COLORADO
Department of Education

Technical Advisory Panel Meeting

March 22, 2018

Technical Advisory Panel (3/22/18)

- Welcome/Introductions
- New Member Update
  - Lisa Berdie, A+ Colorado
  - CASB Appointment forthcoming

Should the new ESSA 4-year cap for including FEP students in the EL disaggregation be implemented for the performance frameworks?

Comparison of Alternatives

	Pros	Cons	ESSA	Factors
Current: ELL subgroup includes NEP, LEP, FEP and FELL.	- Consistent with previous SPF/DPF reporting - Includes more FEP students many years out of program, so could result in higher achievement outcomes	- Does not align with revised October count collection	- Does not align with ESSA	
Proposal 1: ELL subgroup includes NEP, LEP, FEP. FELL students are excluded.	- Aligns with revised October count collection	- Does not align with previous SPF/DPF reporting - May result in slightly lower achievement outcomes	- Aligns with ESSA	

Impact Data- Anticipated for 2018

Language Proficiency- October Count 2017-2018		
	Count	%
FELL - Former ELL	11845	2.2%
FEP Exit Year 2	7287	1.4%
FEP Exit Year 1	6533	1.2%
FEP Monitor Year 2	8084	1.5%
FEP Monitor Year 1	11016	2.1%
LEP - Limited English Proficient	48292	9.1%
NEP - Non English Proficient	13622	2.6%
Not Applicable	417866	78.4%
PHLOTE	8201	1.5%
Total	532746	

Impact

- 2017 CMAS Average Change in School Student N-count and Mean Scale Score, including and excluding FELL/4-year FEP

	Difference in N Count				Difference in Mean Scale Score			
	Valid N	Minimum	Mean	Standard Deviation	Valid N	Minimum	Mean	Standard Deviation
Elementary	1043	-11.00	-.09	.59	1043	-1.03	-.01	.06
Middle	533	-124.00	-12.74	17.16	533	-8.25	-.75	1.21
High	329	-103.00	-10.98	15.34	329	-11.61	-1.15	2.17

- Note that these counts are only approximate as CDE was not previously differentiating between FEP students for the first four years and after 4 years.

TAP Vote

- Should the new ESSA 4-year cap for including FEP students in the EL disaggregation be implemented for the performance frameworks?

1. **Current Practice-** ELL subgroup includes NEP, LEP, FEP and FELL.

2. **Alternative Proposal-** ELL subgroup includes NEP, LEP, FEP (Monitor 1&2, Exit 1&2). FELL students are excluded.

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Disaggregated Measures for SAT and Dropout

Technical Advisory Panel

March 22, 2018

Decision Item for Today

Should Dropout rate and SAT results be reported by disaggregated group like the other framework sub-indicators and grad rate?

1. **Current Practice-** Do not report disaggregated group results for Dropout rate and SAT Mean SS

2. **Alternative Proposal-** Include disaggregated group results for Dropout rate and SAT Means SS

Note: If the decision is made to report out individual race/ethnicity categories, this structure will also be applied to Dropout and SAT disaggregated reporting.

Method and Assumptions

Universe of schools/districts

- AECs excluded
- Traditional schools and districts serving high school grades

Data Modeling

- Ran disaggregated SAT Mean Scale Score data and Dropout rate data for schools and districts *as if* these measures had been included on the 2017 Frameworks
  - used the same official frameworks schools/districts received
  - Schools/districts without data on a measure were excluded from analysis

Current Performance Framework Reporting

POSTSECONDARY AND WORKFORCE READINESS

Subject	Student Group	Count	Best Rate	Rate/Score	Participation Rate	Rating
CO SAT - EBRW^	All Students	69	*	482.5	98.6%	Approaching
CO SAT - MATH	All Students	69	*	470.9	98.6%	Approaching
Dropout	All Students	534	*	4.1%	*	Approaching
Matriculation	All Students	57	*	47.4%	*	Approaching
	2-Year Higher Education Institution	*	*	12.3%	*	-
	4-Year Higher Education Institution	*	*	31.6%	*	-
	Career & Technical Education	*	*	3.5%	*	-
Graduation	All Students	72	5yr	88.9%	*	Meets
	English Learners	16	6yr	93.8%	*	Meets
	Free/Reduced-Price Lunch Eligible	55	7yr	87.3%	*	Meets
	Minority Students	56	5yr	89.3%	*	Meets
	Students with Disabilities	16	7yr	75.0%	*	Approaching

Alternative Proposal Performance Framework

POSTSECONDARY AND WORKFORCE READINESS

Subject	Student Group	Count	Best Rate	Rate/Score	Participation Rate	Rating
CO SAT - EBRW^	All Students	69	*	482.5	98.6%	Approaching
	English Learners	15	*	479.4	98.5%	Meets
	Free/Reduced-Price Lunch Eligible	54	*	480.9	97.9%	Meets
	Minority Students	56	*	480.8	98.7%	Meets
	Students with Disabilities	N<16	*	-	*	-
CO SAT - MATH	All Students	69	*	470.9	98.6%	Approaching
	English Learners	15	*	466.0	98.5%	Meets
	Free/Reduced-Price Lunch Eligible	54	*	468.1	97.9%	Meets
	Minority Students	56	*	469.6	98.7%	Meets
	Students with Disabilities	N<16	*	-	*	-
Dropout	All Students	534	*	4.1%	*	Approaching
	English Learners	157	*	4.2%	*	Meets
	Free/Reduced-Price Lunch Eligible	225	*	4.4%	*	Meets
	Minority Students	231	*	4.2%	*	Meets
	Students with Disabilities	40	*	3.9%	*	Approaching
Matriculation	All Students	57	*	47.4%	*	Approaching
	2-Year Higher Education Institution	*	*	12.3%	*	-
	4-Year Higher Education Institution	*	*	31.6%	*	-
	Career & Technical Education	*	*	3.5%	*	-
Graduation	All Students	72	5yr	88.9%	*	Meets
	English Learners	16	6yr	93.8%	*	Meets
	Free/Reduced-Price Lunch Eligible	55	7yr	87.3%	*	Meets
	Minority Students	56	5yr	89.3%	*	Meets
	Students with Disabilities	16	7yr	75.0%	*	Approaching

Change in Point Structure

		Current State			Alternate Proposal		
All/Disag	Group	Subindicator Points Possible	Total Indicator Points (across all EMH Levels)	Total Indicator Weight	Subindicator Points Possible	Total Indicator Points (across all EMH Levels)	Total Indicator Weight
ALL	All Students	4	18	30	8	52	30
DISAG	EL Students	0	18	30	2	52	30
DISAG	FRL Students	0	18	30	2	52	30
DISAG	Minority Students	0	18	30	2	52	30
DISAG	Students with Disabilities	0	18	30	2	52	30
ALL	All Students	2	18	30	4	52	30
DISAG	EL Students	0	18	30	1	52	30
DISAG	FRL Students	0	18	30	1	52	30
DISAG	Minority Students	0	18	30	1	52	30
DISAG	Students with Disabilities	0	18	30	1	52	30
ALL	All Students	2	18	30	4	52	30
DISAG	EL Students	0	18	30	1	52	30
DISAG	FRL Students	0	18	30	1	52	30
DISAG	Minority Students	0	18	30	1	52	30
DISAG	Students with Disabilities	0	18	30	1	52	30
ALL	Matriculation	2	18	30	4	52	30
ALL	Best-of Graduation Rate	4	18	30	8	52	30
DISAG	EL Students	1	18	30	2	52	30
DISAG	FRL Students	1	18	30	2	52	30
DISAG	Minority Students	1	18	30	2	52	30
DISAG	Students with Disabilities	1	18	30	2	52	30

Analysis

- Saturation of disaggregated measures
- Performance on disaggregated measures
- Change on PWR Indicator rating compared to 2017 Framework results

Impact Analysis – Saturation
Schools

SUBCATEGORY	CO SAT - EBRW		CO SAT - MATH		DROP	
All Students	*357*		*357*		*484*	
English Learners	147	41%	147	41%	276	57%
Free/Reduced-Price Lunch Eligible	243	68%	243	68%	455	94%
Minority Students	244	68%	244	68%	449	93%
Students with Disabilities	96	27%	96	27%	366	76%

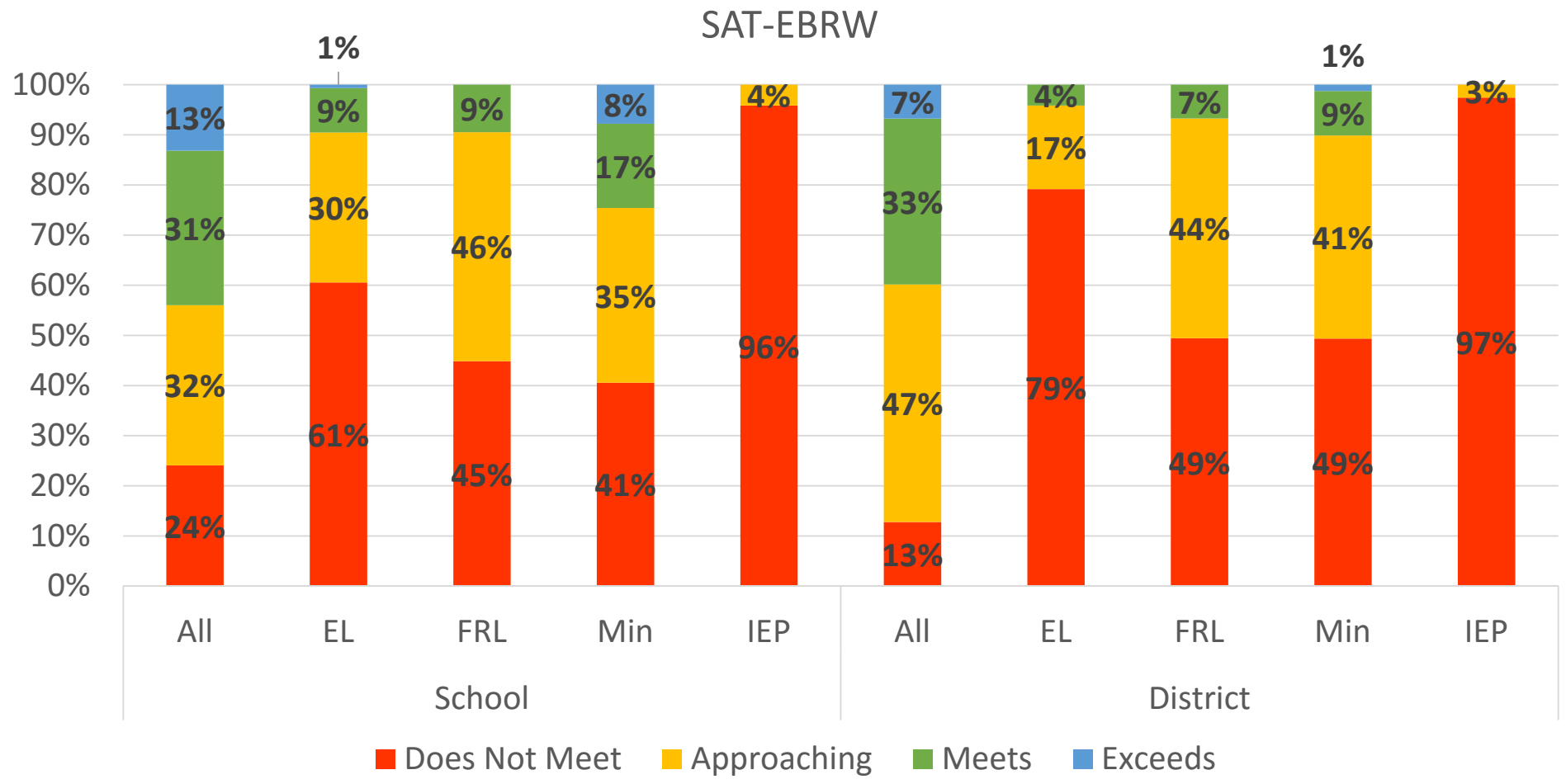
- Schools are more likely to be eligible for disaggregated measures of Dropout rate than SAT Mean SS.
- Of the SAT Mean SS measures, schools are most likely to be eligible for the FRL subgroup and the Minority subgroup measures than the EL and IEP subgroup measures.

Impact Analysis – Saturation
Districts

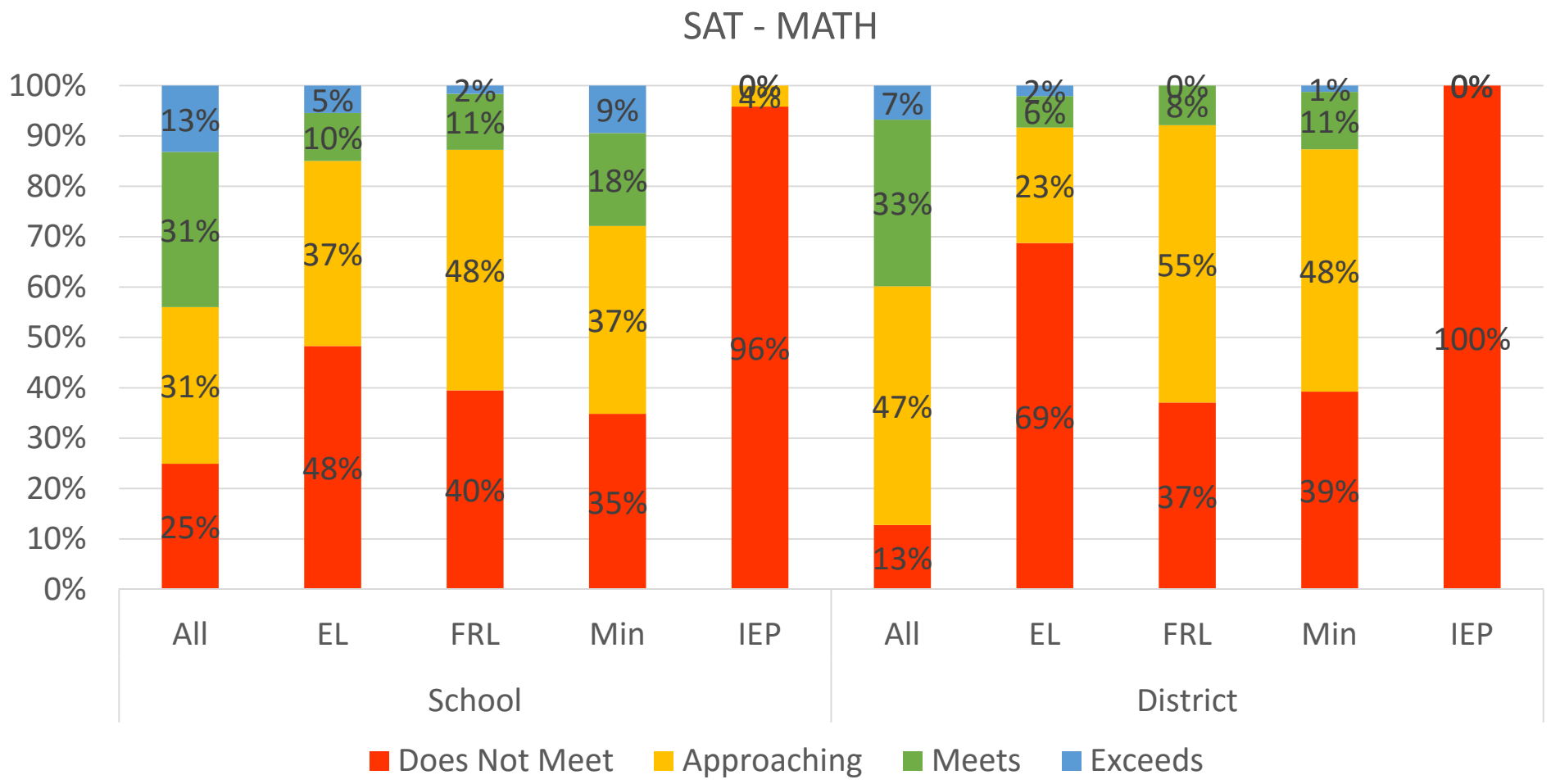
SUBCATEGORY	CO SAT - EBRW		CO SAT - MATH		DROPOUT	
All Students	*132*		*132*		*183*	
English Learners	48	36%	48	36%	101	55%
Free/Reduced-Price Lunch Eligible	88	67%	88	67%	181	99%
Minority Students	78	59%	78	59%	174	95%
Students with Disabilities	39	30%	39	30%	158	86%

- Districts are more likely to be eligible for disaggregated measures of Dropout rate than SAT Mean SS.
- Of the SAT Mean SS measures, Districts are most likely to be eligible for the FRL subgroup measure than the other subgroup measures.

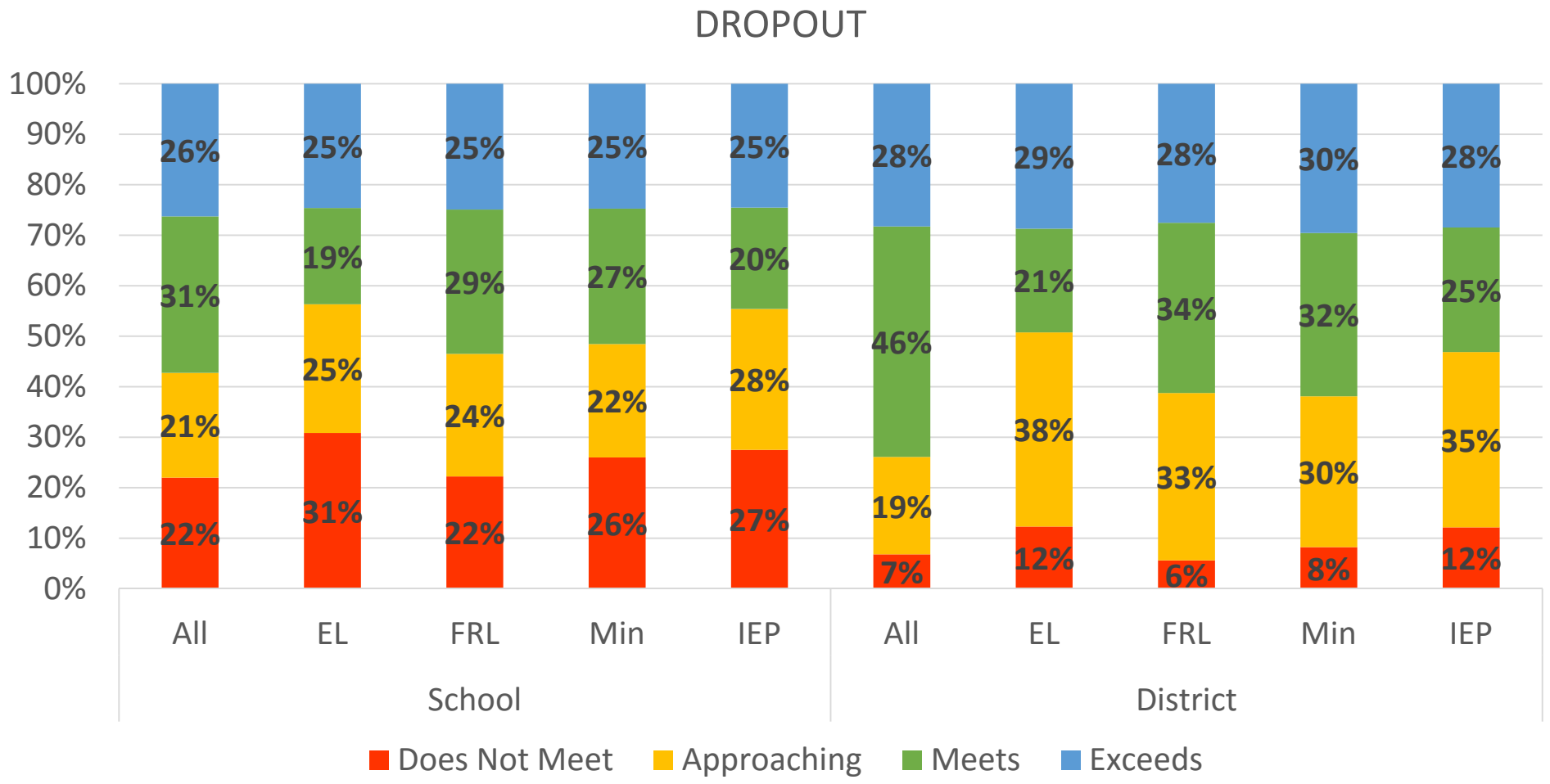
Impact Analysis – Performance
SAT - EBRW



Impact Analysis – Performance
SAT - Math



Impact Analysis – Performance
Dropout Rate



Impact Analysis – Change on PWR Indicator Rating

Schools

66 of 513 schools (12%) changed a rating category

- 16 moved up
  - 10 moved from Meets to Exceeds
  - 4 moved from Approaching to Meets
  - 2 moved from Does Not Meet to Approaching
- 50 moved down
  - 23 dropped from Exceeds to Meets
  - 24 dropped from Meets to Approaching
  - 3 dropped from Approaching to Does Not Meet

Impact Analysis – Change on PWR Indicator Rating

Schools

66 of 513 schools (12%) changed a rating category

16 moved up

- 10 moved from Meets to Exceeds
- 4 moved from Approaching to Meets
- 2 moved from Does Not Meet to Approaching

50 moved down

- 23 dropped from Exceeds to Meets
- 24 dropped from Meets to Approaching
- 3 dropped from Approaching to Does Not Meet

Districts

26 of 184 districts (14%) changed a rating category

11 moved up

- 7 moved from Meets to Exceeds
- 3 moved from Approaching to Meets
- 1 moved from Does Not Meet to Approaching

15 moved down

- 6 dropped from Exceeds to Meets
- 8 dropped from Meets to Approaching
- 1 dropped from Approaching to Does Not Meet

Decision Item for Today

Should Dropout rate and SAT results be reported by disaggregated group like the other framework sub-indicators and grad rate?

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2. **Alternative Proposal-** Include disaggregated group results for Dropout rate and SAT Means SS

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PSAT Aggregations for 2018 Traditional Multi-Year SPF

Technical Advisory Panel

March 22, 2018

Background

- Colorado started testing 10th graders on the PSAT in spring of 2015-16.
- For the 2018 performance frameworks, we will have PSAT 10 results for the years 2015-16, 2016-17, and 2017-18 (3 years total)
- For the first time this march, Colorado will be testing grade 9 students with the PSAT.
- For the 2018 performance frameworks, we will have PSAT 9 results for 2017-18 (1 year total)

Decision Item for Today

As we create the 3-year version of the 2018 performance framework, how many years of PSAT 9 and PSAT 10 should we include?

1. **Proposal #1-** 1 year PSAT 9 and 3 years PSAT 10

2. **Proposal #2-** 1 year PSAT 9 and 1 year PSAT 10

Pros And Cons

All Available Data

Pros

- Follows standing practice by using all available data in multi-year aggregations.
- Will increase the numbers of schools and districts where PSAT achievement measures are eligible on the multi-year frameworks.

Cons

- The proportional weighting within the aggregation between 10th grade and 9th grade data will not be equivalent in most schools/districts.

2018 Data Only

Pros

- Proportionately weights each grade equally within a given system.

Cons

- Does not use all available data in multi-year aggregations.
- Because not all available data is used, fewer schools than is possible will be eligible for the PSAT achievement measure on the multi-year frameworks.

Method and Assumptions

Universe of schools/districts

- AECs excluded
- Traditional schools and districts serving high school grades
  - Most relevant to schools/districts that received a multi-year framework in 2017

Data Modeling

- PSAT Mean SS, so Academic Achievement data only
- Do not have PSAT 9 results; impact focus narrowed to prevalence of measures, not performance on measures
- Created 2018 PSAT 10 and 2018 PSAT 9 dummy sets
  - 2018 PSAT 10: carry forward valid scale score count from 2017 PSAT 10
  - 2018 PSAT 9: multiplied 2017 PSAT 10 participation rate by 2017 CMAS 9 participation denominator to find projected PSAT 9 valid scale score count

Analysis

All Available Data

Sum of:

3 years of PSAT 10

- 2016 PSAT 10 valid scale score count
- 2017 PSAT 10 valid scale score count
- Projected 2018 PSAT 10 valid scale score count

- Projected 2018 PSAT 9 valid scale score count

Eligible if: sum >=16

2018 Data only

Sum of:

- Projected 2018 PSAT 10 valid scale score count
- Projected 2018 PSAT 9 valid scale score count

Eligible if: sum >=16

Impact Analysis – School Level

Official Framework	Subject	All Data Available		2018 Data Only	
		Ineligible	Eligible	Ineligible	Eligible
MULTI-YEAR	EVIDENCE-BASED READING AND WRITING	9	93	22	80
MULTI-YEAR	MATH	9	93	22	80
SINGLE-YEAR	EVIDENCE-BASED READING AND WRITING	5	268	6	267
SINGLE-YEAR	MATH	5	268	6	267

- Of the 102 schools in the set which received a multi-year framework in 2017, 13 more would be eligible for these measures in the All Data Available scenario than in the 2018 Data Only scenario.

Impact Analysis – District Level

Official Framework	Subject	All Data Available		2018 Data Only	
		Ineligible	Eligible	Ineligible	Eligible
MULTI-YEAR	EVIDENCE-BASED READING AND WRITING	7	65	16	56
MULTI-YEAR	MATH	7	65	16	56
SINGLE-YEAR	EVIDENCE-BASED READING AND WRITING	1	107	1	107
SINGLE-YEAR	MATH	1	107	1	107

- Of the 72 districts or BOCES in the set which received a multi-year framework in 2017, 9 more would be eligible for these measures in the All Data Available scenario than in the 2018 Data Only scenario.

Decision Item for Today

As we create the 3-year version of the 2018 performance framework, how many years of PSAT 9 and PSAT 10 should we include?

1. **Proposal #1-** 1 year PSAT 9 and 3 years PSAT 10

2. **Proposal #2-** 1 year PSAT 9 and 1 year PSAT 10

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Initial Steps for Creating a Growth-to-Standard Metric

Growth to Standard

Goals for Today's Session:

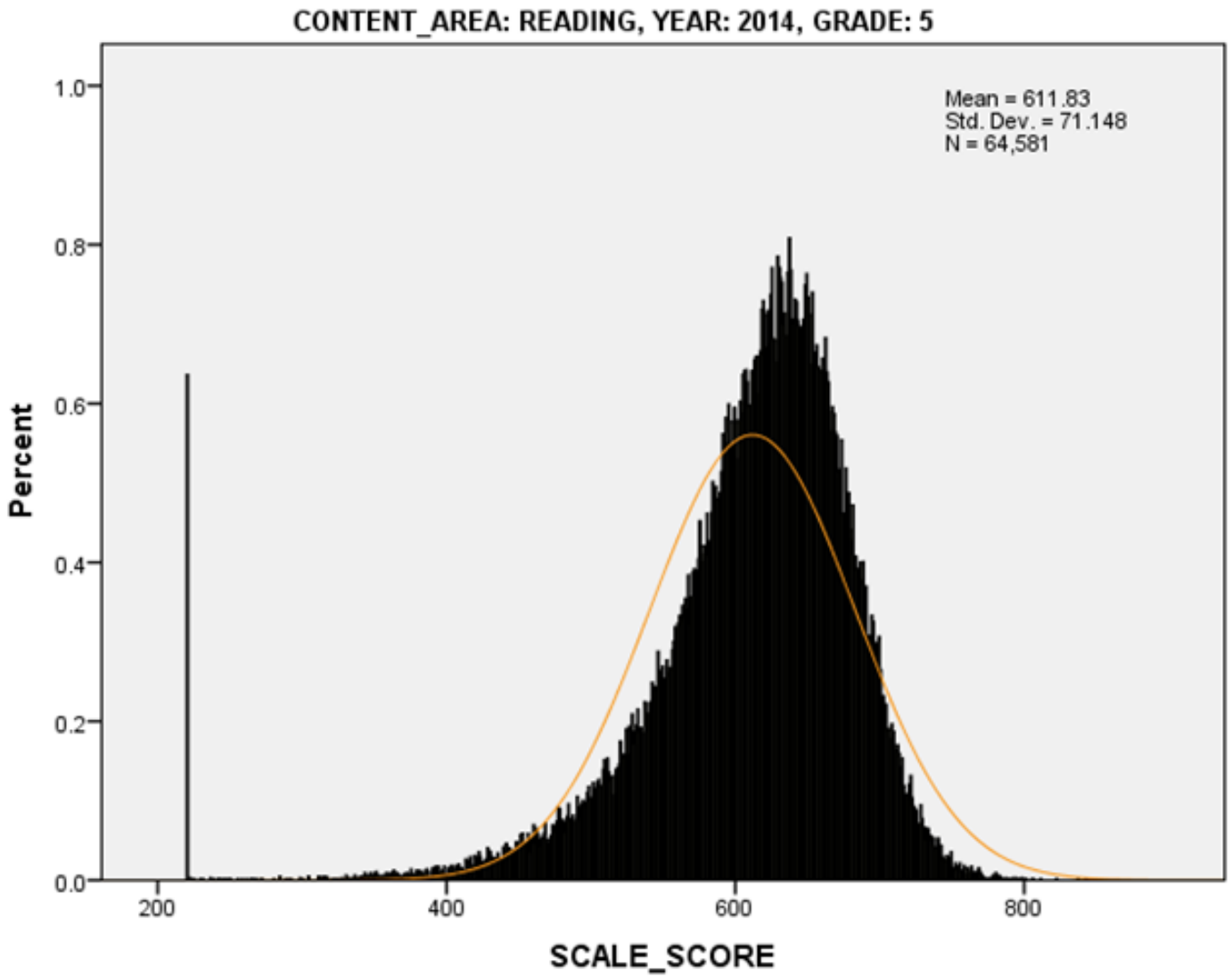
1. Review methodology options for calculating the Growth-to-Standard metric to be included on School and District Performance Frameworks (beginning with the 2019 frameworks)
2. Determine pros, cons, and further considerations for each of the proposed approaches

Historical Data for Analysis

Building the Data Set

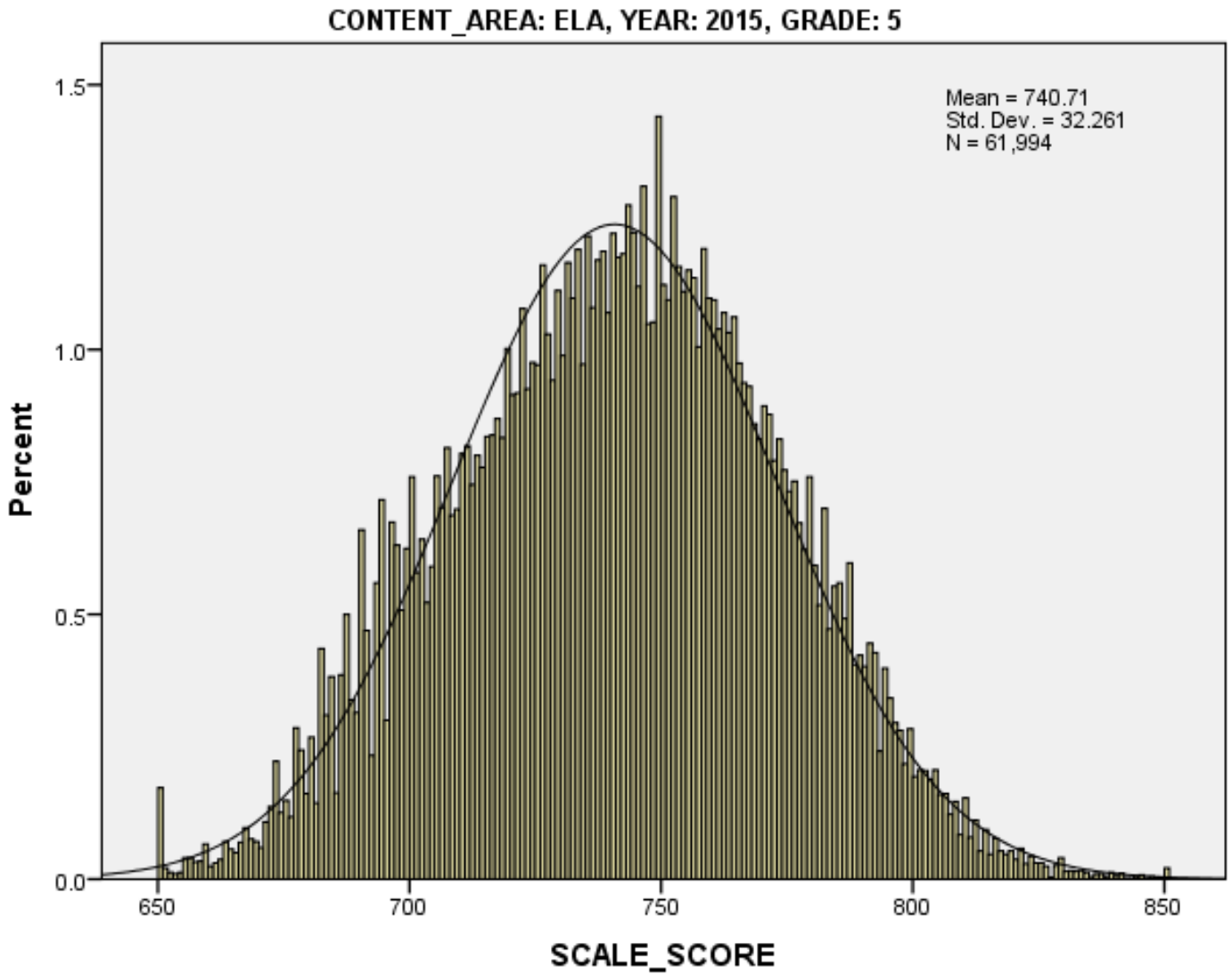
- Pulled all student test records for
  - CSAP 2003 through 2011
  - TCAP 2012 through 2014
  - CMAS 2015 through 2017
- Note for ease of labeling and discussion CSAP and TCAP will both be referred to as CSAP
- For CSAP included only Reading records and relabeled as ELA
  - Did not include Writing based on previous analyses showing that Reading results are most comparable to CMAS ELA
- Collapsed all CMAS math pathways into single Math content label
  - Current analyses are focusing on grades 3-8, future work will need to be done around individual math pathways and PSAT/SAT assessments

Example 2014 CSAP Scale Score Distribution- Grade 5 ELA



- Note the pronounced floor effect and very long negative tail with few students scoring between 210 and 350

Example 2015 CMAS Scale Score Distribution- Grade 5 ELA

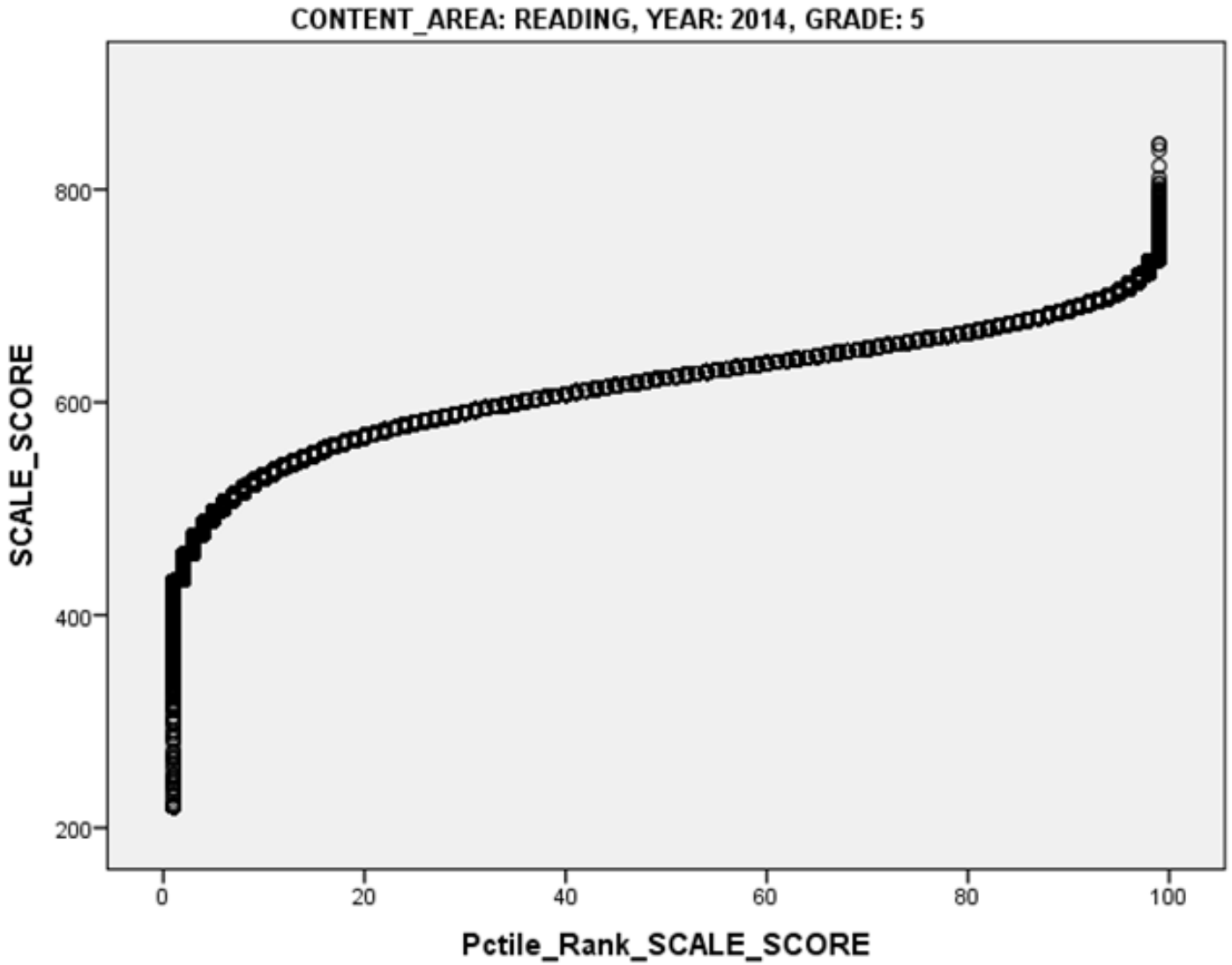


- CMAS scores are more normally distributed and centered around 750.

Standardizing Outcomes via Percentile Ranks

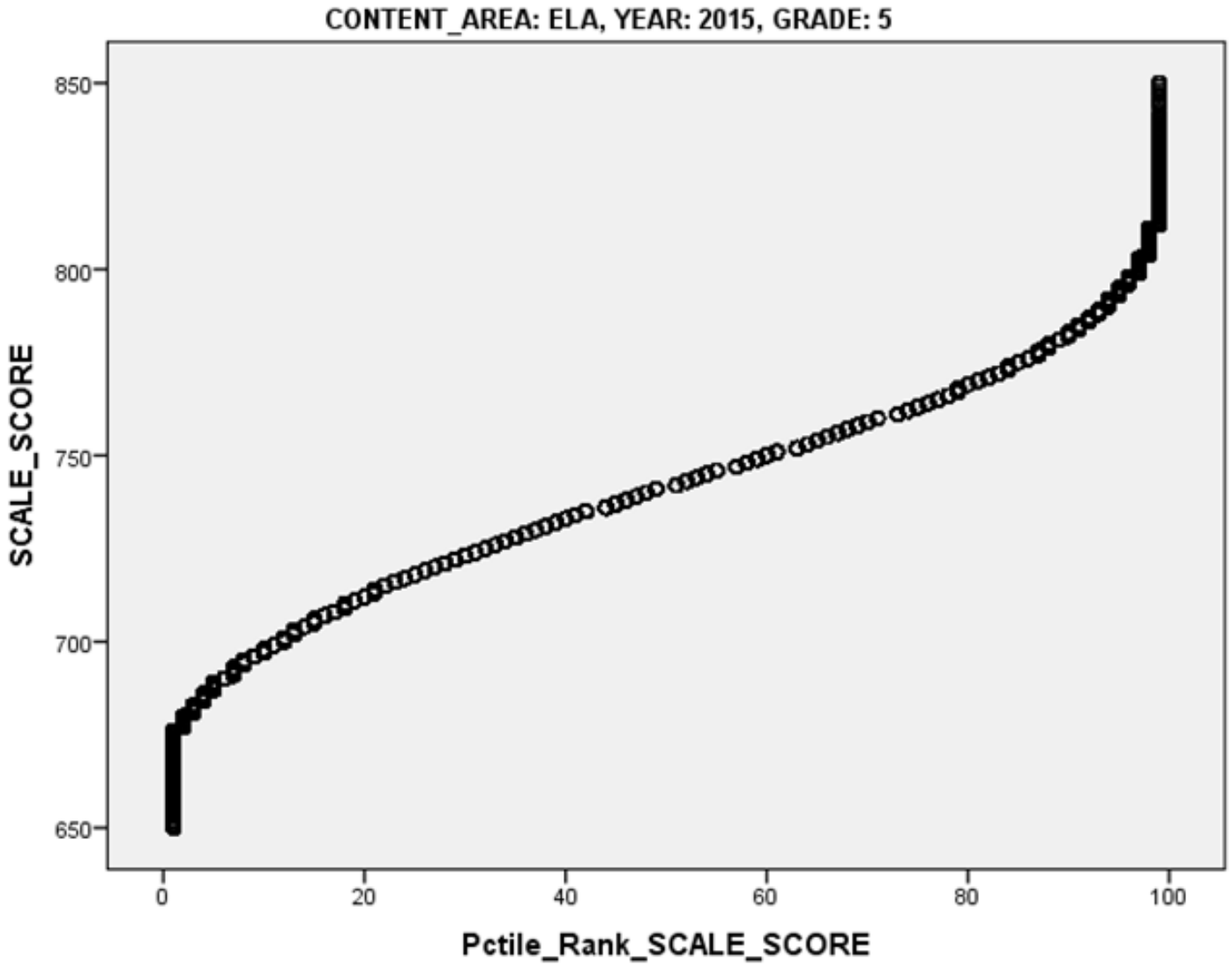
- Given the scale and score distribution differences between CSAP and CMAS, a methodology to make their results comparable is necessary.
- Based on recommendations from the TAP at least month's meeting, the scale score results for each grade, content area and year were transformed into a percentile rank.
- This ensures a consistent scale across all assessments and forces a roughly equi-interval scale that can be used for comparisons.
- To be consistent with practice on the performance frameworks, percentile ranks of 0 were coded to 1, and ranks of 100 coded to 99.

Example 2014 CSAP Percentile Rank by Scale Score- Grade 5 ELA



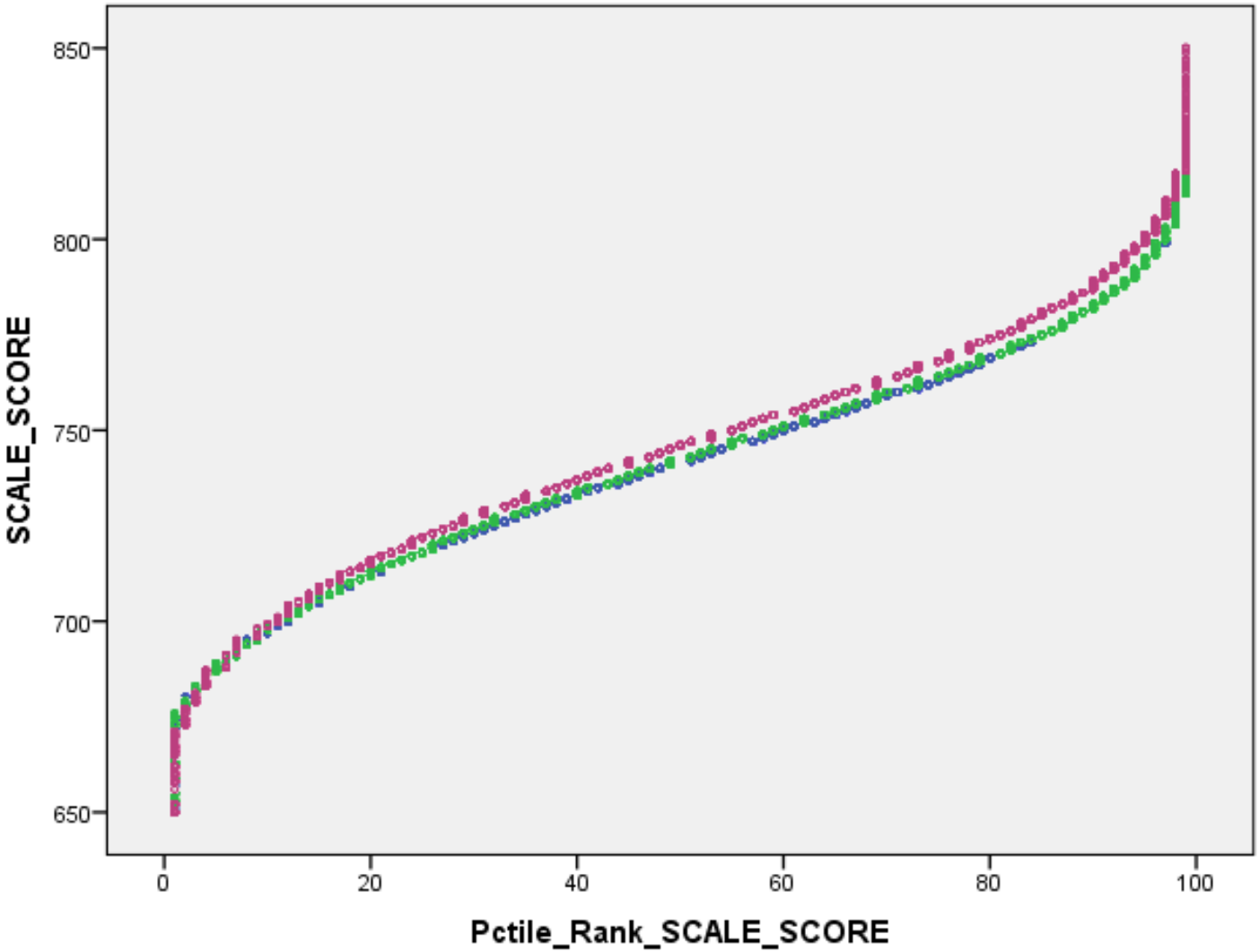
- The long tail of scale scores is now collapsed down into a small number of percentile rank points

Example 2015 CMAS Percentile Rank by Scale Score- Grade 5 ELA



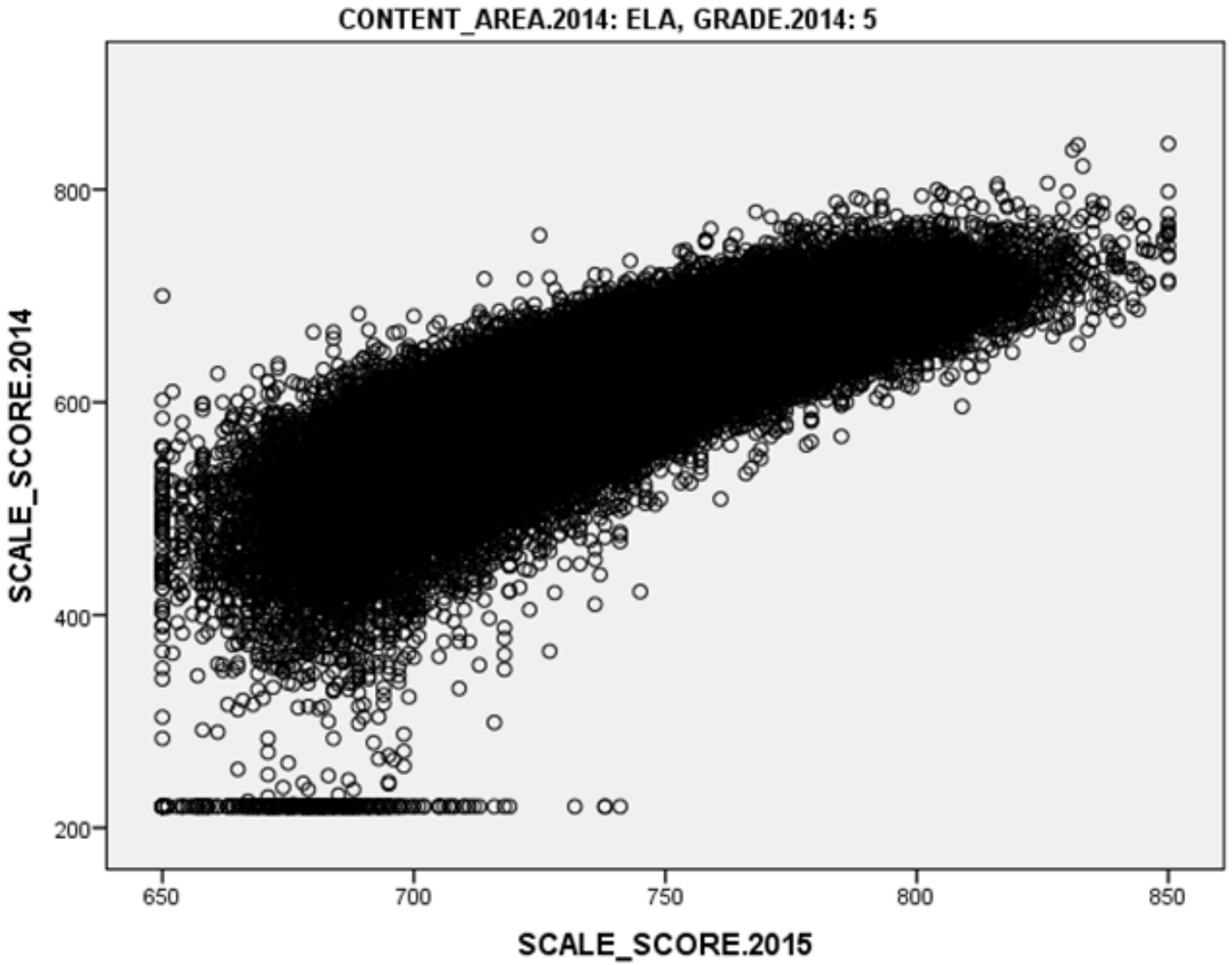
- The gaps in the percentile rank curve are due to the smaller number of scale score points available on CMAS

Consistency of Percentile Ranks Across Years- CMAS Grade 5 ELA for 2015, 2016 and 2017



- Grade 5 shows the largest differences between scale score and percentile rank distribution across years, however they are still pretty consistent.

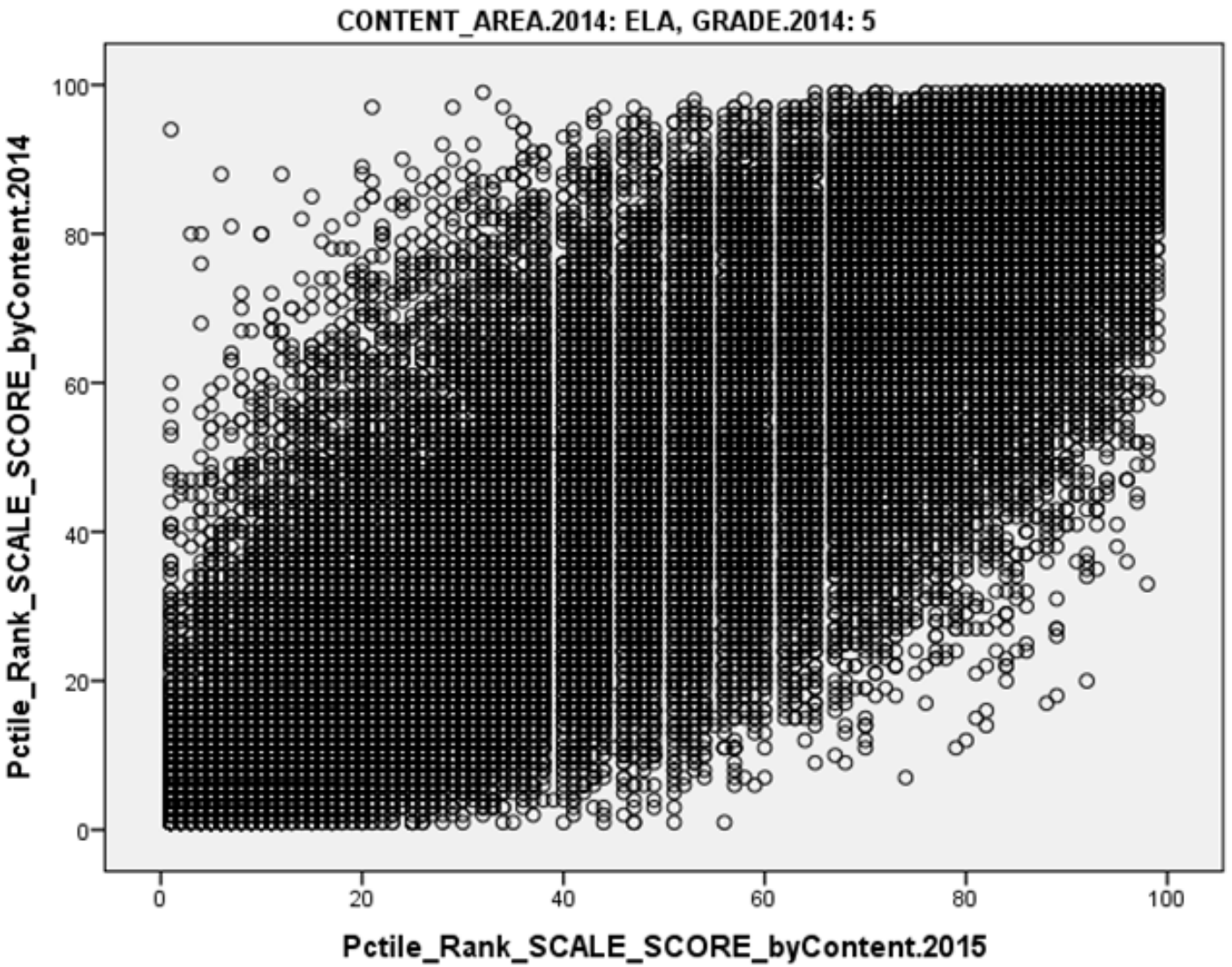
2014 CSAP v. 2015 CMAS Scale Scores- Grade 5 to Grade 6



Corr= 0.794

- The correlation in individual student scores is quite high across years, even during the transition from CSAP to CMAS

2014 CSAP v. 2015 CMAS Scale Scores- Grade 5 to Grade 6



Corr= 0.841

- Although the picture looks more disperse, the correlations between percentile ranks are consistently slightly higher than for scale scores

Scale Score and Percentile Rank Correlations- ELA

		CSAP to CSAP		CSAP to CMAS		CMAS to CMAS	
Content	Grades	2010 v 2011 Scale Score	2010 v 2011 Percentile Rank	2014 v 2015 Scale Score	2014 v 2015 Percentile Rank	2016 v 2017 Scale Score	2016 v 2017 Percentile Rank
ELA	3 to 4	.819**	.866**	.779**	.827**	.824**	.830**
		57356	57356	57190	57190	58882	58882
	4 to 5	.845**	.881**	.774**	.843**	.829**	.833**
		57789	57789	58178	58178	58331	58331
	5 to 6	.855**	.879**	.794**	.841**	.819**	.826**
		56366	56366	57043	57043	55984	55984
	6 to 7	.866**	.888**	.814**	.847**	.838**	.843**
		55669	55669	53896	53896	53623	53623
	7 to 8	.863**	.878**	.805**	.828**	.845**	.850**
		54468	54468	51350	51350	50777	50777
	8 to 9	.854**	.877**	.787**	.812**	.822**	.828**
		52723	52723	41746	41746	42614	42614

Scale Score and Percentile Rank Correlations- Math

		CSAP to CSAP		CSAP to CMAS		CMAS to CMAS	
Content	Grades	2010 v 2011 Scale Score	2010 v 2011 Percentile Rank	2014 v 2015 Scale Score	2014 v 2015 Percentile Rank	2016 v 2017 Scale Score	2016 v 2017 Percentile Rank
MATH	3 to 4	.849**	.864**	.818**	.829**	.861**	.867**
		58560	58560	58615	58615	60429	60429
	4 to 5	.883**	.889**	.835**	.850**	.859**	.864**
		57956	57956	58305	58305	58837	58837
	5 to 6	.884**	.895**	.870**	.881**	.845**	.853**
		56477	56477	57004	57004	56097	56097
	6 to 7	.897**	.913**	.865**	.884**	.857**	.869**
		55782	55782	53805	53805	53771	53771
	7 to 8	.897**	.921**	.829**	.852**	.833**	.854**
		54539	54539	51333	51333	50671	50671
	8 to 9	.897**	.914**	.763**	.789**	.790**	.808**
		52868	52868	41266	41266	42443	42443

Using Established Standards

- In creating a growth-to-standard metric, it is important to use a meaningful set of criterion-based performance standards that align with the overall design of the state assessment.
- For a standards-based assessment, such as the [CMAS] assessment, performance on the assessment is compared to a set of defined content standards. The content standards define a set of knowledge and skills the students taking the assessment are expected to demonstrate upon completion of each course or grade level. The performance standards established represent the level of competence students are expected to demonstrate on the assessment to be classified into each performance level.

Grade 5 CMAS English Language Arts/Literacy Performance Level Descriptors (Excerpt)

Level 4	Level 3
A student who achieves at **Level 4 meets expectations** for the assessed standards.	A student who achieves at **Level 3 approaches expectations** for the assessed standards.
In **reading**, the pattern exhibited by student responses indicates: • With very complex text, students demonstrate the ability to be generally accurate when quoting or referencing, showing general understanding of the text when referring to explicit details and examples in the text and when explaining inferences drawn from the text. • With moderately complex text, students demonstrate the ability to be generally accurate when quoting or referencing, showing general understanding of the text when referring to explicit details and examples in the text and when explaining inferences drawn from the text. • With readily accessible text, students demonstrate the ability to be mostly accurate when quoting or referencing, showing understanding of the text when referring to explicit details and examples in the text and when explaining inferences drawn from the text.	In **reading**, the pattern exhibited by student responses indicates: • With very complex text, students demonstrate the ability to be minimally accurate when quoting or referencing, showing minimal understanding of the text when referring to explicit details and examples in the text. • With moderately complex text, students demonstrate the ability to be generally accurate when quoting or referencing, showing basic understanding of the text when referring to explicit details and examples in the text and when explaining inferences drawn from the text. • With readily accessible text, students demonstrate the ability to be mostly accurate when quoting or referencing, showing understanding of the text when referring to explicit details and examples in the text and when explaining inferences drawn from the text.

Performance Level Cut-Scores by Percentile Rank

- The five CMAS performance levels correspond to particular scale score and percentile rank cuts
- The table below shows these values for 2017 CMAS ELA grade 5

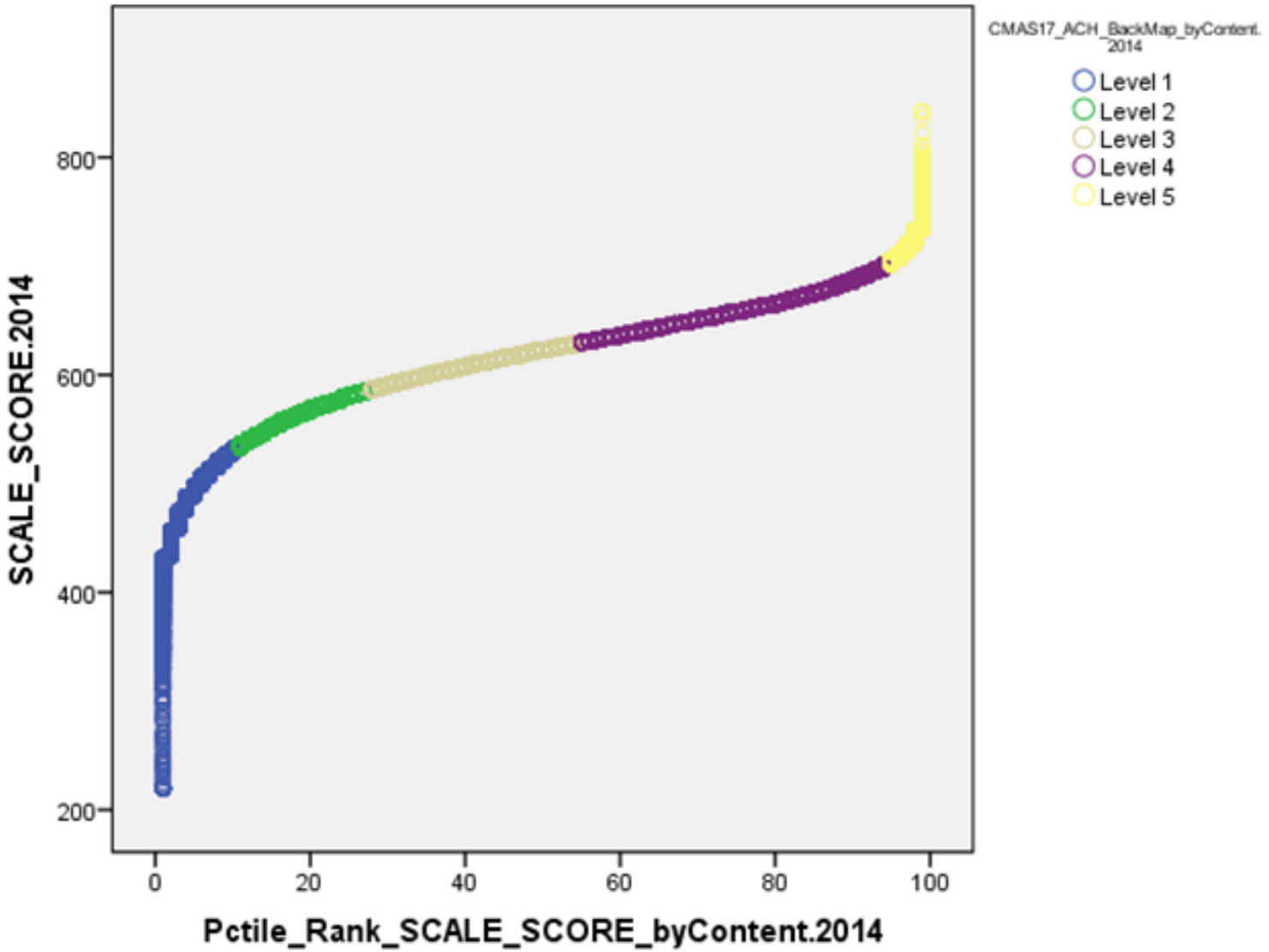
Level	Title	Cut-Score	Percentile Rank
Level 1	Does Not Yet Meet Expectations	650	1
Level 2	Partially Met Expectations	700	11
Level 3	Approaching Expectations	725	31
Level 4	Met expectations	750	55
Level 5	Exceeded Expectations	799	95

- These values were fairly consistent across 2015, 2016 & 2017, so the 2017 percentile ranks were used

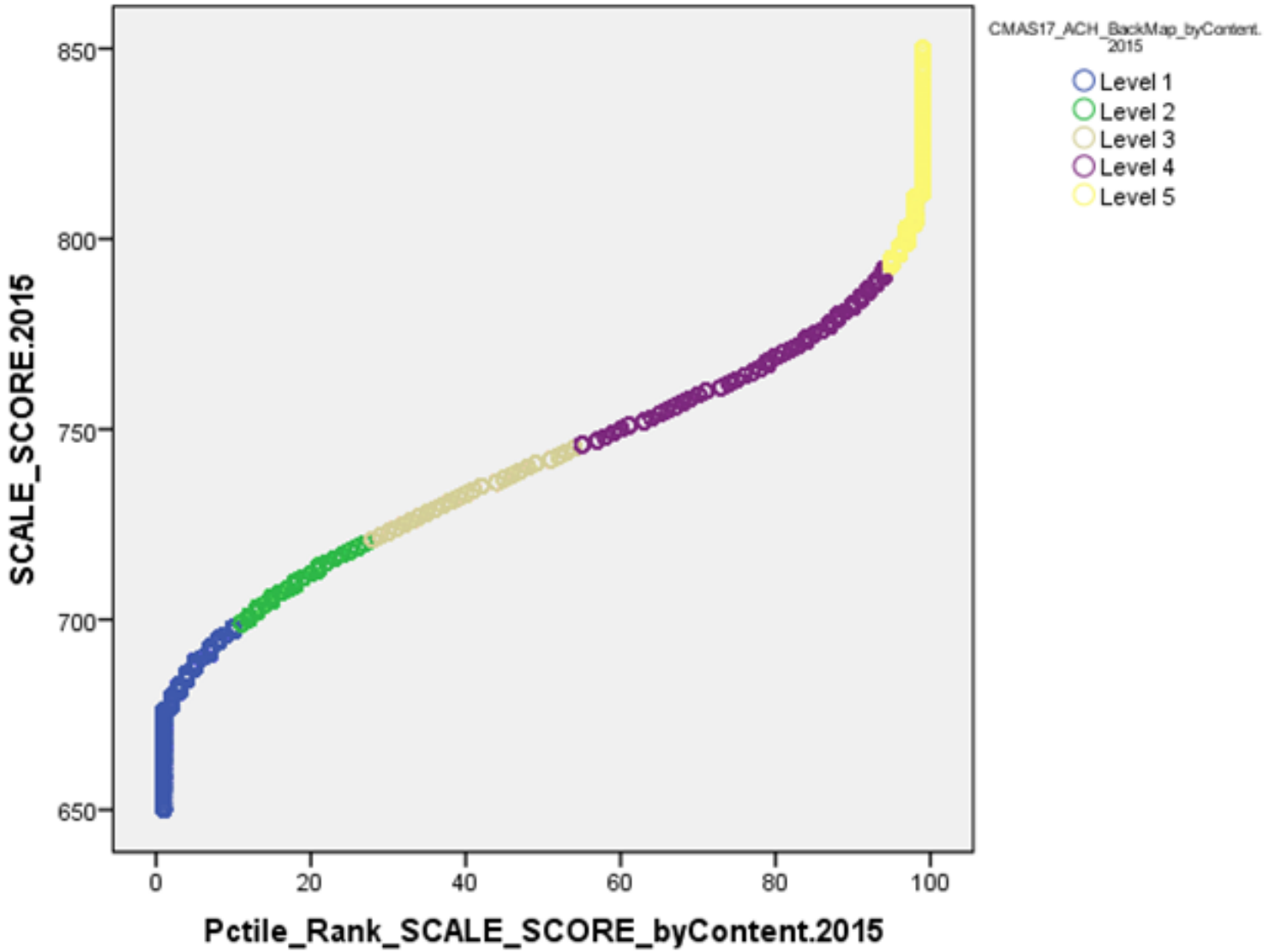
Backmapping Performance Levels Using Percentile Ranks

- The 2017 percentile rank cut-scores were then backmapped onto the CSAP 2003 through 2014 and CMAS 2015 and 2016 percentile rank records (by content and grade), creating hypothetical outcomes for students as if the current performance expectations had always been in place
- The fifteen years of historical back-mapped data were then turned into a panel data set keyed on unique SASID
- This data set enables analysis of long-term achievement trajectories for students as they have progressed through Colorado schools

Example 2015 Percentile Rank by Scale Score with Back-Mapped Performance Level- Grade 5 ELA



Example 2015 Percentile Rank by Scale Score with Back-Mapped Performance Level- Grade 5 ELA



Growth-to-Standard Metric: Two Approaches

Approach 1

- Long term focus on Level 4 i.e. “Meeting Grade Level Expectations” and getting all students College and Career Ready by graduation.
- Student trajectory determined by initial performance level and distance to Level 4 (or maintaining Level 4 if already there).
- Trajectory would be held constant (i.e. not reset each year) and progress would be gauged towards attaining Level 4 (aligns with ELP methodology required by ESSA).
- Once Level 4 or above attained, student would be expected to maintain Level 4 for all subsequent years.

Approach 1: Example Cohort Data

- Tracked a single cohort of students from grade 3 to grade 9 for the years 2008 through 2014. Included:
  - Students with a normal grade progression
  - Students with valid assessment scores every year
- 4,464 observed combinations of 5 performance levels over 7 years

BackMap_ byContent. 2008	BackMap_ byContent. 2009	BackMap_ byContent. 2010	BackMap_ byContent. 2011	BackMap_ byContent. 2012	BackMap_ byContent. 2013	BackMap_ byContent. 2014	CONTENT	
							ELA	MATH
							Count	Count
Level 1	Level 1	Level 1	Level 1	Level 1	Level 1	Level 1	1572	1798
Level 1	Level 1	Level 1	Level 1	Level 1	Level 1	Level 2	71	291
Level 1	Level 1	Level 1	Level 1	Level 1	Level 1	Level 3	3	2
Level 1	Level 1	Level 1	Level 1	Level 1	Level 2	Level 1	82	18
Level 1	Level 1	Level 1	Level 1	Level 1	Level 2	Level 2	34	17
Level 1	Level 1	Level 1	Level 1	Level 1	Level 2	Level 3	4	2

Approach 1: Example Cohort Outcomes

- The outcomes can be simplified by starting point and whether the student scored at/above Level 4:
  - For students initially scoring below Level 4, did they at any time score at/above Level 4 and stay at/above Level 4 afterwards
  - For students initially scoring at/above Level 4, did they maintain at/above Level 4 for all years

Approach 2

- Stepping stone approach that gives students credit for moving up one or more performance levels within a given time frame.
- Student trajectory determined by initial performance level and distance to next level (or maintaining Level 4 if already meeting expectations).
- Trajectory would reset each year and progress would be gauged towards attaining the next performance level (aligns with previous Catch-Up/Keep-Up methodology).
- Once Level 4 or above attained, student would be expected to maintain Level 4 for TBD timeframe.

Approach 2: Example Outcomes

- With this methodology, students would be classified as on or off-track to meet a performance goal within a TBD time-frame
  - Catch-Up- Students on-track to move up one or more performance levels
  - Keep-Up- Students on-track to stay at/above Level 4.
- Potential timeframes of 1, 2, 3, etc years can be investigated to compare the likelihood of being on-track
- Example below shows grade 5 ELA for 2014 through 2017

Initial Perf Level	Metric Type	On-Track_1year		Track_2years		Track_3years		Total Valid N for 2014	On-Track_ 1year	On-Track_ 2years	On-Track_ 3years
		No	Yes	No	Yes	No	Yes				
		Count	Count	Count	Count	Count	Count				
Level 1	Catch-Up	3791	2431	2601	2917	1856	3087	7056	34.5%	41.3%	43.8%
Level 2	Catch-Up	6419	3226	4436	4185	3235	4509	10843	29.8%	38.6%	41.6%
Level 3	Catch-Up	12098	3445	8138	5519	6157	6004	17559	19.6%	31.4%	34.2%
Level 4	Keep-Up	6165	16645	7200	12854	7466	10341	25784	64.6%	49.9%	40.1%
Level 5	Keep-Up	43	2934	83	2547	101	2279	3337	87.9%	76.3%	68.3%

Discussion

- Brainstorm Pros/Cons and Considerations for each approach
  - Discuss as a group
  - Record thoughts on individual note catcher

Technical Advisory Panel (3/22/18)

- Future Items
- Public Comments
- Close Meeting
  - Wednesday, April 18th, 8:00-9:30 (Webinar)