

## **Research Summary: Evaluation of the Quality Teaching for English Learners Program**

### **Regional need and study purpose**

The linguistic landscape of classrooms in the United States has changed considerably in recent decades, with approximately 3.8 million English language learner students now enrolled (Snyder and Hoffman 2002). While all areas of the country have experienced some growth, the West Region leads the country, with 57 percent of all English language learner students enrolled in its elementary and secondary schools (Meyer, Madden, and McGrath, 2004). Of the four West Region states, Nevada experienced the largest increase, at 278 percent in the decade leading up to 2002. Utah was next, at 83 percent, followed by Arizona at 78 percent and California at 40 percent (Office of English Language Acquisition 2002).

Policymakers, superintendents, principals, and teachers consistently report concerns about the difficulty of providing effective instruction to this growing population of English language learner students and an interest in implementing strategies to increase their English proficiency. Subject-area teachers report feeling overwhelmed and unable to teach students who are years behind native English speakers in reading and writing (Ruiz-de-Velasco and Fix 2000; Fix and Zimmerman 1993). Lack of access to high quality teaching in middle school is especially debilitating, with research showing that students' ability to complete courses in grade 9 correlates strongly with high school completion rates (Neild, Stoner-Elby, and Furstenberg 2001). Without adequate preparation in middle school, English language learner students have grade-retention and dropout rates in high school that are nearly four times higher than those of students who are fluent in English (U.S. Government Accountability Office 2001).

In response to regional need, this study evaluates a program aimed at improving the quality of instruction for English language learner students in secondary schools. The Quality Teaching for English Learners (QTEL) program, a professional development model for secondary teachers whose classes include English language learner students, provides intensive summer professional development and sustained support during the academic year and promotes greater collaboration among teachers. The program, implemented in several large school districts across the United States (including New York City, San Jose, and Austin), has shown promise in nonexperimental studies.

The main purpose of the study is to evaluate the impacts of QTEL on teacher knowledge and attitudes, teacher practices, and students' English reading and writing skills, using an experimental design. The relatively long implementation period makes the study unusual; the research literature on professional development for teachers has not typically reported on intensive interventions that have followed students and their teachers for several years.

Most schools in the study are located in one large urban school district in Southern California, where district staff have allowed for the sustained focus on this single model of professional development for the duration of the study. Teacher and student mobility in schools can challenge the assertion that sustained interventions can be feasibly implemented. For this reason, the question of whether the sustained support to teachers translates into learning gains for English language learner students will be of interest across the practitioner and research communities.

### **Intervention description**

Designed over the past 10 years by Dr. Aida Walqui and her colleagues at WestEd, the QTEL program focuses on helping teachers acquire the expertise to support adolescent students as they develop their ability to read, write, and discuss academic texts in English in rigorous academic courses.

The QTEL professional development model draws from three theoretical traditions to present an integrated program characterized by intellectual push and deliberate support to challenge students to mature their potential:

- *Sociocultural theory*. Underlying efforts to provide carefully constructed support for students' interactions and enable them to develop "higher mental functions" (Vygotsky, 1974), appropriate them, and eventually become autonomous is the belief that human beings learn by engaging in supported activity that moves them beyond their current level of development.
- *Functional/systemic linguistics*. In this perspective, language is mainly a semiotic social system that gives primacy to the purposes and practices of interlocutors. Interactions are understood as efforts at "meaning making," in which ideas, connections, and voice (fluency and complexity) are initially more important than accuracy (grammatical correctness), although accuracy also becomes important.
- *Cognitive learning*. Metacognitive skills that foster students' abilities to support their own learning over time are a crucial part of human learning.

The QTEL professional development model being evaluated consists of three components, implemented in three consecutive years with different subsamples of teachers. To maximize the potential impact on a single cohort of students progressing through middle school, the primary group of teachers targeted by the intervention consists of grade 6 teachers in 2007/08, grade 7 teachers in 2008/09, and grade 8 teachers in 2009/10. However, to benefit more teachers and accelerate school-level buy-in of the intervention by extending professional development to as many teachers as possible in the first two years, some professional development activities were open to other teachers in the same school.

The first component is a seven-day summer professional development program, usually implemented as a three-day session at the beginning of the summer and a four-day session at the end. These sessions were offered to grade 6 and 7 teachers in 2007/08 and grade 7 and 8 teachers in 2008/09 and will be offered to grade 8 teachers in 2009/10. The intervention is limited to teachers of English language arts and English language development.

The second component is an intensive coaching program that gives all English language arts and English language development teachers in a given grade and a given school year access to 4–6 expert coaching cycles. The coaches are trained QTEL staff members. Each coaching cycle consists of a one-on-one lesson planning meeting, observation of the lesson's implementation, and a debriefing. Coaching focuses on helping teachers implement what they learn in summer professional development. Coaching was available to grade 6 teachers in 2007/08 and grade 7 teachers in 2008/09 and will be available to grade 8 teachers in 2009/10.<sup>1</sup>

The third component is facilitated collaborative lesson planning meetings, open to all teachers and administrators in the intervention schools. Teachers participating in summer professional development and coaching cycles are especially encouraged to participate and share their experiences at these meetings, which take place 4-6 times a year.

In all three professional development components, QTEL team members create opportunities for teachers to deepen their understanding of their discipline and effective classroom practices by inviting them to learn from past situations, plan how to address specific situations, and think and react quickly and strategically in the classroom. Rather than instructing teachers in specific practices, QTEL professional development is an apprenticeship model in which teachers learn to critically evaluate their own and their colleagues' experiences and to recognize and adopt effective teaching strategies. QTEL team members use videos, vignettes, and case studies to illustrate accomplished teaching, controversial moments in teaching, moments of sudden understanding, and situations that create roadblocks to teacher or student understanding. The instructors link these practical manifestations of the QTEL model to the underlying theoretical framework that guides instructional practice, second language acquisition, and classroom dynamics.

A set of structured tasks presented during professional development invite participants to explore the professional literature and to draw conclusions for their own practice, solve problems, develop new materials, and propose specific learning and teaching alternatives. Teachers who internalize these tools and processes learn to set high expectations for academic performance by English language learner students and reinforce instruction that supports discipline-specific content learning.

Although QTEL focuses on improving teachers' effectiveness in instructing English language learner students, the developers expect the program to benefit other students as well. The techniques are designed to enable teachers to challenge and support all students in their classrooms, regardless of reading proficiency. Also, as English language learner students participate more fully in classroom instruction, greater learning opportunities may be created for all students.

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<sup>1</sup> One exception to this is Sweetwater Union High School District, a grade 7–12 district. In this district, QTEL offered summer institutes and coaching to grade 7 teachers in years 1 and 2.

## Study design

The QTEL evaluation is an experimental trial. San Diego County, California, was selected for the study because it is among the regions with the highest and fastest growing proportion of English language learner students in middle schools. Between November 2006 and March 2007, QTEL team members and study researchers contacted 14 of San Diego County's 20 school districts that serve middle school grades (6 were too small or too remote). Of the 14, 11 consented to a visit. Seven of those eleven districts agreed to participate in the study. However one of the seven districts dropped out shortly after random assignment. The loss of that district and an increase in the estimated number of schools needed for the study led to renewed recruitment efforts in two school districts in nearby San Bernardino and Riverside Counties, both of which agreed to participate. The teams also visited two charter schools in San Diego, one of which agreed to participate in the study. This resulted in a final sample of 52 schools in eight districts.

District personnel were asked to work with middle school principals to identify appropriate schools for implementing QTEL. To qualify, schools had to have at least 10 percent of students identified as English language learners. In many districts, a majority of middle schools qualified and agreed to participate (table 1). After internal review board approval, the study team contacted principals to set up baseline classroom observations to provide an aggregate baseline measure of teacher practice in intervention and control schools.

**Table 1. Number of middle schools in Quality Teaching for English Learners study districts and study sample**

District	Number in district <sup>a</sup>	Number in study
Cajon Valley	6	4
Lakeside	2	2
Oceanside	4	4
Palm Springs	4	3
Rialto	5	5
San Diego	26	19
Sweetwater	11	11
Vista	5	4
Total	63	52

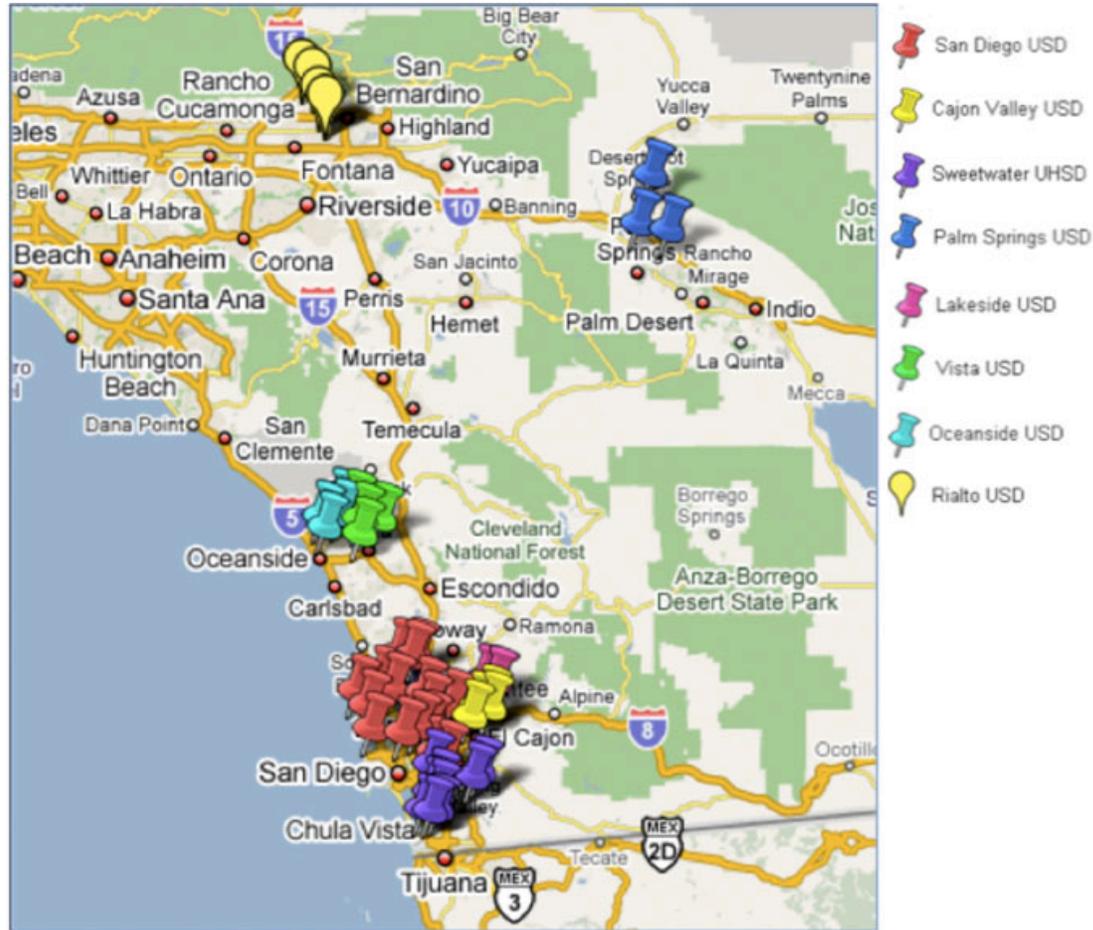
<sup>a</sup> Includes schools that did not qualify because of having fewer than 10 percent English language learner students

*Source:* Author's analysis using data from school district websites.

Schools were stratified by district in order to produce a balanced sample of schools by district in each experimental condition (intervention and control). In April and June 2007, the study team conducted two rounds of random assignment. The first round included 48 schools in San Diego County, and the second round included 8 schools in San Bernardino and Riverside County. Four schools dropped out after randomization but before the first

year of the study, including the entire district of Carlsbad and two schools in San Diego that received a grant that committed them to a different evaluation study. The final research sample includes 52 schools, distributed as shown in figure 1.

**Figure 1. Distribution of study schools across school districts**



*Source:* Study team.

QTEL was offered to teachers in 26 middle schools, randomly selected from the study sample of 52 middle schools. Following random assignment in early 2007, English language arts and English language development teachers in the 26 intervention schools were invited to participate in three years of QTEL professional development beginning in the summer of 2007. English language arts and English language development teachers in the other 26 schools constitute the control group. The study will measure QTEL's impacts on teacher knowledge and attitudes, classroom practices, and student achievement over a three-year period (2007/08–2009/10) by comparing outcomes for teachers and students in intervention schools with those for teachers and students in control schools.

The study will conclude in spring 2010. Approximately 700 teachers will participate in the trial, by being offered access to QTEL, being surveyed, or having their classroom observed. Data will be collected from all teachers and students in the appropriate grades

in participating schools, unless they refuse to provide data (for example by not responding to follow-up surveys or not allowing researchers to observe their classrooms).

The study design seeks to maximize the exposure of a single cohort of students to teachers who have access to QTEL. A student who entered grade 6 in 2007 and remains in the same middle school until graduation will have had English language arts or English language development teachers with access to QTEL professional development and coaching throughout their middle school years.

The primary research questions ask: What is the impact of Quality Teaching for English Learners on the following:

- The quality of classroom instruction?
- English language arts standardized test scores among grade 8 students who were taught in a QTEL intervention school each year they attended middle school?
- English language arts standardized test scores among grade 8 English language learner students who were exposed to QTEL each year they attended middle school?
- English language proficiency standardized test scores among grade 8 English language learner students who were exposed to QTEL each year they attended middle school?

Although the primary research questions focus on the cumulative effect of QTEL on grade 8 students who were continuously in a QTEL intervention middle school from grade 6, exploratory analyses will consider:

- How program effects vary by grade.
- How program effects hold up in the year after teachers receive coaching.
- How QTEL affects teacher content knowledge and teacher attitudes about English language learner students.

For more details on the planned impact analyses, see Bos et al. (2009).

### **Key outcomes and measures**

The study will assess three outcome domains: teacher pedagogical knowledge and attitudes, classroom practices, and student achievement. Teachers' pedagogical content knowledge associated with the key delivery components of the QTEL model will be assessed using surveys. Teachers' attitudes toward, and satisfaction with, the QTEL model will also be measured through surveys. The quality of classroom instruction experienced by English language learner students will be assessed through classroom observation using the Sheltered Instruction Observation Protocol (SIOP) and the Program Aligned Classroom Observation (PACO), an instrument designed to capture specific constructs included in the QTEL professional development.<sup>2</sup> The student achievement outcome will be assessed using scores on the California Standard Test in English

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<sup>2</sup> The SIOP includes 30 items scored using a five-point Likert scale ranging from 0 to 4. The PACO consists of 23 items that assess four working constructs (lesson content, activity structure, interaction patterns, and scaffolding) scored using a five-point Likert scale.

language arts for all students in all participating schools and scores on the California English Language Development Test for all English language learner students who take that test.

### **Data collection approach**

Baseline data were collected for students, schools, and teachers. At the student level, the baseline data include the student's English learner status,<sup>3</sup> eligibility for free or reduced-price lunch, gender, and race/ethnicity. At the school level, the baseline data include the baseline classroom observations conducted in 2006/07 and student achievement data on prior cohorts of students in grades 6, 7, and 8 (collected in 2004/05, 2005/06, and 2006/07).

Implementation data (attendance records capturing teacher participation in professional development activities) are being collected in 2007/08, 2008/09, and 2009/10. Teacher/classroom outcome data (capturing pedagogical content knowledge, attitudes, and classroom practices) and student achievement data (English language arts and English language proficiency test scores) are being collected in 2006/07, 2007/08, 2008/09, and 2009/10. This means that baseline data (from 2006/07) are available for teacher/classrooms and student achievement outcomes.

Throughout the three-year study period, primary data collection focuses on a cohort of students who enrolled in grade 6 in 2007 and are expected to graduate from grade 8 in 2010. Teacher/classroom data collection will therefore take place in grade 6 classrooms in 2007/08, grade 7 classrooms in 2008/09, and grade 8 classrooms in 2009/10. Because of budget constraints, pedagogical content knowledge and attitudes among grade 8 teachers in 2009/10 will not be measured, although classroom observations will take place.

For the classroom observations (using SIOP and PACO), researchers make scheduled visits to schools and observe as many teachers in the appropriate grade as feasible. To avoid bias due to teacher attrition, teachers in each school are randomly selected for observation; there is no favoring of teachers who are participating in QTEL activities. An average of three teachers in the appropriate grades have been observed so far, representing 50–80 percent of potentially available teachers in the schools.

Data collection for student outcome consists of gathering California Standard Test English language arts scores for all students in every school in the study and California English Language Development Test scores for all English language learner students who take that test, to capture their English language proficiency.

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<sup>3</sup> English learner status classifies students into four groups: English learners, initially fluent English proficient students, reclassified fluent English proficient students, and English only students. The second and third groups include students who speak languages other than English at home but whose English is proficient enough that they are not (or are no longer) classified as English learners.

## Analysis plan

The study will evaluate QTEL's impacts relative to business as usual, which may include other types of professional development offered by school districts or other providers. The impact analyses will examine the effects of QTEL on teacher knowledge and attitudes, classroom practices, and student achievement outcomes using hierarchical linear regression models to account for the effect of clustering of the data by school and classroom. The teacher-level impact analyses will include school-level covariates. The student-level impact analyses will include school- and student-level covariates collected before random assignment to improve the estimates' statistical precision and reduce the likelihood that random sampling variation will affect the impact estimates.

With 52 schools and a minimum of 400 students and 100 English language learner students per grade, the projected sample size is sufficient to detect effect sizes of 0.22 standard deviation units on test scores for all students and 0.23 for English language learner students. An effect size of this magnitude is equivalent to about one year of growth on norm-referenced standardized tests in reading (Hill et al. 2008). The estimated minimum detectable effect size for teacher and classroom outcomes is 0.40 standard deviation units on teacher knowledge assessments and SIOP/PACO classroom observations.

*Analytic samples.* The study focuses primarily on the outcomes for a single cohort of students who were in grade 6 in 2007/08 and will be in grade 8 in 2009/10. To avoid multiple comparison problems (discussed below), the confirmatory analysis is limited to the outcomes for these students when they reach grade 8. However, the outcomes of students in other grades in other years are examined as part of the exploratory secondary analyses.<sup>4</sup> Teacher/classroom measures will be analyzed using the same timing strategy (grade 6 for year 1, grade 7 for year 2, and grade 8 for year 3).

Throughout the study period, outcomes are analyzed for teachers and students in the school at the time of data collection, not just for teachers and students who were present at the time of random assignment. As a result, not all teachers and students will have experienced the full treatment contrast. Among evaluation researchers, this approach is known as an "intent to treat" analysis, taking into account the researchers' lack of complete control over who is subject to the intervention and who is not. This approach closely mirrors the real-life circumstances facing interventions such as QTEL.

*Multiple comparison procedures.* The procedures described by Schochet (2008) will be used to account for multiple hypothesis tests involving the numerous outcome variables assessed in the study—teacher pedagogical knowledge and attitudes, classroom practices, and student achievement outcomes, with primary and secondary outcomes within each of

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<sup>4</sup> As discussed, grade 7 teachers were included in the year 1 professional development and grade 8 teachers in the year 2 professional development even though outcomes for grade 7 and 8 students are not part of the primary outcome analyses. This was done to extend summer professional development to as many teachers as possible in the first two years. Student outcomes for grade 7 students in 2007/08 and grade 8 students in 2008/09 will be analyzed as secondary/exploratory outcomes.

these domains. Multiple comparison procedures within proximal and distal outcome domains will be used to reduce the probability of finding statistically significant program impacts due to chance factors alone.

In addition to the impact analyses, a detailed process study is under way to document the intervention's implementation and describe the study's treatment contrast. The process study documents quantitative indicators of teacher participation in QTEL and teacher retention, as well as qualitative indicators of teacher engagement, attitudinal change, satisfaction, and buy-in for the program. These data will facilitate the interpretation of impact study findings.

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This summary is also available at:

[http://ies.ed.gov/ncee/edlabs/projects/rct\\_88.asp?section=ALL](http://ies.ed.gov/ncee/edlabs/projects/rct_88.asp?section=ALL)

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