COLORADO

Department of Education

Colorado Growth Model Overview

October 2020

COVID Stakeholder Group Takeaways

This webinar will provide a brief conceptual overview of the Colorado Growth Model, to support the following outcomes:

- Understanding the basics of the Colorado Growth Model.
- Understanding the role that growth plays within performance frameworks in determining school and district ratings.
- Familiarity with growth at the individual and aggregated levels and appropriate metrics for each.
- Familiarity with assessments that are eligible for growth: CMAS, WIDA ACCESS and PSAT/SAT.

Why is Student Growth Data Important?

Achievement + Growth = Academic Performance

- ✓ Growth shows how well schools are doing in helping each student progress.
  - o All students can show growth – even high performing students
- ✓ Growth data is integral for accountability determinations.
  - o Elementary and middle schools: 60% of plan type rating is based on growth.
  - o High schools/Districts: 40% of ratings are based on growth.
- ✓ Growth data informs improvement planning within schools and districts.

What is Student Growth?

- Growth data shows how much progress individual students have made between last year and this year as measured by the state summative content assessments (CMAS and PSAT/SAT). Growth is also calculated for the state's English language proficiency exam (WIDA-ACCESS for ELLs).
- The Colorado Growth Model was developed by CDE and the National Center for the Improvement of Educational Assessment (NCIEA). It was first used in Colorado in 2009.
- Student Growth Percentiles are determined by how much students have progressed compared to their "academic peers." It is a normative comparison of change.
- Growth data can be summarized for specific groups of students, schools and by district.

Student Growth Percentile

- The student growth percentile (SGP): tells us how a student's progress over time compares with that of other students across the state with similar test score histories.

Calculations:

- Individual SGPs are calculated using a minimum of two sequential years of assessment scale scores and will include as many sequential prior year scores (no "gap years") as are available for every student.
- When the state assessment changed in 2015, student growth percentiles were NOT able to be calculated between TCAP and CMAS. All CMAS growth calculations start with 2015 as the earliest year of available scores.

Student Growth Percentile Calculation Heuristic

Medium 3rd grade score (700)

706 707 708 693 723

High 3rd grade score (725)

718 707 720 705 730

Colorado 4th Graders

Low 3rd grade score (675)

681 707 695 670 735

'Heuristic' slides adopted with permission from Julie O'Brian at the Center for Transforming Teaching and Learning

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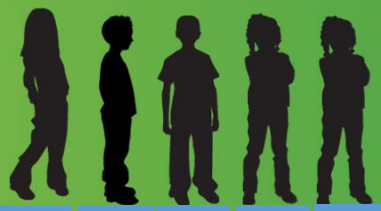
Student Growth Percentile Calculation Heuristic

Medium 3rd grade score (700)



693	706	707	708	723
11	31	50	58	86

High 3rd grade score (725)

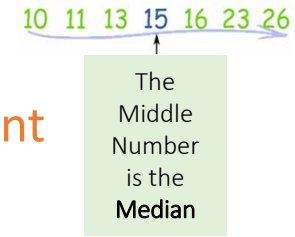
705	707	718	720	730
19	24	52	64	99

Low 3rd grade score (675)

670	681	695	707	735
35	39	61	82	95

Median Student Growth Percentile

- The median growth percentile (MGP): tells us how well a group of students is growing in comparison with other groups. The MGP tells us how much growth that a group as a whole is achieving.
    - The metric provided is the "median" of the student growth percentiles for that disaggregated group – the median student growth percentile.



- MGPs are calculated by CDE for the following groups:
    - State, district, and school (overall and by grade)
    - Minority, Migrant, Performance Level, Gifted, FRL, IEP, ELL, and Gender

School Median Growth Percentile Calculation Heuristic

Students grouped by School

Raider Elementary School

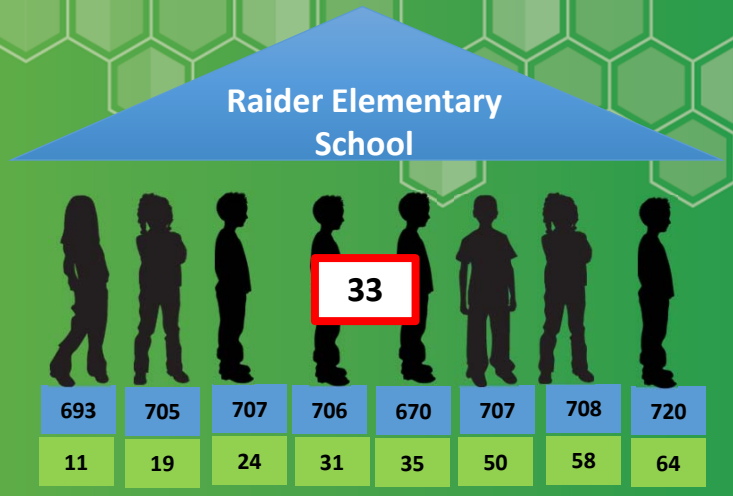
706	670	707	693	705	720	707	708
31	35	50	11	19	64	24	58

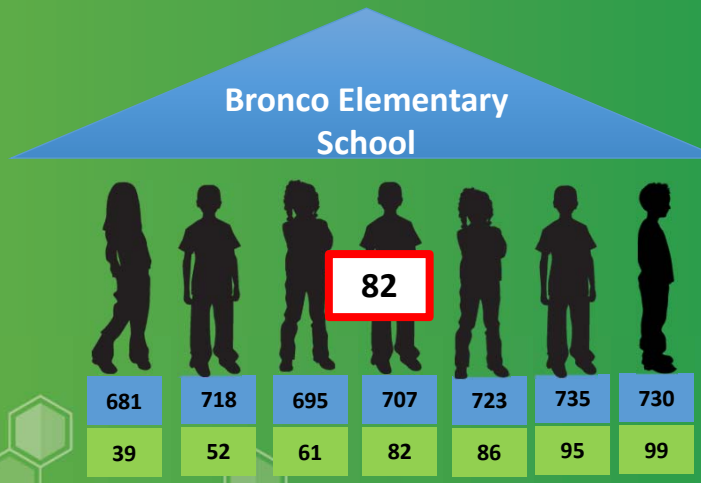
Bronco Elementary School

730	723	695	707	735	681	718
99	86	61	82	95	39	52

School Median Growth Percentile Calculation Heuristic

In Order
by Student Growth Percentile within Schools





How do we look at growth?

Students

Student-level growth percentiles (SGPs) range from 1-99

Schools & Districts

Median growth percentiles (MGPs) range from 1-99, but tend to fall between 20 and 80

State

Median growth percentiles (MGPs) range from 1-99 but tend to fall between 40 and 60

How do we look at student growth?

2018-2019 Student Grade Level	2017 State Assessment*		2018 State Assessment*		2019 State Assessment
4			CMAS Grade 3	⇨	CMAS Grade 4
5	CMAS Grade 3	⇨	CMAS Grade 4	⇨	CMAS Grade 5
6	CMAS Grade 4	⇨	CMAS Grade 5	⇨	CMAS Grade 6
7	CMAS Grade 5	⇨	CMAS Grade 6	⇨	CMAS Grade 7
8	CMAS Grade 6	⇨	CMAS Grade 7	⇨	CMAS Grade 8
9	CMAS Grade 7	⇨	CMAS Grade 8	⇨	PSAT 9**
10	CMAS Grade 8	⇨	PSAT 9**	⇨	PSAT 10
11	CMAS Grade 9	⇨	PSAT 10**	⇨	SAT 11

* Middle and high school math pathways are not represented in this graphic.
** No growth was reported crossing from CMAS ELA to PSAT EBRW due to differences in the assessment constructs

On Track Growth

- On Track Growth is an additional metric calculated for some state assessments (currently WIDA ACCESS for ELLs and CMAS).
- On Track Growth bridges achievement and growth, indicating whether a student is On Track to attain a specified performance target within a given timeframe.
- Details about the development and implementation plans for On Track Growth are beyond the scope of this presentation, but additional resources can be found here regarding:
  - **WIDA On track Growth**

    http://www.cde.state.co.us/accountability/access-growth-to-standard-fact-sheet_final_july-2018
  - **CMAS On track Growth**

    http://www.cde.state.co.us/accountability/growth-to-standard_11-29-18

Data, Reports, & Resources

What Data & Reports are typically available to Stakeholders?

- CMAS Student Detail files & Individual Student Growth Reports
  - Available to districts, includes student level growth results.
  - The reports have been prepared for parents to explain the performance and growth of their students on the CMAS PARCC assessments.
- All schools, districts, state summary for CMAS growth (Excel Workbook)
  - Includes overall performance and performance by level.
  - Posted here: http://www.cde.state.co.us/accountability/growthmodelsummarydata
- Individual school and district summary reports
  - One-page CMAS reports for districts and schools that include median growth percentiles overall, by grade, and by disaggregated groups by year (i.e. 2017, 2018 and 2019). Also, comparison data for the district and state are included.
  - Posted here: http://www.cde.state.co.us/schoolview/coloradogrowthmodel
- SAT Student Detail files, State Summary Files, and Summary Reports

Additional Growth Resources

- **Growth Fact Sheet**: a parent friendly overview of how the Colorado growth model results are calculated and what they mean.
  http://www.cde.state.co.us/communications/growthfactsheet2018

- **Top Ten Myths about Growth & Accountability**: a fact sheet that addresses the most common misunderstandings related to the Colorado Growth Model and state accountability.
  http://www.cde.state.co.us/communications/growthfactsheet2018

- **Colorado Growth Model:** The purpose of this fact sheet is to provide a brief technical orientation to the Colorado Growth Model.
  http://www.cde.state.co.us/accountability/colorado-growth-model_1-3-19

- **Growth Data, It Matters and It's Complicated (by the DQC):**
  This is an external report that summarizes how growth data is considered in accountability systems across the nation. https://dataqualitycampaign.org/resource/growth-data-it-matters-and-its-complicated/

- **Other Growth Resources:** http://www.cde.state.co.us/accountability/coloradogrowth