Teach Secondary

*Our **vision** is to revolutionize how education systems track and improve secondary teaching quality*

WORLD BANK GROUP
Education

What is Teach Secondary?

Teach is an open access classroom observation tool that provides a window into one of the less explored and most important aspects of student learning: *what goes on in the classroom.* The tool has been designed to help countries track and improve teaching quality. For more information, please see this short video on *Teach*, which is also available in Arabic, French, and Spanish.

This brief focuses on *Teach Secondary* (which is intended to be used in secondary classrooms). The tool was designed to help countries, in particular low- and middle-income countries (LMICs), monitor and improve teaching quality at the secondary level following the *Teach* framework. *Teach* is also available for the early childhood education context through *Teach ECE* and for the primary level through *Teach Primary.*

Why Is It Important to Measure Teaching Practices?

Quality teaching is central to student success in secondary school. Quality teaching not only requires having a sufficient number of teachers, but that these teachers are equipped with the skills to instruct and support learners in increasingly diverse classrooms. Research, including some carried out in secondary education contexts in the Global South, has shown that 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 that several consecutive years of effective teaching can offset the learning shortfalls of marginalized students and significantly improve long-term outcomes (Bau and Das 2017; Buhl-Wiggers et al. 2017; Hanushek and Rivkin 2010; Nye, Konstantopoulos, and Hedges 2004; Snilstveit et al. 2016).

In response to the growing need to improve the quality of secondary schooling in LMICs, *Teach Secondary* has been developed to measure secondary teachers' practices in the classroom and shed greater light on their professional development needs. It is hoped that the provision of a common framework for understanding quality secondary teaching will contribute to improved training and support for secondary teachers as well as the professionalization of secondary teaching worldwide.

Teach Secondary's Value Proposition

- *Teach Secondary* **holistically measures what happens in the classroom.** It does so by considering time spent on learning and the quality of teaching practices.

- *Teach Secondary* **captures secondary education teaching practices that contribute to students' cognitive skills and socioemotional skills.** The tool provides developmentally appropriate descriptions and examples from a range of subject areas. It captures quality across a range of educational settings, including teacher-directed, student-centered, and peer learning activities.

- *Teach Secondary* **was developed with LMICs in mind and can be contextualized for different settings.**[1] The tool includes a checklist that captures aspects of structural quality, which can also contribute to improved process quality of teaching practices. Local video footage is used to train observers on the tool and additional elements can be added to further contextualize the tool at the government's request.[2]

- *Teach Secondary* **is designed to align with** *Teach Primary* **for ease of implementation and to facilitate continuity of measurement in countries.** *Teach Secondary* maintains the four Areas from *Teach Primary* but expands upon Time on Learning and Instruction to better capture the greater cognitive demand of secondary school and the increased independence of adolescents. It also extends behavior and critical thinking task examples beyond mathematics and language arts, to capture learning that occurs within science subjects including physics, chemistry, and biology.

- *Teach Secondary* **has a cross-cutting focus on inclusion.** As with *Teach Primary*, the tool provides a common language to encourage teaching that is inclusive and that facilitates whole-child development.

- *Teach Secondary* **uses evidence-based teaching practices from numerous countries and has been tested in diverse contexts.** *Teach Secondary* underwent a rigorous process of development which has involved researching, revising, and piloting the tool over a 2-year timeframe. As of mid-2023, the tool has been tested using video footage from classrooms in 7 LMICs, and has been applied within the Pacific Islands and at scale in Andhra Pradesh, India. The team is currently carrying out a validation study on the tool to explore how better teaching practices as captured through *Teach Secondary* are linked to student outcomes.

How Can Teach Secondary Be Used?

Teach Secondary can be used for different purposes depending on the country context and project goals.

Teach Secondary can been used as a **system diagnostic**, allowing governments to get a clear snapshot of the current state of teaching practices and teaching quality in classrooms. In this capacity, *Teach Secondary* can be leveraged as a **monitoring and evaluation (M&E) tool** to assess the results of a specific education policy or program that targets teacher practices, such as the deployment of a new curriculum or a new instructional model.

Teach Secondary can also be used as part of a teacher professional development system to identify individual teachers' strengths and weaknesses and **to provide targeted support to teachers**, when coupled with resources such as those from *Coach*, the World Bank's initiative to improve in-service teacher professional development. *Coach* helps school leaders and instructional coaches use the information from *Teach* classroom observations to provide targeted feedback on how teachers can strengthen their classroom practice.

What Does Teach Secondary Capture?

1 The time teachers spend on learning and the extent to which students are on task and actively participating;

2 The quality of teaching practices that help develop students' socioemotional *and* cognitive skills; and

3 Other aspects of the learning environment such as the accessibility of the physical environment, including the classroom set-up and materials available.

As part of the **Time on Task component**, three *snapshots* of 1–10 seconds are used to record the teacher's actions, the number of students who are on task throughout the observation, and whether students are actively participating in learning.

The **Quality of Teaching Practices component** is organized into three primary areas: Classroom Culture, Instruction, and Socioemotional Skills. These areas have nine corresponding elements that point to twenty-nine 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's correction of students' negative behaviors but rather the extent to which the teacher creates a **supportive learning environment** and sets **positive behavioral expectations.**
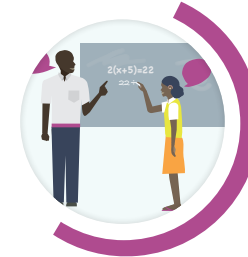
INSTRUCTION:

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.**
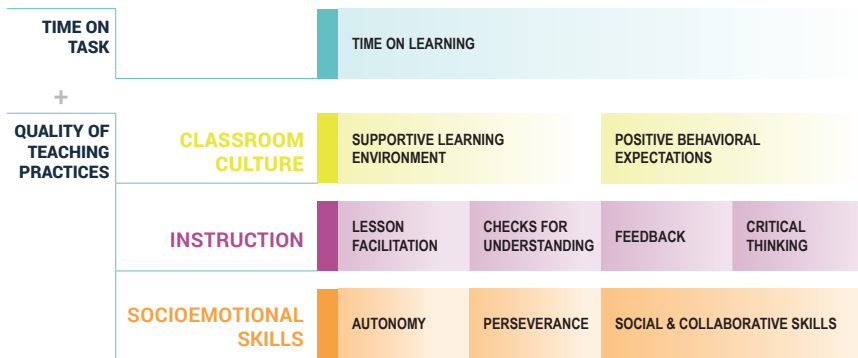
SOCIOEMOTIONAL SKILLS:

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.**

Finally, *Teach Secondary* is accompanied by a **checklist** to assess other aspects of the learning environment, including the accessibility of the physical environment and some aspects of the classroom set-up and materials available, which can be analyzed together with the lesson observation component.

Teach Secondary Framework

TIME ON TASK		TIME ON LEARNING			
+					
QUALITY OF TEACHING PRACTICES	**CLASSROOM CULTURE**	SUPPORTIVE LEARNING ENVIRONMENT		POSITIVE BEHAVIORAL EXPECTATIONS	
	INSTRUCTION	LESSON FACILITATION	CHECKS FOR UNDERSTANDING	FEEDBACK	CRITICAL THINKING
	SOCIOEMOTIONAL SKILLS	AUTONOMY	PERSEVERANCE	SOCIAL & COLLABORATIVE SKILLS	

Teach Secondary's Focus on Inclusion

Inclusive teaching practices are defined as those that create increased opportunities **for all students to access learning.**

The vision for inclusion in *Teach Secondary* is grounded in the Universal Design for Learning (UDL) framework and considers additional dimensions of inclusion including the physical environment.[3] *Teach Secondary* incorporates a number of evidence-based practices which help to foster inclusivity within the classroom. These include:

1 A focus on the inclusion of students with disabilities through the measurement of teachers not exhibiting bias and challenging stereotypes within the classroom;

2 A focus on measuring teachers' use of multiple forms of representation to explain content within the classroom; and

3 A focus on capturing preplanned and spontaneous adjustments to teaching which accommodate students' different needs and learning levels.

Development and Validation

Teach Primary underwent a rigorous development and validation process over a two-year timeframe to ensure that the tool captures teaching practices associated with student learning, and that it met the appropriate psychometric criteria of reliability and validity.

Since its launch in 2019, more than 500 enumerators have been trained on the tool and **more than 92 percent of all enumerators trained have passed the certification exam**, which involves coding three videos accurately (for each video, successful participants score within one point of the expert-developed codes at least 80 percent of the time). Further analyses have shown than **less than 6.2 percent of the variation in *Teach Primary* scores is due to enumerator effects.** The tool's high reliability can be credited to the structured training material, intense and practical training, and use of local videos to train local observers. For more information on the theoretical and empirical foundations for the tool's content, please see "Evidence-Based Teaching" (Molina et al. 2018).

Teach Secondary is currently in the final stages of development and validation. As of mid-2023, the tool has been applied in the Pacific Islands and Andhra Pradesh, India. These applications, along with feedback from the *Teach Secondary* Expert Panel Review, will help inform of any needed revisions to the instrument and ultimately provide an opportunity to ensure the tool's sustainability for LMICs. Additionally, the team is carrying out a validation study, exploring how better scores on *Teach Secondary* relate to student learning outcomes. A final version of the tool will be published incorporating any revisions from these applications and studies.

>92%
of enumerators trained passed certification

<6.2%
of variation is due to enumerator effects

# How does Teach Secondary differ from Teach Primary?

Differences between the two tools relate primarily to the different age ranges and curricula content being observed. The main changes in *Teach Secondary* in relation to the *Teach Primary* tool are:

1) Developmental level

Teach Secondary includes modified descriptions and examples to be more relevant and developmentally appropriate for secondary students and to reflect quality across a range of cultural contexts and different secondary teaching practices including teacher-centered, student-centered, and peer learning activities.

2) Greater emphasis on critical thinking
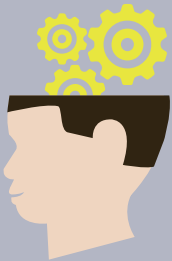
The critical thinking element has been expanded to capture the greater cognitive demand of secondary classrooms and the importance of students being provided with opportunities to explain their thinking during lessons.

3) Enhanced subject representation

The tool includes an extension of the thinking tasks table and behavior examples to facilitate understanding of how the tool can be applied in different secondary school contexts. This includes examples beyond mathematics and language arts to capture learning that occurs within science subjects including physics, chemistry, and biology.

4) Increased student agency

The tool includes an expanded Time on Learning area to capture the extent to which students are actively participating in learning tasks. Several behaviors within the tool are also modified to capture students' increased agency in the classroom. Finally, the tool incorporates changes throughout in response to students' growing autonomy and responsibility at the secondary level.

Implementing Teach Secondary: From Conception to Completion

This roadmap provides a detailed timeline, cost estimate, and list of complementary resources needed to apply *Teach Secondary* in a new setting. The roadmap captures the implementation process from start to finish and outlines the recommended steps teams should follow to ensure timely and accurate data collection. The overall process takes a minimum of three months. For more detail, see the *Teach Secondary* Implementation Guide.

1. Consult with stakeholders

EXPECTED TIME: 2 WEEKS
Consult with stakeholders on what *Teach Secondary* measures and discuss its applicability in the local setting.

2. Collect video footage

EXPECTED TIME: 2 WEEKS
Collect video footage from the country where *Teach Secondary* will be applied. These videos need to reflect the diversity of the target sample, as they will be used in the training to prepare observers to apply the tool within a given context.

3. Option 1: Implementor Training[4]

STEP A) CREATE MASTER CODES / **EXPECTED TIME: 7 DAYS**
The *Teach Secondary* trainer (with optional help from a master coder or coders) prepares local master codes for the implementor training.

STEP B) TRAIN IMPLEMENTORS / **EXPECTED TIME: 5 DAYS**
The *Teach Secondary* trainer trains 5–8 local implementors on the tool. At the end of the implementor training, the *Teach Secondary* trainer will choose 1–2 implementors to conduct the observer training.

STEP C) CREATE MASTER CODE JUSTIFICATIONS / **EXPECTED TIME: 7–14 DAYS**
Implementors who successfully passed the *Teach Secondary* training will create master code justifications for the 6 practice videos, and master codes for the 6 exam videos.

STEP D) CONDUCT OBSERVER TRAINING / **EXPECTED TIME: 5 DAYS**
The implementor(s) conducts the observer training. The training lasts 5 days (a four-day training with 1 day for the reliability testing).

3. Option 2: Direct Observer Training[5]

STEP A) CREATE MASTER CODES AND PREPARE TRAINING / **EXPECTED TIME: 7 DAYS**
The *Teach Secondary* trainer and the master coder(s) certified on *Teach Secondary* develop the training materials.

STEP B) CONDUCT OBSERVER TRAINING / **EXPECTED TIME: 5 DAYS**
The *Teach Secondary* trainer conducts the observer training. The training lasts 5 days (a four-day training with 1 day for reliability testing).

4. Observers collect data

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

5. Clean, analyze, validate, and present results

EXPECTED TIME: 10 DAYS
After the data have been cleaned, another do-file (Stata) automatically analyzes the data, which generates descriptive statistics and confirms the validity of the *Teach Secondary* scores, producing Excel/Stata graphs and tables. These outputs are then input into a preformatted Microsoft Word file or a text file (LaTeX).

Minimum time needed for execution, from conception to completion: 3 months

Implementing Teach Secondary: Cost

The cost to implement *Teach Secondary* varies significantly by context.[6]

The cost of *Teach Secondary* training, including costs for video editing, adapting the training material to use local videos of classroom teaching, and trainer travel and accommodation, are estimated at approximately US$8,000. These costs may vary based on the consultancy rate of the *Teach Secondary* trainer, which ranges from US$300–US$400 per day. This estimate does not include facilities for the training nor data collection costs, which will vary depending on the sample size and location. It also does not include additional translation costs.

Translating the manual and training materials to another language costs US$800–US$1,500.

For more guidance on translating the manual, please consult the Complementary Resources page on the *Teach Secondary* website.

Table 1: Teach Secondary cost options

	IN-PERSON TRAINING		VIRTUAL TRAINING	
	No translation	*Translation*	*No translation*	*Translation*
Staff time (video editor, coder, and trainer) 1 video editor's time x 1 day	✓	✓	✓	✓
1 roundtrip airline ticket	✓	✓		
1 accommodation x 7 days	✓	✓		
1 per diem x 7 days	✓	✓		
1 translator's time x (10 days translating manual + 8 days transcribing video footage + 7 days translating master codes)		✓		✓
1 designer's time x 2 days designing manual		✓		✓
	$8,000–9,000*	$14,000–16,000*	$6,000–7,000*	$12,000–13,000*

*Approximate costs provided in US$.

For more information on costs and timeline for implementing *Teach Secondary*, please consult the Implementation Guide.

What World Bank Users are Saying about Teach

Ease and relevance of implementation process

"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 implement with a high degree of reliability."

Marina Bassi, Mozambique

"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*… 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

"*Teach* is the tool that can improve teaching practices in every country when adapted and widely used."

Alina Sava, Romania

Impact on 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

"The value-add [of *Teach*] is that it provides a framework for us to interact with governments on these projects that go all the way from the science of learning and reaches down into the classrooms, and that is really powerful. We don't have many tools in our toolkit that do that."

Shawn Powers, Guyana

Endnotes

1 This ensures that the Elements and behaviors described in the manual are contexualized and anchored in the local setting. For example, while Teach Secondary states that the teacher should treat all students respectfully, evidence on what is respectful may vary depending on the country and can be adapted.

2 The tool is designed to be modular, which allows users to create additional elements that are relevant for the local curriculum and standards of effective secondary teaching practices. For example, an additional feature was piloted in primary in Uruguay, where the local assessment agency developed 2 new elements for the tool in reading and writing.

3 CAST is an organization that has led the development of UDL. Its website is rich with resources that make it feasible for teachers to incorporate UDL for students with or without disabilities. For more information, please visit https://www.cast.org/impact/universal-design-for-learning-udl.

4 There are two approaches to preparing Teach Secondary coders: implementor training or direct observer training. Implementor training, which is preferred, involves hiring a member of the core Teach Secondary team, who will train an implementor, who will then train observers, in a cascade model.

5 In direct observer trainings a member of the core Teach Secondary team directly trains observers, working with least one certified master coder on master codes for local videos prior to the local Teach Secondary trainings for observers.

6 The timeline and cost may vary slightly based on the sample size, survey, and/or context-specific realities.

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What Experts Are Saying About Teach

"[*Teach*] is the single most important thing the World Bank has done in the last 30 years."

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

"The revision of *Teach Primary* is hugely welcomed as an essential tool that brings new knowledge on how to measure inclusive teaching practices that will be important for observing learners with disabilities in the classroom and making *Teach* truly a valuable tool for all learners."

Charlotte Vuyiswa McClain-Nhlapo
Lead Social Development Specialist, World Bank

"*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

Contact us at **teach@worldbank.org** and visit us at
**www.worldbank.org/en/topic/education/brief/teach-secondary-
helping-countries-track-and-improve-teaching-quality**