

# California Comprehensive Center (CA CC): Successful Schools Methodology

Prepared by CA CC partner, the American Institutes for Research  
September 2008

## Overview

The American Institutes for Research (AIR), as a partner in the California Comprehensive Center (CA CC), has developed a rigorous selection process to identify California schools that are demonstrating substantially higher academic outcomes than expected given the demographic composition of their students. This selection process, known as a "beating-the-odds" (BTO) analysis, utilizes extant statewide data to identify schools where students overall, as well as subgroup populations, are substantially outperforming similar schools over time. First, we used publicly-available data to select BTO schools that 1) were producing higher than expected levels of performance consistently over time as calculated through regression analyses; and 2) met additional performance criteria (such as passing state and federal accountability measures). Then, based on information obtained through additional sources such as website searches, we attempted to eliminate schools with any form of selective admissions. We then conducted interviews with principals of selected schools meeting the criteria above to gather information on some of their successful strategies for improving student achievement. Because we were initially most interested in "beating-the-odds" schools serving relatively high-poverty student populations, we limited our calls to these schools. The interview protocol was organized around a typology of elements from the effective schools literature to guide the discussion. However, discussion was not limited to these elements; respondents were asked to describe the predominant factors and strategies that they believed had led to enhanced student achievement at their school. School profiles were created consolidating the most salient information. The following sections provide greater detail about the process described above.

## Data Sources

AIR created a database of public elementary, middle, and high schools using publicly-accessible data sources from the California Department of Education (<http://www.cde.ca.gov/ds/>). We compiled available student demographic and academic performance data from 2002-03 through 2006-07 for the identification of consistently high performing schools. Demographic data included the percentage of students eligible for free-or-reduced price lunch, percentages of different ethnicities/minorities, percentage of English learners (ELs), and the percentage of students with disabilities. Academic performance measures included achievement data extracted from the Academic Performance Index (API), Adequate Yearly Progress (AYP), California High School Exit Examination (CAHSEE), and the Standardized Testing and Reporting (STAR) databases. We used mean scale scores from the California Standards Tests (CST) in English/Language Arts (ELA) and mathematics and CAHSEE in ELA and mathematics as the primary academic performance measures for identifying high performance for the school overall, as well as for relevant student subgroups.

## Identification of BTO Schools

**Elementary Schools:** We ran regressions on the standardized CST ELA and mathematics mean scale scores for all students and specific subgroup populations (African Americans, Hispanics, ELs, and students eligible for free-or-reduced price lunch), controlling for the following variables:

- percentage of African American students
- percentage of ELs
- percentage of Hispanic students
- percentage of students eligible for free-or-reduced price lunch
- percentage of students with parents who have a degree higher than a high school diploma
- percentage of students with disabilities

The difference between the actual and expected standardized CST mean scale scores for each of these student populations, as estimated by the regressions, was used to identify whether all

students on average and their subgroup populations were “beating-the-odds” in each year from 2002-03 through 2005-06. “Beating-the-odds” performance for elementary schools was defined as the standardized CST mean scale scores being at least 0.75 standard deviations above expected performance.

**Middle Schools:** We used the same regression model as for elementary schools. However, the criterion for being selected as a “beating-the-odds” middle school was defined simply as actual performance greater than expected (i.e., greater than 0). We had to relax the performance threshold to identify high performing middle schools that met our screening criteria (e.g., higher-poverty schools meeting both AYP and API targets).

**High Schools:** We used a similar regression model to that used with elementary and middle schools. However, the high school regressions were only estimated for 2004-05 and 2005-06 because CAHSEE data were not constructed to allow disaggregation for subgroups and grade levels in 2002-03 and 2003-04. Standardized CST ELA mean scale scores and 10<sup>th</sup> grade CAHSEE mean scale scores in ELA and mathematics were used as school-wide performance measures. CST mathematics mean scales scores were replaced by CAHSEE mathematics mean scale scores because there is no consistent CST mathematics exam that can be compared across all high schools. In addition, the variable parental education was not included in the regression model due to missing and unreliable data. Similar to middle schools, the criterion for being noted as a “beating-the-odds” high school was defined as having an actual performance greater than expected (i.e., greater than 0).

### **Evaluation of Consistent Performance**

All selected schools met all BTO criteria at least in 2005-06, the latest year for which we had BTO data. In addition, we constructed a longitudinal measure to identify schools that consistently exhibited high performance over time. To accomplish this, we calculated a ratio of all relevant student populations (including numerically significant subgroups) meeting or exceeding the performance criteria. At a minimum, schools that exhibited a BTO frequency of at least 80% for all relevant student populations across all available years, as specified above, were selected for closer examination.

### **Screening and Selection of BTO Schools to Highlight**

To highlight high performing schools with relatively high-poverty populations, we limited the school interviews to those with at least 50% of students eligible for free-or-reduced price lunch. Additional “screens” were then applied to these schools. For example, we were not interested in schools found to be selective in their admissions (e.g., accepting students based on prior academic performance).<sup>1</sup> Furthermore, schools had to have met school-wide API growth targets and AYP criteria at least in 2005-06 and 2006-07.<sup>2</sup> The Similar Schools Rank from the API was also used as an indicator of school performance. Selected BTO schools were required to have a Similar Schools Rank of 8 or above in 2006-07. In addition, these schools must not have been in Program Improvement status from 2003-04 through 2006-07. Finally, we strove for balance in geographic location and school size in the final selection of schools to interview.

### **Contacts for the CA CC High Performing Schools Analysis at AIR**

Please contact one of the following members with any questions you might have: Dr. Thomas Parrish ([tparrish@air.org](mailto:tparrish@air.org)); Ms. Mette Huberman ([mhuberman@air.org](mailto:mhuberman@air.org)); Dr. Miguel Socias ([msocias@air.org](mailto:msocias@air.org)); Ms. Larisa Shambaugh ([lshambaugh@air.org](mailto:lshambaugh@air.org)); Ms. Mari Muraki ([mmuraki@air.org](mailto:mmuraki@air.org)); Ms. LaRena Woods ([lwoods@air.org](mailto:lwoods@air.org)).

---

<sup>1</sup> To identify possible school selectivity, we went through the following process: rejected schools whose names sounded selective (e.g., Magnet, Academy); checked school websites for admission procedures; and asked principals at the beginning of the interview if the school had any selectivity in admissions. If the principal answered affirmatively, the interview was brought to a close.

<sup>2</sup> We included the most currently available data from 2006-07 in our screening criteria.