## Technical Advisory Panel Meeting

February 9, 2023

## Welcome \& Introductions

- Welcome!
- The purpose of the TAP is to provide non-binding technical recommendations to CDE regarding the Colorado Growth Model, state accountability, and other topics as needed.
- Meeting Logistics:
- Non-members, please add your Name/Affiliation to the chat box.
- Everyone please mute your sound.
- We ask all non-TAP members to hold any comments until the end of the meeting. We do this to ensure we have sufficient time to address all meeting agenda items.


## Agenda for Today

- Welcome and Logistics
- Evaluation of Colorado’s K-12 Education Accountability System Lisa Medler
- Discussion Item
- New Post Secondary and Workforce Readiness Measures Analysis - Marie Huchton
- Decision Item
- Wrap-Up



## Evaluation of Colorado's K-12 Education Accountability System Lisa Medler

Discussion Item


## Overview of the Evaluation of Colorado's K-12 Education Accountability System

- HB 21-1294: Audit of Statewide Education Accountability Systems
- Audit overseen by the Office of the State Auditor. They selected HumRRO to collect information and evaluate the system.
- Report was released publicly by the Legislative Audit Committee on December 12, 2022. Posted on the State Auditor's Office website: www.colorado.gov/auditor. OSA and HumRRO also presented the report at the December State Board of Education meeting. Presentation is here (at about 20-min marker). Board materials are here.
- The intent was to determine whether the current system:
- Meets the goals and intentions of the General Assembly, as stated in the legislative declarations set forth in Section 22-7-1002, C.R.S., and Section 22-11-102, C.R.S.
- Contains institutional or cultural biases based on race, ethnicity, religion, sex, sexual orientation, nationality, disability, age, or economic status.
- Provides an accurate, credible, and comparable assessment of public education throughout the state.


## TAP Discussion: Key Takeaways from the Report

- Note capture:
https://docs.google.com/document/d/12Dv8RPoC2IBiUertihy NuJKYURpDDvWB4wzjpCqD4zO/edit
- TAP Members: Lisa M will try to capture notes from your discussion, but feel free to jump in there and add your comments


## TAP Discussion: Areas for further follow up or next steps

- Note capture:
https://docs.google.com/document/d/12Dv8RPoC2IBiUertihy NuJKYURpDDvWB4wzjpCqD4zO/edit
- TAP Members: Lisa M will try to capture notes from your discussion, but feel free to jump in there and add your comments


## Cheat Sheet: High Level Summary

- Overall: Accountability System "... provide[s] a reasonable and appropriate basis for objectively measuring the performance of districts and public schools...did not identify any significant gaps in the design ...schools and districts are assigned performance ratings consistent with their underlying performance indicator scores."
- Disaggregated Student Groups: "...found statistically significant differences in academic outcomes among some student groups...Hispanic or Black students, ...students receiving free or reduced lunches, and ...students with disabilities...we caution against over-interpreting the results...could indicate the presence of unintended barriers...[or] differences could also be attributed to other factors..."
- State Interventions: "...lower performing schools that participated in ... intensive state-supported interventions ...generally experienced more gains or fewer losses in academic achievement, academic growth, and graduation rates than non-participating schools."
- Postsecondary \& Workforce Readiness: "...high schools with a higher number of [AP] ...course offerings or a higher percentage of career and technical education graduates tended to have better student academic achievement, academic growth, and postsecondary and workforce readiness outcomes. ...schools serving higher proportions of students receiving free or reduced lunch tended to have fewer [AP] opportunities ...or did not have [IB] programs."
- Access and Use of Accountability Data: "... accountability data are being used to help inform decision making in support of students' educational outcomes. However, the results also indicate that these data need to be made more accessible, understandable, and useful, especially for parents."


## Cheat Sheet: More Details

## Chapters 1 \& 2

- On track growth is being developed based upon input from field
- Frustration by some educators at the constant change in accountability measures (e.g., transition from ACT to PSAT/SAT)
- Perception by many educators that the system is punitive, especially for lower performing schools (e.g., community perception can impact enrollment and teacher recruitment).
- Not clear consensus from field on next steps, but stakeholders should be consulted
- Disaggregated groups of students did not tend to meet achievement and growth expectations, even in higher performing schools.
- More variability in aggregated assessment results for smaller systems
- Assessment participation rates do not have a significant effect on plan type assignments.


## Cheat Sheet: More Details (cont.)

## Chapter 3

- HS performance indicators are positively linked to the number of AP courses and \% of CTE graduates. Sites with higher FRL tended to have fewer of these opportunities for students.
- Growth model meets/partially meets state accountability objectives. Partially meets comes from imprecision of growth models.
- Potential error associated with individual students or smaller schools
- Growth correlations of school-level performance attributes are not as strong as mean scale score correlations
- An error estimate has not been typically included in reporting, including public reporting
- Attributes of the growth model make it difficult to report on student success in making a year's growth or more in a year's time as outlined in statute
- There are limitations of the growth model for high stakes decision making for individual students and small schools
- Recognition that the growth model does build from the individual student level and does indicate student improvement
- SchoolView does provide public access to growth data in alignment with statute


## Cheat Sheet: More Details (cont.)

## Chapter 3 (cont.)

- Accountability data are being used to help inform decision making in support of students.
- Despite the volume of reports and resources, there is still a need for more resource development that is accessible, understandable and useful, especially for parents.
- Smaller districts could use even more help in interpreting state data.


## Chapter 4

- Schools participating in the optional state intensive interventions experienced more gains and fewer losses. High schools experienced higher graduation rates.


New Postsecondary \& Workforce Readiness Sub-Indicators

Marie Huchton


## Two New PWR Sub-Indicators

- SB17-272
- Higher achievement levels in ELA and Math, as defined by the State Board, on certain graduation guidelines measures
- (Accuplacer, ACT, ACT Work Keys, AP, ASVAB, Concurrent Enrollment, IB, SAT).
- HB18-1019
- Successful completion of AP, IB, and/or Concurrent Enrollment for non-ELA and non-Math courses.
- AP examination score of 3 or higher
- IB examination score of 4 or higher
- CE course grade of B or higher


## PWR Sub-Indicator Calculation Methodology

At the February 2021 meeting, TAP recommended using the same calculation methodology for both sub-indicators:
unduplicated count of graduates that have met at least one measure
graduates identified by the school / district
$\checkmark$ Graduation Guidelines reporting is required for graduates
$\checkmark$ Consistency in the denominator between the two sub-indicators
$\checkmark$ Counting at graduation allows for a complete dataset across the state
o About $85 \%$ of IB examinations are taken in the final year of high school
o About $65 \%$ of AP examinations are taken in the final two years of high school
$\checkmark$ A graduate is counted in the numerator if they met the requirement at any time during grades 9-12.

## Higher Bar Metric Options, Cut Scores, and Data Sources

| Measure | Higher Bar \& PWR Diploma Endorsement Cut Scores |  | Data Source |
| :---: | :---: | :---: | :---: |
|  | Reading, Writing \& Communicating | Mathematics |  |
| ACCUPLACER Classic | 80 Reading Comprehension or 95 Sentence Skills | 85 Elementary Algebra | GG Collection |
| ACCUPLACER <br> Next Generation | 246 Writing* | 265 Arithmetic or 240 Quantitative Reasoning or Advanced Algebra | GG Collection |
| ACT | 18 ACT English | 22 ACT Math | GG Collection |
| ACT WorkKeys | Silver | Silver | GG Collection |

## Higher Bar Metric Options, Cut Scores, and Data Sources

| Measure | Higher Bar \& PWR Diploma Endorsement Cut Scores |  | Data Source |
| :---: | :---: | :---: | :---: |
|  | Reading, Writing \& Communicating | Mathematics |  |
| Advanced <br> Placement (AP) | 3 | 3 | College Board, GG Collection |
| ASVAB | 50 | 50 | GG Collection |
| Concurrent Enrollment (credit bearing course) | Passing grade of C or higher | Passing grade of C or higher | CDHE, <br> GG Collection |
| International <br> Baccalaureate (IB) | 4 | 4 | IB, GG Collection |
| SAT | 480 | 530 | CO SAT, GG Collection |

## HB18-1019- AP, IB, Concurrent Enrollment for non-ELA/Math Subjects

HB18-1019 is intended to complement SB17-272, giving schools and districts credit for students demonstrating high achievement and postsecondary readiness in subjects other than ELA or Math.

| Measure |  | Data Source |
| :--- | :---: | :---: |
| Advanced Placement <br> (AP) | 3 | College Board |
| International <br> Baccalaureate (IB) | 4 | IB |
| Concurrent Enrollment <br> (credit bearing course) | Passing grade of B or <br> higher | CDHE |

## Defining ELA and Math

- Guidance from CDE's PWR office around Graduation Guidelines Demonstration Options allows districts to choose what AP and IB exam subjects and Concurrent Enrollment course offerings qualify as ELA and Math.
- Majority of districts are allowing a variety of social sciences and arts/humanities to count for ELA and science/technology courses to count for Math
- Districts do not submit exam name or course title being used for Graduation Guidelines collection.
- As recommended by TAP, applying strict interpretation of ELA and Math for both Higher Bar and Non-ELA/Math calculations.


## Data Build for Higher Bar and Non-ELA/Math Metrics

Advanced Placement
Exams

| International <br> Baccalaureate Exams <br> Concurrent Enrollment <br> from CDHE |
| :--- |
| Grad Guidelines <br> Collection |
| CO SAT |

Aggregated student level file. Contains 1 student record from each contributing file that provides "bestof" outcome for that data stream.

Matriculation File to establish denominator

Unique by Student ID. Includes "best-of" numerator value from all available files for Higher Bar metric and Non-ELA/Math metric

## Advanced Placement Exam Summary

Summary of AP Exam Records

|  | \# Records | \# Missing SASID | \% Missing SASID | \# Unique SASIDs |
| :--- | :---: | :---: | :---: | :---: |
| $\mathbf{2 0 1 7}$ | 81,150 | 343 | $0.4 \%$ | 48,176 |
| $\mathbf{2 0 1 8}$ | 84,704 | 373 | $0.4 \%$ | 50,156 |
| $\mathbf{2 0 1 9}$ | 86,475 | 163 | $0.2 \%$ | 51,032 |
| $\mathbf{2 0 2 0}$ | 83,916 | 84 | $0.1 \%$ | 49,211 |
| $\mathbf{2 0 2 1}$ | 75,916 | 82 | $0.1 \%$ | 45,097 |
| $\mathbf{2 0 2 2}$ | 79,386 | 164 | $0.2 \%$ | 47,199 |
| Total | 491,547 | 1209 | $0.2 \%$ | 290,871 |

- Students in AP courses took an average of 2.3 exams per year (max 14)
- Students in AP courses took an average of 3.7 exams across all years (max 24)


## Advanced Placement Exam Summary

- 34-38\% of students enrolled in AP took one or more ELA exams
- 22-24\% of students enrolled in AP took one or more Math exams
- 80-83\% of students enrolled in AP took one or more non-ELA/non-Math exams


## Students Meeting AP Exam Higher Bar Expectations

|  | ELA |  |  |  | Math |  |  | Non-ELA/Math |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Student <br> Count | \# Meeting <br> HB | \% Meeting <br> HB | Student <br> Count | \# Meeting <br> HB | \% Meeting <br> HB | Student <br> Count | \# Meeting <br> HB | Meeting <br> HB |  |
| $\mathbf{2 0 1 7}$ | 18,320 | 10,410 | $56.8 \%$ | 11,634 | 6,851 | $58.9 \%$ | 38,782 | 23,465 | $60.5 \%$ |  |
| $\mathbf{2 0 1 8}$ | 18,258 | 10,504 | $57.5 \%$ | 11,358 | 6,877 | $60.5 \%$ | 41,158 | 25,613 | $62.2 \%$ |  |
| $\mathbf{2 0 1 9}$ | 17,868 | 10,182 | $57.0 \%$ | 11,295 | 6,858 | $60.7 \%$ | 42,440 | 26,418 | $62.2 \%$ |  |
| $\mathbf{2 0 2 0}$ | 17,400 | 11,493 | $66.1 \%$ | 10,914 | 6,655 | $61.0 \%$ | 40,992 | 27,458 | $67.0 \%$ |  |
| $\mathbf{2 0 2 1}$ | 15,796 | 9,049 | $57.3 \%$ | 9,676 | 5,433 | $56.1 \%$ | 37,448 | 22,284 | $59.5 \%$ |  |
| $\mathbf{2 0 2 2}$ | 15,972 | 10,786 | $67.5 \%$ | 10,510 | 6,450 | $61.4 \%$ | 39,214 | 24,383 | $62.2 \%$ |  |

## International Baccalaureate Exam Summary

Summary of IB Exam Records

|  | \# Records | \# Missing SASID | $\%$ Missing SASID | \# Unique SASIDs |
| :--- | :---: | :---: | :---: | :---: |
| $\mathbf{2 0 1 8}$ | 12,217 | 39 | $0.3 \%$ | 3,267 |
| $\mathbf{2 0 1 9}$ | 11,416 | 36 | $0.3 \%$ | 3,210 |
| $\mathbf{2 0 2 0}$ | 11,229 | 137 | $1.2 \%$ | 3,363 |
| $\mathbf{2 0 2 1}$ | 10,272 | 9 | $0.1 \%$ | 3,161 |
| $\mathbf{2 0 2 2}$ | 10,761 | 4 | $0.0 \%$ | 3,427 |
| Total | 55,895 | 225 | $0.4 \%$ | 16,428 |

- Students in IB courses took an average of 3.2 exams per year (max 9)
- Students in IB courses took an average of 3.8 exams across all years (max 12)


## International Baccalaureate Exam Summary

- 47-51\% of students enrolled in IB took one or more ELA exams
- 37-46\% of students enrolled in IB took one or more Math exams
- 87-91\% of students enrolled in IB took one or more non-ELA/nonMath exams


## Students Meeting IB Exam Higher Bar Expectations

|  | ELA |  |  | Math |  |  | Non-ELA/Math |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Student <br> Count | \# Meeting <br> HB | Meeting <br> HB | Student <br> Count | \# Meeting <br> HB | $\%$ Meeting <br> HB | Student <br> Count | \# Meeting <br> HB | Meeting <br> HB |
| $\mathbf{2 0 1 8}$ | 1,635 | 1,492 | $91.3 \%$ | 1,495 | 990 | $66.2 \%$ | 2,978 | 2,384 | $80.1 \%$ |
| $\mathbf{2 0 1 9}$ | 1,631 | 1,381 | $84.7 \%$ | 1,394 | 807 | $57.9 \%$ | 2,878 | 2,224 | $77.3 \%$ |
| $\mathbf{2 0 2 0}$ | 1,579 | 1,448 | $91.7 \%$ | 1,392 | 1,015 | $72.9 \%$ | 2,991 | 2,421 | $80.9 \%$ |
| $\mathbf{2 0 2 1}$ | 1,497 | 1,348 | $90.0 \%$ | 1,174 | 977 | $83.2 \%$ | 2,858 | 2,463 | $86.2 \%$ |
| $\mathbf{2 0 2 2}$ | 1,738 | 1,504 | $86.5 \%$ | 1,331 | 992 | $74.5 \%$ | 2,981 | 2,342 | $78.6 \%$ |

## Concurrent Enrollment Summary

Summary of Concurrent Enrollment Records

|  | \# Records | \# Missing <br> SASID | \% Missing <br> SASID | \# Remedial <br> Courses | Remedial <br> Courses | \# Unique <br> SASIDs |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2 0 1 8}$ | 119,907 | 11,591 | $9.7 \%$ | 3,895 | $3.2 \%$ | 36,630 |
| $\mathbf{2 0 1 9}$ | 132,470 | 17,119 | $12.9 \%$ | 4,098 | $3.1 \%$ | 38,552 |
| $\mathbf{2 0 2 0}$ | 145,718 | 13,761 | $9.4 \%$ | 3,792 | $2.6 \%$ | 45,313 |
| $\mathbf{2 0 2 1}$ | 138,344 | 13,327 | $9.6 \%$ | 2,304 | $1.7 \%$ | 42,930 |
| Total | 536,439 | 55,798 | $10.4 \%$ | 14,089 | $2.6 \%$ | 163,425 |

- Students enrolled in CE took an average of 2.8 courses per year (max 45)
- Students enrolled in CE took an average of 4.5 courses across all years (max 68)


## 2020-2021 Concurrent Enrollment Counts by Institution

|  | Frequency | Percent |  | Frequency | Percent |
| :--- | :---: | :---: | :--- | :---: | :---: |
| Adams State University | 800 | 0.7 | Metropolitan State University of Denver | 703 | 0.6 |
| Aims Community College | 8,393 | 6.8 | Morgan Community College | 2,472 | 2.0 |
| Arapahoe Community College | 17,182 | 14.0 | Northeastern Junior College | 1,434 | 1.2 |
| Colorado Mesa University | 2,967 | 2.4 | Otero College | 1,391 | 1.1 |
| Colorado Mountain College | 4,297 | 3.5 | Pikes Peak Community College | 13,504 | 11.0 |
| Colorado Northwestern Community College | 1,206 | 1.0 | Pueblo Community College | 7,441 | 6.0 |
| Colorado School of Mines | 17 | 0.0 | Red Rocks Community College | 7,485 | 6.1 |
| Colorado State University | 19 | 0.0 | Technical College of the Rockies | 783 | 0.6 |
| Colorado State University - Pueblo | 888 | 0.7 | Trinidad State College | 1,730 | 1.4 |
| Community College of Aurora | 12,463 | 10.1 | University of Colorado Boulder | 178 | 0.1 |
| Community College of Denver | 2,726 | 2.2 | University of Colorado Colorado Springs | 677 | 0.6 |
| Emily Griffith Technical College | 796 | 0.6 | University of Colorado Denver | 9,022 | 7.3 |
| Fort Lewis College | 348 | 0.3 | University of Northern Colorado | 730 | 0.6 |
| Front Range Community College | 20,127 | 16.4 | Western Colorado University | 1,830 | 1.5 |
| Lamar Community College | 1,414 | 1.1 | Total | 123,023 | 100.0 |

Note: Excludes records missing SASIDs or for remedial courses

## 2020-2021 Concurrent Enrollment Counts by Course (most popular)

|  | Frequency Percent | Frequency Percent |  |  |  |  | Frequency | Percent | Frequency Percent |  |  |
| :--- | :---: | :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| ENG | 17,552 | 14 | ART | 1,880 | 1.5 | HWE | 823 | 0.7 | ASL | 440 | 0.4 |
| MATH | 17,573 | 14 | NUA | 1,785 | 1.5 | CNG | 778 | 0.6 | OCOS | 436 | 0.4 |
| HIS | 5,567 | 4.5 | CIS | 1,692 | 1.4 | CAD | 773 | 0.6 | PHO | 428 | 0.3 |
| BUS | 4,905 | 4.0 | MUS | 1,499 | 1.2 | EMS | 756 | 0.6 | LEA | 422 | 0.3 |
| PSY | 4,877 | 4.0 | POS | 1,484 | 1.2 | PSCI | 730 | 0.6 | AST | 417 | 0.3 |
| LIT | 4,009 | 3.3 | MAR | 1,442 | 1.2 | ACT | 648 | 0.5 | ECE | 408 | 0.3 |
| ASE | 3,216 | 2.6 | SOC | 1,426 | 1.2 | AAA | 646 | 0.5 | GEO | 392 | 0.3 |
| COM | 3,042 | 2.5 | CSC | 1,351 | 1.1 | CAR | 589 | 0.5 | ENP | 387 | 0.3 |
| BIO | 2,783 | 2.3 | HUM | 1,286 | 1.0 | FST | 580 | 0.5 | PSYC | 351 | 0.3 |
| MGD | 2,360 | 1.9 | HIST | 1,194 | 1.0 | ACC | 577 | 0.5 | GEY | 339 | 0.3 |
| SPA | 2,089 | 1.7 | PHI | 1,186 | 1.0 | EST | 568 | 0.5 | COMM | 333 | 0.3 |
| COS | 2,055 | 1.7 | ECO | 1,146 | 0.9 | CUA | 567 | 0.5 | DPM | 320 | 0.3 |
| HPR | 1,992 | 1.6 | BIOL | 1,056 | 0.9 | MAN | 554 | 0.5 | NAT | 312 | 0.3 |
| CRJ | 1,945 | 1.6 | CHE | 955 | 0.8 | ENV | 511 | 0.4 | THE | 294 | 0.2 |
| WEL | 1,891 | 1.5 | CHEM | 830 | 0.7 | PHY | 489 | 0.4 | MOT | 279 | 0.2 |

Note: Excludes records missing SASIDs or for remedial courses

## Concurrent Enrollment Summary

- $14 \%$ of students enrolled in CE took one or more ELA courses
- $13-14 \%$ of students enrolled in CE took one or more Math courses
- 71-73\% of students enrolled in CE took one or more non-ELA/nonMath courses


## Students Meeting Concurrent Enrollment Higher Bar Expectations

|  | ELA |  |  | Math |  |  | Non-ELA/Math |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Student <br> Count | \# Meeting <br> HB | \% Meeting <br> HB | Student <br> Count | \# Meeting <br> HB | $\%$ Meeting <br> HB | Student <br> Count | \# Meeting <br> HB | $\%$ Meeting <br> HB |
| $\mathbf{2 0 1 8}$ | 14,729 | 10,990 | $74.6 \%$ | 13,877 | 8,818 | $63.5 \%$ | 76,363 | 58,276 | $76.3 \%$ |
| $\mathbf{2 0 1 9}$ | 16,014 | 11,820 | $73.8 \%$ | 15,007 | 9,562 | $63.7 \%$ | 80,799 | 61,419 | $76.0 \%$ |
| $\mathbf{2 0 2 0}$ | 18,642 | 13,922 | $74.7 \%$ | 17,922 | 12,026 | $67.1 \%$ | 91,801 | 69,474 | $75.7 \%$ |
| $\mathbf{2 0 2 1}$ | 17,552 | 13,483 | $76.8 \%$ | 17,676 | 12,480 | $70.6 \%$ | 87,795 | 67,536 | $76.9 \%$ |

## Graduation Guidelines

Summary of Grad Guidelines Records

|  | \# Records | \# Missing SASID | \% Missing SASID | \# Unique SASIDs |
| :--- | :---: | :---: | :---: | :---: |
| $\mathbf{2 0 2 1}$ | 133,941 | 3 | $0.0 \%$ | 88,283 |
| $\mathbf{2 0 2 2}$ | 186,055 | 13 | $0.0 \%$ | 105,883 |
| Total | 319,996 | 16 | $0.0 \%$ | 194,166 |

- Students in GG file had an average of 1.3 records per content per year (max 15)
- Students in GG file had an average of 1.7 records per content area across all years (max 19)

| Demonstration Option Submitted for Graduation Guidelines Collection | 2020-2021 |  |  |  | 2021-2022 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | English |  | Math |  | English |  | Math |  |
|  | Count | \% | Count | \% | Count | \% | Count | \% |
| ACCUPLACER Elementary Algebra | 0 | 0.0\% | 643 | 0.5\% | 0 | 0.0\% | 132 | 0.1\% |
| ACCUPLACER Reading Comprehension | 1,215 | 0.9\% | 0 | 0.0\% | 103 | 0.1\% | 0 | 0.0\% |
| ACCUPLACER Sentence Skills | 1,475 | 1.1\% | 0 | 0.0\% | 227 | 0.1\% | 0 | 0.0\% |
| Accuplacer Next-Generation Arithmetic | 0 | 0.0\% | 1,014 | 0.8\% | 0 | 0.0\% | 1,970 | 1.1\% |
| Accuplacer Next-Generation Quantitative Reasoning Algebra and Statistics | 0 | 0.0\% | 5,111 | 4.1\% | 0 | 0.0\% | 9,364 | 5.4\% |
| Accuplacer Next-Generation Reading | 678 | 0.5\% | 0 | 0.0\% | 924 | 0.5\% | 0 | 0.0\% |
| Accuplacer Next-Generation Writing | 6,395 | 4.8\% | 0 | 0.0\% | 9,947 | 5.3\% | 0 | 0.0\% |
| ACT | 7,070 | 5.3\% | 6,588 | 5.3\% | 5,134 | 2.8\% | 4,775 | 2.8\% |
| ACT WorkKeys | 2,565 | 1.9\% | 2,564 | 2.1\% | 11,512 | 6.2\% | 11,690 | 6.8\% |
| Advanced Algebra and Function | 0 | 0.0\% | 0 | 0.0\% | 0 | 0.0\% | 3,001 | 1.7\% |
| Advanced Placement (AP) | 9,793 | 7.3\% | 3,690 | 3.0\% | 18,278 | 9.8\% | 8,240 | 4.8\% |
| Armed Services Vocational Apptitude Battery (ASVAB) | 5,114 | 3.8\% | 5,026 | 4.0\% | 11,755 | 6.3\% | 12,252 | 7.1\% |
| Collaboratively developed standards based performance assessment | 201 | 0.2\% | 248 | 0.2\% | 210 | 0.1\% | 245 | 0.1\% |
| Concurrent Enrollment | 10,391 | 7.8\% | 8,104 | 6.5\% | 27,547 | 14.8\% | 20,545 | 11.9\% |
| District Capstone | 15,124 | 11.3\% | 14,910 | 12.0\% | 37,332 | 20.1\% | 39,443 | 22.9\% |
| Industry Certificate | 2,017 | 1.5\% | 2,015 | 1.6\% | 5,352 | 2.9\% | 5,410 | 3.1\% |
| International Baccalaureate (IB) | 248 | 0.2\% | 250 | 0.2\% | 278 | 0.1\% | 231 | 0.1\% |
| Local Measure | 37,866 | 28.3\% | 39,019 | 31.4\% | 0 | 0.0\% | 0 | 0.0\% |
| SAT | 33,789 | 25.2\% | 34,990 | 28.2\% | 57,456 | 30.9\% | 55,112 | 32.0\% |
| Total | 133,941 |  | 124,172 |  | 186,055 |  | 172,410 |  |

## Higher Bar Cuts Applied to 2021-2022 Grad Guidelines Results by Demonstration Option

|  | ELA |  |  | Math |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Student <br> Count | Meeting <br> HB | Meeting <br> HB | Student <br> Count | \# Meeting <br> HB | Meeting <br> HB |
| ACCUPLACER Elementary Algebra | 0 | 0 | -- | 132 | 53 | $40.2 \%$ |
| ACCUPLACER Reading <br> Comprehension | 103 | 78 | $75.7 \%$ | 0 | 0 | -- |
| ACCUPLACER Sentence Skills | 227 | 63 | $27.8 \%$ | 0 | 0 | -- |
| ACT | 5,134 | 4,934 | $96.1 \%$ | 4,775 | 3,520 | $73.7 \%$ |
| ACT WorkKeys | 11,512 | 7,350 | $63.8 \%$ | 11,690 | 6,969 | $59.6 \%$ |
| Advanced Placement | 18,278 | 12,463 | $68.2 \%$ | 8,240 | 5,574 | $67.6 \%$ |
| Armed Services Vocational Apptitude <br> Battery (ASVAB) | 11,755 | 4,579 | $39.0 \%$ | 12,252 | 4,799 | $39.2 \%$ |
| Concurrent Enrollment | 27,547 | 26,414 | $95.9 \%$ | 20,545 | 19,535 | $95.1 \%$ |
| International Baccalaureate | 278 | 253 | $91.0 \%$ | 231 | 206 | $89.2 \%$ |
| Next-Generation Arithmetic | 0 | 0 | -- | 1,970 | 436 | $22.1 \%$ |
| Next-Generation Quantiative <br> Reasoning Algebra and Statistics | 0 | 0 | -- | 9,364 | 7,113 | $76.0 \%$ |
| Next-Generation Writing | 9,947 | 6,775 | $68.1 \%$ | 0 | 0 | -- |
| SAT | 57,456 | 41,679 | $72.5 \%$ | 55,112 | 27,231 | $49.4 \%$ |

## Higher Bar Cuts Applied to 2021-2022 Grad Guidelines Results by Content Area

## Students Meeting Grad Guidelines Higher Bar Expectations

|  | ELA |  |  | Math |  |  | Both ELA \& Math |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Student <br> Count | \# Meeting <br> HB | \% Meeting <br> HB | Student <br> Count | \# Meeting <br> HB | \% Meeting <br> HB | Student <br> Count | \# Meeting <br> HB | \% Meeting <br> HB |
| $\mathbf{2 0 2 1}$ | 84,982 | 37,289 | $43.9 \%$ | 85,124 | 28,707 | $33.7 \%$ | 88,283 | 25,956 | $29.4 \%$ |
| $\mathbf{2 0 2 2}$ | 102,980 | 65,582 | $63.7 \%$ | 100,917 | 51,366 | $50.9 \%$ | 105,883 | 47,437 | $44.8 \%$ |

Summary of Colorado SAT Records

|  | \# Records | \# Missing SASID | \% Missing SASID | \# Unique SASIDs |
| :--- | :---: | :---: | :---: | :---: |
| $\mathbf{2 0 1 8}$ | 62,948 | 20 | $0.0 \%$ | 62,928 |
| $\mathbf{2 0 1 9}$ | 66,183 | 1 | $0.0 \%$ | 66,182 |
| $\mathbf{2 0 2 1}$ | 67,363 | 5 | $0.0 \%$ | 67,353 |
| $\mathbf{2 0 2 2}$ | 67,524 | 11 | $0.0 \%$ | 67,513 |
| Total | 264,018 | 37 | $0.0 \%$ | 16,428 |

Students Meeting CO SAT Higher Bar Expectations

|  | ELA |  |  |  | Math |  |  | Both ELA \& Math |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Student <br> Count | \# Meeting <br> HB | Meeting <br> HB | Student <br> Count | \# Meeting <br> HB | Meeting <br> HB | Student <br> Count | \# Meeting <br> HB | Meeting <br> HB |  |
| $\mathbf{2 0 1 8}$ | 62,928 | 34,635 | $55.0 \%$ | 62,928 | 22,743 | $36.1 \%$ | 62,928 | 21,559 | $34.3 \%$ |  |
| $\mathbf{2 0 1 9}$ | 66,182 | 33,931 | $51.3 \%$ | 66,182 | 22,597 | $34.1 \%$ | 66,182 | 21,349 | $32.3 \%$ |  |
| $\mathbf{2 0 2 1}$ | 67,353 | 30,706 | $45.6 \%$ | 67,353 | 18,625 | $27.7 \%$ | 67,353 | 17,809 | $26.4 \%$ |  |
| $\mathbf{2 0 2 2}$ | 67,513 | 31,749 | $47.0 \%$ | 67,513 | 19,116 | $28.3 \%$ | 67,513 | 18,061 | $26.8 \%$ |  |

Note that all non-participants on SAT are counted as not meeting HB

## Additional Aggregation and Matriculation Denominator

- After collapsing each data source so it contains only 1 record per SASID per year containing the "best-of" outcome for that data stream.
- Combine all data source files into a single file, max 1 record per SASID per data source per year.
- Add in denominator for the cohort graduating in spring 2021 (from matriculation file), total 61,643 students
- Using this matriculation denominator and matching in all available records from the aggregated measure data set, yields 153,433 total records across all data sources with an average of 2.1 submitted data sources per student across all years (max 10)


## Final Aggregation to Unique by SASID for 2021 graduating cohort

- Collapse across data sources and years so final file contains only 1 record per SASID, the "best-of" outcome across all data sources.
- Calculate final Higher Bar for ELA/Math metric where both ELA and Math variables indicate student met higher bar.

|  | Total <br> Student <br> Count | ELA |  | Math |  | Both ELA \& Math |  | Non-ELA/Math |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | \# Meeting HB | \% Meeting HB | \# Meeting HB | \% Meeting HB | \# Meeting HB | \% Meeting HB | \# Meeting HB | \% Meeting HB |
| 2021 | 60,343 | 27,746 | 46.0\% | 22,366 | 37.1\% | 19,627 | 32.5\% | 26,693 | 44.2\% |

## 2021 Distribution of Schools by Percent of Students Meeting ELA \& Math Higher Bar



Note that AECs and
schools with less than 16
graduates in 2021 are

## 2021 Distribution of Schools by Percent of Students Meeting Non-ELA/Math Higher Bar



## Correlations to Framework Total Percent of Points Earned



Note that AECs and schools with Insufficient State Data ratings in 2022 are excluded

## Correlations to Achievement Indicator Percent of Points Earned




Note that AECs and schools with Insufficient State Data ratings in 2022 are excluded

## Correlations to Growth Indicator Percent of Points Earned



Note that AECs and schools with Insufficient State Data ratings in 2022 are excluded

## Correlations to PWR Indicator Percent of Points Earned



Note that AECs and schools with Insufficient State Data ratings in 2022 are excluded

## Correlations to Framework Total Percent of Points Earned by Rural Designation



# Correlations to Framework Total Percent of Points Earned by District Setting 



## Correlations to School Demographics- Percent Eligible for Free- or Reduced-Price Lunch Programs



Note that AECs are included

## Correlations to School DemographicsPercent of Minority Students



Note that AECs are included

## Correlations to School DemographicsPercent of Students with Disabilities



Note that AECs are included

## Correlations to School DemographicsPercent of English Learners



Note that AECs are included

- What questions and/or concerns do TAP members have about the results from and implications of the new PWR metrics?
- Does the TAP recommend moving forward with the current calculation methodologies for each metric?
- Does the TAP have additional suggestions or recommendations on communicating about these new metrics and incorporating them into the frameworks?


## Next Steps for New PWR Indicators

- Discuss potential reporting and framework weighting scenarios
- Plan for both new PWR metrics to be included for informational purposes in fall 2023 frameworks, and for points in 2024.


## Technical Advisory Panel

- Meeting Summary
- Suggested future analysis
- TAP recommendations from this meeting
- Public Comment
- Close Meeting
- Next Scheduled Meeting: March 8 ${ }^{\text {th }}, 1-4$ pm

