

# The PLATO Protocol for Classroom Observations

## Overview of Classroom Observation Protocols

A teacher's classroom instructional practice is perhaps one of the most important<sup>1</sup> yet least understood factors contributing to teacher effectiveness. The method of video capture and review designed for the Measures of Effective Teaching (MET) project seeks to demystify effective teaching practices in the classroom and, in turn, provide insights into teacher evaluation and professional development.

The video footage recorded during the MET project is watched and coded by highly trained, independent raters. Many of the raters are current or former teachers, some with National Board Certification in subjects they are assigned to watch. These raters are managed and trained by the Educational Testing Service (ETS) to observe the videos and rate the teaching practice on a series of indicators ranging from the teacher's ability to establish a positive learning climate and manage the classroom to his or her ability to explain concepts and provide useful feedback to students. ETS is training approximately 500 experts to rate more than 23,000 hours of videotaped lessons using one or more of the following observation protocols:

1. The Classroom Assessment Scoring System (CLASS) measure developed at the University of Virginia
2. The Framework for Teaching (FFT) developed by Charlotte Danielson
3. The Mathematical Quality of Instruction (MQI) developed at the University of Michigan and Harvard University
4. The Protocol for Language Arts Teaching Observation (PLATO) developed at Stanford University
5. The Quality Science Teaching (QST) developed at Stanford University

A subset of the videos are also rated using an observational protocol developed by the National Board of Professional Teaching Standards (NBPTS) and the National Math and Science Initiative (NMSI).

The scores on the observational protocols will be compared against value-added measures for both the statewide standardized assessment and on supplemental assessments. These analyses will establish how closely the observation scores (both overall and domain-level) correlate with improvements in student achievement. (See [www.METproject.org](http://www.METproject.org) for more information about this process.)

<sup>1</sup> Steven G. Rivkin, Eric A. Hanushek, and John F. Kain, "Teachers, Schools, and Academic Achievement," *Econometrica*, Vol. 73, No. 2 (March 2005), pages 417–458.  
<http://edpro.stanford.edu/Hanushek/admin/pages/files/uploads/teachers.econometrica.pdf>

### About the PLATO Method for Evaluating Classroom Observation

The Protocol for Language Arts Teaching Observation (PLATO) is a classroom observation tool that focuses on fourth- through ninth-grade English/Language Arts (ELA) instruction. It was developed as part of a research study on classroom practices that differentiate more and less effective teachers, as measured by their impact on student achievement. PLATO is based on existing literature on effective instruction in secondary ELA and in adolescent literacy (e.g., Beck & McKeown, 2002; Freedman & Sperling, 2001; Greenleaf, Schoepenhauer, Cziko, & Mueller, 2001; Hillocks, 1995; Langer & Applebee, 1986; Nystrand & Gamoran, 1996; Snow & Biancarosa, 2003). The Langer & Applebee (1986) research informed the development of PLATO's instructional scaffolding focus, which inspired parts of the Intellectual Challenge, Guided Practice, Strategy Instruction, and Modeling elements. Research done by Greenleaf, et. al. (2001) helped inspire the Modeling and the Strategy Use and Instruction elements. Finally, the Classroom Discourse element was developed based on the work of Nystrand & Gamoran (1996).

The PLATO protocol is designed to capture vital elements of ELA classroom instruction by focusing on four underlying factors:

- Disciplinary demand of classroom activity and discourse;
- Instructional scaffolding of ELA content;
- Representations and use of content; and
- Classroom environment.

The protocol used with the PLATO method scores 13 elements of ELA instruction on a scale from one to four. Eight of the elements ("Plato Prime") are being used in the MET project. Each element was designed to be independent from the other elements and to capture different aspects of classroom instruction.

### PLATO Elements

The 13 PLATO Elements include:

- Purpose
- **Intellectual Challenge**
- Representation of Content
- Connections to Prior Knowledge
- Connections to Personal and Cultural Experience
- **Modeling**
- **Strategy Use and Instruction**
- **Guided Practice**
- **Classroom Discourse**
- **Text-Based Instruction**
- Accommodations for Language Learning
- **Behavior Management**
- **Time Management**

The eight "Plato Prime" elements being used in the MET project are listed in bold above and are described below:

The element of **Intellectual Challenge** focuses on the intellectual rigor of the activities and assignments in which students engage. Activities and assignments with high intellectual challenge ask students to engage in analytic or inferential thinking. Activities and content with low challenge, in contrast, require students to engage in recall or rote thinking. Intellectual challenge also depends on the level of analytical or inferential thinking demanded in the questions asked by the teacher within discussion or in-class activities.

The element of **Modeling** focuses on the degree to which a teacher visibly enacts strategies, skills, and processes targeted in the lesson to guide students' work before or while they complete the task and the extent to which these strategies, skills, and processes are analyzed. The teacher might model metacognitive or discussion strategies, lead a think-aloud on how to identify theme, demonstrate how to support a statement with textual evidence, and so on. Modeling focuses on supporting the students' completion of the task at hand rather than of hypothetical or longer-term tasks.

The element of **Strategy Use and Instruction** focuses on the teacher's ability to teach strategies and skills that are connected to learning to read, write, speak, listen, and engage with literature. ELA strategies include, for example, how to read for meaning, how to generate ideas for writing, and how to figure out the meaning of unfamiliar words. Strategy instruction does not include the teaching of rules (e.g. grammar/spelling rules, definitions of parts of a story). The teacher can use a variety of methods for teaching explicit strategies, including modeling strategies, providing opportunities for guided practice, etc. At the high end, students have the opportunity to develop a repertoire of strategies and skills that they can use flexibly and independently, depending on their purpose. At the low end, where strategy instruction is minimal or insufficient, students often appear stuck. PLATO uses evidence of students' use of strategies and/or a teacher's prompting of strategy use as evidence of prior strategy instruction that is being reinforced.

The element of **Guided Practice** focuses on the opportunities provided for students to practice ELA skills, concepts, or strategies in a structured and scaffolded way that helps move them towards completing the lesson's tasks independently. The activity must be related to the purpose of the lesson and tied to instruction to constitute a practice opportunity. This could include opportunities to practice elements of reading and writing, either individually, in small groups, or as a whole class. Students might practice asking questions about a text, writing an introduction or conclusion, combining sentences, or tracing characterization. For a practice opportunity to be guided, there should be supports in place to help students move towards success. At the high level, the teacher offers sufficient support during guided practice to allow students to complete the task successfully. At the low levels, there are either no opportunities for guided practice, or if there are opportunities, there is very little guidance from the teacher either directly, through interaction with students, or indirectly, through materials that support students in the task. This element also relates to the specificity and timeliness of the feedback provided to improve students' work on this task and other ELA lessons.

**Classroom Discourse** focuses on the opportunities students have for conversations with the teacher and among peers. It focuses on the classroom talk itself, and whether it is perfunctory and minimal at the low end, or elaborated, on

task, and purposeful at the high end. In addition, this element looks at uptake of student ideas, or the extent to which a teacher accepts minimal or unclear responses at the low end, and his or her ability to engage students' ideas and prompt them to clarify and specify their understandings at the high end.

The element of **Text-Based Instruction** focuses on the presence and use of texts in the classroom. Texts can include published material, student-generated work, pieces of music or art, or film/video. This element assesses how regularly and effectively a teacher and students reference texts and use those textual references to meet the goals of ELA instruction. This element can apply to instruction across domains of ELA; for example, in grammar instruction, the element would distinguish among teachers who teach grammar rules out of the context of a text and those who tie grammar instruction to either student-generated or published texts.

The element of **Behavior Management** focuses on the degree to which behavior management facilitates academic work. This element does not presume that an ideal classroom is a quiet and controlled one. The key question is whether student behavior is appropriate for the task at hand, and an "orderly" classroom will look different during a lecture than it would during small group work.

The element of **Time Management** focuses on how well paced and efficient tasks and transitions are in the classroom. It looks at the teacher's efficient organization of classroom routines and materials to ensure that little class time is lost and that instructional time is maximized.

For the MET project, the elements of Representations of Content and Accommodations for Language Learning will be recorded with a series of checklists that keep track of the clarity of teachers' explanations and the teacher's use of various strategies that support language learners.

## Observation Process

PLATO is designed to be used over multiple brief intervals in each class. Each observation cycle is independent and captures 15 minutes of instruction. Because the elements are designed to capture a wide range of ELA content, it would be extremely rare for a teacher to achieve a high score in every element within a 15-minute observation cycle.

An analysis of a pilot study found that scoring multiple lessons over multiple days was necessary in order to get a stable score on all elements. For the highest level of reliability, it is important that the multiple days of observation are not consecutive. This allows for a more complete picture of the kinds of instruction and content covered in class. As part of the MET project, four video captures per participating teacher will be rated on the eight PLATO elements detailed above; according to previous studies using PLATO, these multiple ratings per teacher should yield a reliable score.

### PLATO Development and Results

PLATO was originally used in a small study of teachers in a large urban district in 2008. The study found that the high value-added teachers (top quartile) scored higher on average than the low value-added teachers (second quartile) across all PLATO elements, indicating that the elements measured by PLATO are observable elements of effective teaching. Observers were unaware of the value-added quartile of the teachers when rating instructional practice. A follow-up study included over 177 teachers and was designed to yield results about the reliability of the instrument as well as about relationships to student achievement gains.

### For More Information

Information about PLATO can be found at <http://cset.stanford.edu/tools/plato>. To request training on the PLATO tool, please contact Pam Grossman at [pamg@stanford.edu](mailto:pamg@stanford.edu).

### About the MET Project

A teacher has more impact on student learning than any other factor controlled by school systems, including class size, school size and the quality of after-school programs—or even which school a student is attending<sup>2</sup>—but currently, there is no agreement among education stakeholders about how to identify and measure effective teaching. In an effort to improve the quality of information about teaching

---

<sup>2</sup> Steven G. Rivkin, Eric A. Hanushek, and John F. Kain, “Teachers, Schools, and Academic Achievement,” *Econometrica*, Vol. 73, No. 2 (March 2005), pages 417–458.  
<http://edpro.stanford.edu/Hanushek/admin/pages/files/uploads/teachers.econometrica.pdf>

effectiveness, in the fall of 2009, the Bill & Melinda Gates Foundation launched the two-year MET project to rigorously develop and test multiple measures of teacher effectiveness.

As part of the project, partners from more than a dozen reputable academic, non-profit and for-profit organizations are collecting and analyzing data collected during the 2009-10 and 2010-11 school years from over 3,000 teacher volunteers and their classrooms across Charlotte-Mecklenburg Schools, Dallas Independent School District, Denver Public Schools, Hillsborough County Public Schools, Memphis City Schools and the New York City Department of Education. Teachers and classrooms in Pittsburgh Public Schools are also participating in the project by helping researchers with early-stage development and testing of the effectiveness measures before they are tested in the other MET project districts.

The project’s data is collected across five critical research areas:

1. Student achievement gains on state standardized assessments and supplemental assessments designed to measure higher-order conceptual thinking
2. Classroom observations and teacher reflections
3. Teachers’ pedagogical content knowledge
4. Student perceptions of the classroom instructional environment
5. Teachers’ perceptions of working conditions and instructional support at their schools

A close analysis of each of these will help establish which teaching practices, skills and knowledge positively impact student learning and represents a real opportunity for teachers to inform the national discussion on education reform.

The MET project seeks to develop an array of measures that will be viewed by teachers, unions, administrators and policymakers as reliable and credible indicators of effective teaching. By determining exactly what measures predict the biggest student achievement gains, the MET project will give teachers the feedback (including exemplary practices) they need to improve. In addition, a greater understanding about which teaching practices, skills and knowledge positively impact student learning will allow states and districts to develop teacher evaluation systems that will help strengthen

## Measures of Effective Teaching (MET) Project

all aspects of teaching—from recruitment through retention.

The MET project's final findings will be shared broadly at the project's conclusion in winter 2011-2012.

For more information about the MET project, please visit [www.METproject.org](http://www.METproject.org) or send an email to [info@METproject.org](mailto:info@METproject.org).

**Note:** The inclusion of a given research protocol or tool in the MET project is not an endorsement by either the MET project or its partners of that protocol or tool. In many cases, the research instruments included in the MET project are still being tested and do not yet have verified results associated with them. Other protocols and tools similar or equivalent to those used in the MET project may exist.