The California Model: Academic Indicator

Presented by the Analysis, Measurement, and Accountability Reporting Division

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Objectives

- Participants Will:

  - Understand the California Model and the Performance Levels

  - Know Which:

    - o Institutions Receive an Academic Indicator
    - o Student Groups Included
    - o Accountability Rules to Include/Exclude Students
    - o Assessments Included/Excluded

Objectives (Cont.)

- Understand the Academic Indicator Methodology: Distance from Level 3 (DF3)
- Know the Definition of the English Learner (EL) student group in the Academic Indicator

The California Model

The California Model

- The California Model uses percentiles to create a five-by-five grid (giving 25 results), which combines "Status" and "Change" to produce a "Performance Level" (represented by a color) for each state indicator.
- Both Status and Change are equally weighted.

The California Model (Cont.)

- **Status** is based on performance from the most *current* year.

- **Change** is the difference between performance from the *prior* year and *current* year.

The California Model (Cont.)

- The Status and Change cut points were established separately for each indicator.

- Cut points were established using a percentile distribution using the most current data for local educational agencies (LEAs) and charter schools (grading on a curve).

- Cut points will remain in place for a select number of years to be determined by the State Board of Education (SBE) (e.g., 3 to 5 years).

(Note: Because a separate accountability system is being developed for alternative schools, their data were excluded from this process.)

Five Status and Five Change Levels

| Five Status Levels	Five Change Levels
Very High	Increased Significantly
High	Increased
Medium	Maintained
Low	Declined
Very Low	Declined Significantly

The California Model Methodology

- To determine overall performance, the **percentile distributions** for Status and Change were examined for each indicator.

- For **Status**, LEAs and charter schools were ordered from highest to lowest and four cut points were selected based on the distribution which created the five Status Levels.

The California Model Methodology (Cont.)

- For **Change**, LEAs and charter schools were ordered from highest to lowest for positive change and lowest to highest for negative change.

- Cut points were determined separately for positive and negative change. A total of four cut points were selected which created the five Change Levels.

Performance Levels

- The combination of **Status** and **Change** results in a **performance level** that is assigned a color for each indicator:

Blue	**Highest**
Green	
Yellow	
Orange	
Red	**Lowest**
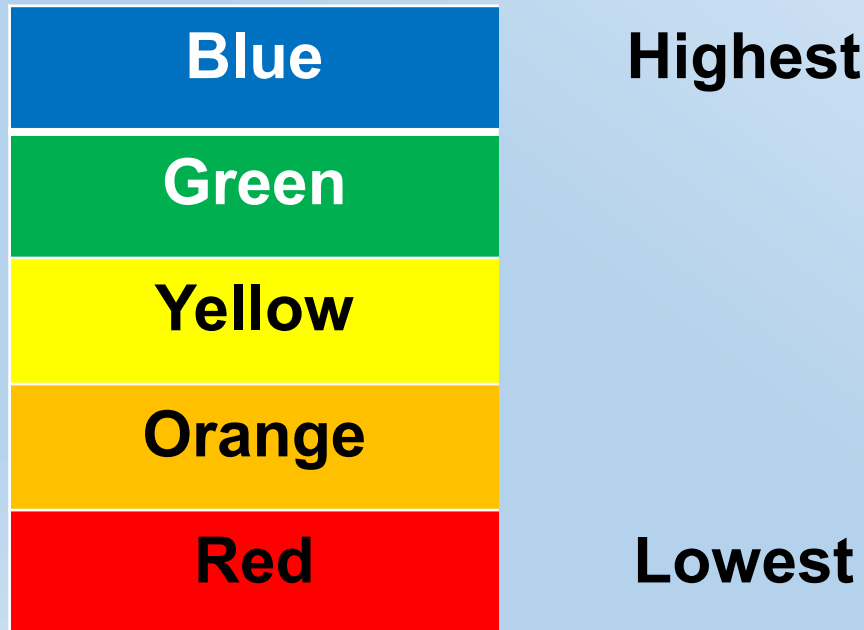
Overview of the Standard Setting

Example:
An LEA or school with a "High" **Status** and an "Increase" in **Change** will receive an overall performance of **Green** for most indicators.

Change

Level	Declined Significantly	Declined	Maintained	Increased	Increased Significantly
Very High	Yellow	Green	Blue	Blue	Blue
High	Orange	Yellow	Green	Green	Blue
Medium	Orange	Orange	Yellow	Green	Green
Low	Red	Orange	Orange	Yellow	Yellow
Very Low	Red	Red	Red	Orange	Yellow

Status

Academic Indicator

Who Receives an Academic Indicator?

- The Academic Indicator applies to all LEAs and schools with grades three through eight assessment results.

  - Grade eleven results are not included in this Indicator. Rather, the grade eleven results are included in the College/Career Indicator.

  - However, the Dashboard will include a report that displays the grade eleven results using the same methodology that produces the Academic Indicator for grades three through eight.

  (Note: County offices and alternatives schools do not receive determinations on the Academic Indicator.)

Who Receives an Academic Indicator? (Cont.)

- Only LEAs, schools, and student groups with 30 or more valid assessment scores in both the Status and Change will receive a performance level. (Valid scores are determined using the inclusion/exclusion rules for the Academic Indicator.)

Student Groups Included in the Academic Indicator

- Student groups included in the spring 2017 Dashboard release are:
  - Black/African American
  - American Indian or Alaska Native
  - Asian
  - Filipino
  - Hispanic/Latino
  - Native Hawaiian or Pacific Islander
  - White
  - Two or More Races
  - English Learners
  - Socioeconomically Disadvantaged
  - Students with Disabilities

Student Groups Included in the Academic Indicator (Cont.)

- In the fall 2017 Dashboard release, two additional student groups will be included:
    - Foster Youth
    - Homeless Students

- Numerically significant student group size is:
    - 15 for LEAs
    - 30 for schools

- In the spring 2017 Dashboard release, these student groups will only show "N/A" for the state indicators.

Accountability Rules

- The CAASPP* Web site (http://caaspp.cde.ca.gov/sb2016/Search) reports the scores for all students who take the Smarter Balanced Summative Assessments. Accountability uses a number of rules to either include or exclude student scores
  - This may result in a different number of students being used in the calculation for the Academic Indicator than what is reported on the CAASPP Web site.

*California Assessment of Student Performance and Progress

Accountability Rules (Cont.)

- The following slides review some of the major rules used for accountability in the Academic Indicator.

Accountability Rules (Cont.)

- A student must be continuously enrolled to be included in the calculations of the Academic Indicator. (Continuous enrollment is defined as enrollment from Fall Census Day [first Wednesday in October] to the testing date without a gap in enrollment of more than 30 consecutive calendar days.)

- The first day of testing is the first day that any student starts an English language arts/literacy (ELA) or mathematics Smarter Balanced Summative test at the school.

Accountability Rules (Cont.)

- ELs who have been enrolled in a U.S. school for less than one year will not be included in the calculations for ELA or mathematics.

- Students who do not take the assessment due to a parent wavier will not be included in the performance level calculation for this indicator (note: they will be included in the calculation of the participation rate).

Assessment Results Included in the Academic Indicator

- For the spring 2017 Dashboard release, only Smarter Balanced Summative Assessment results will be included.

- The California Alternate Assessment (CAA) results will be incorporated in the fall 2017 Dashboard release.

Data Sources

- All assessment results are obtained from the data file provided by the California Department of Education's (CDE's) testing vendor (Educational Testing Service [ETS]).

- Demographics and program participation data (e.g., ELs, students with disabilities [SWD], socioeconomically disadvantaged [SED]) are extracted by CDE staff from the California Longitudinal Pupil Achievement Data System (CALPADS). In other words, the demographic data included in the ETS data file are not used in CDE's processing.

Academic Indicator Methodology

State Board Direction for the Academic Indicator

- At the September 2016 SBE meeting, the CDE proposed using the percent of students at or above Standards Met for the Academic Indicator.

- However, the SBE requested that CDE staff develop a methodology that used all students' Smarter Balanced Summative Assessment scale scores for the Academic Indicator.

State Board Direction for the Academic Indicator (Cont.)

- SBE members voiced a concern that the CDE's proposed methodology too closely paralleled the Adequate Yearly Progress (AYP) methodology, which rewarded schools that only focused on students who were closest to proficient.

Advisory Group Input on the Academic Indicator (Cont.)

- CDE staff worked with California's CAASPP contractor, ETS; the Technical Design Group (TDG); the California Practitioners Advisory Group (CPAG); and the English Learner Progress Indicator Work Group in developing the methodology for using scale scores and the definition of the EL student group for the Academic Indicator.

Educational Stakeholder Input on the Academic Indicator

- CDE staff also solicited extensive feedback from various educational stakeholders:
  - Attendees at the California Educational Research Association (CERA)
  - Attendees at the Accountability Leadership Institute for English Learners
  - Capitol Region Assessment Network
  - California County Superintendents Educational Services Association-Curriculum and Instruction Steering Committee
  - CAASPP Stakeholder Group

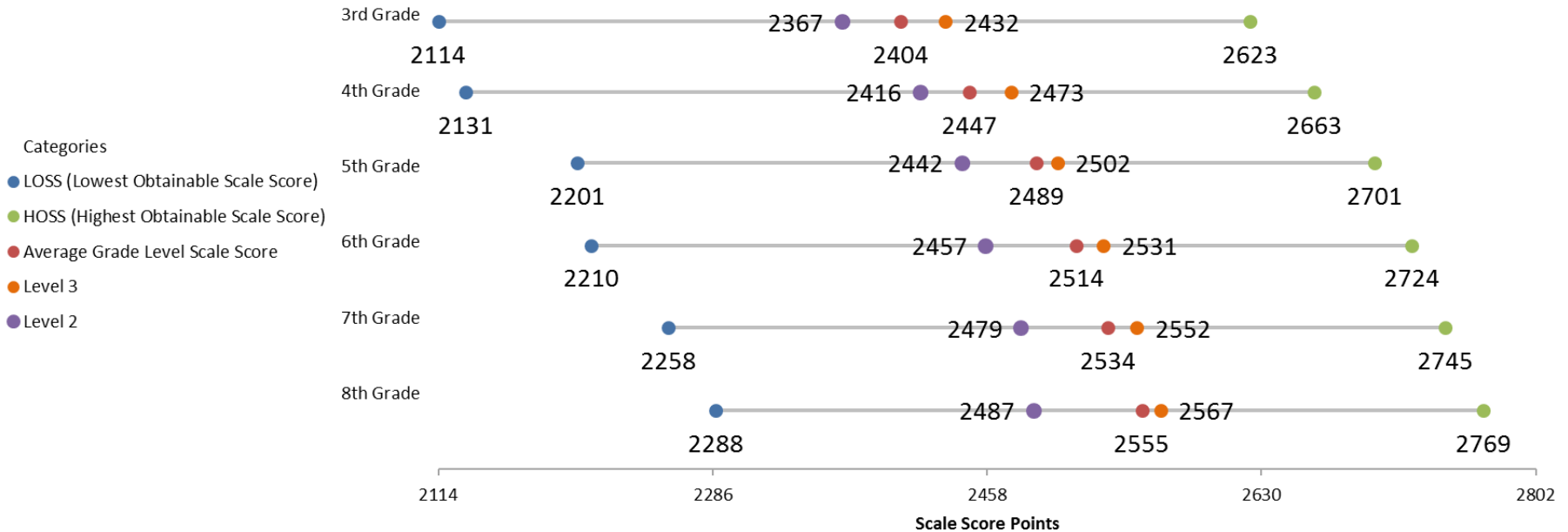# Academic Indicator Methodology: Distance from Level 3

- CDE staff, ETS, and the TDG worked on multiple approaches for using scale scores, focusing on a methodology known as DF3 (i.e., Distance from "Standard Met").

- In this methodology, each student's assessment score is compared to the lowest possible scale score to achieve Level 3 (standard met).

Distance from a Fixed Point

- In addition to using Level 3 as a fixed point for comparing scale scores, three additional options for comparing fixed points on the vertical scale were explored:
    - Distance from the statewide average (by grade)
    - Distance from Level 2 (DF2)
    - Distance from the lowest possible scale score (LOSS)

Display of the ELA Smarter Balanced Scale Score Ranges

ELA CAASPP Scale Score Ranges

Categories
- LOSS (Lowest Obtainable Scale Score)
- HOSS (Highest Obtainable Scale Score)
- Average Grade Level Scale Score
- Level 3
- Level 2

3rd Grade: 2114, 2367, 2404, 2432, 2623
4th Grade: 2131, 2416, 2447, 2473, 2663
5th Grade: 2201, 2442, 2489, 2502, 2701
6th Grade: 2210, 2457, 2514, 2531, 2724
7th Grade: 2258, 2479, 2534, 2552, 2745
8th Grade: 2288, 2487, 2555, 2567, 2769

Scale Score Points: 2114, 2286, 2458, 2630, 2802

*English language arts

Display of the Math Smarter Balanced Scale Score Ranges

MATH CAASPP Scale Score Ranges

Categories
- LOSS (Lowest Obtainable Scale Score)
- HOSS (Highest Obtainable Scale Score)
- Average Grade Level Scale Score
- Level 3
- Level 2

Grade	LOSS	Level 2	Average	Level 3	HOSS
3rd Grade	2189	2381	2417	2436	2621
4th Grade	2204	2411	2455	2485	2659
5th Grade	2219	2455	2482	2528	2700
6th Grade	2235	2473	2507	2552	2748
7th Grade	2250	2484	2521	2567	2778
8th Grade	2265	2504	2537	2586	2802

Scale Score Points: 2114, 2286, 2458, 2630, 2802

Methodology for the Academic Indicator

- After reviewing recommendations from the advisory groups, feedback from educational stakeholders, and the simulations presented for the four fixed points on the Smarter Balanced Scale, the SBE approved using the DF3 for the Academic Indicator.

Distance from Level 3

Middle School Example

Ruby Middle School

Grade 6 Testers: 4 students

Grade 7 Testers: 3 students

Grade 8 Testers: 3 students

Total Testers: 10 students

Middle School Example (Cont.)

Step 1:

Retrieve minimum scale score required to achieve Level 3, by grade.

Grade Level	- ELA - Minimum Scale Score Required to Achieve Level 3	- MATH - Minimum Scale Score Required to Achieve Level 3
Grade 6	2531	2552
Grade 7	2552	2567
Grade 8	2567	2586

Middle School Example (Cont.)

Example: Grade 6 ELA Scale Score Range

Standard Not Met	Standard Nearly Met	Standard Met	Standard Exceeded
2210 to 2456	**2457 to 2530**	**2531 to 2617**	**2618 to 2724**

2210
LOSS

2724
HOSS

Note: Not drawn to scale

Middle School Example (Cont.)

- All scale score ranges are set by the Smarter Balanced Assessment Consortium

- All students in the same grade across California are measured against the same scale score

  - All grade 6 students across California are measured against the 2531 scale score for ELA.

  - All grade 8 students across California are measured against the 2586 scale score for math.

Middle School Example (Cont.)

Step 2:

Compare student scale scores to the minimum Level 3 scale score, by grade.

Student	Grade Level	- ELA - Student's Earned Scale Score	- ELA - Minimum Level 3 Scale Score	Difference Between Earned Scale Score and Minimum Level 3 Scale Score
Sally	6	2566	2531	2566 minus 2531 = +35
Billy	6	2668	2531	2668 minus 2531 = +137
Jason	6	2415	2531	2415 minus 2531 = -116
Debbie	6	2669	2531	2669 minus 2531 = +138

Middle School Example (Cont.)

School-Wide Student Results:

Student	Grade Level	- ELA - Student's Earned Scale Score	- ELA - Minimum Level 3 Scale Score	Difference Between Earned Scale Score and Minimum Level 3 Scale Score
Sally	6	2566	2531	2566 minus 2531 = +35
Billy	6	2668	2531	2668 minus 2531 = +137
Jason	6	2415	2531	2415 minus 2531 = -116
Debbie	6	2669	2531	2669 minus 2531 = +138
Sandy	7	2499	2552	2499 minus 2552 = -53
Donna	7	2690	2552	2690 minus 2552 = +138
David	7	2531	2552	2531 minus 2552 = -21
Jack	8	2601	2567	2601 minus 2567 = +34
Baljeet	8	2441	2567	2441 minus 2567 = -126
Dorothy	8	2739	2567	2739 minus 2567 = +172

Middle School Example (Cont.)

- The difference between a student's earned scale score and the minimum Level 3 scale score produces one of the following results:
  - Positive result
  - Negative result
  - Neutral result (i.e., zero)

- In other words, every student will have a positive, negative, or neutral contribution to the school-wide, LEA-wide, or student group average.

Middle School Example (Cont.)

Step 3:

Calculate the school-wide average.

$$\text{Average} \ = \ \frac{\text{Sum of all student distances from Level 3}}{\text{Total number of valid test scores}}$$

For Ruby Middle School:

$$\frac{(35) + (137) + (-116) + (138) + (-53) + (138) + (-21) + (34) + (-126) + (172)}{10 \text{ valid test scores}}$$

= 33.8 points above Level 3

Middle School Example (Cont.)

- The results of DF3 show:
    - The needed improvement to bring the average score to Level 3, or
    - The extent to which the average score exceeds Level 3.

- In the case of Ruby Middle School, the school is 33.8 points above Level 3 for ELA.
    - In other words, the average student score at Ruby Middle School is 33.8 points above Level 3.

Formula for Academic Indicator

Status:

- The 2016 DF3 average will be used for Status in the initial release of the Dashboards (formerly known as the Evaluation Rubrics).

Change:

- Change uses current and prior year DF3.

Change Formula:

2016 DF3 average *minus* 2015 DF3 average.

ELA Status and Change for Ruby Middle School

Status

- 2016 DF3 average is **+33.8**

Change:

- **Step 1:** Obtain prior year (2015) DF3 average: **+30.1**
- **Step 2:** Calculate Change

 Current Average *minus* Prior Average

  33.8 *minus* **30.1** = **+3.7**

Five-by-Five Colored Grid

Ruby Middle School
Status = +33.8 and Change = +3.7
Performance Level = Green

Level	Declined Significantly by more than 15 points	Declined by 1 to 15 points	Maintained Declined by less than 1 point or increased by less than 7 points	Increased by 7 to less than 20 points	Increased Significantly by 20 points or more
Very High 45 or more points above	Yellow	Green	Blue	Blue	Blue
High 10 points above to less than 45 points above	Orange	Yellow	Green	Green	Blue
Medium 5 points below to less than 10 points above	Orange	Orange	Yellow	Green	Green
Low More than 5 points below to 70 points below	Red	Orange	Yellow	Yellow	Yellow
Very Low More than 70 points below	Red	Red	Red	Orange	Yellow
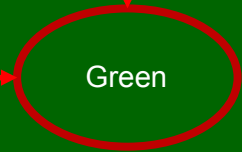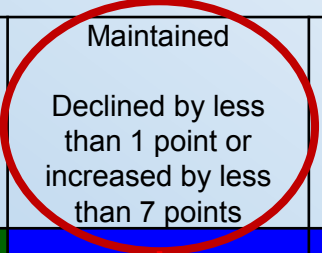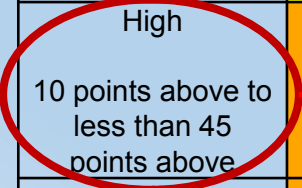
CAASPP Assessment Results Versus DF3

CAASPP Results

- The CAASPP results show the percent of students in each Achievement Level (i.e., 12% in Standard Exceeded).

- All students who tested are included in the assessment results.

- All students scoring within the range of Standard Met are reported together

  - A student who scores the minimum for Standard Met will contribute the **same** as the student who scores the maximum for Standard Met.

CAASPP Assessment Results Verses DF3 (Cont.)

DF3 Results

- DF3 shows the average distance from Level 3.

- Only the results of students who meet accountability inclusion criteria are incorporated into the DF3 calculation.

- A student who scores the minimum for Standard Met will contribute **differently** than the student who scores the maximum for Standard Met.
    - Minimum Score: Neutral contribution
    - Maximum Score: Positive contribution

CAASPP Assessment Results Versus DF3 (Cont.)

Therefore:

- While some information for DF3 can be gleaned from the CAASPP Web site, it is not an appropriate source for inferring DF3 results as it does not contain enough detail to perform the necessary calculations for DF3.

Definition of the English Learner Student Group for the Academic Indicator

Definition of the English Leaner Student Group

- At the January 2017 SBE meeting, the SBE considered three definitions for the EL student group for the Academic Indicator:

  - ELs Only

  - Students currently identified as EL plus students who have been reclassified fluent English proficient (RFEP) for two years or less

  - Students currently identified as EL plus students who have been RFEP for four years or less.

Simulation Results Using Distance from Level 3

School Distribution of the EL Student Group: ELA Academic Indicator Performance Categories by Student Group Definition

EL Student Group Definition	Red	Orange	Yellow	Green	Blue	Total	Difference
EL Plus Four Years RFEP or Less	760 (13.3%)	847 (14.8%)	3,271 (57.2%)	507 (8.9%)	337 (5.9%)	5,722	N/A
EL Plus Two Years RFEP or Less	1,142 (21.3%)	985 (18.4%)	2,779 (52%)	242 (4.5%)	201 (3.8%)	5,349	-373
EL Only	1,818 (40.3%)	1,153 (25.6%)	1,469 (32.6%)	40 (0.9%)	29 (0.6%)	4,509	-1,213

Theory of Action

- The CDE recommended adopting the definition of ELs plus four years or less of RFEP which utilizes both indicators (Academic and English Learner Progress) to measure two different aspects of EL success:
    1. Making sufficient progress toward language acquisition to increase EL access to the curriculum in all content areas, and
    2. Evaluating the strength of the entire EL program from initial designation through successful reclassification.

SBE Decision for the EL Student Group

- The SBE adopted the definition of ELs plus four-years of RFEP. The CDE provided the following rationale for including four year or less RFEPs:
  - Excluding RFEPs may result in an inability for schools to achieve the Green and Blue performance levels if they reclassify their students.
  - Many schools would be identified as needing to improve EL programs when their schools are successfully helping EL students gain language proficiency.
  - Identifying a large number of EL student groups in the Red and Orange performance levels may not help LEAs and schools distinguish strengths and weakness.

Definition of English Learners in the New Accountability System

State Indicator	EL Inclusion Criteria
English Learner Progress	Current EL annual CELDT* test takers (grades K–12) plus students reclassified in the prior year
Academic	ELs (grades 3–8) plus students who have been Reclassified fluent English proficient (RFEP) for four years or less** (Note: this is similar to the criteria used in the prior state and federal accountability systems)
Graduation	Students with an EL status at any time in grades 9–12 (Same criteria since the initial release of the cohort graduation rate)
College/Career	Students with an EL status at any time in grades 9–12
Suspension (Note: Chronic Absenteeism will be added when data is available)	Current EL students (grades K–12)

*CELDT: California English Language Development Test
**This definition is based on what is permitted in the Every Student Succeeds Act

California School Dashboard: In-depth Webinar Series

- **English Learner Progress and Suspension Rate Indicators:** February 22, 2017, from 9:30 a.m. to 11 a.m.

- **Graduation Rate and Career/College Indicator:** February 28, 2017, from 9:30 a.m. to 11 a.m.

- **Local Performance Indicators and Chronic Absenteeism-review of local data:** March 6, 2017, from 1:30 p.m. to 3 p.m.

For Further Information

For additional information on:

- The Academic Indicator, contact the Academic Accountability Unit by e-mail at Dashboard@cde.ca.gov.

- Technical errors in accessing the Dashboard and importing local indicators into the Dashboard, contact the Local Agency Systems Support Office by e-mail at lcff@cde.ca.gov.

- Signing up as a Dashboard Coordinator visit the California School Dashboard Coordinator Application Web page at https://www.caschooldashboard.org.

Questions and/or Discussion