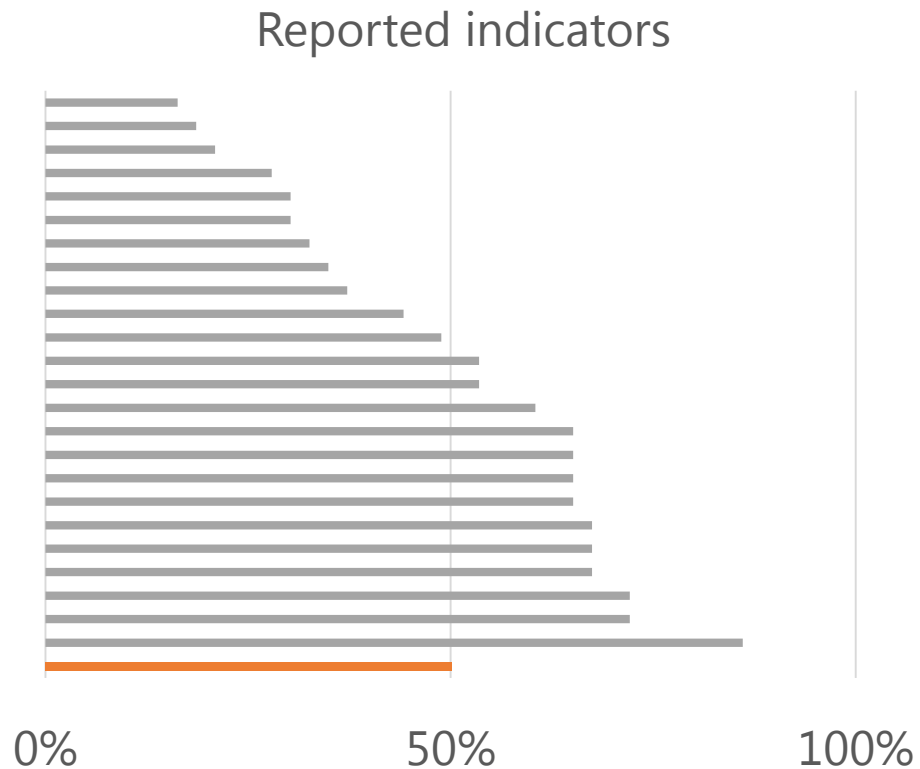
- Identify what works in in-service teacher training in low- and middle-income countries
- Propose an instrument to more fully and consistently characterize in-service teacher training in future evaluations



Why would we need an instrument like that?

What's in that program, anyway?

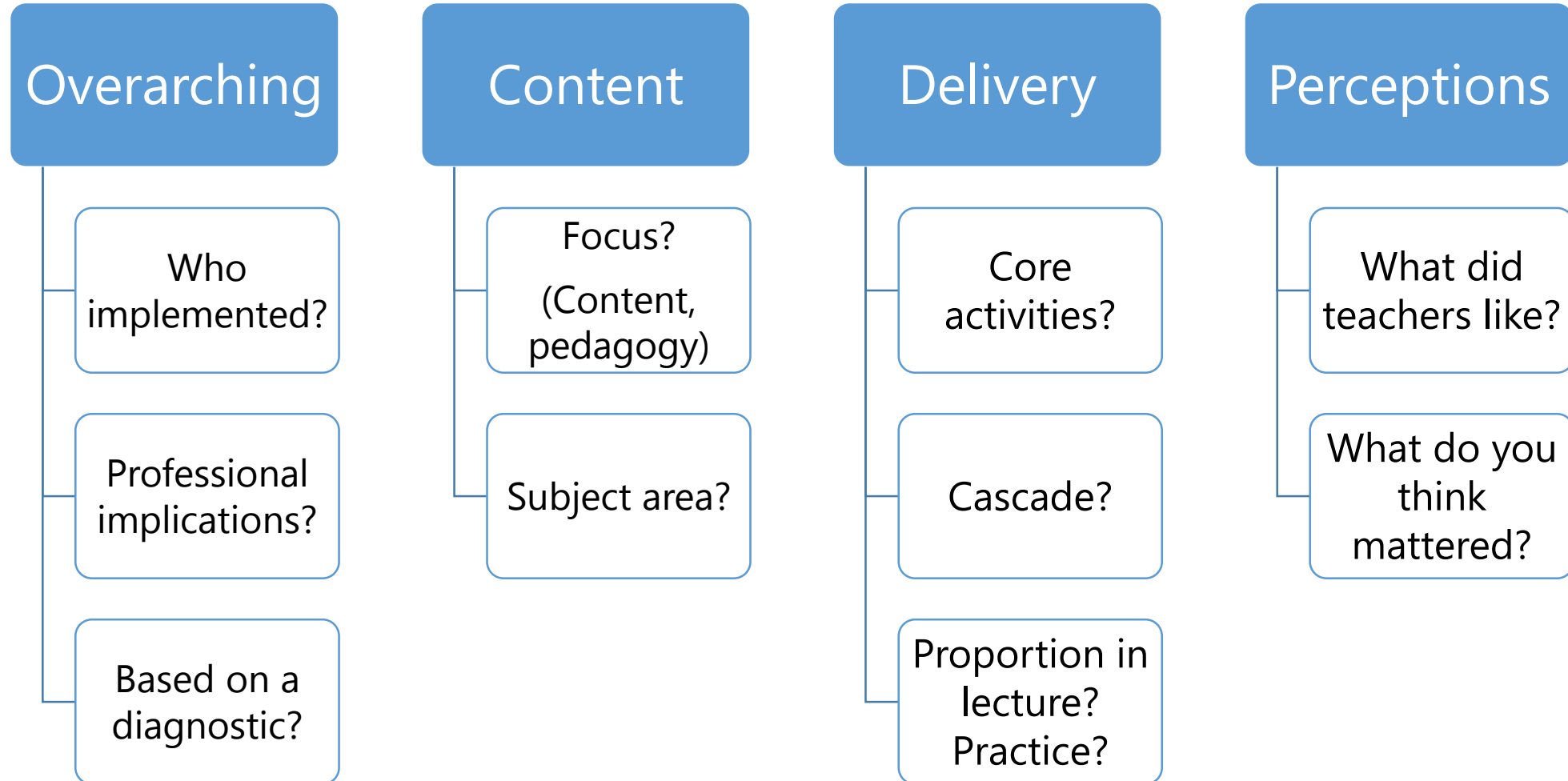
We examined two dozen studies for 43 potential indicators



Lack of instruments

Teacher policy	Teacher development	Teacher behavior
<ul style="list-style-type: none">• SABER-Teachers	<ul style="list-style-type: none">• _____	<ul style="list-style-type: none">• Stallings• CLASS• Others

What would it look like?



What would it mean?

A simple annex table in each paper or report

Table A1: Teacher Training Program Characteristics

Content	
Primary focus	Subject-specific pedagogy
Subject focus	Mathematics
Delivery	
Core activities	<ul style="list-style-type: none">• Lecture• Teaching practice
Proportion of time on lecture	60%
Proportion of time on practice teaching with other teachers	35%
Proportion of time on practice teaching with students	5%

Can we use these characteristics in already evaluated projects to see “what works”?

Has this question already been answered in rich countries?

What do we learn from rich country evaluations?

Meta-analysis of 196 randomized field experiments on student test scores

Intervention	RE estimate
High dosage tutoring	0.309
No excuse charters	0.153
Charters	0.110
Data driven	0.057
Managed professional development	0.052 (2)
Teacher certification	0.030
Student incentives	0.024
Teacher incentives	0.022
Low dosage tutoring	0.015
General professional development	0.019 (7)

- **General professional development** = General skills
 - Self-executing (books, DVDs, handbook)
 - OR hands-on, but general
- **Managed professional development** = Specific methods
 - Precise training in specific curricular materials
 - Success for All: Every child to 3rd on time with basic skills
 - Reading Recovery: Individualized remedial reading

But when we look within teacher training?

We don't know too much

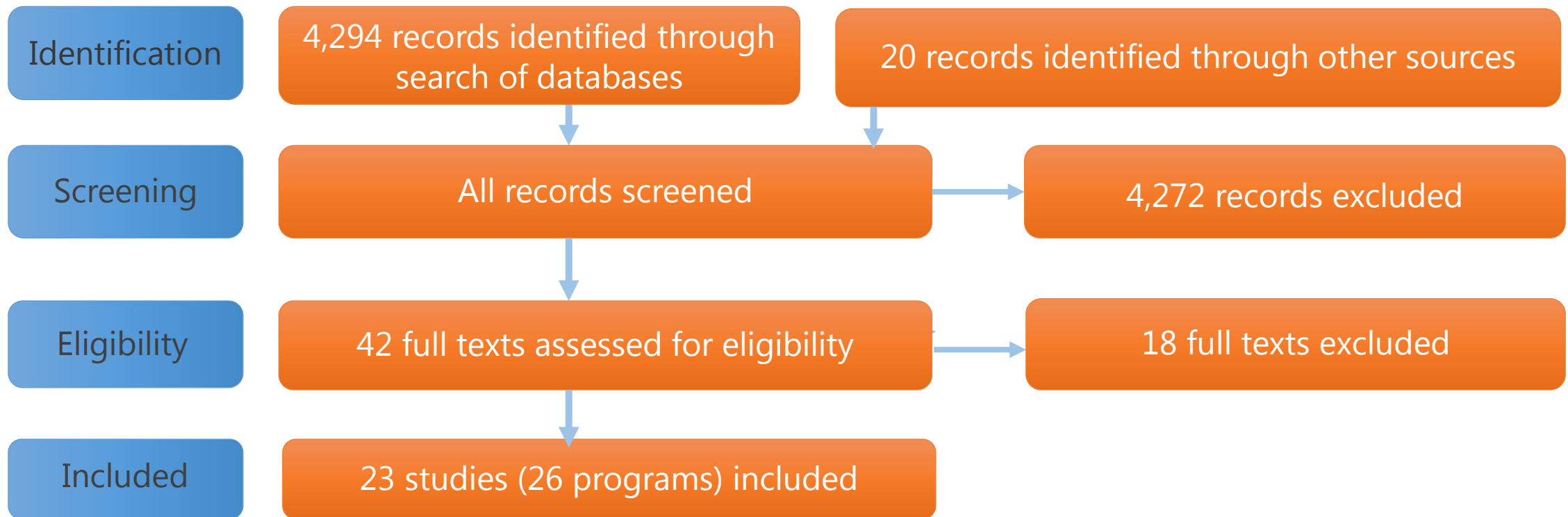
- Example: Math professional development (Gersten et al. 2014)
 - Review of 910 studies
 - 5 high quality studies
 - 2 positive impacts

“The limited research on effectiveness means that schools and districts cannot use evidence of effectiveness alone to narrow their choice.”

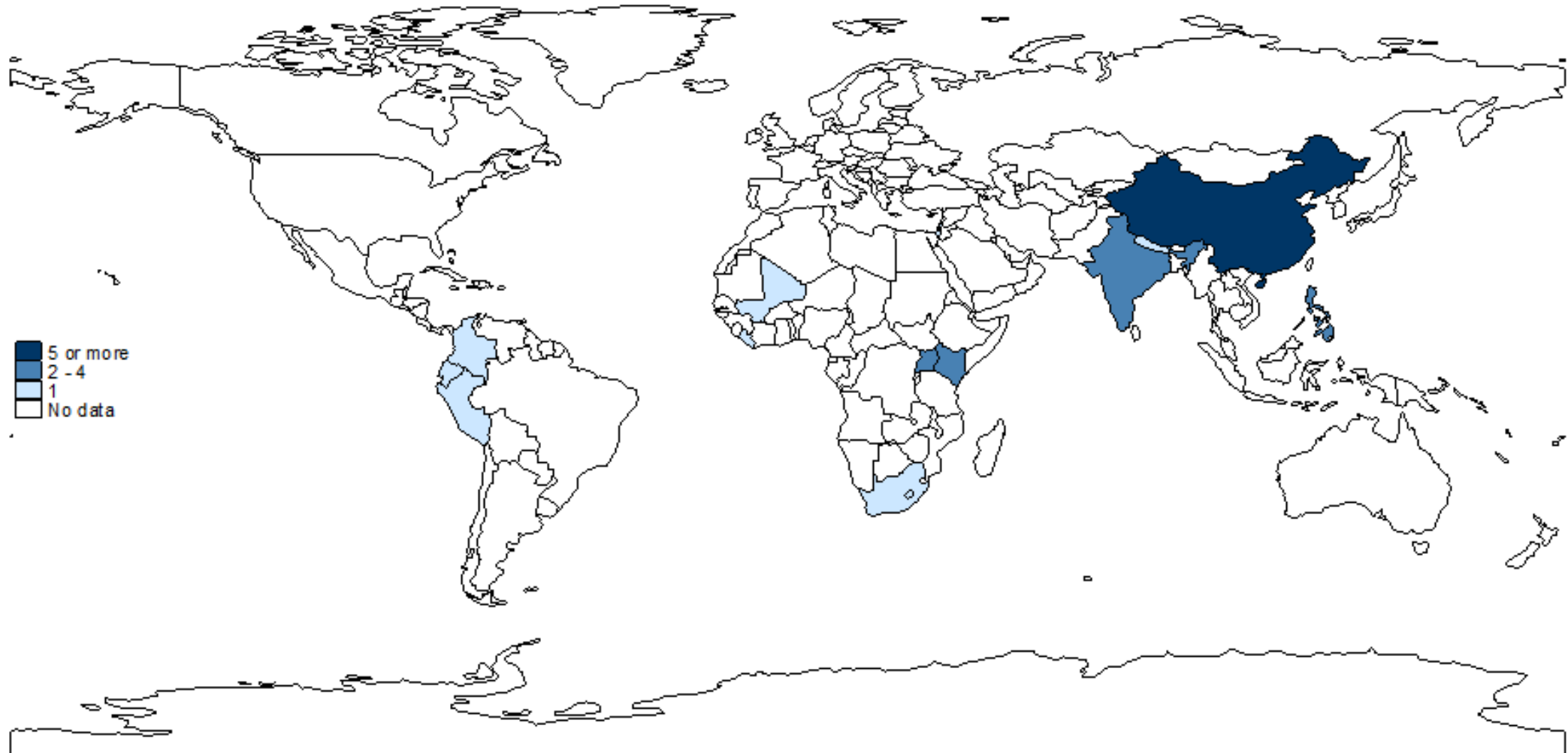
Has this been answers in rich countries? No.

The search

11 meta-databases searched



Geographical distribution of studies: China, India, Kenya, Uganda, and a few more



Availability of information

Papers

- Information on 22/43 indicators (50%) was reported in the evaluations on average

Contact

- We contacted the authors of all evaluations to put us in touch with program implementers – 16/26 responded

Interview

- We interviewed the program implementers for 12/26 programs

Success

- Post-interview, information on 98% was collected on average

What do these programs look like?

Overarching Aspects

Characteristics	Distribution
Program design informed by some type of formal diagnostic/evaluation	41%
Targeted teachers based on years of experience or specific skill gaps	0%
Have salary or promotion implications?	41%
Evaluated at scale?	Few: Average 609 teachers per year across 57 schools

What do these programs look like?

Content

Characteristics	Distribution
Primary focus on pedagogy	46%
Secondary focus on content	68%
Language or math	90%
Linked with some sort of materials provision (textbooks, storybooks, teacher manuals, lesson plans etc.)	82%

What do these programs look like?

Delivery

Characteristics	Distribution
Cascade training model	50%
Hours of training	64
Dedicated to lecture?	48%
Dedicated to practice with other teachers	52%
Dedicated to practice with students	6%
Provided in-school	6%
Follow-up visits	78% (6 visits on average)

May point to selected nature of evaluated programs.

What is
associated with
success?

- Bivariate regressions
- Remember power: 26 observations

Do the effective programs look different from the ineffective programs? Overarching Aspects

Overarching Aspects variable	Program impact on student learning
Program provides textbooks	0.355** (0.128)
Program provides other reading materials (flashcards, word banks, primers)	0.159* (0.087)
Participation has implications for promotion or points towards promotion or salary implications	0.143** (0.066)
Targeting by years of experience	0.136 (0.198)
Program provides storybooks	0.129 (0.094)

Do the effective programs look different from the ineffective programs? Content

Content variable	Program impact on student learning
Primary focus of the training program is classroom management	0.471 (0.272)
No subject focus of training	-0.243 (0.204)
Secondary focus of the training program is subject content	0.182 (0.156)
Primary focus of the training program is new technology	0.180 (0.206)
Primary focus of the training program is pedagogy	0.177 (0.201)

Do the effective programs look different from the ineffective programs? Delivery

Content variable	Program impact on student learning
Training takes place in university or training center	0.385** (0.142)
Follow-up visits to review material	0.256 (0.156)
Most common profile of the direct trainers is researchers	-0.196 (0.336)
Most common profile of the direct trainers is local government officials	-0.170 (0.257)
Proportion of training spent practicing with other teachers	0.169 (0.134)

What do trainers think is the most effective?

Mentoring follow-up visits

(4/13 interviewees)

Programs designed in response to local context - building on what teachers already do & linking to everyday experiences

(3/13 interviewees)

Engaging teachers - for their opinions and ideas either through discussion or text messages

(3/13 interviewees)

The end

Conclusions

- Weak reporting on interventions
- Some suggestions of what works
- An standard instrument can make a huge difference

Next steps

- We mapped programs that have been evaluated
- Those are a tiny proportion of total programs
- Next: Map out what teacher training programs look like
 - 5 key indicators for all programs in a country
 - Deep dive (all indicators) for 1-2