

IMPLEMENTATION BRIEF

# Teach



## What is Teach?

*Teach* is a free classroom observation tool that provides a window into one of the less explored and more important aspects of a student's education: *what goes on in the classroom*. The tool is intended to be used in primary classrooms (grades 1-6) and was designed to help low- and middle-income countries track and improve teaching quality.

## Why is it important to measure teaching practices?

The learning crisis is, at its core, a teaching crisis. A growing body of research indicates teaching is the most important school-based determinant of student learning. The difference between the impact of a weak and great teacher on student test scores is equivalent to one to two years of schooling. Moreover, evidence suggests several consecutive years of effective teaching can offset learning shortfalls and help students reach their full potential. Although better teaching practices are needed to tackle the learning crisis, most education systems in low- and middle-income countries do not regularly monitor them.

## How can Teach be used?

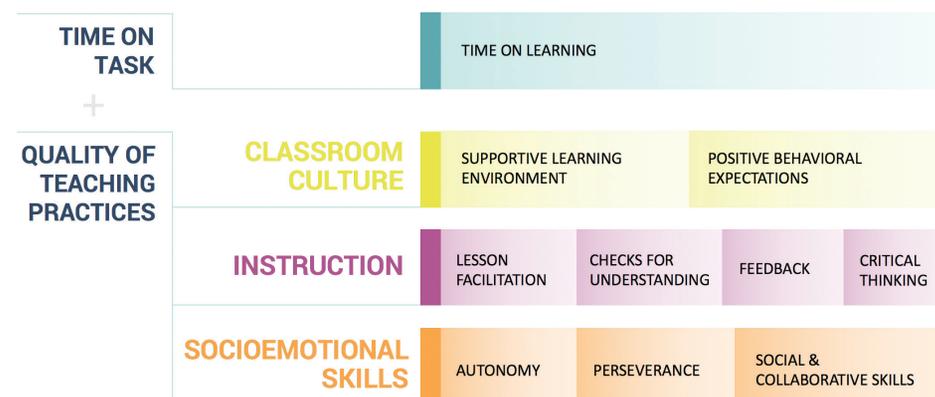
*Teach* can be used as a tool as a tool for system diagnostic and for professional development. As a system diagnostic, *Teach* allows governments to monitor the effectiveness of their policies to improve teacher practices. As a professional development tool, *Teach* is used to identify individual teachers' strengths and weaknesses. The World Bank is currently developing *Coach*, which will help principals and coaches use the information from *Teach* to provide targeted feedback on how teachers can improve their classroom practices.

## Teach's value proposition

*Teach* holistically measures what happens in the classroom. It does so by considering not just time spent on learning but, more importantly, the quality of teaching practices.

- *Teach* captures practices that nurture children's **cognitive** and **socioemotional skills**.
- *Teach* was developed with **low- and middle-income countries in mind** and can be contextualized for different settings. For instance, additional elements can be added at the request of the government and local video footage is used to train observers on the tool.
- *Teach* includes a **free complementary toolkit** that helps teams conduct the training with a detailed script and training guide, collect data using a data collection app available in several languages, and clean and analyze data with automatized programs — including assessing the validity of *Teach* scores. A template report to communicate the results is also available.
- *Teach* has been already applied in a dozen low- and middle-income countries and shown to be reliable. **Emerging evidence** indicates it is also a good predictor of student learning.

## Teach framework



## What does Teach measure?

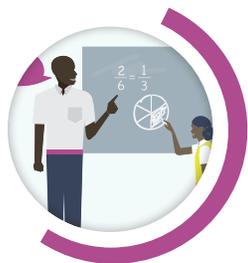
*Teach* differs from other classroom observation tools in that it captures (i) the time teachers spend on learning and the extent to which students are on task, and (ii) the quality of teaching practices that help develop students' socioemotional and cognitive skills.

As part of the Time on Task component, 3 *snapshots* of 1–10 seconds are used to record both the teacher's actions and the number of students who are on task throughout the observation. The Quality of Teaching Practices component, on the other hand, is organized into 3 primary areas as shown below: Classroom Culture, Instruction, and Socioemotional Skills. These areas have 9 corresponding elements that point to 28 behaviors. The behaviors are characterized as low, medium, or high, based on the evidence collected during the observation. These behavior scores are translated into a 5-point scale that quantifies teaching practices as captured in a series of two, 15-minute lesson observations.



### CLASSROOM CULTURE:

The teacher creates a culture that is conducive to learning. The focus here is not on the teacher correcting students' negative behaviors but rather the extent to which the teacher creates a **supportive learning environment** and sets **positive behavioral expectations**.



### INSTRUCTION:

The teacher instructs in a way that deepens student understanding and encourages critical thought and analysis. The focus here is not on content-specific methods of instruction, but rather, the extent to which the teacher **facilitates the lesson, checks for understanding**, provides **feedback**, and encourages students to **think critically**.



### SOCIOEMOTIONAL SKILLS:

The teacher fosters socioemotional skills that encourage students to succeed both inside and outside the classroom. To develop students' social and emotional skills, the teacher instills **autonomy**, promotes **perseverance**, and fosters **social and collaborative skills**.

## Development and validation

Before the launch of the tool, *Teach* underwent a rigorous development and validation process over a 2-year timeframe. A Technical Advisory Panel provided extensive feedback and inputs on the tool's design. *Teach* was also piloted in over 1,000 classrooms across Mozambique, Pakistan, the Philippines, and Uruguay, and tested with global video footage from 11 low- and middle-income countries. Analyses of the training data indicate that after only 4 days, almost 90% of participants passed the *Teach* Reliability Exam, which involves coding 3 videos reliably. Meaning, for each video, the participants scored within 1-point of the master codes, at least 80% of the time (**Table 1**). This feat was achieved by local observers who have a comparable level of education to the average citizen in their country and who had no previous experience conducting classroom observations.

**Table 1: Teach Reliability Exam pass rate**

COUNTRY	N OF OBSERVERS	PASS RATE
Mozambique	46	74%
Pakistan	53	96%
Philippines	25	96%
Uruguay	21	100%

Raters also have high levels of inter-rater reliability. Results from field trials from 845 schools in Pakistan show that paired raters have 97% agreement within 1 point and 87% agreement within a half-point (Molina et al., 2018). The Intraclass Correlation Coefficient (ICC) is .75 for the overall *Teach* score, indicating strong inter-rater reliability. Finally, teachers who display effective practices, as measured by *Teach*, are associated with students who achieve higher learning outcomes.

# Implementing Teach: From conception to completion

This implementation roadmap provides a detailed timeline, cost estimate, and list of complementary resources needed to apply *Teach* in a new setting. Though the timeline and cost may vary slightly based on the size of the survey and context-specific realities, the roadmap captures the implementation process from start to finish and outlines the recommended steps teams should follow to ensure to timely and accurate data collection.

## 0. Consultations on Teach

**EXPECTED TIME: VARIES**  
Before *Teach* becomes an active activity in any project, an in-depth consultation with government officials, development partners, or researchers is held to review the tool's structure and outline steps for implementation.

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## 1. Source local videos for training

**EXPECTED TIME: 3-5 DAYS**  
15 full-length lessons (60-minute) are recorded by government, country office, or local staff. When possible, these videos should reflect the larger sample. Of these, ten (15-minute) video segments are selected for the implementor and observer trainings, based on video quality and variation of practices observed.

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## 2. Teach trainer trains 5-8 local implementors on tool

**EXPECTED TIME: 5 DAYS**  
Using 3 of the 15 collected videos (2 for practice, 1 for the certification exam), the *Teach* trainer prepares local master codes for the implementor training. The remaining 7 videos needed for the training are sourced from the *Teach* international library. This training is designed to (i) ensure implementors can reliably code using *Teach* (3 days) and (ii) provide implementors with training strategies they can apply during the observers' training (2 days). Implementors will be given a host of complementary training materials, including a full-length training script, to assist them with the observer training. At the end of the implementor training, the *Teach* trainer will choose 1-2 implementors to conduct the observer training.

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## 3. Implementors use collected videos to create master codes

**EXPECTED TIME: 14-21 DAYS**  
In addition to the 3 videos prepared by the *Teach* trainer, all 5-8 implementors prepare master codes for 7 (15-minute) local videos (2 for practice, 5 for the certification exam) to be used during the observer training. These materials are prepared under the guidance and supervision of the *Teach* trainer.

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## 4. Implementors train observers

**EXPECTED TIME: 5 DAYS**  
The training is designed to i) ensure observers can reliably code using *Teach* (3 days), ii) conduct a practice observation at local schools (1 day), and iii) ensure observers can accurately and consistently code classroom observations in accordance with the *Teach* rubric as demonstrated by passing the reliability exam (1 day). For best results, we recommend 1 trainer for every 20 observers.

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## 6. Teach resources automate data cleaning, analysis, & validation

**EXPECTED TIME: 1 DAY**  
After the data have been cleaned, another do-file (Stata) automatically analyzes the data, which generate descriptive statistics and confirm the validity of the *Teach* scores (Excel/Stata graphs and tables). These outputs are then inputted into pre-formatted MS Word file or a tex file (LaTeX).

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## 5. Observers collect data

**EXPECTED TIME: 21-28 DAYS**  
After the observers are trained, they proceed to conduct classroom observations using *Teach*. Data collection is either done by the government or an external entity, depending on the context. In either scenario, observers collect data using PAPI or CAPI. The *Teach* team provides a do-file (Stata) that automatizes the data cleaning process and generates a report that highlights potential mistakes.

# Teach complementary toolkit

RESOURCE	DESCRIPTION
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## 0. Consultations on Teach

<b>Brief &amp; Slide Deck</b>	These documents can be used by World Bank staff to present <i>Teach</i> to different audiences, including, but not limited to: governments, donors, and partners. They provide a high-level overview of why teaching practices matter for student learning, current shortfalls in how many countries measure teaching practices, what <i>Teach</i> is, how it addresses these shortfalls, how it differs from other tools, and background on the development and validity of the tool.
<b>Teach Expert (TOR)</b>	This individual is an optional hire. S/he is hired to help draft an additional element at the request of the government. This consultant either drafts the element in full or advises government officials as they draft the element, depending on the government's needs and preferences.

## 1. Source local videos for training

<b>Guide for Selecting &amp; Recording Videos</b>	This document provides a step by step explanation on how to select and record classroom video footage for <i>Teach</i> .
<b>Recording Authorization Form</b>	The document is a legal form teachers must sign before their classroom is recorded. By signing the form, teachers not only consent to be recorded, but for their recordings to be used as part of the <i>Teach</i> training. It also provides the option of permitting their videos to be made publicly available online.
<b>Video Editor (TOR)</b>	This individual is an optional hire. S/he is responsible for editing the local classroom lesson videos into 15-minute segments and embedding subtitles into the training videos (where applicable).
<b>Translator (TOR)</b>	This individual is an optional hire. S/he is responsible for translating official <i>Teach</i> documents from English to the local language. The manual is available in Spanish, Portuguese, and French; if a project team is using a language other than these, it needs to be translated. All other documents in the complementary toolkit are currently only available in English.

## 2., 3., & 4. Teach trainer trains implementors; implementors create local master codes & train observers

<b>Guidelines for Writing Master Codes</b>	This document provides a step by step explanation on how to write master codes. A master code is a detailed justification for why a behavior or element, as observed in classroom footage, warrants a particular <i>Teach</i> score, which is established by a consensus of several master coders.
<b>Training Manual</b>	This document includes all resources necessary to conduct the 5-day reliability training. This includes a detailed script, 5-day agenda, example bank, in-class activities, common challenges by element, and overall tips for trainers to execute a successful training.
<b>Training PowerPoint</b>	This presentation is to be used during the 5-day reliability training. It is aligned to the training manual and includes video clips and detailed notes for participants to practice and identify the tool's various behaviors, elements, and areas.
<b>Project Management Plan</b>	This document provides information on the roles, responsibilities, and timeline needed to conduct the master coding process.
<b>Teach Reliability Exam</b>	This Excel file automatically calculates the participants' reliability score and whether they passed the <i>Teach</i> reliability exam.
<b>Teach Trainer (TOR)</b>	This individual is a necessary hire. S/he is likely a member of the <i>Teach</i> team, who is responsible developing master codes for the implementors' training and conducting the training. S/he then oversees the implementors as they develop the master codes for the observers' training. The <i>Teach</i> trainer will choose 1-2 implementors to lead the observers' training, based on performance.

<b>Implementor (TOR)</b>	This individual is a necessary hire. S/he is responsible for passing the <i>Teach</i> reliability exam and developing a set of master code justifications under the direction and oversight of the <i>Teach</i> trainer. 1-2 of the implementors will be chosen by the <i>Teach</i> trainer to facilitate the observers' training, based on performance.
<b>Quality Assurance Assistant (TOR)</b>	This individual is an optional hire and is particularly useful if the training is being conducted for a large number of observers or in a low-capacity setting. S/he is responsible for helping the <i>Teach</i> trainer prepare the materials for the training of implementors and helps manage and oversee the development of master coders for the observer training.

## 5. Observers collect data

<b>Guidelines for Using Electronic Application</b>	This document provides a step by step explanation on how to create a web and mobile version of the questionnaire to be collected on computer/tablets, how to use the web version and the app version, and how to export the data collected.
<b>SurveyCTO (CAPI)</b>	This is a computer-assisted personal interviewing style wherein observers input scores digitally using SurveyCTO. This form makes the survey available on phone/tablets/computer in English, French, Spanish, and Portuguese. The team will have to create a SurveyCTO server to collect data using this form. Data can be collected using a computer or the SurveyCTO app on tablets/phones. Once the data is collected, it can be exported from SurveyCTO as an Excel file. This file is perfectly aligned with the pre-created do-files that will automatically label, clean, and analyze the data.
<b>Data Entry (PAPI)</b>	This is a pen-and-paper interviewing style wherein observers input scores on the <i>Teach</i> observation form and manually transfer them to an Excel database. In the case where PAPI data collection is done, this Excel file is a template for data entry and is perfectly aligned with the pre-created do-files that will automatically label, clean, and analyze the data. If the team wishes to program the data entry to another software such as CSPro, a file is available that details the logic of the questionnaire.
<b>Program for labeling the data using Stata</b>	After data has been collected, either through CAPI or through PAPI, a pre-written do-file (Stata) automatically labels the data and saves it as a first Stata dataset.
<b>Survey Firm (TOR)</b>	This document provides the terms for a survey firm to oversee the collection of data and hiring of field supervisors and observers to implement <i>Teach</i> .

## 6. Teach resources automatize data cleaning, analysis, & validation

<b>Program for cleaning the data using Stata</b>	After data has been collected and labeled, a pre-written do-file (Stata) automatically checks for strange patterns in the data and exports the data to be checked in an Excel file. This Excel file can be shared with the team or firm responsible for data collection. In this do-file, corrections can also be applied, following the feedback from the data collection team. The do-file saves the cleaned data as a second Stata dataset.
<b>Program for Reliability using Stata</b>	After data has been cleaned, a pre-written do-file (Stata) automatically analyzes the data and confirms the validity of the <i>Teach</i> scores (Stata graphs and Excel tables).
<b>Program for Analysis using Stata</b>	After data has been cleaned, a pre-written do-file (Stata) automatically analyzes the data, which generates descriptive statistics in Excel and analytical graphs (both in Excel and Stata format).
<b>MS Word Template</b>	This document is a sample report. This template has automatically generated sections with areas (text and graphs) to be filled in with country-specific results. The graphs and tables produced by the do-file can be manually included in the report.
<b>Tex File (LaTeX)</b>	This document is a sample report. This template has automatically generated sections with texts to be filled in with country-specific results. The graphs and tables produced by the do-file are automatically integrated.
<b>Stata/Analysis (TOR)</b>	This individual is an optional hire and is particularly applicable if the project calls for a highly technical analysis of the <i>Teach</i> findings. S/he cleans the data and conducts an in-depth analysis for use in an extended report or presentation.

## How much does Teach cost?

The cost to implement *Teach* varies by context; however, the implementor training, training package, local master-coded videos used for the implementor training, support for observer training, software to collect data, automatized results, and travel costs are estimated at ≈\$8,000 USD. These costs may vary based on the consultancy rate of the *Teach* Trainer, which ranges from \$300–\$400 USD per day. This estimate does **not** include local implementors' time, facilities for the training, or data collection costs, which will vary depending on sample size and location. It also does **not** include additional translation costs.

The manual is currently available in Arabic, Bulgarian, English, French, Portuguese, Spanish, and Swahili, if teams need the manual translated to a language other than these it costs \$600–\$1,000 USD. Moreover, the master coded videos and descriptions for the *Teach* training are currently only available in English; additional translation and subtitling fees may apply for use in contexts where master coders do not understand English (≈\$2,500 USD). These translation costs may be partially subsidized by the *Teach* team, where applicable.

## What Task Team Leaders are saying about Teach

### Applicability in local context

"For our new project, we had to produce a baseline of teaching practices in a very tight timeframe — our counterparts put a large emphasis on both the quality of the instrument and its adaptation to the local context. *Teach* allowed us to meet both of these requirements and our deadline in a very cost-effective way."

**Francisco Haimovich Paz, Uruguay**

"At first, I was skeptical to use a high inference tool in Mozambique. However, the simplicity of *Teach* and the fact it uses local videos made it possible to implement with a high degree of reliability."

**Marina Bassi, Mozambique**

### Policy dialogue

"*Teach* provided the evidence needed to have a real conversation regarding the challenges teachers' face in classrooms. With this information we were able to engage the government on specific ways the Bank can support these teachers to strengthen their competencies and pedagogical skills."

**Franco Russo, Philippines**

"*Teach* gave us the chance to discuss several issues with the government, including the importance of observing teachers, which was relevant to introduce a culture of monitoring and feedback. It helped us to identify gaps in the teacher professional development component of our project and plan innovations for the future."

**Helena Rovner, Uruguay**

### Teach training

"Preparing for the *Teach* training involves collecting videos and creating master codes using the tool. The process of master coding local videos is a crucial step in the implementation of *Teach*. When implementing *Teach*, we had a lot of questions from our client on whether we know what the behaviors and elements mean, and whether our observers could understand them. After master coding the videos, we trained and certified observers, which took a few attempts to get right. Despite all this, we reached an extremely high reliability rate of 96%. In the field, the strong training really paid off, as we reached extremely high IRR. Through this process, we were much more knowledgeable of the tool and were able to convince our partners and observers that this was done in the right way."

**Koen Martijn Geven, Pakistan**

# What experts are saying about Teach

*“Teach is a magnificent example of research taken to the practical level with the possibility of providing enormous social value. This initiative turns research and evaluation into a clear improvement mechanism.”*

**Eric Hanushek**

*Paul and Jean Hanna Senior Fellow, Hoover Institution, Stanford University*

*“Before Teach, the lack of open source, flexible, easy-to-learn observational measures that can be used systematically in classrooms has stood as a major stumbling block in international efforts to improve education.”*

**Sara Rimm-Kaufman**

*Professor of Education, Center for Advanced Study of Teaching and Learning, Curry School of Education, University of Virginia*

*“Teach represents a major innovation in our efforts to improve education for all. It will be catalytic for enhancing learning all around the world.”*

**Oon-Seng Tan**

*Director, Centre for Research in Child Development, National Institute of Education, Singapore*

*“Teach is an essential resource for countries seeking to improve education results. It combines the best features of prior instruments into an all-in-one package.”*

**Barbara Bruns**

*Center for Global Development and Walsh School of Foreign Service, Georgetown University*

*“Teach provides excellent guidance for observing and rating global classroom instruction. It is impressive not only for its comprehensiveness, but also its specificity, naming key classroom practices, and describing concrete examples of how those practices occur at different levels of quality.”*

**Heather Hill**

*Jerome T. Murphy Professor in Education, Harvard Graduate School of Education; Creator of the Mathematical Quality of Instruction (MQI) instrument*

*“Teach provides a practical tool for educators around the world who are serious about improving the quality of classroom practice.”*

**Pam Grossman**

*Dean and George and Diane Weiss Professor, Graduate School of Education, University of Pennsylvania; Creator of the Protocol for English Language Arts Teaching Observation (PLATO) instrument*

*“Teach has clearly been designed with the realities of the Global South in mind. The clear explanations, well-crafted examples, and FAQs ease interpretation and ensure commonality of understanding between observers.”*

**Sara Ruto**

*Director, People's Action for Learning (PAL) Network*

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visit us at [www.worldbank.org/education/teach](http://www.worldbank.org/education/teach)

