



COLORADO
Department of Education

Technical Advisory Panel Meeting

October 26, 2018



COLORADO
Department of Education

HB18-1355

Rulemaking & Updates

Ashley Piche, Accountability & Data Analysis

October 26, 2018

Current State Board of Education Conversation

- ✓ Setting Achievement, Growth & PWR **Targets** on Performance Frameworks
- ✓ Achievement, Growth and Postsecondary & Workforce Readiness (PWR) **Weighting** on Performance Frameworks
- ✓ Addition of a new **Growth-to-Standard** (criterion-based growth) metric to Performance Frameworks

Rulemaking Process for House Bill 18-1355

- ✓ Bill passed in Spring 2018 concerning adjustments to the accountability system for the elementary and secondary public education system

Current State Board of Education Conversation | Timeline

Annual Process that occurs each November for the following year's frameworks.

2018-2019	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Performance Framework Target Setting		*							
Performance Indicator Weighting (Growth, Achievement, PWR)				*	*	*	*		
Addition of Growth to Standard Metric				*	*	*	*		

Proposed timeline for HB 18-1355 Rulemaking. There is flexibility here based on board preference & stakeholder feedback.

Target Year of Implementation:
2020 School & District Performance
Frameworks

Current State Board of Education Conversation | Timeline

2018 -2019	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Performance Framework Target Setting		*							
Performance Indicator Weighting (Growth, Achievement, PWR)				*	*	*	*		
Addition of Growth to Standard Metric				*	*	*	*		
Stakeholder Feedback Sessions	*	*	*	*	*				

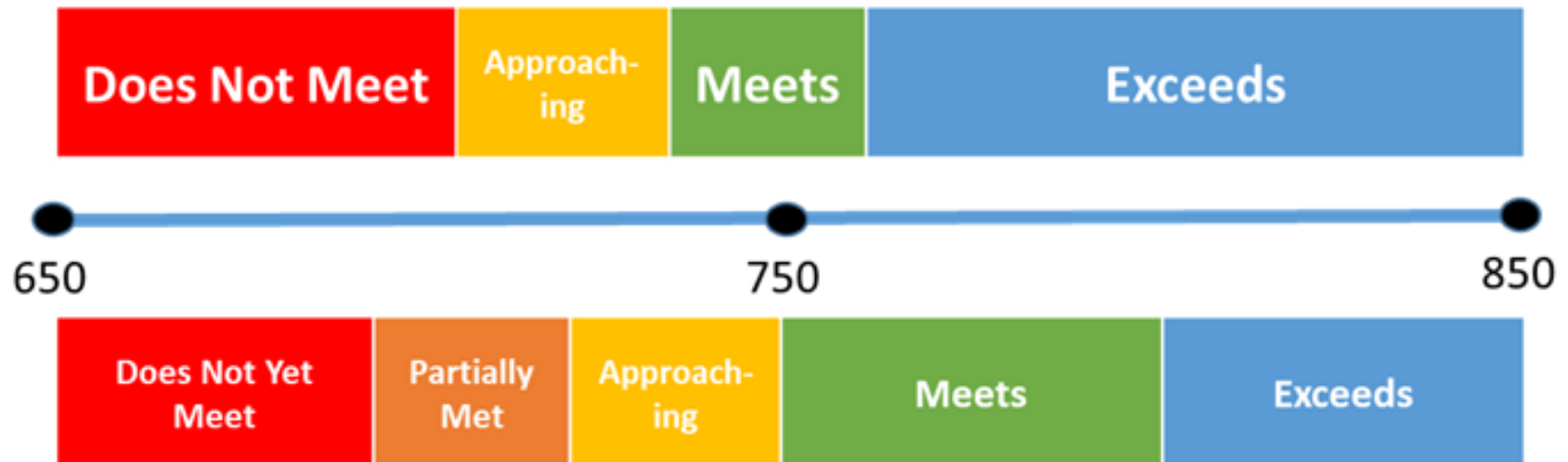
- CDE Staff visits established stakeholder group meetings
- Materials and process for submitting comments will be available online (coming soon!)
- Feedback can be sent via email to both CDE staff and state board members
- Public feedback sessions will occur during the rulemaking process

Current SBE Conversation

CO State Accountability | Areas of Interest – Target Setting

CMAS Scale Scores:
School & district accountability targets vs. individual student performance levels

Schools & Districts | Mean Scale Score



Students | Scale Score

CO State Accountability | Areas of Interest – Weighting

Taking recommendations from the Technical Advisory Panel for Longitudinal Growth's (TAP) into consideration in 2016, the state board decided to adopt the following Performance Indicator weighting for Performance Frameworks:



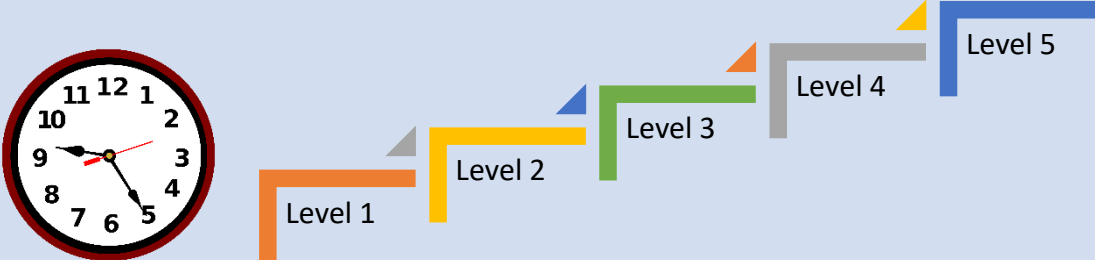
Elementary/Middle Schools

- ❖ 60% Growth
- ❖ 40% Achievement

High Schools and Districts

- ❖ 40% Growth
- ❖ 30% Postsecondary Workforce Readiness
- ❖ 30% Achievement

CO State Accountability | Areas of Interest – Growth to Standard

Achievement	Growth
<p data-bbox="150 419 446 629">Student performance on underlying assessments</p> 	<p data-bbox="983 419 1715 579">Students making progress as compared to students of a similar performance history</p> 
Growth To Standard	
<p data-bbox="237 943 1692 991">Students making enough progress to meet grade level expectations</p> 	

HB 18-1355 Rulemaking

State Board Rulemaking Process

State Statute [HB 18-1355]

*Passed by the elected legislature;
Create rights or duties that are legally binding*

Colorado State Board of Education Rules

*Authorized by statute;
Adopted by the elected board of education;
Create rights or duties that are legally binding*

Colorado Department of Education's Policy

*Written by department;
No legally binding effect;
Interprets existing legal obligations*





COLORADO
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Growth-to-Standard: Update

Marie Huchton, Accountability & Data Analysis

October 26, 2018

Topics to Cover

- Cross-year and Subgroup SGP Distributions for Observed Achievement Level Trajectories
- Look at Data for Hypothetical Catch Up & Keep Up Determinations

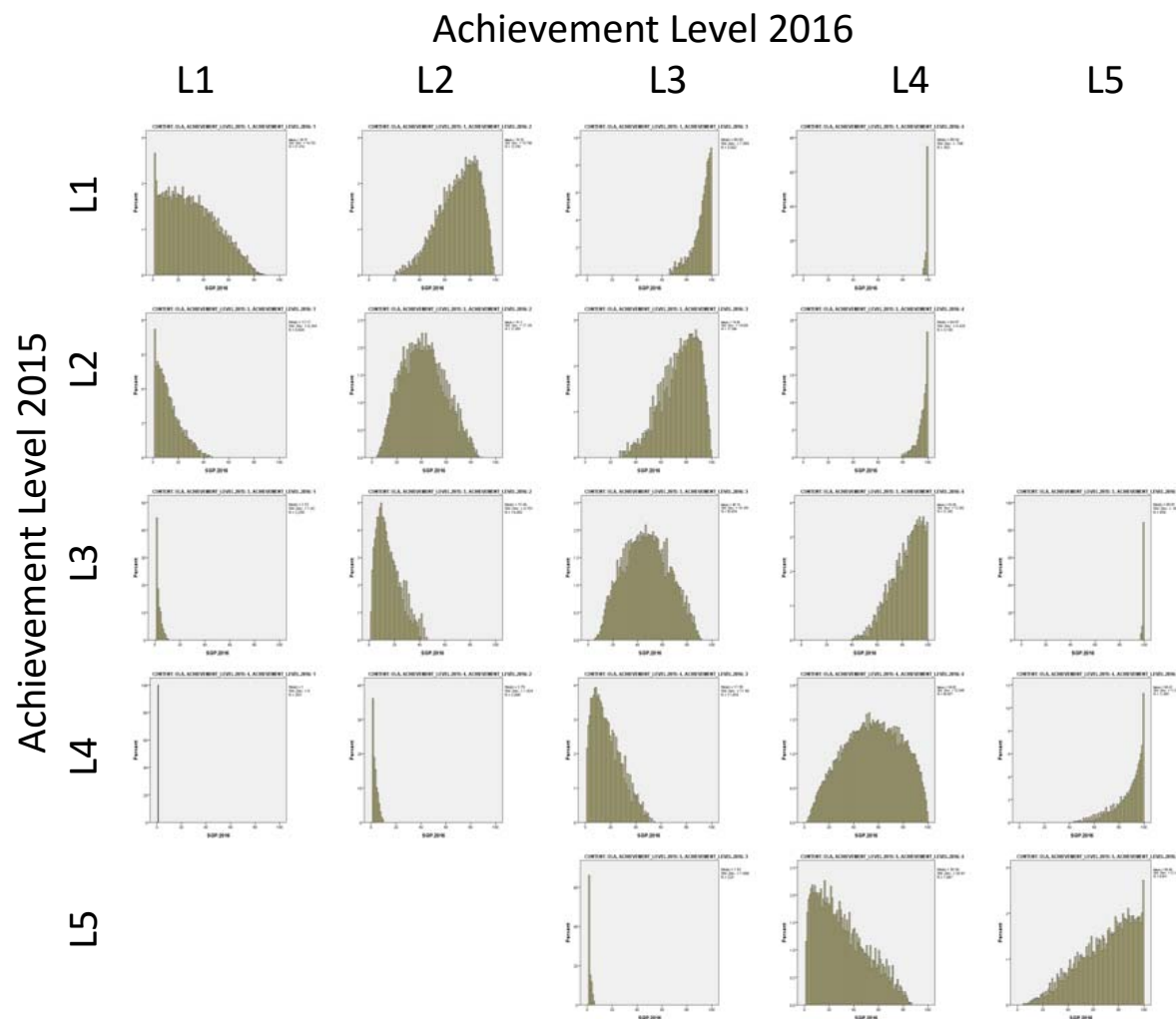
Cross-Year and Subgroup SGP Distributions for Observed Achievement Level Trajectories

Observed Achievement Level

- Eligible for inclusion in the following analyses were students in grades 3-8 with typical grade progressions and CMAS scores in two or more consecutive years
- The table below shows the proportion of students scoring at each of the 5 CMAS achievement levels in 2016, 2017, and 2018

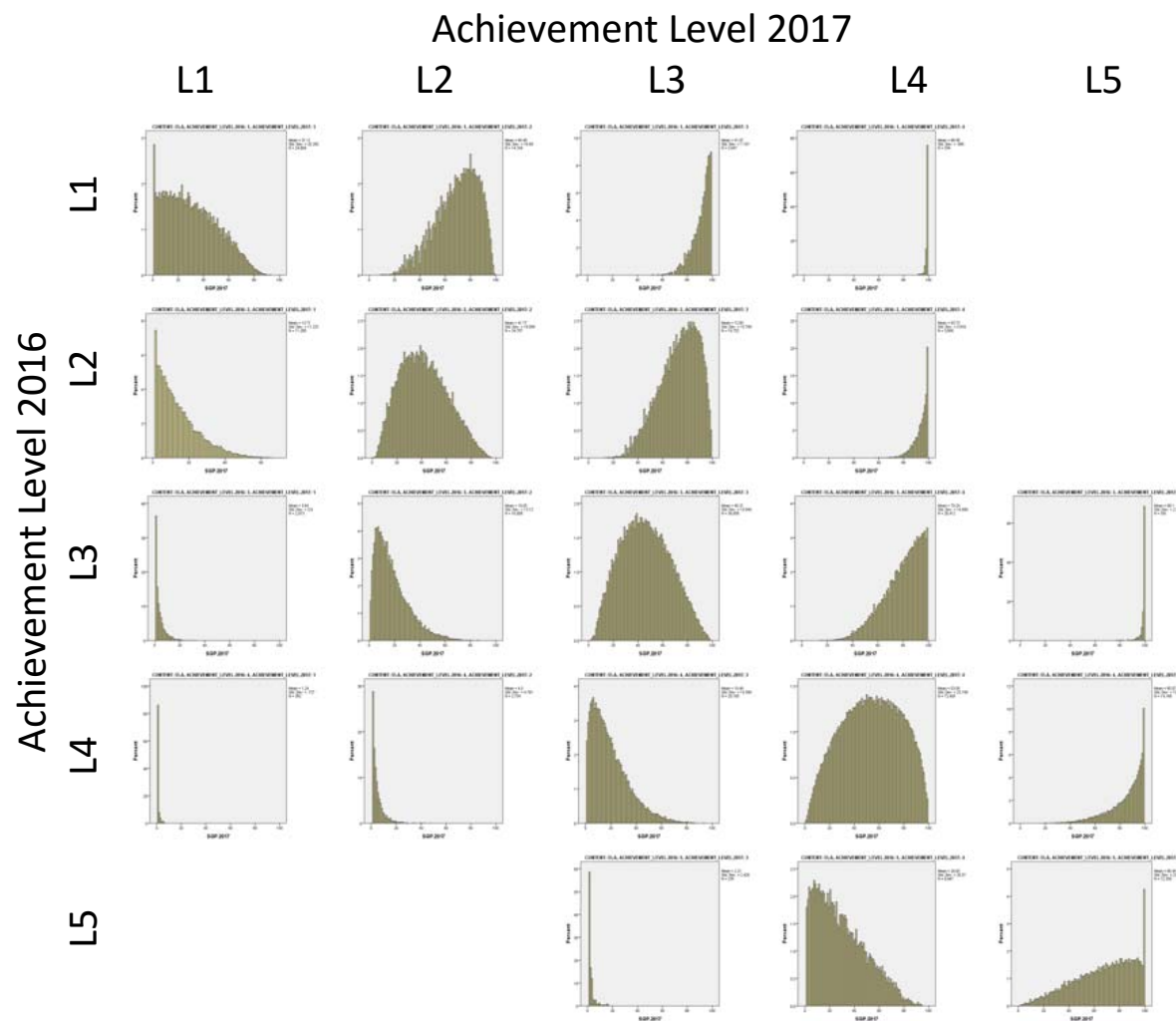
		2016		2017		2018	
		Count	Column N %	Count	Column N %	Count	Column N %
ACHIEVE MENT_ LEVEL	1	73,817	13.7%	74,377	13.4%	74,748	13.1%
	2	117,167	21.7%	114,694	20.6%	116,096	20.4%
	3	151,141	28.0%	153,845	27.7%	154,672	27.1%
	4	169,828	31.4%	178,036	32.1%	185,083	32.5%
	5	28,611	5.3%	34,503	6.2%	39,683	7.0%
Total		540,564		555,455		570,282	

2016 SGP Results and Relations Achievement Trajectories- ELA



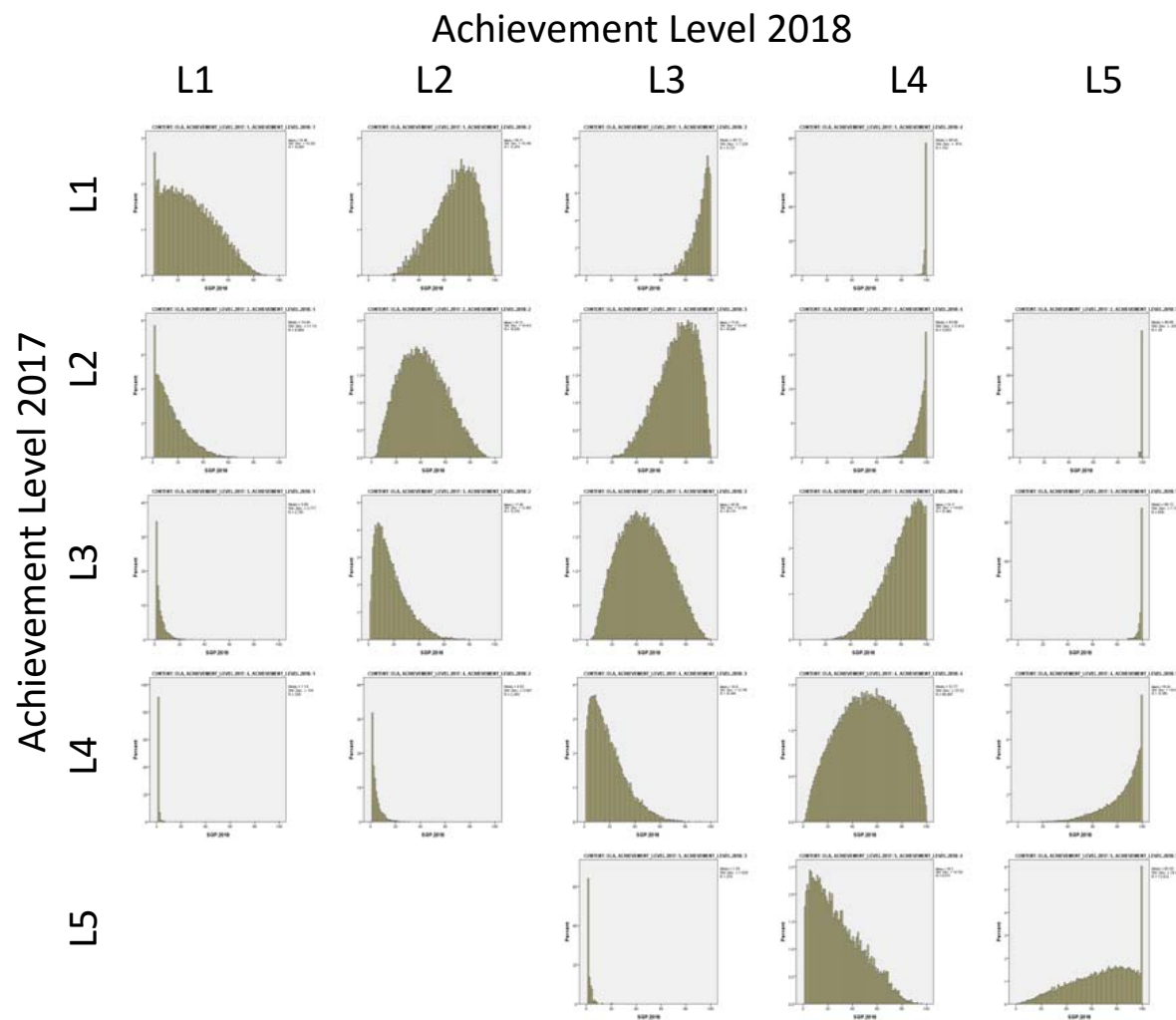
For the All Students group combining across grades in ELA, moving either up or down one or more achievement levels requires significantly higher (or lower) than average growth. Students with typical growth tend to stay at the same achievement level from one year to the next (notable exception for level 5)

2017 SGP Results and Relations Achievement Trajectories- ELA



For the All Students group combining across grades in ELA, the 2017 distributions of SGPs tend to be slightly less steep and more rounded than the 2016 results and more students earned SGPs of 99 in L5-L5, but overall the patterns are fairly consistent

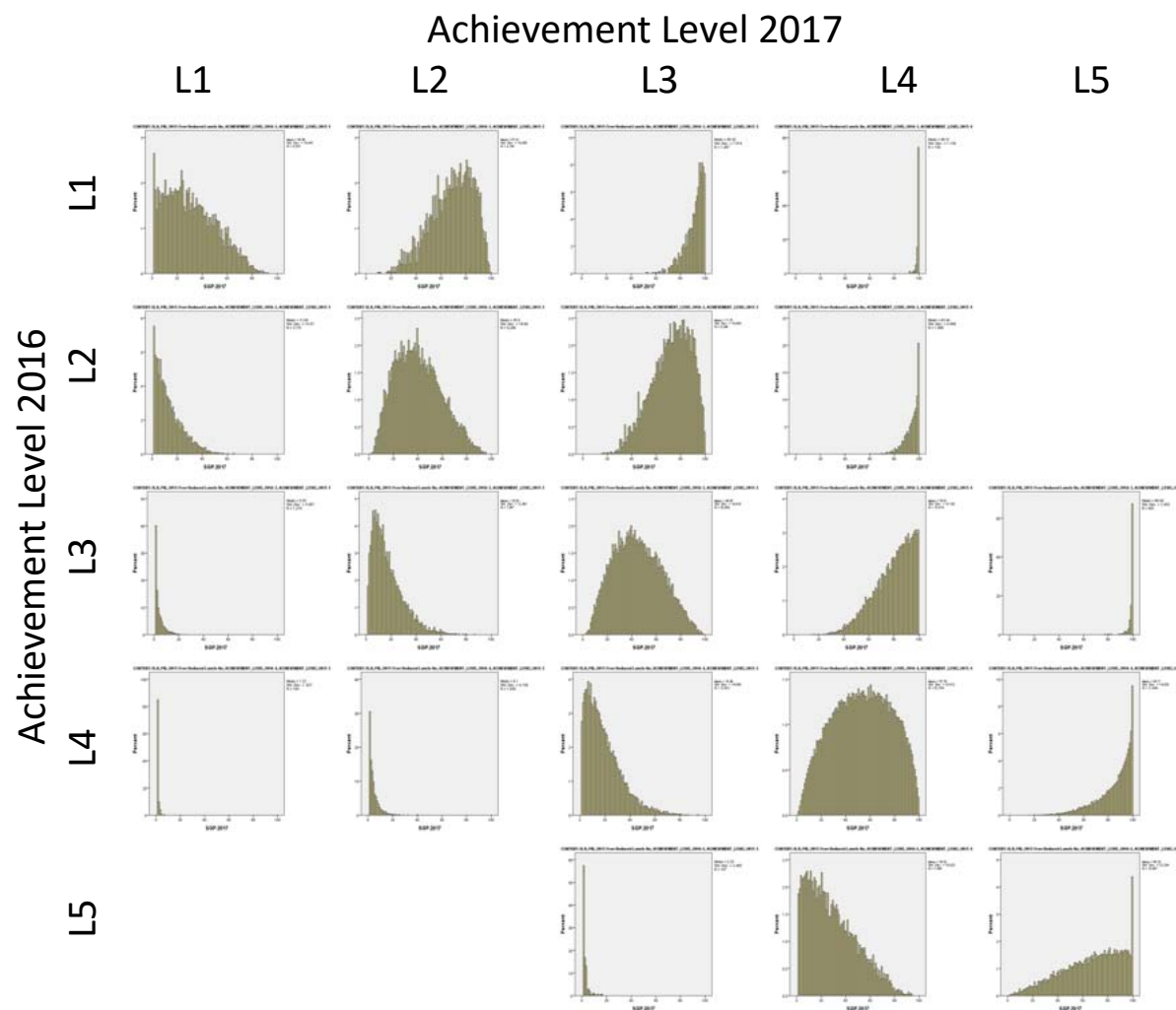
2018 SGP Results and Relations Achievement Trajectories- ELA



For the All Students group combining across grades in ELA, the 2018 results are very similar to 2017, indicating that the CMAS SGP calculations with two or more priors are consistent across years when looking by current and prior achievement level.

2017 SGP Results and Relations Achievement Trajectories- ELA

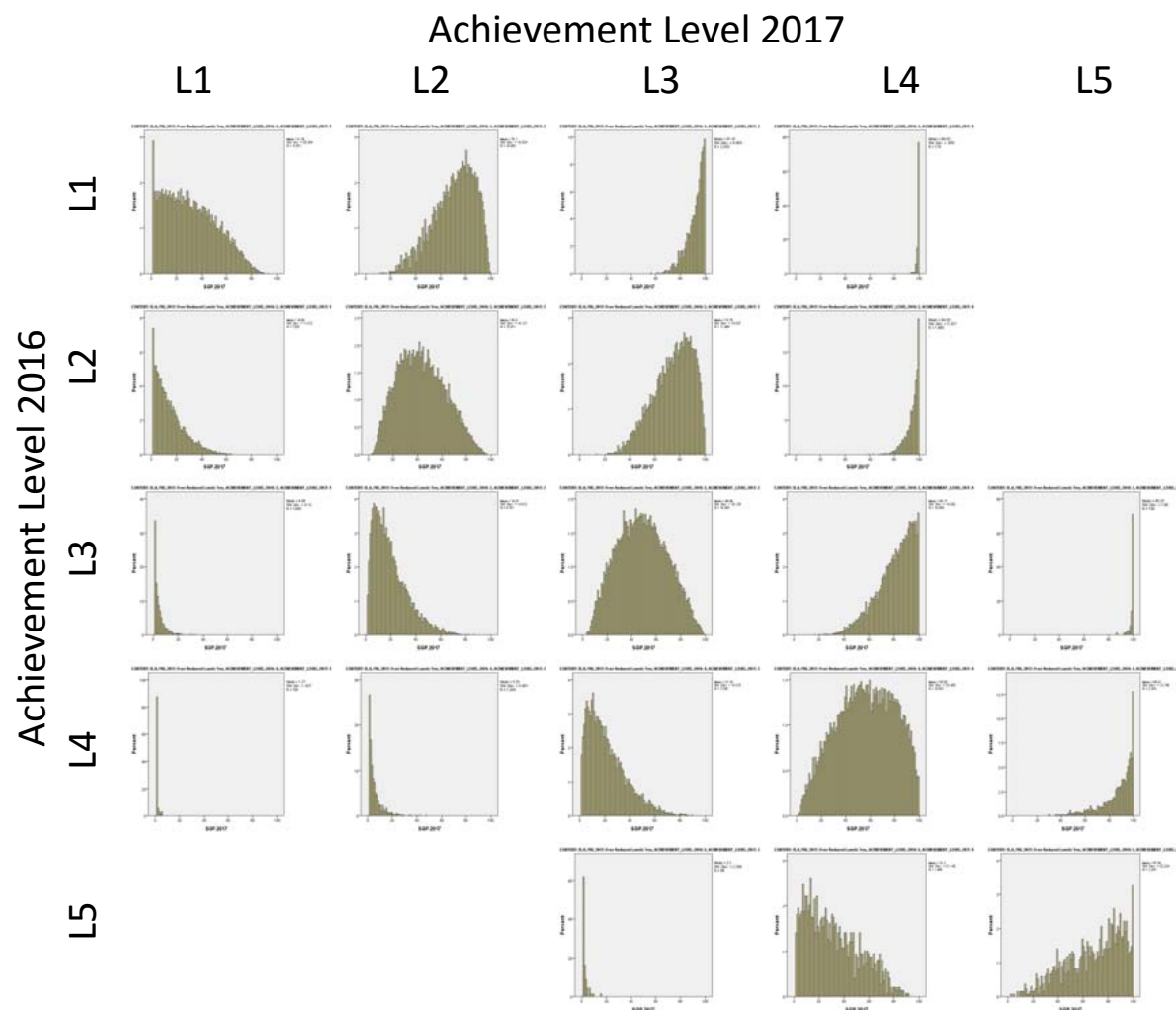
Not FRL Eligible



Students who are not eligible for free- or reduced-price lunch programs show patterns very similar to the All Students group for 2017

2017 SGP Results and Relations Achievement Trajectories- ELA

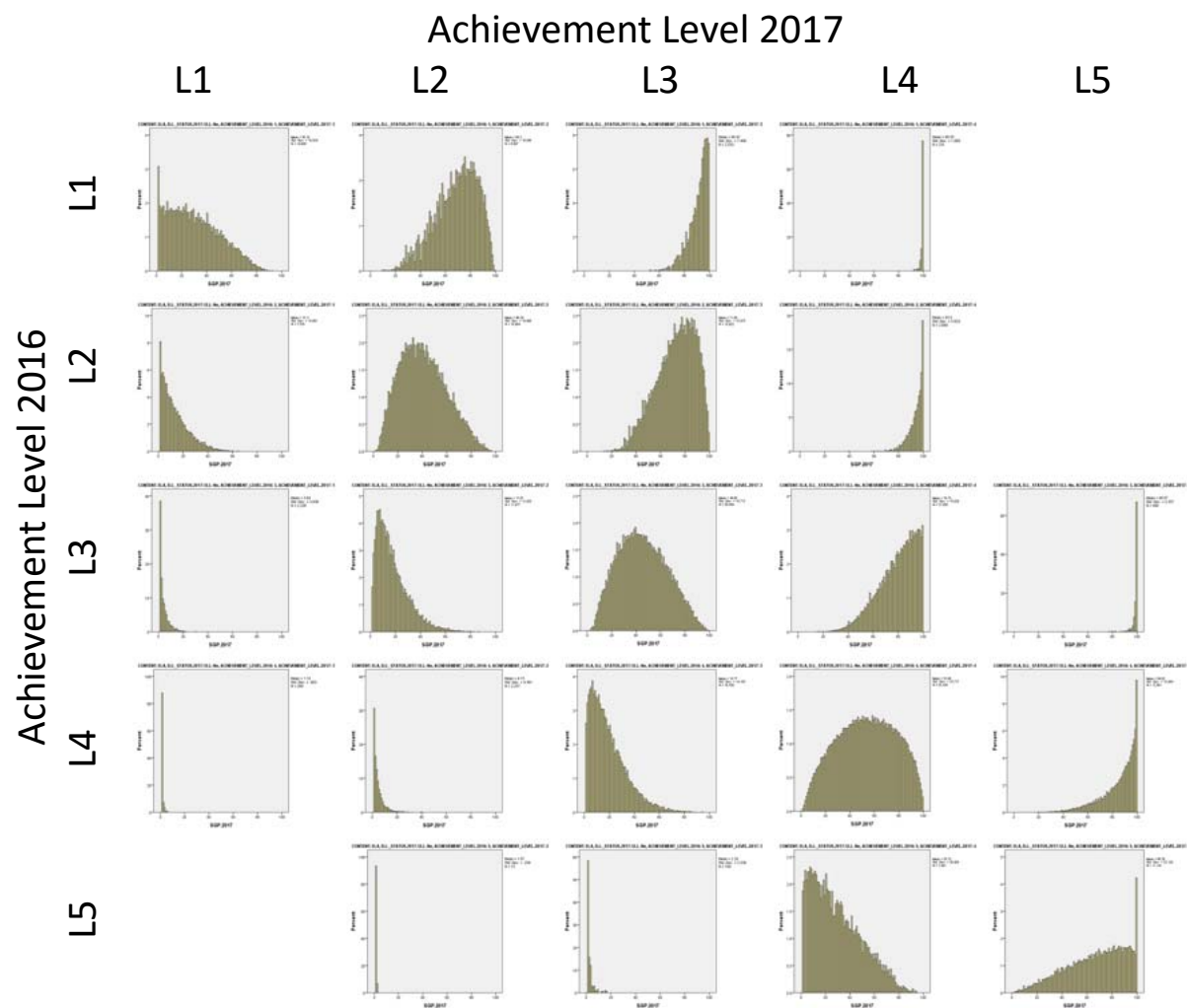
FRL Eligible



Larger proportions of FRL eligible students score at the lower proficiency levels in comparison to their non-FRL eligible peers, but the distributions of SGPs tend to be fairly similar

2017 SGP Results and Relations Achievement Trajectories- ELA

Native-English

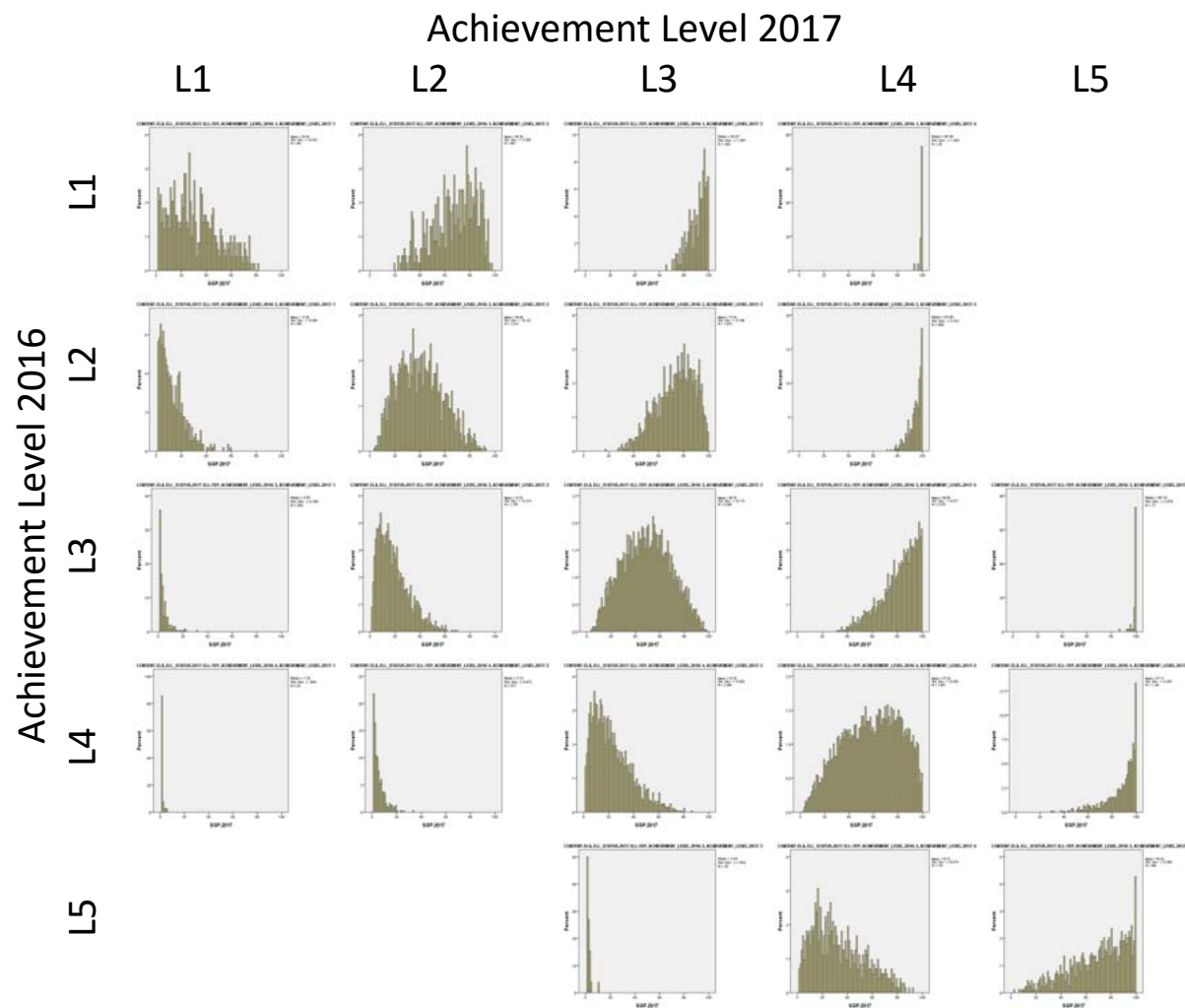


The distributions of ELA SGPs for Native-English speaking students are very similar to the All Students group

2017 SGP Results and Relations

Achievement Trajectories- ELA

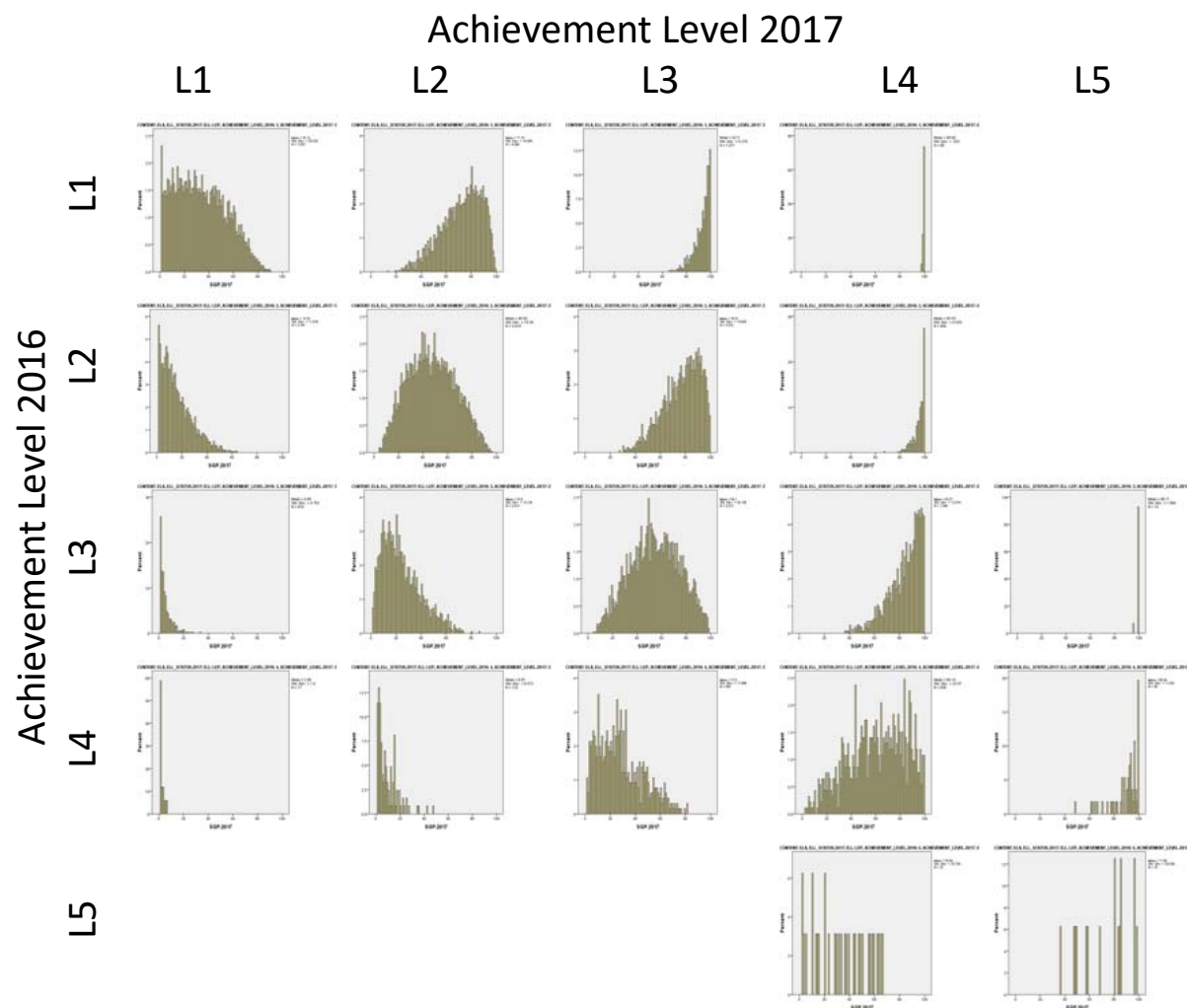
ELL: FEP



Fluent English Proficient (FEP) students are a much smaller population than Native-English speakers, so the distributions tend to be choppy, but follow roughly similar patterns to their Native-English peers

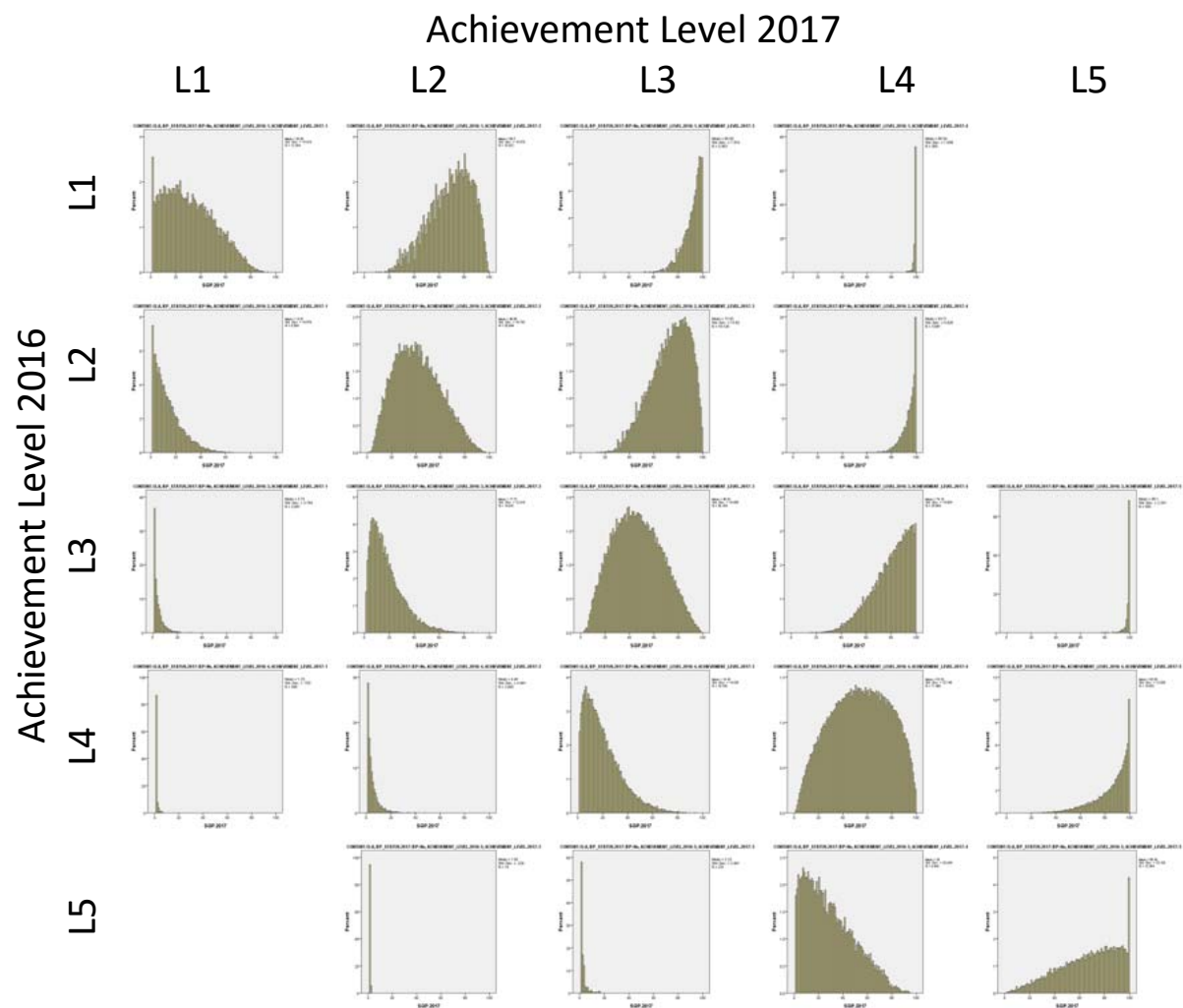
2017 SGP Results and Relations Achievement Trajectories- ELA

ELL: LEP



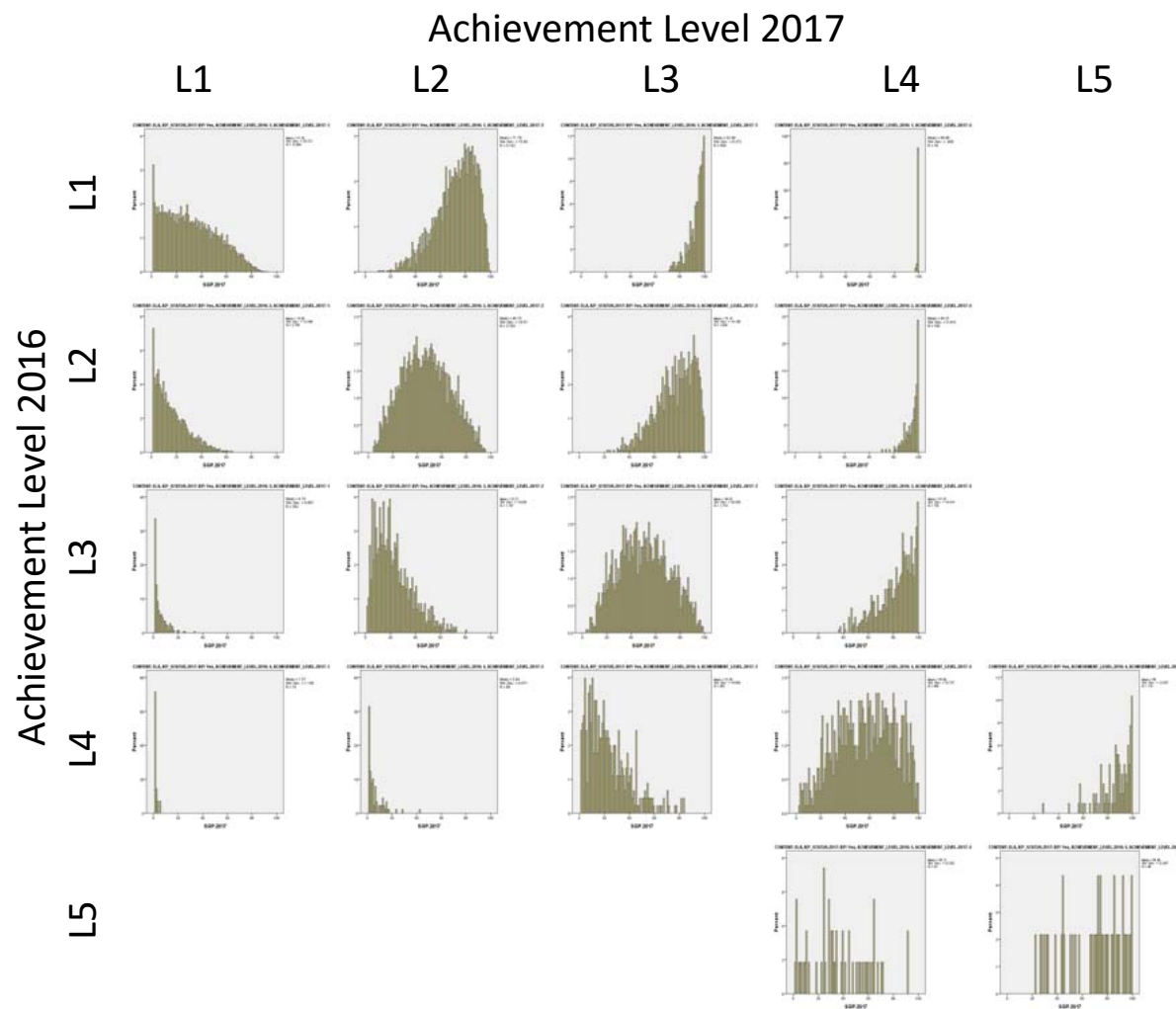
Limited English Proficient (LEP) ELs are less likely to score at the higher achievement levels, and generally need slightly higher growth in order to maintain their starting proficiency level than their Native English peers

2017 SGP Results and Relations Achievement Trajectories- ELA Not on IEP



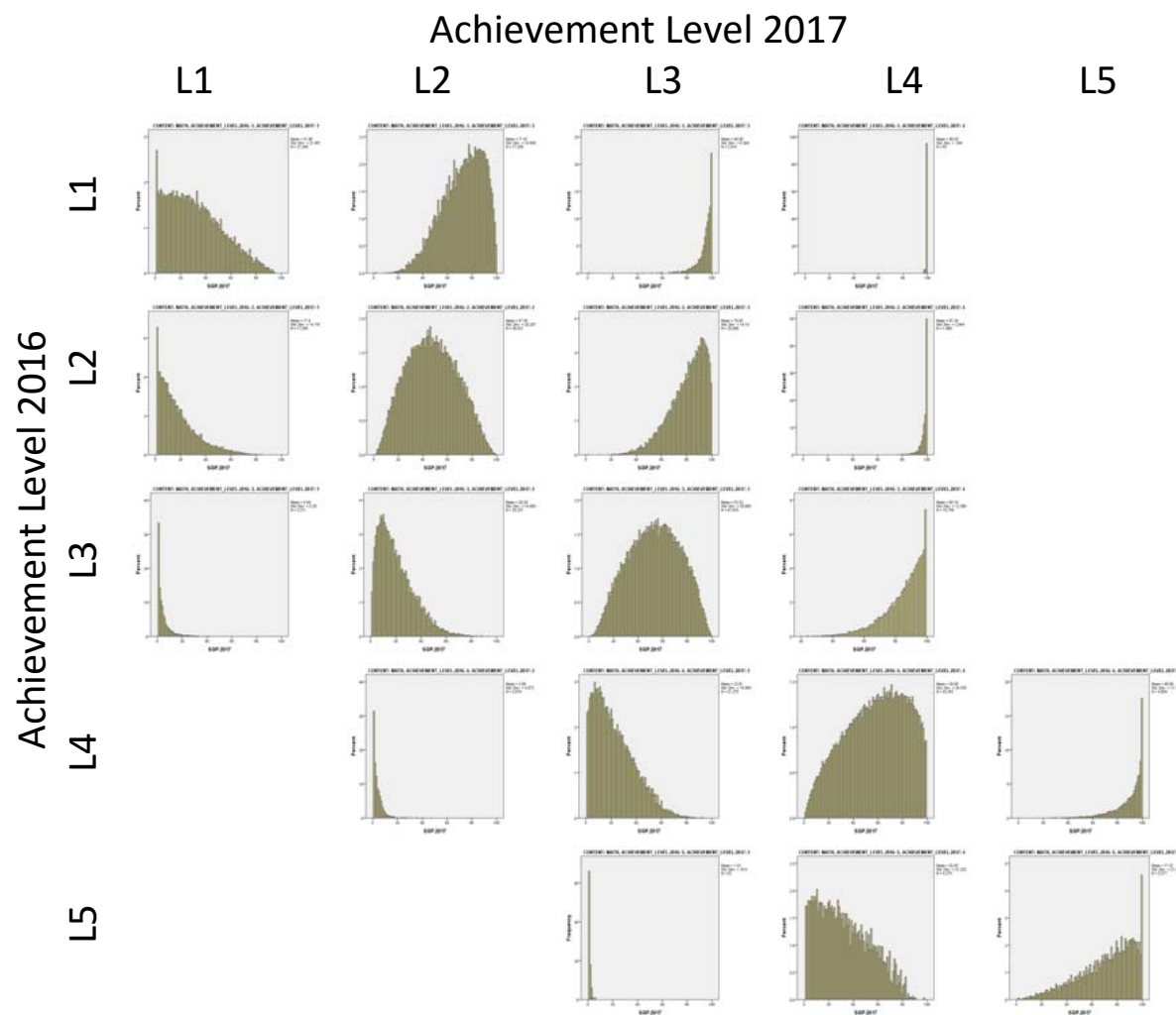
Encompassing roughly 90% of the population, the results for students not on IEPs are nearly identical to the All Students group

2017 SGP Results and Relations Achievement Trajectories- ELA On IEP



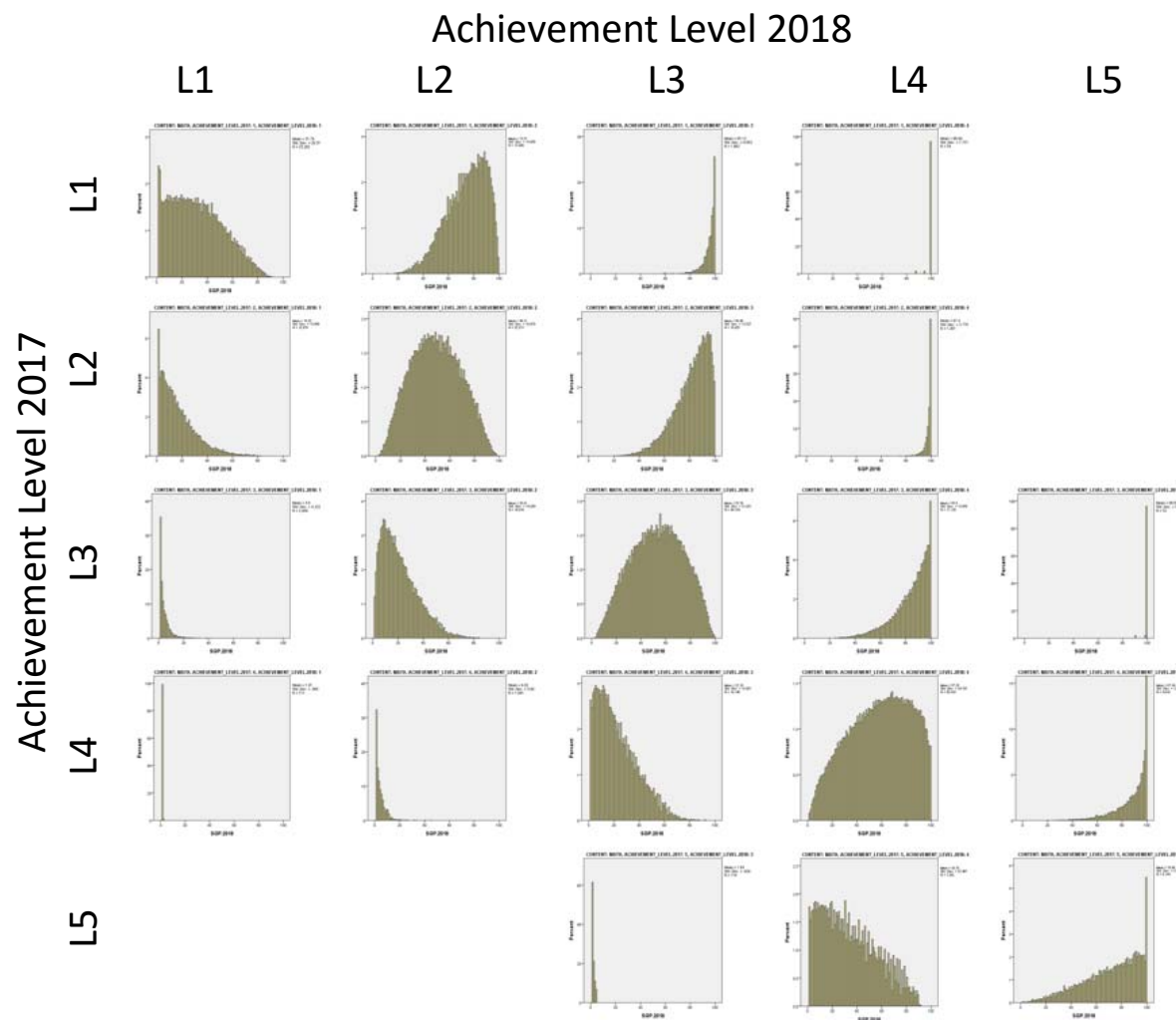
Students on IEPs are more likely to score at lower achievement levels and need to show higher growth in order to maintain or move up levels in comparison to their peers not on IEPs

2017 SGP Results and Relations Achievement Trajectories- Ma



In comparison to ELA, students generally needed higher SGPs in order to move up one or more proficiency levels.

2018 SGP Results and Relations Achievement Trajectories- Ma



2018 All Students Math results are very similar to 2017. Again this indicates that the CMAS SGP calculations with two or more priors are consistent across years when looking by current and prior achievement level.

TAP Recommendation

- Across grade levels, subgroups and years, the distributions of SGPs by prior and current year achievement level, are fairly consistent.
- Students moving up one proficiency level generally show above average growth (65-99), while students dropping a proficiency level show below average growth (1-34).
- Students maintaining the same proficiency level (for levels 1-4) generally show typical growth (35-64).

TAP Recommendation

- Does the TAP recommend moving forward with the performance level stepping-stone approach, giving students credit for incremental progress towards meeting state standards?

Hypothetical Catch Up & **Keep Up** Determinations



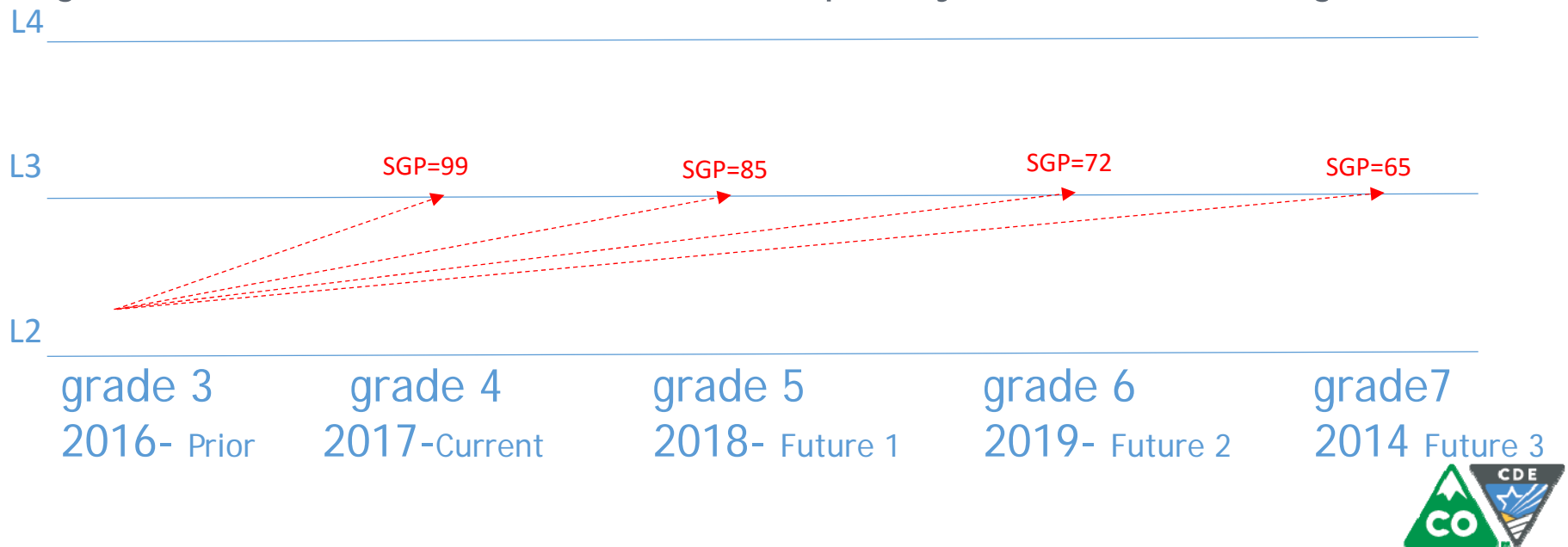
Catch Up 1 Level Determination

For a stepping-stone trajectory aimed at moving from the previous year's proficiency level up to the next proficiency level, what proportion of students are considered "on-track" to attain this goal?

Note that for the current year target, reality takes precedence over what was predicted by the SGP model as in a small number of cases the two outcomes are not identical.

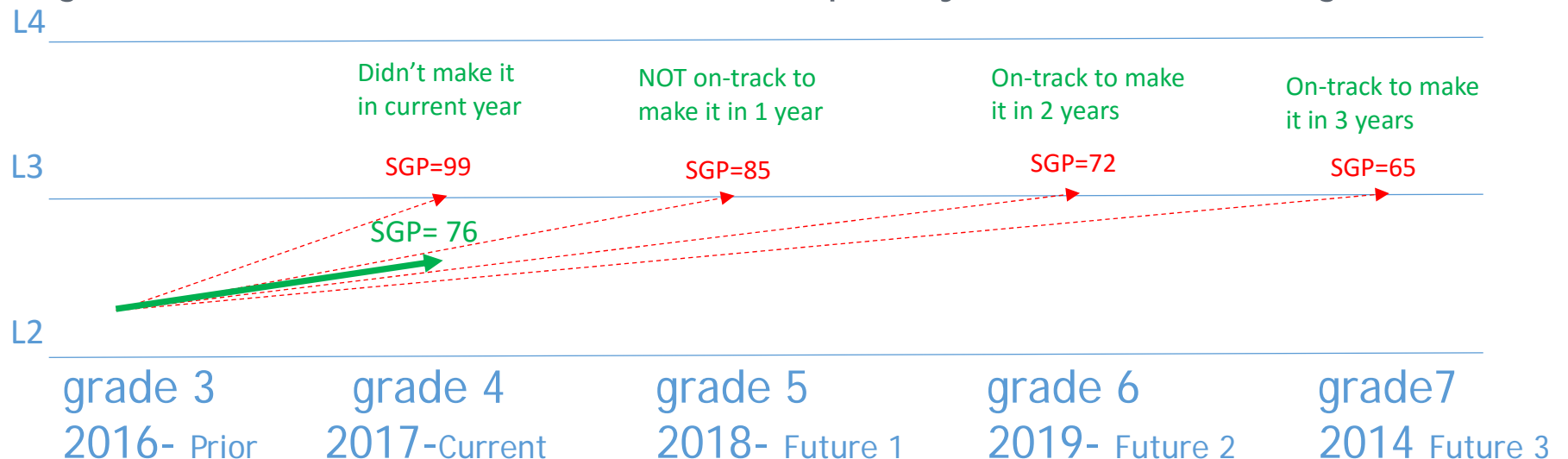
Catch Up 1 Level Determination

- Similar to the Catch Up Up methodology used for CSAP/TCAP, except looks for increasing only 1 achievement level with TBD timeframes instead of expecting all students to achieve proficiency within 3-years or by 10th grade
- Pretending the current year is 2017 and we have just established SGPs and target growth percentiles, take an example student currently in grade 4, who scored at level 2 in the prior year 2016 as a 3rd grader.



Catch Up 1 Level Determination

- Similar to Catch Up/Keep Up methodology used for CSAP/TCAP, except looks for increasing only 1 achievement level with TBD timeframes instead of expecting all students to achieve proficiency within 3-years of by 10th grade
- Pretending the current year is 2017 and we have just established SGPs and target growth percentiles, take an example student currently in grade 4, who scored at level 2 in the prior year 2016 as a 3rd grader.



2017 Catch Up Determination Grades 3-8 by 2016 & 2017 Ach

ACH_LVL. 2016	ACH_LVL. 2017	CatchUp_y0.2017				CatchUp_y1.2017				CatchUp_y2.2017				CatchUp_y3.2017				CatchUp_y4.2017			
		Not On Track		On Track		Not On Track		On Track		Not On Track		On Track		Not On Track		On Track		Not On Track		On Track	
		Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct
L1toL2	1	20743	55.8%			14719	49.3%	1469	4.9%	10419	44.2%	1631	6.9%	7586	42.9%	1496	8.5%	4451	40.8%	893	8.2%
	2			12559	33.8%			10466	35.0%			8810	37.4%			6402	36.2%			4040	37.0%
	3			3546	9.5%			2975	10.0%			2496	10.6%			2011	11.4%			1398	12.8%
	4			296	0.8%			237	0.8%			204	0.9%			185	1.0%			136	1.2%
	5			2	0.0%			2	0.0%			1	0.0%			1	0.0%			1	0.0%
L2toL3	1	9066	17.5%			7060	16.6%			4679	14.6%			2762	13.1%			1123	9.9%		
	2	21384	41.3%			15393	36.2%	2200	5.2%	10899	33.9%	2509	7.8%	6742	32.0%	1552	7.4%	3622	31.8%	534	4.7%
	3			17710	34.2%			14789	34.8%			11551	36.0%			8007	38.0%			4761	41.8%
	4			3616	7.0%			3068	7.2%			2465	7.7%			1999	9.5%			1343	11.8%
	5			21	0.0%			19	0.0%			12	0.0%			12	0.1%			12	0.1%
L3toL4	1	2150	2.9%			1620	2.6%			1016	2.2%			578	1.9%			200	1.4%		
	2	13353	17.8%			10794	17.4%			7995	17.3%			4712	15.5%			1840	12.8%		
	3	34829	46.3%			24592	39.6%	4280	6.9%	16417	35.6%	5326	11.6%	10326	34.1%	3488	11.5%	4914	34.3%	1350	9.4%
	4			24249	32.3%			20311	32.7%			15062	32.7%			10994	36.3%			5825	40.7%
	5			568	0.8%			520	0.8%			269	0.6%			220	0.7%			195	1.4%
L4toL5	1	203	0.2%			143	0.2%			96	0.2%			47	0.1%			19	0.1%		
	2	2031	2.1%			1631	2.0%			1285	2.1%			749	1.8%			289	1.4%		
	3	16516	17.3%			13650	17.1%			11147	17.9%			6826	16.7%			3002	14.8%		
	4	63240	66.4%			45906	57.4%	6808	8.5%	30221	48.5%	12287	19.7%	17879	43.7%	10392	25.4%	8645	42.7%	4425	21.9%
	5			13217	13.9%			11837	14.8%			7319	11.7%			4997	12.2%			3853	19.0%

Note: The total number of students included in each of the future year categories (y1, y2, y3) decreases as students reach grade 8 and are no longer included in the target calculations.

2017 Catch Up Determination Grades 3-8 by 2016 & 2017 Ach

ACH_LVL. 2016	ACH_LVL. 2017	CatchUp_y0.2017				CatchUp_y1.2017				CatchUp_y2.2017				CatchUp_y3.2017				CatchUp_y4.2017			
		Not On Track		On Track		Not On Track		On Track		Not On Track		On Track		Not On Track		On Track		Not On Track		On Track	
		Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct
L1toL2	1	23589	61.4%			17430	53.8%	1577	4.9%	12619	50.8%	2740	11.0%	8236	47.0%	2525	14.4%	4176	47.9%	1508	17.3%
	2			13139	34.2%			11909	36.7%			8322	33.5%			5897	33.6%			2687	30.8%
	3			1617	4.2%			1441	4.4%			1106	4.5%			841	4.8%			328	3.8%
	4			61	0.2%			49	0.2%			45	0.2%			31	0.2%			15	0.2%
L2toL3	1	15718	23.7%			10080	19.0%			8061	20.2%			4878	18.3%			2501	20.2%		
	2	32274	48.6%			24378	45.9%	3001	5.6%	16146	40.5%	4205	10.6%	10394	39.0%	3332	12.5%	4533	36.7%	2029	16.4%
	3			17155	25.8%			14706	27.7%			10564	26.5%			7361	27.6%			3022	24.4%
	4			1223	1.8%			990	1.9%			877	2.2%			663	2.5%			278	2.2%
	5			1	0.0%			1	0.0%			1	0.0%			1	0.0%			1	0.0%
L3toL4	1	2784	3.5%			1629	2.6%			1369	2.9%			738	2.3%			473	3.0%		
	2	18192	22.9%			14673	23.2%			11457	24.1%	2	0.0%	7232	23.0%	1	0.0%	4125	26.5%		
	3	43252	54.5%			30314	47.9%	5320	8.4%	19744	41.5%	5883	12.4%	12452	39.6%	4641	14.8%	5128	32.9%	3159	20.3%
	4			15182	19.1%			11363	17.9%			9058	19.1%			6381	20.3%			2702	17.3%
	5			23	0.0%			22	0.0%			22	0.0%			13	0.0%			2	0.0%
L4toL5	1	120	0.1%			82	0.1%			71	0.1%			39	0.1%			33	0.2%		
	2	1747	2.1%			1499	2.2%			1322	2.4%			845	2.2%			562	2.9%		
	3	18966	23.1%			16787	24.6%			13346	24.3%			9009	23.8%			5306	27.3%		
	4	56628	69.0%			41650	61.0%	4184	6.1%	30117	54.9%	6462	11.8%	19233	50.8%	6350	16.8%	8620	44.4%	4325	22.3%
	5			4664	5.7%			4060	5.9%			3515	6.4%			2394	6.3%			583	3.0%

Note: The total number of students included in each of the future year categories (y1, y2, y3) decreases as students reach grade 8 and are no longer included in the target calculations.

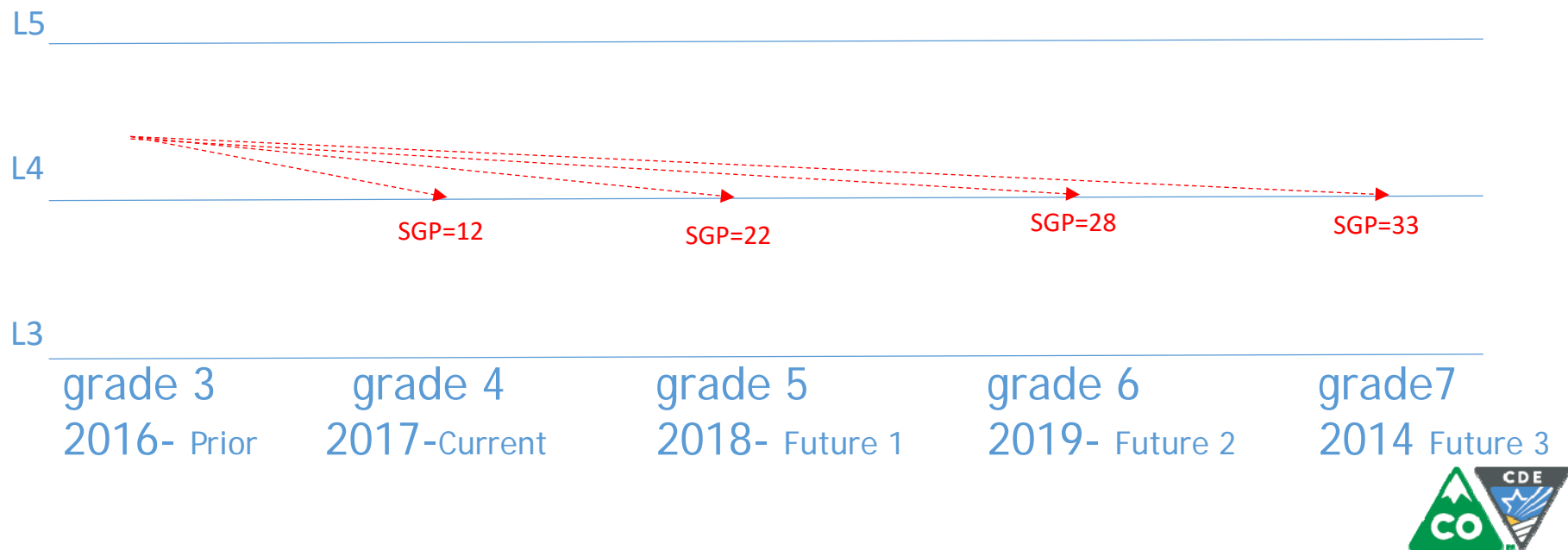
Keep Up at Level 4 Determination

For a stepping-stone trajectory aimed at maintaining performance at level 4, what proportion of students are considered “on-track” to attain this goal?

Note that for the current year target, reality takes precedence over what was predicted by the SGP model as in a small number of cases the two outcomes are not identical.

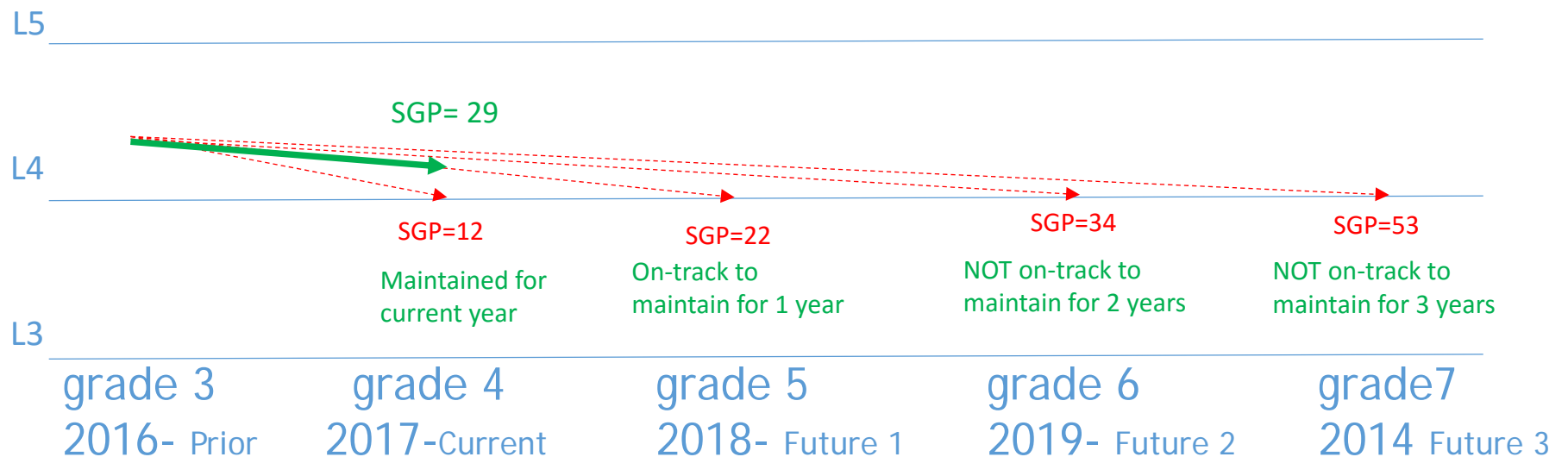
Keep Up Determination Method

- Similar to the Keep Up Up methodology used for CSAP/TCAP, except with TBD timeframes instead of expecting all students to achieve proficiency within 3-years of by 10th grade
- Pretending the current year is 2017 and we have just established SGPs and target growth percentiles, take an example student currently in grade 4, who scored at level 4 in the prior year 2016 as a 3rd grader.



Keep Up Determination Method

- Similar to the Keep Up Up methodology used for CSAP/TCAP, except with TBD timeframes instead of expecting all students to achieve proficiency within 3-years of by 10th grade
- Pretending the current year is 2017 and we have just established SGPs and target growth percentiles, take an example student currently in grade 4, who scored at level 4 in the prior year 2016 as a 3rd grader.



2017 Keep Up Determination C

Math Grades 3-8 by 2016 & 2017



CONTE NT	ACH_ LVL. 2016	ACH_ LVL. 2017	KeepUp_y0.2017				KeepUp_y1.2017				KeepUp_y2.2017				KeepUp_y3.2017				KeepUp_y4.2017			
			Not On Track		On Track		Not On Track		On Track		Not On Track		On Track		Not On Track		On Track		Not On Track		On Track	
			Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct	Count	Pct
ELA	L4toL4	1	203	0.2%			143	0.2%			96	0.2%			47	0.1%			19	0.1%		
		2	2031	2.1%			1631	2.0%			1285	2.1%			749	1.8%			289	1.4%		
		3	16516	17.3%			13650	17.1%			11147	17.9%			6826	16.7%			3002	14.8%		
		4			63240	66.4%	6047	7.6%	46667	58.4%	8171	13.1%	34337	55.1%	6864	16.8%	21407	52.4%	3968	19.6%	9102	45.0%
		5			13217	13.9%			11837	14.8%			7319	11.7%			4997	12.2%			3853	19.0%
ELA	L5toL4	1	6	0.0%			2	0.0%			1	0.0%										
		2	13	0.1%			4	0.0%			4	0.0%			3	0.0%			1	0.0%		
		3	166	0.9%			92	0.7%			74	0.8%			62	0.9%			13	0.6%		
		4			7471	40.8%	521	4.2%	4427	35.9%	1023	11.3%	3358	37.0%	1216	16.8%	2473	34.1%	393	19.5%	183	9.1%
		5			10642	58.2%	1	0.0%	7284	59.1%			4621	50.9%	7	0.1%	3485	48.1%	26	1.3%	1395	69.4%
MATH	L4toL4	1	120	0.1%			83	0.1%			71	0.1%			39	0.1%			33	0.2%		
		2	1747	2.1%			1528	2.2%			1322	2.4%			845	2.2%			562	2.9%		
		3	18966	23.1%			17020	24.8%			13346	24.3%			9009	23.8%			5306	27.3%		
		4			56628	69.0%	5029	7.3%	40805	59.6%	7451	13.6%	29128	53.1%	6376	16.8%	19207	50.7%	3162	16.3%	9783	50.4%
		5			4664	5.7%			4041	5.9%			3515	6.4%			2394	6.3%			583	3.0%
MATH	L5toL4	1																				
		2	3	0.0%			3	0.0%			3	0.0%			3	0.1%			3	0.1%		
		3	90	0.8%			87	0.9%			74	0.9%			56	1.0%			54	1.2%		
		4			6071	52.7%	445	4.6%	4485	46.7%	986	11.9%	3313	39.9%	1110	19.2%	2161	37.4%	1020	23.5%	1794	41.4%
		5			5365	46.5%	1	0.0%	4592	47.8%			3933	47.3%	5	0.1%	2444	42.3%			1462	33.7%

Note: The total number of students included in each of the future year categories (y1, y2, y3) decreases as students reach grade 8 and are no longer included in the target calculations.



2017 Median Growth Percentile and 2016 Achievement Level T



CONT ENT	EMH_ LVL. 2016	ACH_LVL. 2016	OnTrack_y0.2017				OnTrack_y1.2017				OnTrack_y2.2017				OnTrack_y3.2017				OnTrack_y4.2017			
			Not On Track		On Track		Not On Track		On Track		Not On Track		On Track		Not On Track		On Track		Not On Track		On Track	
			Count	MGP	Count	MGP	Count	MGP	Count	MGP	Count	MGP	Count	MGP	Count	MGP	Count	MGP	Count	MGP	Count	MGP
ELA	E	L1toL2	12553	26.0	11721	75.0	11404	23.0	12870	73.0	10386	22.0	13121	72.0	7569	21.0	10084	71.0	4442	20.0	6461	70.0
		L2toL3	19224	29.0	14536	77.0	17509	26.0	16251	76.0	15568	24.0	16532	74.0	9499	23.0	11567	73.0	4743	21.0	6649	71.0
		L3toL4	32892	33.0	16130	82.0	29403	30.0	19619	80.0	25421	28.0	20655	78.0	15612	26.0	14705	76.0	6953	24.0	7369	74.0
		L4toL5	58034	43.0	8073	90.0	51486	38.0	14621	87.0	42747	34.0	19604	84.0	25499	31.0	15388	81.0	11953	30.0	8277	79.0
		L4toL4	13396	13.0	52711	59.0	18385	14.0	47722	63.0	20698	17.0	41653	66.0	14485	18.0	26402	68.0	7277	18.0	12953	68.0
		L5toL4	86	1.0	9768	50.0	543	3.0	9311	52.0	1102	6.0	7978	56.0	1287	9.0	5958	59.0	433	11.0	1578	60.0
	M	L1toL2	8190	31.0	4682	81.0	3315	29.0	2279	80.0												
		L2toL3	11226	32.0	6811	81.0	4944	30.0	3825	79.0												
		L3toL4	17440	34.0	8687	83.0	7603	30.0	5492	80.0												
		L4toL5	23956	43.0	5144	87.0	9844	39.0	4024	85.0												
		L4toL4	5354	13.0	23746	60.0	3086	13.0	10782	63.0												
		L5toL4	99	1.0	8345	52.0	77	2.0	2400	56.0												
MATH	E	L1toL2	15823	31.0	10020	79.0	14251	27.0	11592	77.0	12580	25.0	12195	75.0	8215	23.0	9285	73.0	4166	23.0	4532	73.0
		L2toL3	29908	36.0	12153	84.0	27038	32.0	15022	82.0	24193	31.0	15643	80.0	15267	29.0	11352	79.0	7031	29.0	5327	79.0
		L3toL4	41032	41.0	9479	89.0	37570	37.0	12929	87.0	32567	34.0	14965	84.0	20419	32.0	11036	82.0	9724	31.0	5863	81.0
		L4toL5	54348	46.0	3600	92.0	50752	44.0	6931	92.0	44851	41.0	9977	90.0	29123	38.0	8744	88.0	14519	37.0	4908	87.0
		L4toL4	15695	17.0	42253	63.0	20303	18.0	37427	67.0	22188	20.0	32640	70.0	16268	22.0	21599	71.0	9062	23.0	10365	73.0
		L5toL4	85	1.0	8690	50.0	495	3.0	8065	53.0	1063	6.0	7246	57.0	1174	10.0	4605	60.0	1077	12.0	3256	62.0
	M	L1toL2	7766	31.0	4797	79.0	3179	24.0	3384	74.0												
		L2toL3	18084	37.0	6226	85.0	7420	35.0	3676	83.0												
		L3toL4	23196	41.0	5726	87.0	9046	36.0	3776	85.0												
		L4toL5	23113	50.0	1064	94.0	9266	45.0	1313	92.0												
		L4toL4	5138	16.0	19039	62.0	3357	18.0	7419	66.0												
		L5toL4	8	1.0	2746	53.0	41	2.0	1012	55.0												

Questions & Considerations with 2017 Hypothetical On Track Results

- How should we consider these results in setting expected timelines for students to move up one or more achievement levels?
- What are your reactions to the proportions of students being flagged as On Track and Not On Track? By starting point? By grade and content?
- What additional analyses would be helpful?



Comparison of 2016 Future Year 1 & 2 Targets to 2017 & 2018 Observed Outcomes



Comparison of 2016 Future Year 2017 & 2018 Observed Outcomes

We can compare the observed 2018 achievement levels against our assigned Catch Up determinations to see how accurately we are predicting student outcomes for 1 year and 2 years into the future.

In general, the majority (80-100%) of students we flagged as being On Track to move up 1 proficiency level in future year 1 accomplished this feat.

Students flagged as Not On Track had slightly more variable outcomes, with 60-90% being accurately classified.

Comparison of 2017 Future Year Observed Outcomes

EMH. 2016	CONTENT	ACH LVL. 2016 & Target	CatchUp_y1.2017					
			Not On Track			On Track		
			Count	Pct of Ach Lvl Cohort	Pct Correctly Predicted	Count	Pct of Ach Lvl Cohort	Pct Correctly Predicted
E	ELA	L1toL2	11,404	47.0%	64.9%	12,870	53.0%	94.9%
E	ELA	L2toL3	17,509	51.9%	69.8%	16,251	48.1%	93.6%
E	ELA	L3toL4	29,403	60.0%	76.4%	19,619	40.0%	88.9%
E	ELA	L4toL5	51,486	77.9%	90.5%	14,621	22.1%	72.9%
E	MATH	L1toL2	14,251	55.1%	65.1%	11,592	44.9%	92.0%
E	MATH	L2toL3	27,038	64.3%	80.8%	15,022	35.7%	87.4%
E	MATH	L3toL4	37,570	74.4%	89.3%	12,929	25.6%	80.5%
E	MATH	L4toL5	50,752	88.0%	96.3%	6,931	12.0%	60.9%
M	ELA	L1toL2	3,315	59.3%	72.5%	2,279	40.7%	91.8%
M	ELA	L2toL3	4,944	56.4%	74.8%	3,825	43.6%	92.3%
M	ELA	L3toL4	7,603	58.1%	78.4%	5,492	41.9%	89.9%
M	ELA	L4toL5	9,844	71.0%	89.7%	4,024	29.0%	94.2%
M	MATH	L1toL2	3,179	48.4%	81.2%	3,384	51.6%	100.0%
M	MATH	L2toL3	7,420	66.9%	82.7%	3,676	33.1%	97.3%
M	MATH	L3toL4	9,046	70.6%	80.0%	3,776	29.4%	71.9%
M	MATH	L4toL5	9,266	87.6%	96.2%	1,313	12.4%	47.9%

CDE Next Steps

- Revisit Observed 2013-2017 Proficiency Trajectories from May TAP meeting and look at demographic profiles of exemplar schools
- Calculate hypothetical 2017 Keep Up Targets and repeat previous predicted/observed analyses
- Aggregate Catch Up and Keep Up results at the school and district level to see how systems with varying demographic profiles perform
- Other suggestions for analysis?

Technical Advisory Panel

- Meeting Summary:
 - Suggested future analysis
 - TAP recommendations from this meeting
- Public Comment
- Close Meeting
 - Next Scheduled Meeting, November 30th (Fri), 1-4 at CDE.

