Student Growth Score File Release Webinar

June 14, 2021

- Analysis, Measurement, and Accountability Reporting Division
- Assessment Development and Administration Division
- Educational Testing Service

Agenda

- Overview
- Meaning and Utility of Growth Data
- How Student Growth Scores are Calculated
- Aggregate Growth Score File
- Student-Level Growth Score File – CAASPP Coordinators
- Communication Plans and Resources
- Questions

Overview

Kimberly Mundhenk
Education Research and Evaluation Consultant
Analysis, Measurement, and Accountability Reporting Division

Growth Model Journey

- In 2015, the State Board of Education (SBE), the California Department of Education (CDE), and the Educational Testing Service (ETS) began work to measure student growth in a valid and reliable way.
- At its May 2021 meeting, the SBE approved a methodology for measuring student growth at the student level and in aggregations (i.e., school, LEA, student group).

Growth Model Data Release

- The CDE is releasing growth scores for students in grades 4 through 8 for informational purposes.
- These growth scores were calculated using the
  - SBE-approved methodology, and
  - 2016–17, 2017–18 and 2018–19 Smarter Balanced school year assessment data
- The growth scores are not actionable due to their historical nature.

Growth Data Release Schedule

- **Today**, the CDE is providing
  - California Assessment of Student Performance and Progress (CAASPP) Coordinators individual student-level growth scores via the Test Operations Management System (TOMS), and
  - Secure Accountability and Dashboard coordinators a ***private preview*** of the aggregated growth scores for student groups at the district and school-levels.
- On **June 22, 2021**, the CDE is ***publicly releasing*** the aggregated growth scores for student groups at the district and school-levels.
- The next release of new growth scores is likely to be in **2024.**

Growth Model and Accountability

- No relationship with the Accountability System at this time.
- The CDE will continue using the current Academic Indicator methodology on the California School Dashboard.
- Conversations about incorporating the growth data into the Accountability System will begin when we have new growth data to evaluate.

Meaning and Utility of Growth Data

Joseph A. Martineau
Executive Director
Center for Operational Solutions & Innovation

How Growth Differs from Achievement

- Achievement:
  - How much students ***knew*** at the time of the assessment.

- Growth:
  - How much students ***learned*** from one grade to the next.

What Growth Data Can Tell Us

- Whether one group of students had average growth that was higher than the average for another group
- Whether one group of students has average growth that was similar to the average for another group
- Whether one group of students has average growth that was lower than average for another group

What Growth Data Cannot Tell Us

- ***Why*** one group of students had lower, similar, or higher average growth compared to another group.
  - For example, growth data cannot tell us about the quality of education received by different student groups (there are generally other plausible explanations for why growth differs from group to group).
  - ***Approximating*** an understanding of why average growth differs from group to group requires additional evidence, advanced statistical models, and cautious interpretation.

What Are Growth Data Useful For? (1)

- As background, we need to define two kinds of instructional decisions:
  - Low-level instructional decisions affecting instruction over a relatively short term such as moment to moment, day to day, and week to week.
  - High-level instructional programming decisions affecting instruction over a year or more
- Because growth data are calculated and reported once annually:
  - They **are not** useful for informing low-level instructional decisions affecting instruction over a relatively short term.
  - They **can be** useful for informing high-level instructional programming affecting instruction over a year or more.

What are Growth Data Useful For? (2)

- Growth data are retrospective, meaning that the grade for which they are reported is already over when growth data are calculated.
- Also because of this, growth data are useful for decisions made based on retrospective analysis that will affect later groups of students.

How Student Growth Scores are Calculated

Kimberly Mundhenk
Education Research and Evaluation Consultant
Analysis, Measurement, and Accountability Reporting Division

Growth Model Methodology

- The SBE-adopted student growth model incorporates
  - a “residual gain” method to calculate individual student growth scores, and
  - a hybrid method aggregating individual student growth scores to calculate the LEA, school and student group growth scores.
- This approach creates a valid and reliable growth model with year-to-year stability.

Residual Gain (RG) Model – Which Students Receive a Growth Score

- Only students in grades 4 through 8.
- The RG model measures each student's year-to-year growth based on the student's scores from the CAASPP for English language arts/literacy (ELA) and mathematics.
- The CAASPP for ELA and mathematics are administered in grades 3 through 8 and grade 11.
    - Although students in grades 3 and 11 are tested, they do not have prior-year scores; therefore, they do not receive a growth score.

RG Model - Methodology

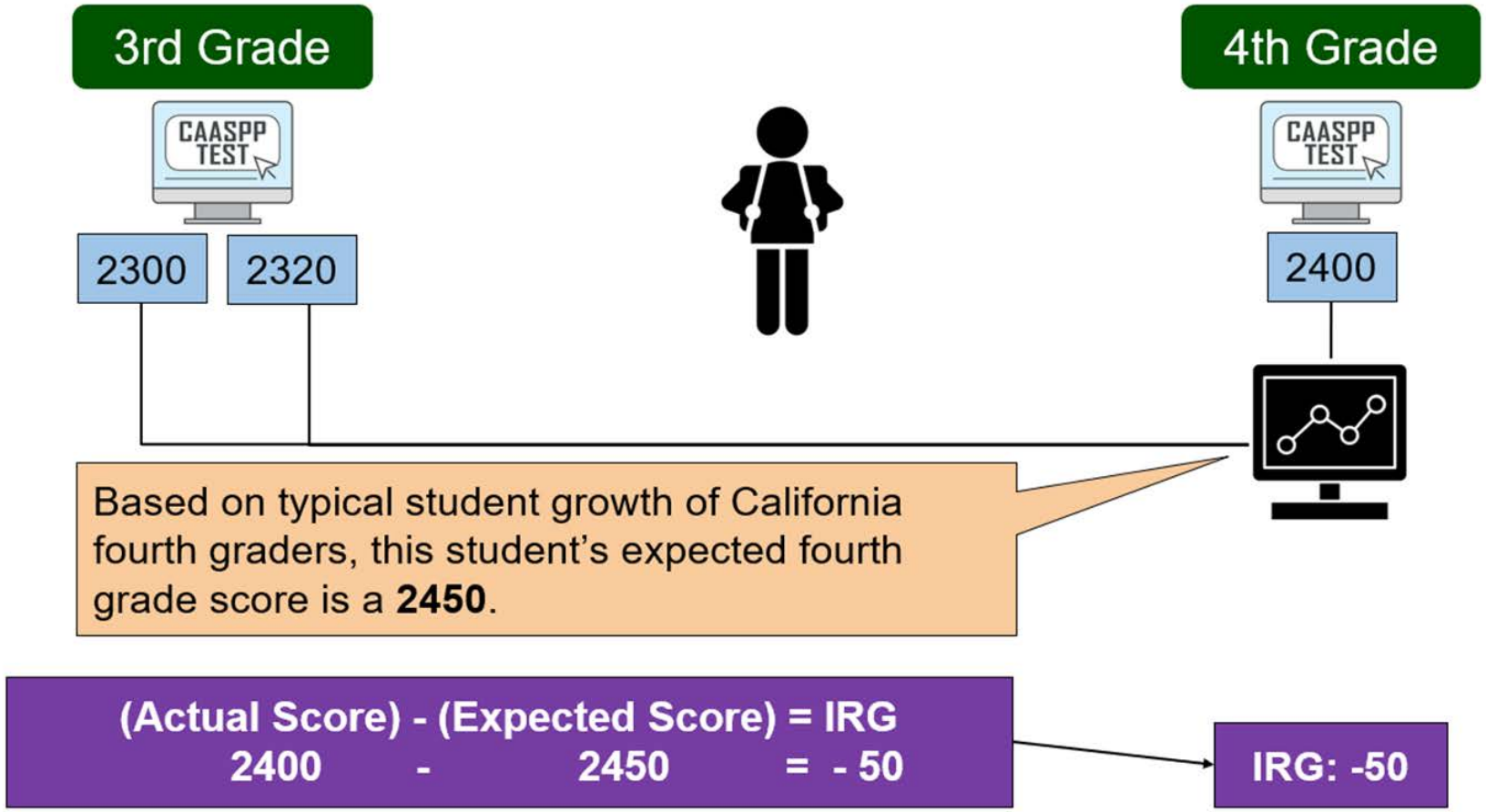
- The RG Model compares a student’s actual score on the CAASPP for ELA and mathematics to an expected test score.
  - A student's expected test score is based on the typical score of students who had similar prior test scores on the CAASPP for ELA and mathematics in the previous grade.
- The difference between the student’s actual score and expected score is the individual residual gain or student growth score.

RG Model – Student Growth Score

- The individual student growth score can be negative.

Individual Student Growth Score	Indicates the student's growth
Less than 0	Was lower than their expected growth
Equal to 0	Met their expected growth
Greater than 0	Was higher than their expected growth

RG Model – Calculating a Student Growth Score



Descriptive Text for Slide 19 (Student Growth Model: Individual Residual Gain Scores)

- An example of how to measure student growth using Individual Residual Gain (RG) Scores.
- Based on the third-fourth performance of CA grade 4 students, the student's expected grade 4 score is 2450 (Expected Score). However, in our example, the student had a CAASPP score of 2300 in Grade 3 and a score of 2400 in Grade 4 (Actual Score). So to calculate growth using Individual RG score, the formula used is Actual Score (2400) minus Expected Score (2450) is used (2400 minus 2450 equals -50). This will mean the student had an RG of -50.

Hybrid Model for School, LEA, and Student Group Growth Scores

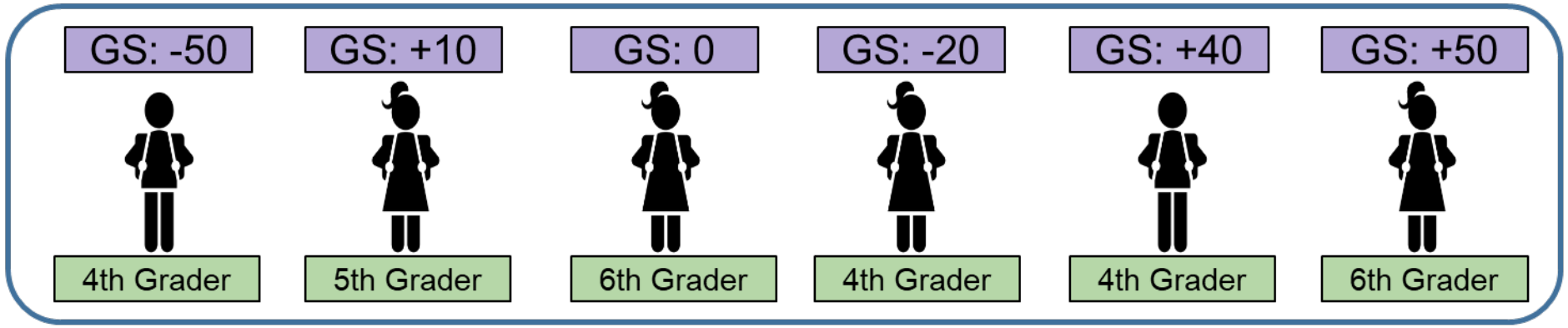
- The hybrid model aggregates two consecutive school years of individual student growth scores using either
  - a simple average, or
  - the Empirical Best Linear Predictor (EBLP) method.
- The benefit of the hybrid model approach is the increase in accuracy and stability of the aggregate growth scores.

Aggregate Growth Scores for Schools, LEAs, and Student Groups

- Schools and LEAs with students in grades 4 through 8 receive aggregate growth scores by student group and CAASPP subject (ELA or mathematics).
- Aggregate growth scores are calculated only for student groups with 11 or more individual student growth scores in the “reporting year”.

Simple Average - Large LEA Student Groups

- The simple average is applied to students groups in LEAs where the student groups have more than 500 student growth scores.
- This example shows the simple average for six students.



Sum Total of Student Growth Scores (GS): 30

Divided by the Total Number of Student Growth Scores: 6

Simple Average Growth Score: 5

Descriptive Text for Slide 23 (Simple Average – Large LEA Student Groups)

- **Picture 1:** This picture shows an example of how to calculate a simple average. The picture shows six students in grades 4 through 6 with their individual growth scores as follows: Student 1 is a 4th grader with a growth score of negative 50. Student 2 is a 5th grader with a growth score of positive 10. Student 3 is a 6th grader with a growth score of zero. Student 4 is a 4th grader with a growth score of negative 20. Student 5 is a 4th grader with a growth score of positive 40. Student 6 is a 6th grader with a growth score of positive 50.
- **Picture 2:** This show that the sum total of the six student growth scores is 30. To get the simple average, divide the sum total of 30 by the number of students which is 6. This leads to the simple average growth score equal to 5.

What is the Empirical Best Linear Prediction (EBLP) Methodology?

- EBLP is the weighted average of two consecutive years of individual student growth scores.
  - Greater weight is assigned to the most recent data.
  - The weights are school and LEA-specific and designed to maximize accuracy.
- For example, the weights for mathematics growth scores:

Growth Data	School A (n = 1,243)	School B (n = 15)
2018–19 mathematics growth scores	99%	67%
2017–18 mathematics growth scores	1%	33%

When is EBLP Applied?

- The EBLP method is used to calculate the aggregate growth score for:
  - Schools (The “All” student group)
  - LEAs (The “All” student group)
  - Student groups in a school, and
  - Student groups in an LEA where the student groups have 500 or fewer growth scores.

Aggregate Growth Scores Are Never Negative

- After the aggregate growth score is calculated using either the simple average or EBLP, the CDE adds an additional 100 points to the aggregate growth score

Aggregate Growth Score	Indicates that, on average, a student group's growth
Less than 100	Was lower than their expected growth
Equal to 100	Met their expected growth
Greater than 100	Was higher than their expected growth

RG Model – Why Add 100 to the Aggregate Growth Score?

- This helps in two ways:
  - Creates two different scales for aggregate and individual student growth scores, reducing confusion when discussing growth scores, and
  - Removes negative scores from aggregate reporting.

Growth Model Summary

Characteristic	Student Growth Score	Aggregated Growth Score
Growth score level	Student	School, LEA, Student Group
Methodology applied	Residual Gain (RG)	• Empirical Best Linear Predictor [EBLP] • Simple average
Who gets a growth score	Students with at least two consecutive years of CAASPP for ELA and mathematics scores	Schools, LEAs and student groups with >=11 student growth scores
Scale	0 = met expected growth	100 = met expected growth

Aggregate Growth Score File

Kimberly Mundhenk
Education Research and Evaluation Consultant
Analysis, Measurement, and Accountability Reporting Division

Why is the CDE Releasing an Aggregate Growth Score File?

- The aggregate growth scores are for information purposes.
- This is an opportunity for schools, LEAs, and the public to become familiar with aggregate growth scores.
- The aggregate growth scores were calculated using individual student growth scores from prior year CAASPP for ELA and mathematics (using CAASPP scores from 2016-17, 2017-18, and 2018-19 school years)
- The aggregate score file does *not* contain growth results from either the 2019-2020 or 2020-2021 school year as CAASPP testing was cancelled for 2019-2020 and flexible in 2020-2021 due to the global pandemic.

Aggregate Growth Scores - Private Preview and Public Release

- Secure Accountability and Dashboard Coordinators can preview the aggregate growth scores starting today. An email was sent this morning with access instructions.
- The public release will be next Tuesday, June 22nd
  - The file can be downloaded from the CDE Growth Model web page at: https://www.cde.ca.gov/Ta/ac/acctgrowthmod.asp

Aggregate Growth Score File Record Layout

VARIABLE	DESCRIPTION	VALUES
cds	CDS code	14-digit CDS code
rtype	Record Type	D (LEA) or S (school)
subject	CAASPP subject area	ela, math
studentgroup	Student Group	ALL,AA,AI,AS,FI,HI,MR,PI,WH, FOS,HOM,SED,SWD, EL,ELO,EO,RFP
n_growthscores	Number of Growth Scores	#
growthscore	Growth Score	#
decilerank	decile rank of aggregate growth score based on subject, rtype, and studentgroup	1-10
reported_which	note explaining which estimate was reported and why	none_10orless, simple_nolagdata, eblp, eblp_n500orless, simple_nmore500

The Aggregate Growth Score File

Field	Definition	Example	Interpretation
CDS	County-District-School Code	12345670000000	CDS code
Rtype	Record Type	D	A District/LEA growth score
Subject	CAASPP subject area	ELA	The CAASPP ELA
Student Group	Student Group	ALL	All students with two student growth scores
N Growth Scores	Number of Growth Scores	4171	4,171 students with growth scores in 2018-19 school year
Growth Score	Growth score	100.9	More than 100 – on average students met expected growth
Decile Rank	Decile rank of aggregate growth score based on subject, rtype, and studentgroup	6	LEA/District is in the 60th percentile for the “ALL” group
Reported Which	Note explaining which estimate was reported and why	eblp	Aggregate growth was calculated using EBLP methodology

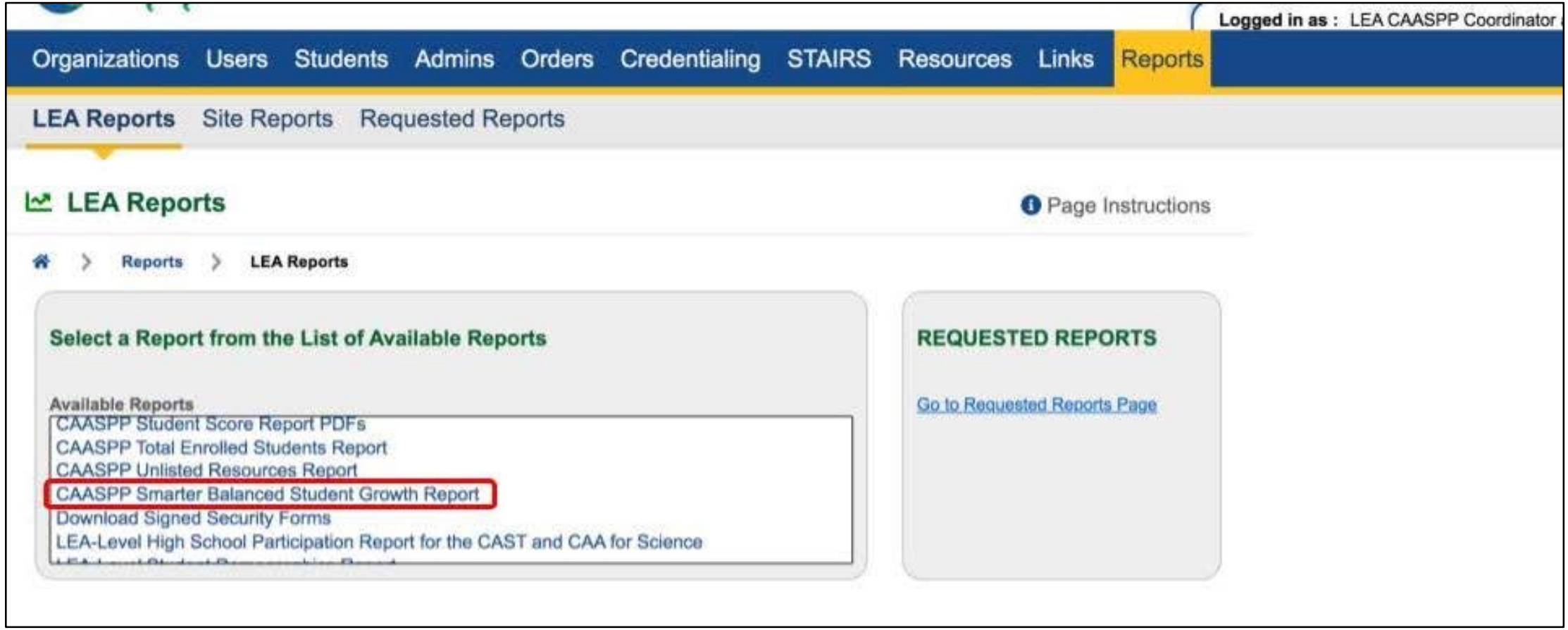
For CAASPP Coordinators – Student-Level Growth Scores (TOMS)

Devin Triplett
Education Programs Consultant
Assessment Development and Administration Division

For CAASPP Coordinators – Individual Student Growth Scores

- The CDE is releasing an individual student growth score report via the Test Operations Management System (TOMS).
- The report contains student growth scores from the CAASPP for ELA and mathematics that were administered during the 2016-17, 2017-18, and 2018-19 school years.
- CAASPP Coordinators can download this report starting today.

For CAASPP Coordinators – Download the Student Growth Report from TOMS



Descriptive Text for Slide 37 (For CAASPP Coordinators – Download the Student Growth Report from TOMS)

- A screenshot of the Graphical user interface, application, website for TOMS. Top navigation bar contains the following tabs: Organization, Users, Students, Admins, Orders, Credentialing, STAIRS, Resources, Links, and Reports. Reports tab is selected (highlighted). Submenu under Reports tab contains: LEA Reports, Site Reports, and Requested Reports. LEA Reports is selected. A list of Reports is available and “CAASPP Smarter Balanced Student Growth Report” is selected.
- In TOMS, LEA coordinators can download a data file that includes all of the growth scores for students who took the Smarter Balanced assessments.
- This report is available to LEA CAASPP coordinators only.
- To access the report, log on to TOMS, select the “Reports” tab in the navigation bar, and select the “CAASPP Smarter Balanced Student Growth Report” from the menu. Select the blue “Download Report” button to download the report.

For CAASPP Coordinators – Student Growth Report File Information

- Formatted as caret-delimited (^) file
- Only includes students who have growth scores
  - A student will not have a growth score if they did not have a valid CAASPP for ELA and mathematics scores for two consecutive years
- Data layout posted on https://www.caaspp.org/administration/reporting/index.html

Communication Plan and Resources

Cindy Kazanis
Director
Analysis, Measurement, and Accountability Reporting Division

Communication of Student Growth Model

- The CDE is developing with:
  - The Sacramento County Office of Education (SCOE) and ETS staff to produce three videos:
    1) What is a Growth Score?
    2) Why Measure Growth?, and
    3) How is Growth Calculated?
  - ETS staff is developing growth model resources based on information obtained from a variety of focus groups (teachers, school, and district administrators).

Communications for Public Release of Aggregate Growth Scores

- The CDE is providing several resources to accompany the public release of aggregate growth scores
  - ETS, in collaboration with the CDE, developed talking points to assist LEAs in responding to questions about their growth scores
  - a “frequently asked questions” section, and
  - the slides from today’s webinar.

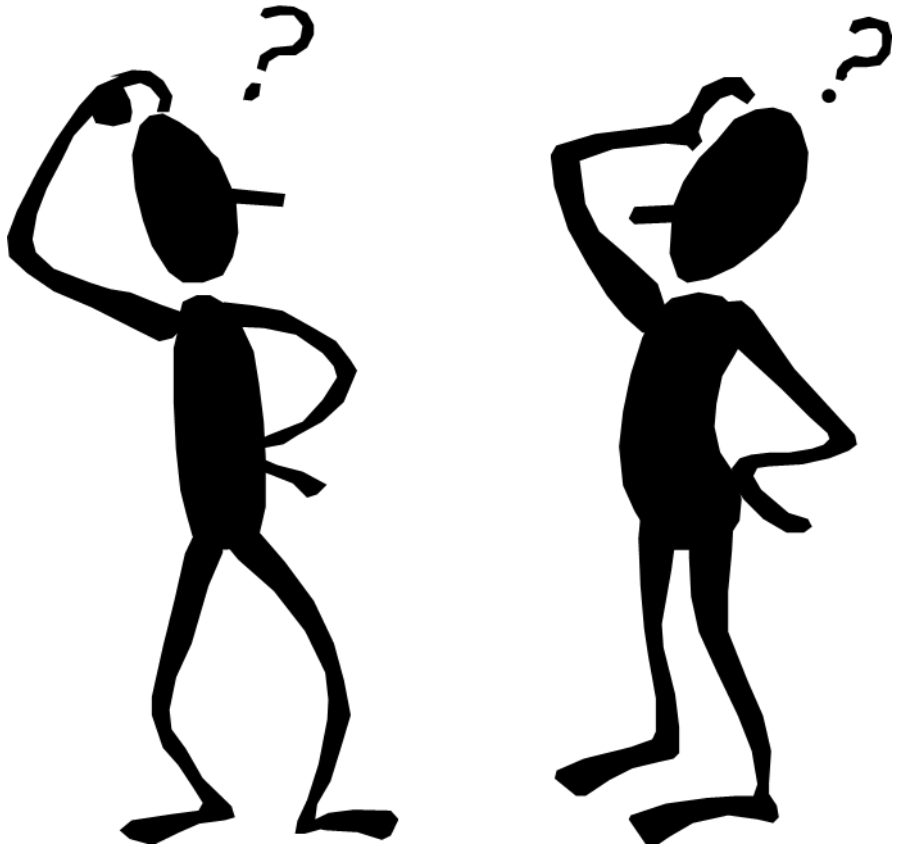
Student Growth Model Resources

- Growth Model web page
  https://www.cde.ca.gov/ta/ac/acctgrowthmod.asp
- CDE's May 2021 SBE Item
  https://www.cde.ca.gov/be/ag/ag/yr21/documents/may21item04.docx
  - The distributions of growth scores for all student groups at school and LEA levels
  - The distributions of growth scores by school type (charter vs. non-charter, DASS vs. non-DASS, and small vs. large)

Would You Like to be Involved?

- Interested in participating in focus groups around our communication materials and strategies for student growth in 2021 and 2022?
- Please send an email to the Academic Accountability Unit (AAU) (aau@cde.ca.gov) with the following information:
  - Name
  - Email Address
  - County You Work In
  - Your Role at Work (e.g., manager of educational technology; testing coordinator; administrator of instructional services; data coordinator)
  - Where You Work (i.e., county office of education; school district; school; or other)
  - Please state in the email subject line: Participate in Growth Model Focus Group

Questions?



Thank You!