



The Measurement Crisis

Ezequiel Molina *Economist, Education GP*

Julia Ladics *Consultant, Brown University*



WORLD BANK GROUP
Education

RISE
RESEARCH ON IMPROVING
SYSTEMS OF EDUCATION

Teachers are the most important factor affecting learning in schools ...

In **Ecuador**, children scored **~0.11 standard deviations** higher on math and language exams with high-quality teacher

*Similar findings in the **USA, Uganda & Pakistan***



When students have a high quality teacher, they're more likely to **attend college, earn higher salaries, live in higher SES neighborhoods, and save more for retirement**

*An average teacher can increase students lifetime income by up to **250K***

...but what determines
a good teacher?



Observed
characteristics
give little
indication

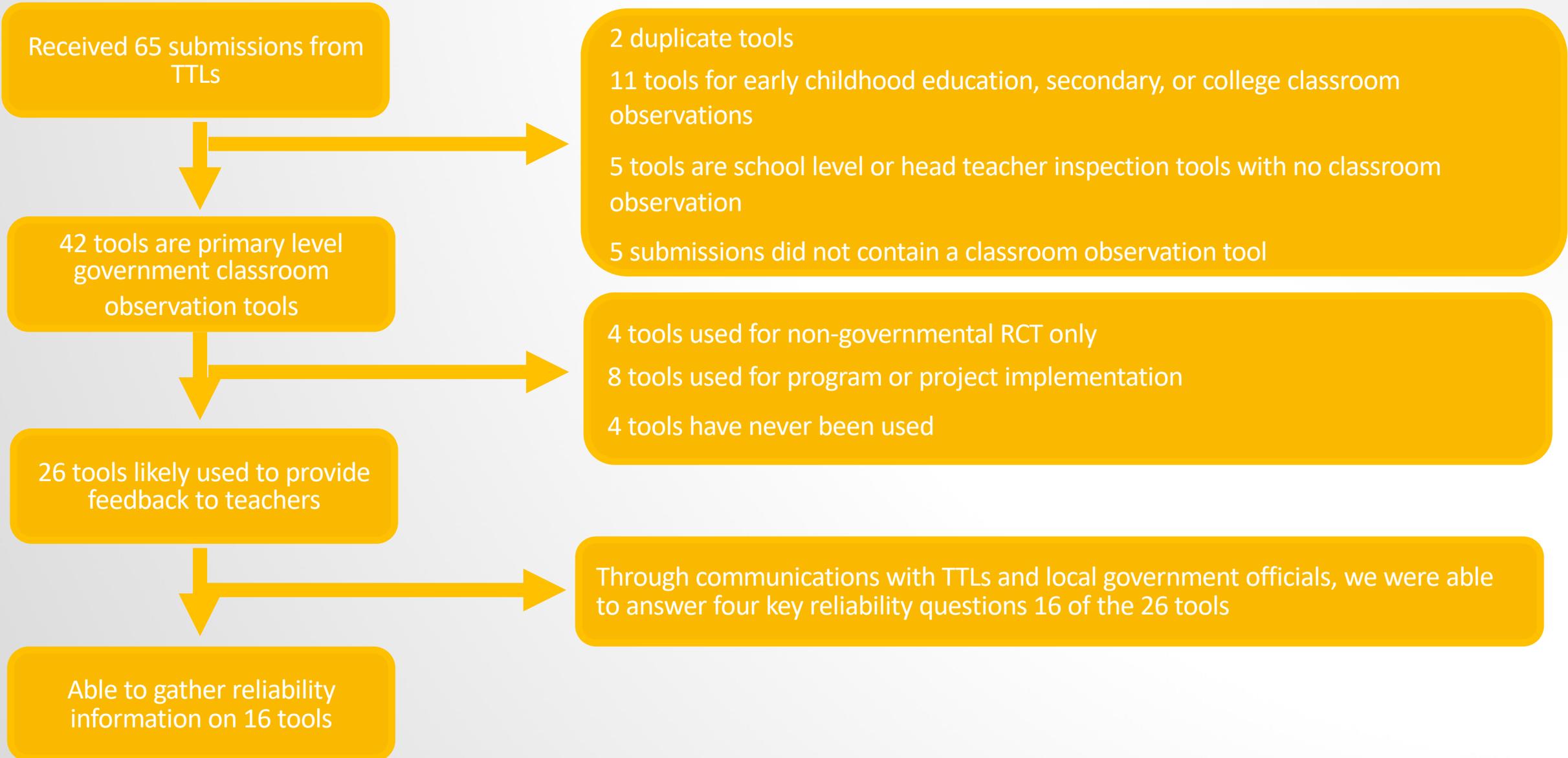
Good Teaching

To what extent the use of teacher practices scores are “valid” ?

The 5 C’s of Validation (Andrew Ho, 2018)

1. **Content** — Are these tools evidence based?
2. **Cognition** — How are these tools measuring these constructs? — aka RTFQ
3. **Coherence** — Are the scores derived from these tools reliable? 
4. **Correlation** — Are the scores predictive of other variables?
5. **Consequence** — Do the use of the scores achieved the intended outcome?

Methodology – The Sample



Methodology – The Framework

Classroom Culture

- Checks classroom environment
- Classroom management
- Positive social climate
- Equality and inclusiveness
- Family engagement
- Professionalism and respect

Instruction

- Feedback
- Checking for student understanding
- Content understanding
- Clear presentation and lesson structure
- Language development
- Lesson facilitation
- Critical thinking

Socioemotional Skills

- Student focus
- Motivating the classroom
- Discourse facilitation

43 Behaviors

15 Elements

3 Areas



1. Profile of the Average Tool

Profile of the **Average Tool**



Ratings based



Used by Inspectors
for 3 to 4 years



Measures 9
teaching practices

Rank	Element	Frequency	Percentage
1	Lesson facilitation and discourse	16	100%
2	Checking for Student understanding	14	88%
3	Classroom management	13	81%
3	Content Understanding	13	81%
5	Checks classroom environment	12	75%
6	Clear Presentation and Lesson Structure	11	69%
6	Student focus	11	69%
8	Equality and Inclusiveness	10	63%
9	Positive Social climate	9	56%
9	Language Development	9	56%



2. Extent to Which Tools are Evidence-Based

Are Tools Evidence Based?

They are, in two ways...



The **Elements**
they Measure



How they
Measure

Examples from Tools

Checking for Student Understanding

Teacher asked questions to promote students' critical thinking and check understanding

1.5 Assessment of learning
Scheme of work

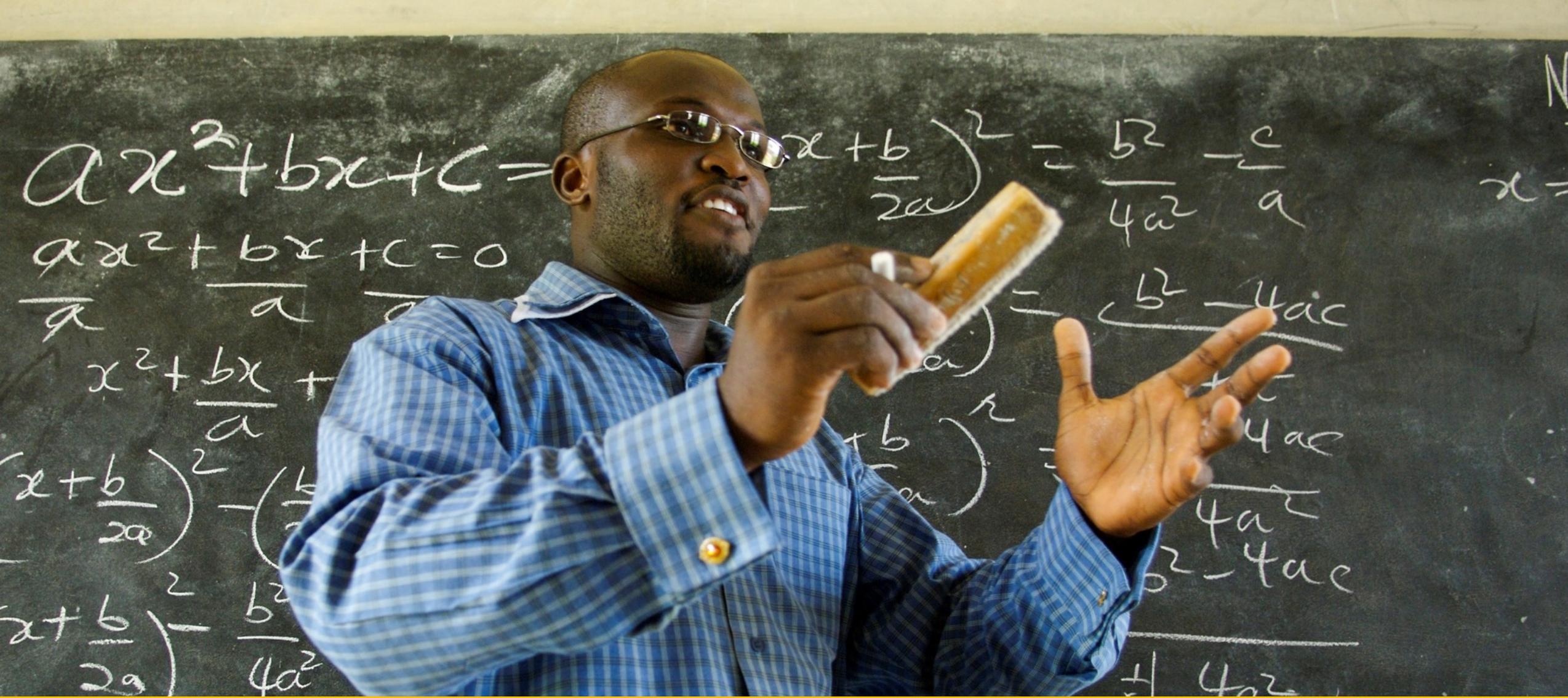
- Unsatisfactory
- Satisfactory
- Good
- Very good



Activity	Yes	No
5a. Students can follow simple instructions given by the teacher (e.g. to get their books out, form groups, put hands up)		
5b. Students give appropriate responses to teacher questions (e.g. to comprehension questions when reading a story)		

6e. Teacher asking comprehension questions when reading story/text		
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use questioning appropriately to check students' understanding;



3. Extent to Which Tools are Reliable

Quantifying Reliability

Reliability Protocol Types

Are Tools Reliable?

1. Training

2. Observer
Reliability

3. Evidence of
Observer
Reliability

4. Certification
Exam

Quantifying Reliability

Reliability Protocol Types

Are Tools Reliable?

1. Training

16

2. Observer
Reliability

5

3. Evidence of
Observer
Reliability

1

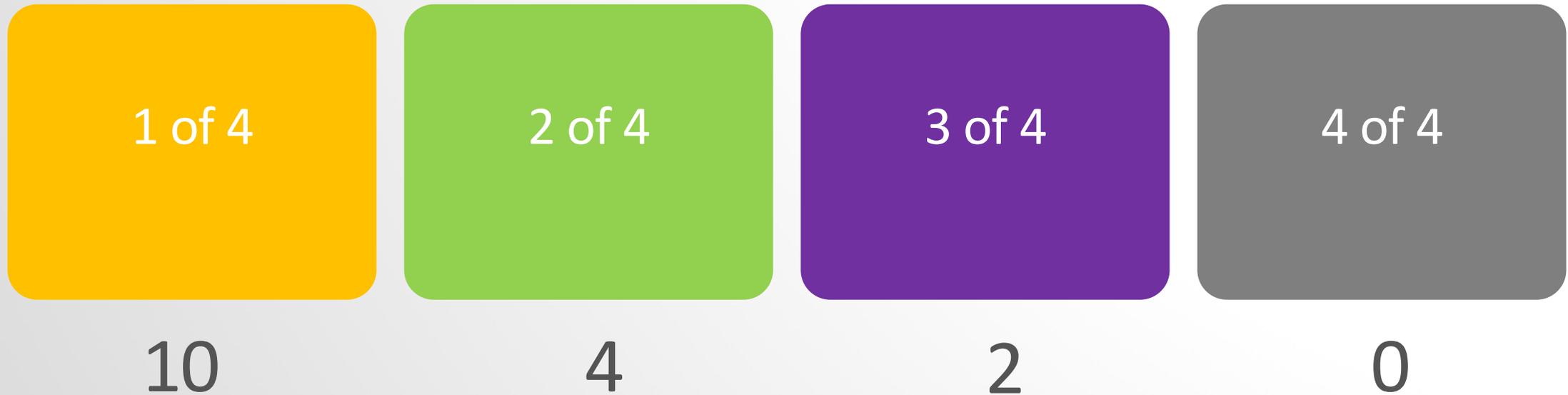
4. Certification
Exam

2

Quantifying Reliability

Reliability Protocol Types

Are Tools Reliable?



The Measurement Crisis

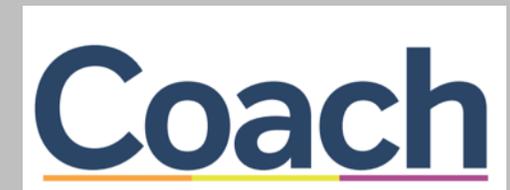


An Urgent Call to Action

More research on simpler tools attempting to capture quality of teacher practices (adding to the existing literature on time on task)

More effort on **establishing validity evidence** for the use of a score
(There is **NOT** such as thing as validity of the tool)

Translate **diagnostics** into implementable programs





Thank you!

Ezequiel Molina, Economist, Education GP

Julia Ladics, Consultant, Brown University

Tracy Wilichowski, Analyst, Education GP

Noah Yarrow, Senior Education Specialist, Education GP



Please send comments and suggestions to molina@worldbank.org