

ICPSR 34309

**Measures of Effective Teaching: 3a  
- Base Data: Section-Level  
Analytical Files, 2009-2011**

Description

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## **Bibliographic Description**

ICPSR Study No.: 34309

Title: Measures of Effective Teaching: 3a - Base Data: Section-Level Analytical Files, 2009-2011

Alternate Title: MET 3a - Section-Level Analytical Files, 2009-2011

Principal Investigator(s): Bill and Melinda Gates Foundation

Series: Measures of Effective Teaching (MET) Project Series

Funding Agency: Bill and Melinda Gates Foundation

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## **Scope of Study**

**Summary:** The MET project is based on two premises: First, a teacher's evaluation should depend to a significant extent on his/her students' achievement gains; second, any additional components of the evaluation (e.g., classroom observations) should be valid predictors of student achievement gain.

Student achievement was measured in two ways--through existing state assessments, designed to assess student progress on the state curriculum for accountability purposes, and supplemental assessments, designed to assess higher-order conceptual understanding. The supplemental assessments used were Stanford 9 Open-Ended Reading Assessment in grades 4 through 8, Balanced Assessment in Mathematics (BAM) in grades 4 through 8, and the ACT QualityCore series for Algebra I, English 9, and Biology.

Panoramic digital video of classroom sessions were taken of participating teachers and students, teachers submitted commentary on their lessons (e.g., specifying the learning objective) and then trained raters scored the lesson based on classroom observation protocols using the following five observation protocols:

- Classroom Assessment Scoring System (CLASS), developed by Robert Pianta, University of Virginia

- Framework for Teaching, developed by Charlotte Danielson
- Mathematical Quality of Instruction (MQI), developed by Heather Hill, Harvard University, and Deborah Loewenberg Ball, University of Michigan
- Protocol for Language Arts Teaching Observations (PLATO), developed by Pam Grossman, Stanford University
- Quality Science Teaching (QST) Instrument, developed by Raymond Pecheone, Stanford University

A subset of the videos also are being scored using an observational protocol developed by the National Board for Professional Teaching Standards (NBPTS)

Close to 3,000 teacher volunteers from across the following six, predominantly urban, school districts participated in the MET project: 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. Participants teach math and English language arts (ELA) in grades 4-8, Algebra I, grade 9 English, and high school biology.

Subject Term(s): curriculum, education, educational testing, student attitudes, student behavior, students, teacher attitudes, teacher education, teacher evaluation, teacher student relationship, teachers, teaching conditions, teaching methods

Smallest Geographic Unit: School District

Geographic Coverage: Charlotte, Colorado, Dallas, Denver, Florida, Memphis, New York, New York City, North Carolina, Pennsylvania, Pittsburgh, Tampa, Tennessee, Texas, United States

Time Period: • 2009 - 2011

Date(s) of Collection: • January 2010 - June 2011

Unit of Observation: Teachers, Students

Universe: Teachers and students within the six participating school districts.

Data Type: administrative records data

observational data

survey data

Data Collection Notes: Participating academic institutions include Dartmouth College, Harvard University, Stanford University, University of Chicago, University of Michigan, University of Virginia, and University of Washington. Participating non-profit organizations include Educational Testing Service, RAND Corporation, and the New Teacher Center. Participating education consultants include Cambridge Education, Teachscape, and Westat. The National Board for Professional Teaching Standards and Teach For America supported the project and have encouraged their members to participate. The American Federation of Teachers and the National Education Association were involved in discussions about the MET project and supported the research.

Teachscape conducted the classroom video recordings, Educational Testing Service (ETS) managed the lesson-scoring process.

## Methodology

Purpose of the Study: The MET Study addressed several related research questions: How reliable and valid are the specific measures of teaching effectiveness under study? Do the various measures identify distinctive dimensions of teaching effectiveness, and if so, what dimensions are identified? What measures of effective teaching are empirically related to student learning gains? What does effective teaching look like, and how does it compare to less effective teaching? For example, what is the distribution of teacher scores on measures of effective teaching, and how much difference is there in teacher knowledge scores, teaching practice scores, and student outcome scores among teachers at different points in the distribution of measures of effective teaching? Can multiple sources of data on teachers and their teaching be combined to develop a set of fair, valid, and reliable indicators of teaching quality for use in teacher evaluation systems intended to rank teachers for personnel decision making and to promote teachers' professional learning and development?

Study Design: Teachers at targeted grade levels (4th-9th grade) and in targeted subject areas (English Language Arts and Math with some Biology) were recruited from schools in six school districts. Video was captured of these teachers' classroom sessions and that video was scored using multiple measure to rate teaching method and classroom environment. Multiple assessment instruments and standardized test scores were used to gather student achievement data. Multiple surveys were administered to gather student, teacher and principal opinion on topics such as classroom instruction as well as classroom, school and working environment. Year two of the study included a teacher randomization.

**Sample:** The MET Study began with a process of "opportunity" sampling that took place over the period July - November 2009 and that resulted in six, large school districts volunteering to participate in the study. The process of opportunistic sampling then continued as elementary, middle, and high schools within each district were recruited into the study. Once schools were recruited, opportunity sampling continued as teachers (at targeted grade levels and subject areas) within these schools volunteered for the study. The sampling process resulted in 2,741 teachers from 317 schools in six large school districts being recruited into the first year of the study. Attrition in the teacher sample in year two of the study resulted from schools that dropped out of the study (11 schools; 60 teachers). Additionally, individual teachers dropped out when they left their school or district, began teaching a different subject or grade, lost interest in the study, or became ill. Overall, the year two sample of teachers included 2086 teachers in 310 schools. Of the 582 4th and 5th grade teachers in year two, the majority continued to be subject-matter generalists who taught English Language Arts (ELA) and Mathematics to a single class of students, although the sample also included a small number of subject matter specialists (who taught ELA or Mathematics to more than one class section of students) and teachers who volunteered only to have their teaching of a single subject be studied. Of the 841 middle grades teachers in year two, about half continued to be teachers of ELA in grades 6-8, and the other half teachers of Mathematics at these grades. Of the 479 9th grade teachers in year two, about a third were teachers of 9th grade English, another third were teachers of 9th grade Algebra I, and another third were teachers of 9th grade Biology.

**Data Source:** Administrative data were gathered from each of the six participating school districts.

**Mode of Data Collection:** coded video observation  
cognitive assessment test  
mail questionnaire  
self-enumerated questionnaire

**Response Rates:** 2746 teachers began the year 1 of the MET project, 1868 completed year 2 of the MET project.

**Presence of Common Scales:** Classroom observational measures include: The Framework for Teaching (FFT), developed by Charlotte Danielson; Classroom Assessment Scoring System (CLASS), developed at the University of Virginia; Mathematical Quality of Instruction (MQI), developed at the University of Michigan; Protocol for Language Arts Teaching Observation (PLATO), developed at Stanford University; Quality of Science Teaching (QST), developed

at Stanford University; UTEACH Observation Protocol (UTOP), developed at the University of Texas-Austin for assessing math and science instruction. Supplemental student assessments include: Stanford 9 Open-Ended Reading Assessment in grades 4 through 8, Balanced Assessment in Mathematics (BAM) in grades 4 through 8, ACT QualityCore series for Algebra I, English 9, and Biology.

Extent of Processing: Performed consistency checks.  
Created variable labels and/or value labels.  
Checked for undocumented or out-of-range codes.

## Access and Availability

Note: A list of the data formats available for this study can be found in the [summary of holdings](#). Detailed file-level information (such as record length, case count, and variable count) is listed in the [file manifest](#).

Restrictions: The Measures of Effective Teaching Longitudinal Database (MET LDB) is restricted from general dissemination; a Confidential Data Use Agreement must be established prior to access. Researchers interested in gaining access to the data can submit their applications via ICPSR's online Restricted Contracting System, linked above.

Applicants will be required to:

- Submit IRB approval/exemption documentation;
- Scan and email the completed Confidential Data Use Agreement, signed by the Primary Investigator and an Institutional Representative ([Link](#));
- Pay the access fee (\$500 for up to five users, and \$250 for each additional user beyond five)

Please visit the MET LDB ([Link](#)) Web site for more information.

Original ICPSR Release: 2012-08-15

Version History: The last update of this study occurred on 2014-12-16.

2014-12-16 - A versioning system was installed in the file names.

2014-07-28 - A series wide update to assure that files distributed through internal systems are current with those turned over.

2013-09-24 - 2013-09-23 Changed study title and updated documents.

2013-08-16 - Updated all R statistical package data files.

2013-08-01 - Updated variable labels and added value labels for all files.

- Dataset(s):
- DS1: Year 1 Section-Level Analytical File 4th-8th Grade
  - DS2: Year 1 Section-Level Analytical File 9th Grade
  - DS3: Year 2 Section-Level Analytical File 4th-8th Grade
  - DS4: Year 2 Section-Level Analytical File 9th Grade