Charlotte-Mecklenburg Schools

Every Child. Every Day. For a Better Tomorrow.

EVAAS

An Introduction

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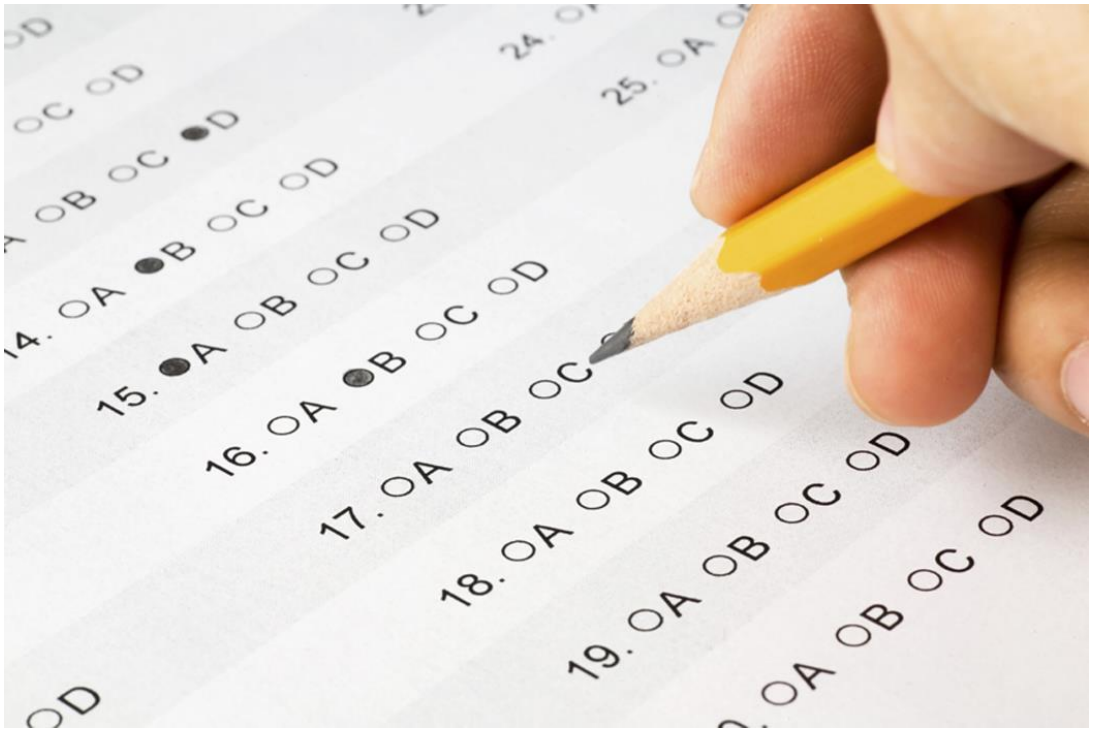
Office of Accountability

What will EVAAS help me to do?

- Identify and address problems that inhibit student progress
- Develop strategies to meet the needs of students at different achievement levels
- Make scheduling decisions
- Identify students for specialized programs
- Provide a data-based foundations for annual planning and preparing for the next school year
- Identify students who are at risk and in need of remediation supports
- Support other initiatives aimed at improving student performance
- Specifically, it answers the question, “Is the program meeting the academic needs of all students it serves?”

What data are used in EVAAS?

- Student assessment data acquired from the following tests:
  - mCLASS Reading
    - Kindergarten – 2nd grade
  - EOG Reading
    - 3rd – 8th grade
  - EOG Math
    - 4th – 8th grade
  - EOG Science
    - 5th and 8th grade
  - EOCs
    - Math I
    - Biology
    - English II
  - NCFE
  - CTE Exams
  - SAT/ACT



- Teacher and student linkage data – based on Roster Verification

How does EVAAS measure growth?

Gain Model

- mClass Reading Grades K-2
- EOG Math Grades 4-8
- EOG Reading Grades 3-8
- Can only be used with test in sequential years
- Does not predict where students will score, so three years of prior scores are not needed
- Measures the difference in cohort position in the state distribution in a grade/subject at the end of one year, and their position in the distribution at the end of the next year.
- **Reported in NCEs**

Predictive Model

- EOG Science, EOC, ACT, SAT,CTE, NC Final Exams
- Can be used with test whether in sequential years or not.
- Requires at least three years of test scores (grades and subjects can be different) to predict where students will score relative to other NC students who take the same test
- Measures the difference of where students would be expected to score, assuming the average progress statewide, and where they did score when tested.
- **Reported in scale scores**

What are the advantages to both models?

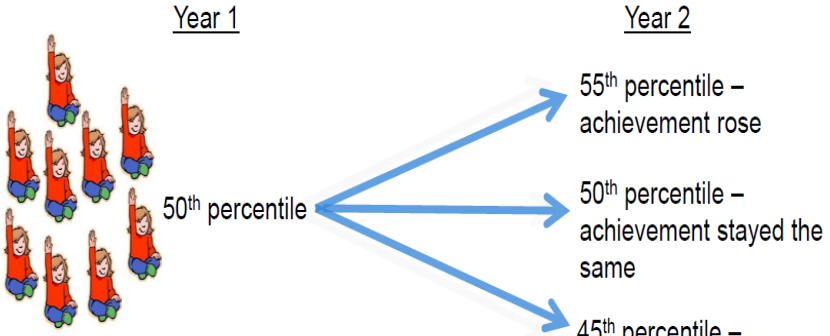
- Use all available testing history for each student to minimize impact of measurement error
- Include students who have missing test scores
  - For predictive model, students must have three prior test scores in any grade/subject.
- Incorporate team teaching or other shared instructional practices for teacher reports
- Use standard errors to address uncertainty inherent in any growth model and protect against misclassification

What is expected growth?

Precise definition depends on the model, but the general idea is that the actual performance of students in the current year determines the growth expectation for the current year.

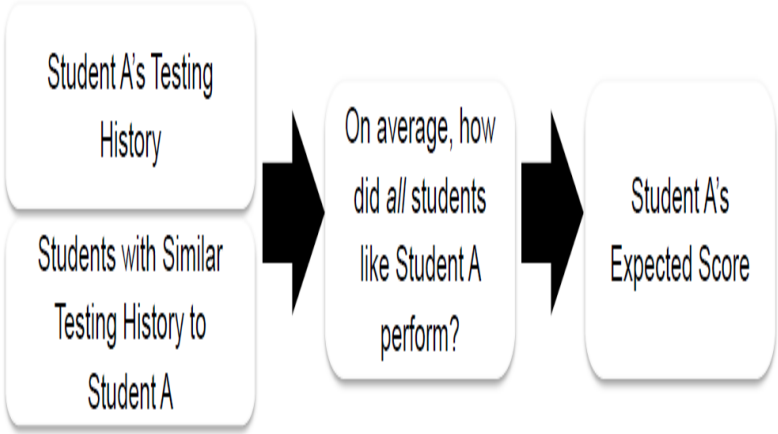
Gain Model

- Student Growth = Change in Achievement over time for a group of students



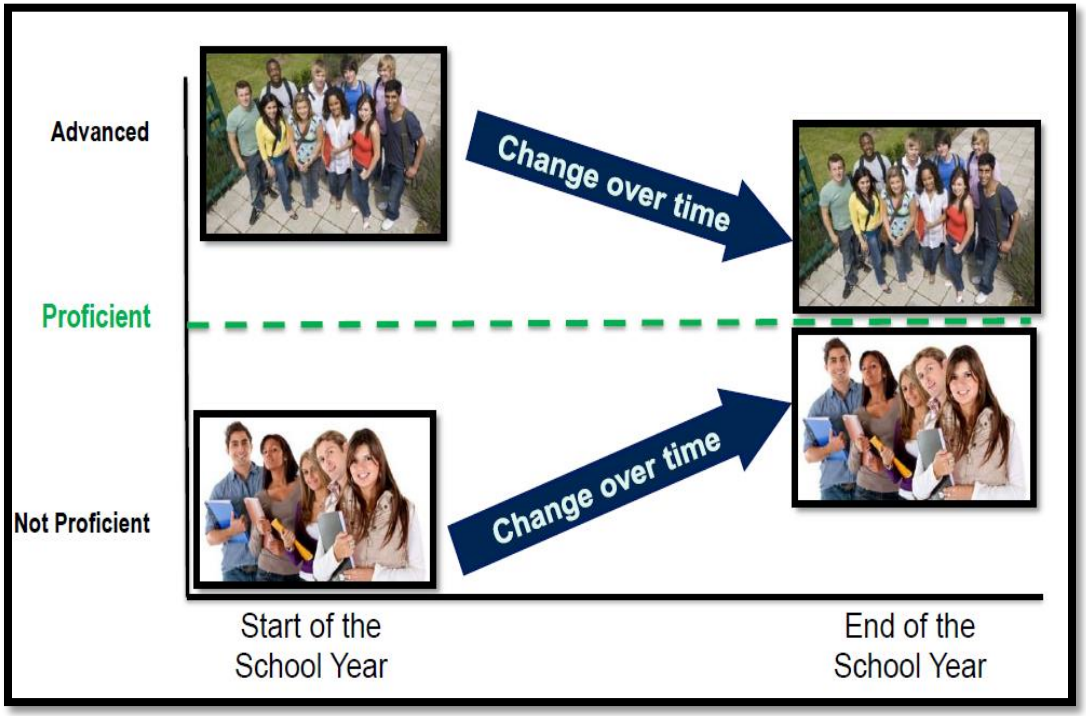
Predictive Model

- Student Growth = Average Expected Score – Average Observed Score

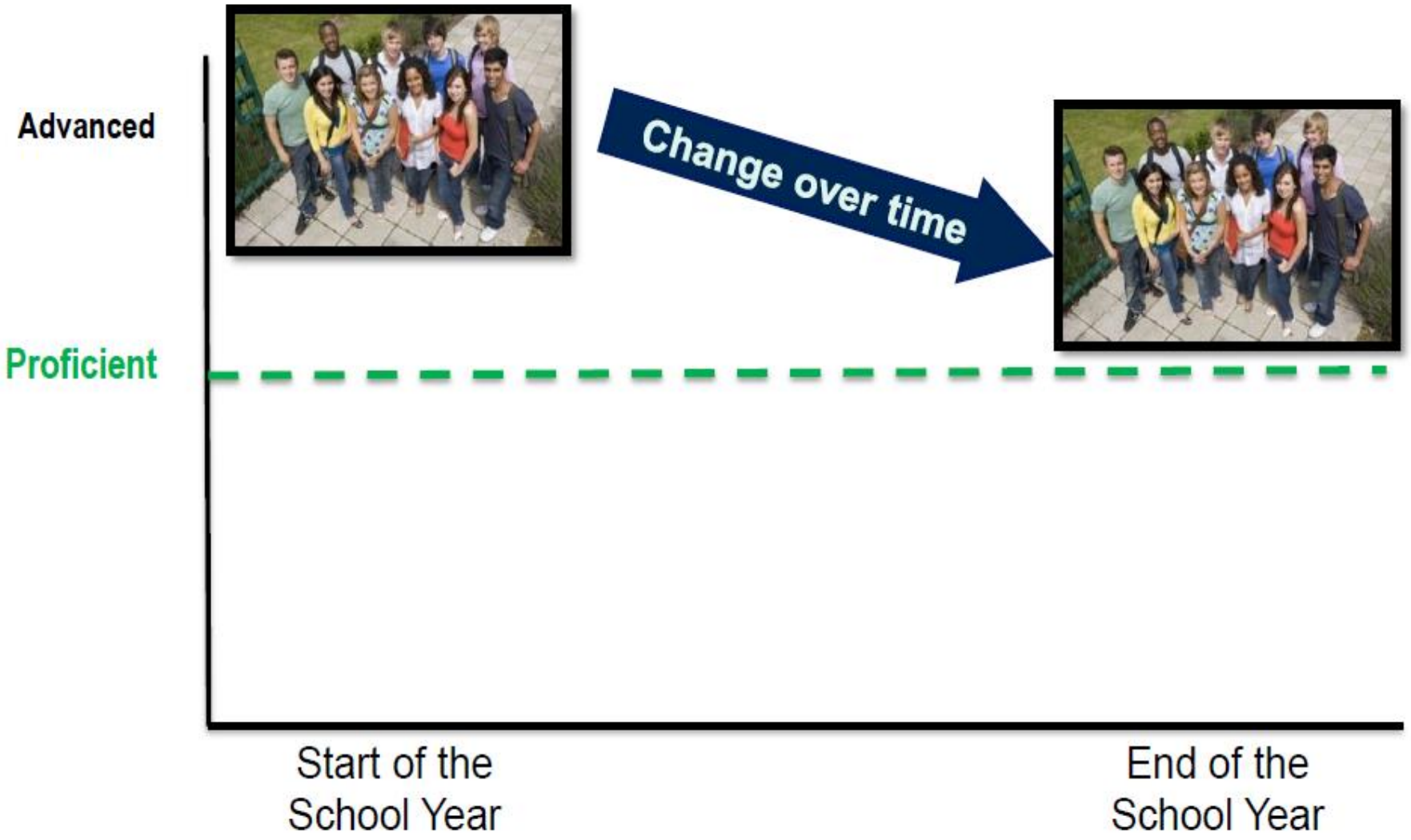


Growth is Not Achievement

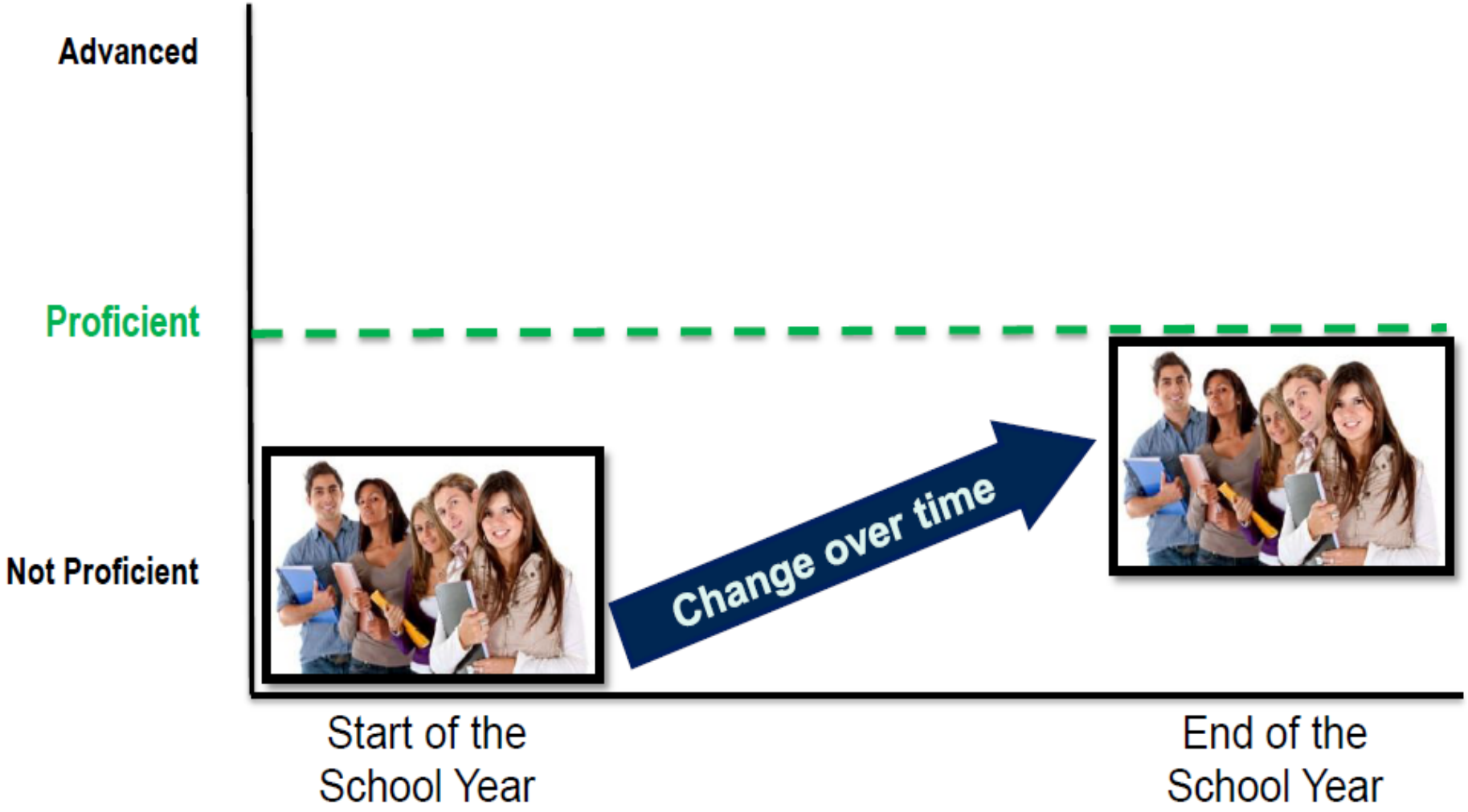
- Proficiency and growth are two unrelated events.
- Important for teachers and leaders to understand that the attainment of proficiency can distract teachers from generating maximum growth with their students.
- A change management strategy may be needed to help with the shift from a “proficiency culture” to a “growth culture”.



How can educators be ineffective when all students passed the test?



How can educators be very effective when none of their students passed the test?

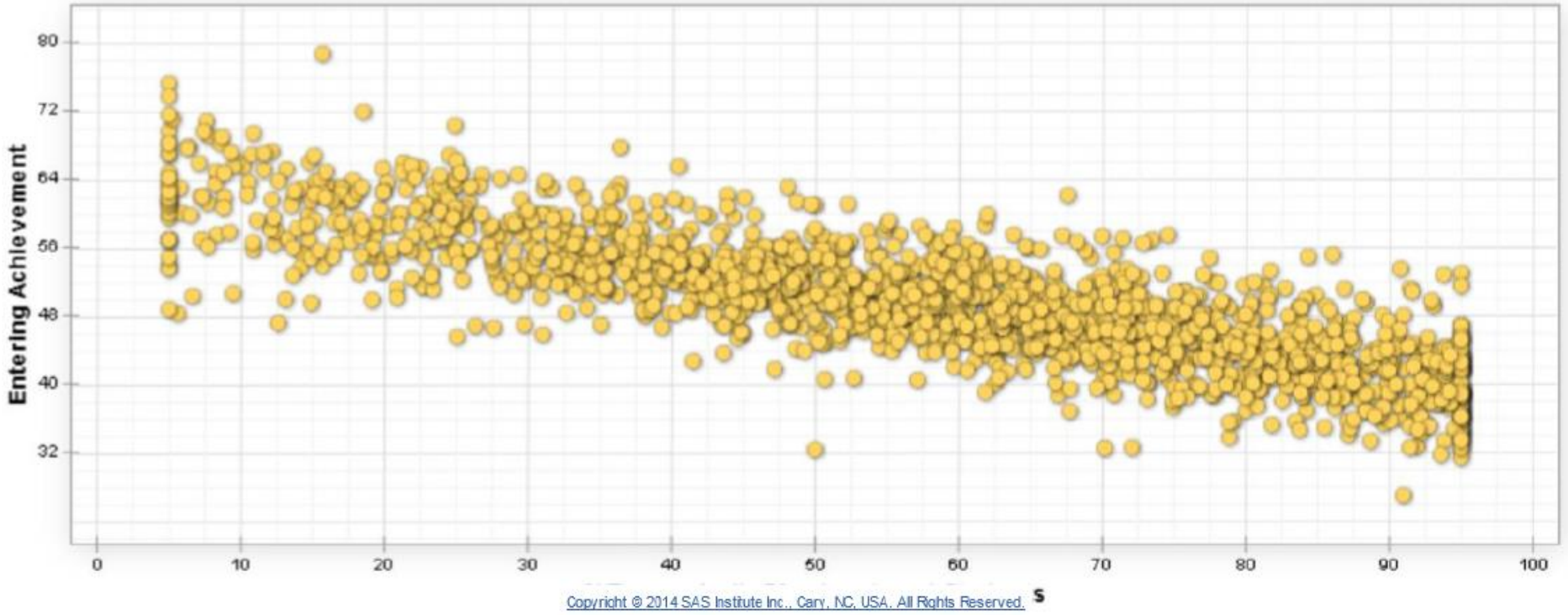


Is the EVAAS growth model fair for *all* students served?

- Exceptional Children
- Economically Disadvantaged Students
- Minority Students
- Students with Disabilities
- Academically Intellectually Gifted
- Limited English Proficiency
- Truant Students
- Students with Discipline Infractions
- etc.

Is the EVAAS growth model fair for *all* students served?

Achievement vs. % Students Testing as Econ. Disadvantaged



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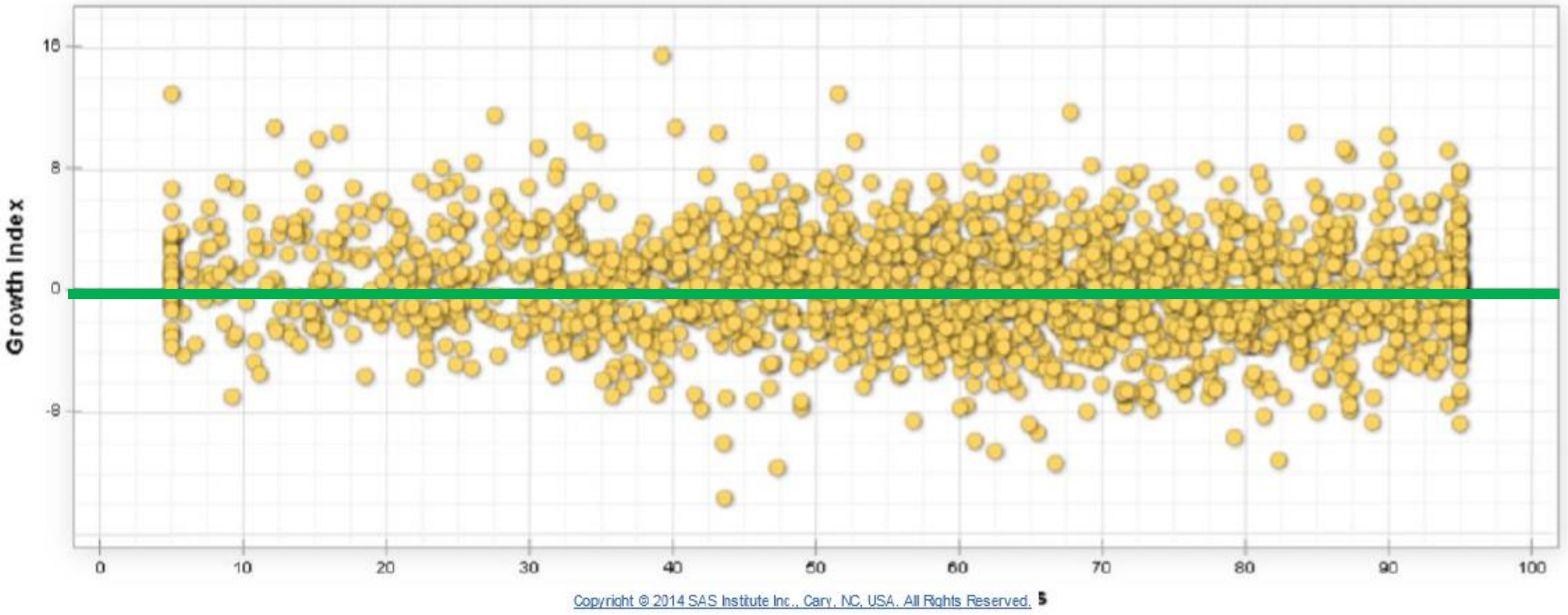
Is the EVAAS growth model fair for *all* students served?

Growth vs. % Students Testing as Econ. Disadvantaged



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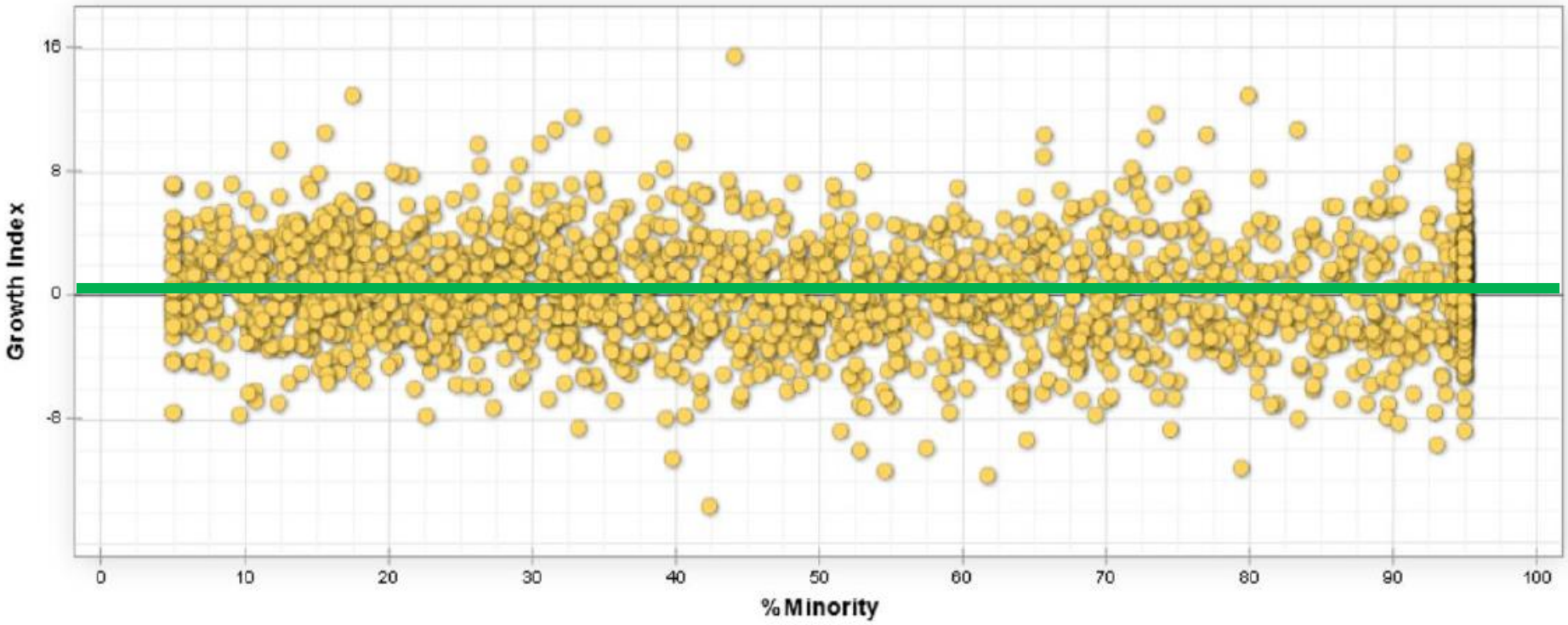
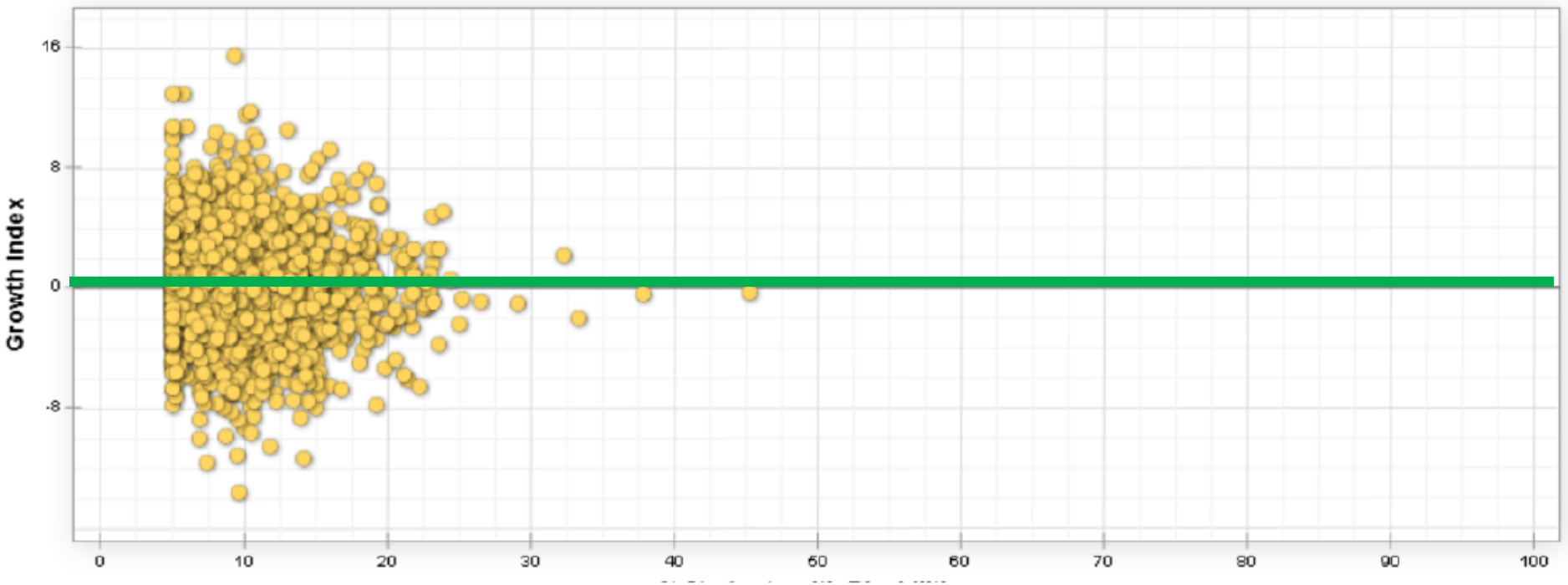
Is the EVAAS growth model fair for *all* students served?

Growth vs. % Students Testing as Minority



Is the EVAAS growth model fair for *all* students served?

Growth vs. % Students Testing with Disabilities



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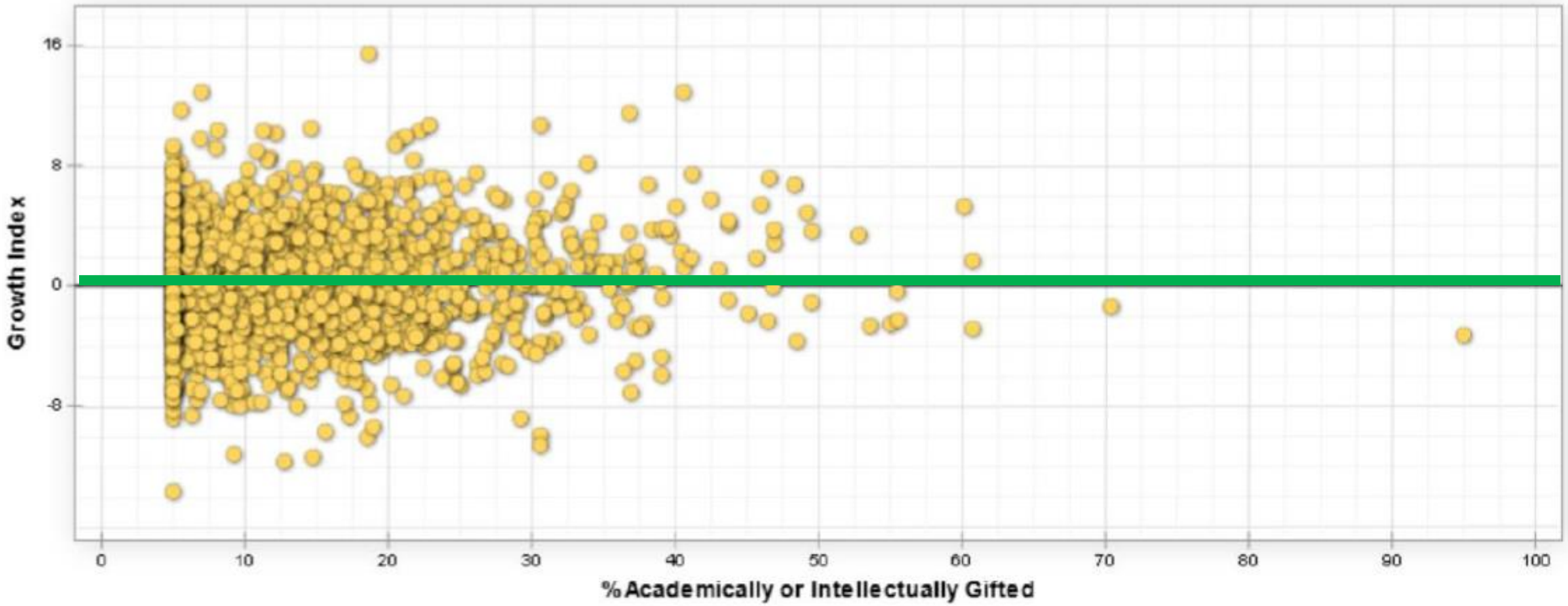
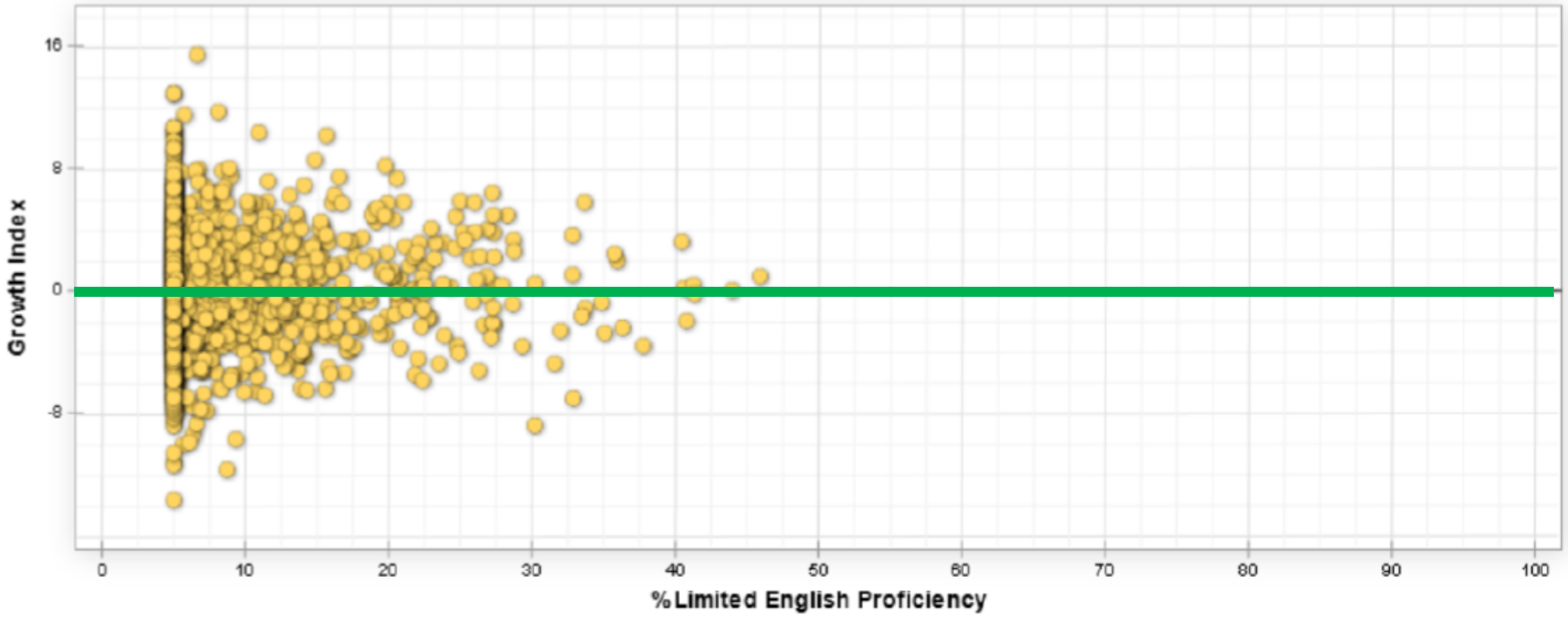
Is the EVAAS growth model fair for *all* students served?

Growth vs. % Students Testing as AIG (Math)



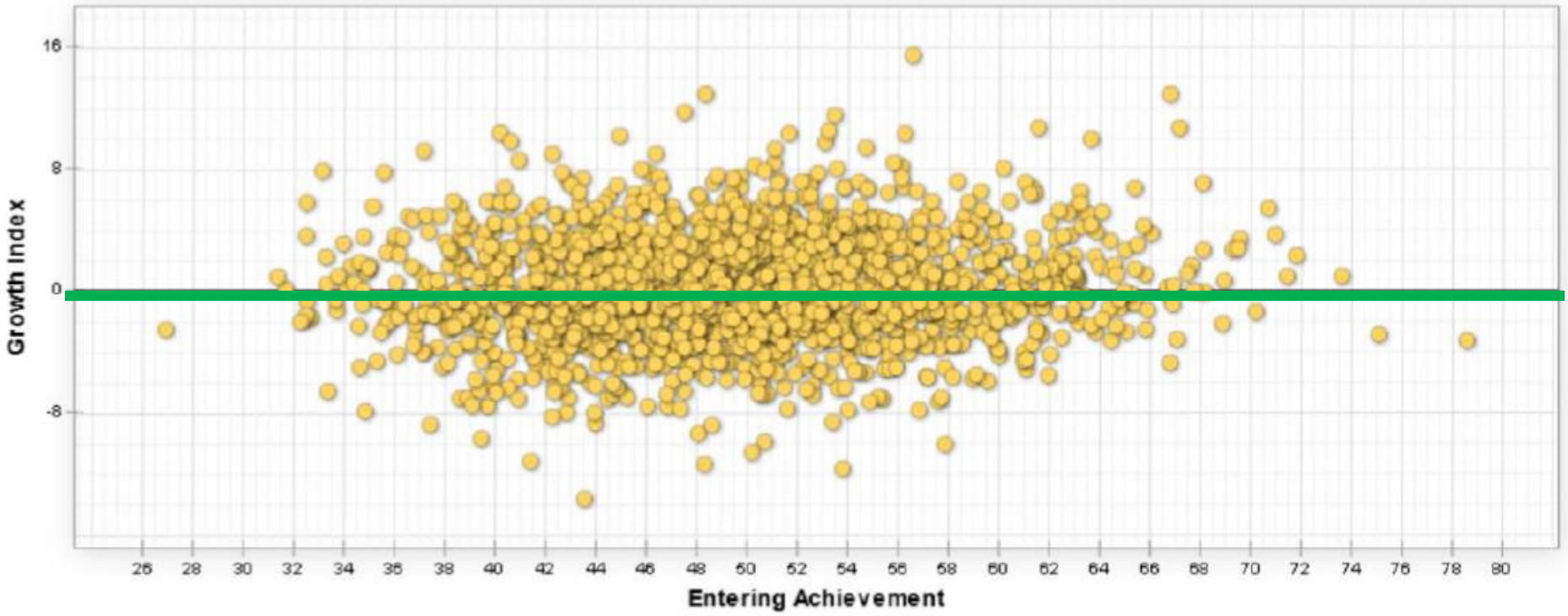
Is the EVAAS growth model fair for *all* students served?

Growth vs. % Students Testing as LEP



Is the EVAAS growth model fair for *all* students served?

Growth vs. Achievement



How is Effectiveness Indicated In EVAAS?

Exceeds Expected Growth

- **Exceeds Expected Growth**: Estimated mean NCE gain is above the growth standard by at least 2 standard errors.

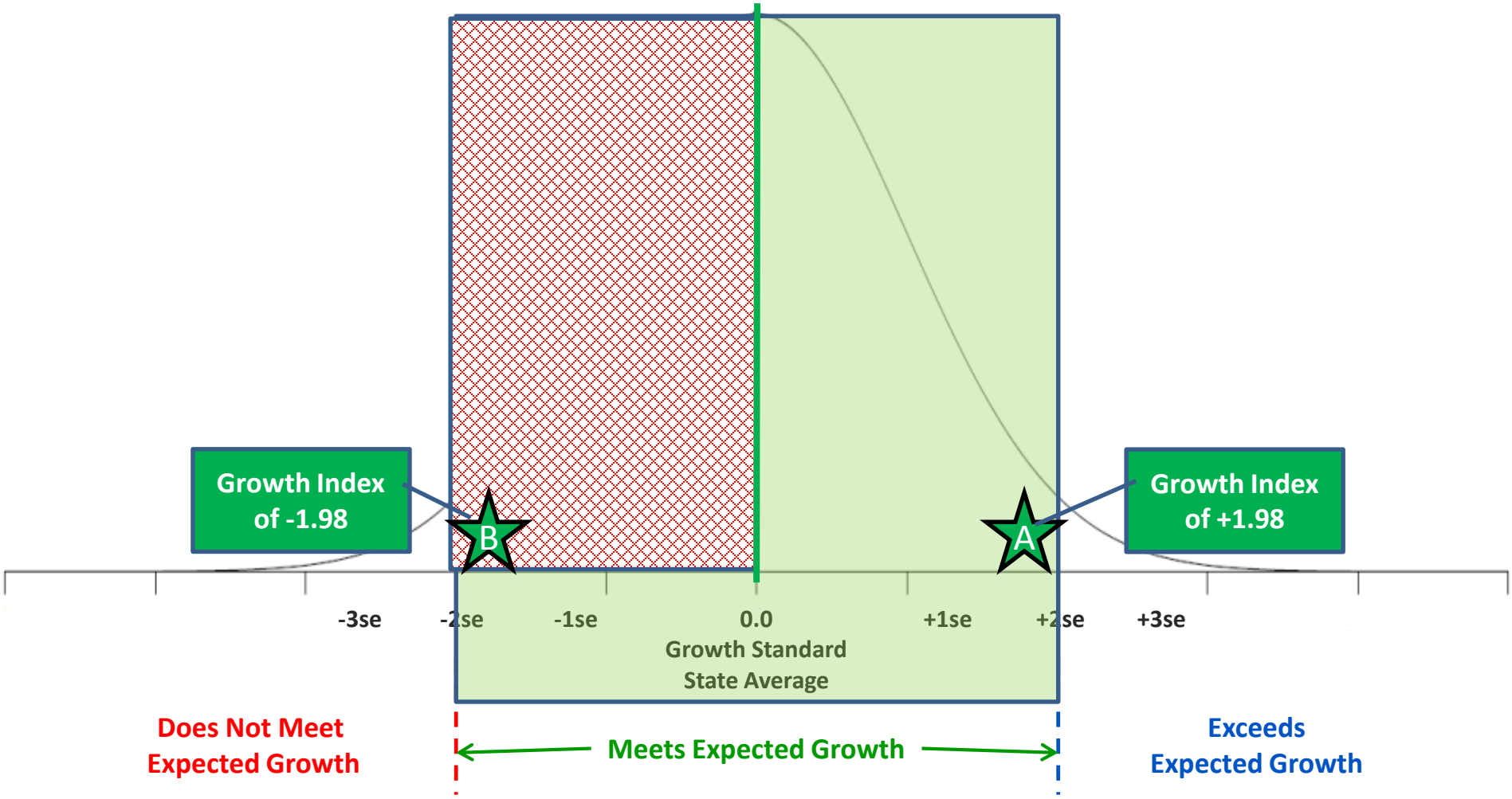
Meets Expected Growth

- **Meets Expected Growth:** Estimated mean NCE gain is below the growth standard by at most 2 standard errors but less than 2 standard error above it.

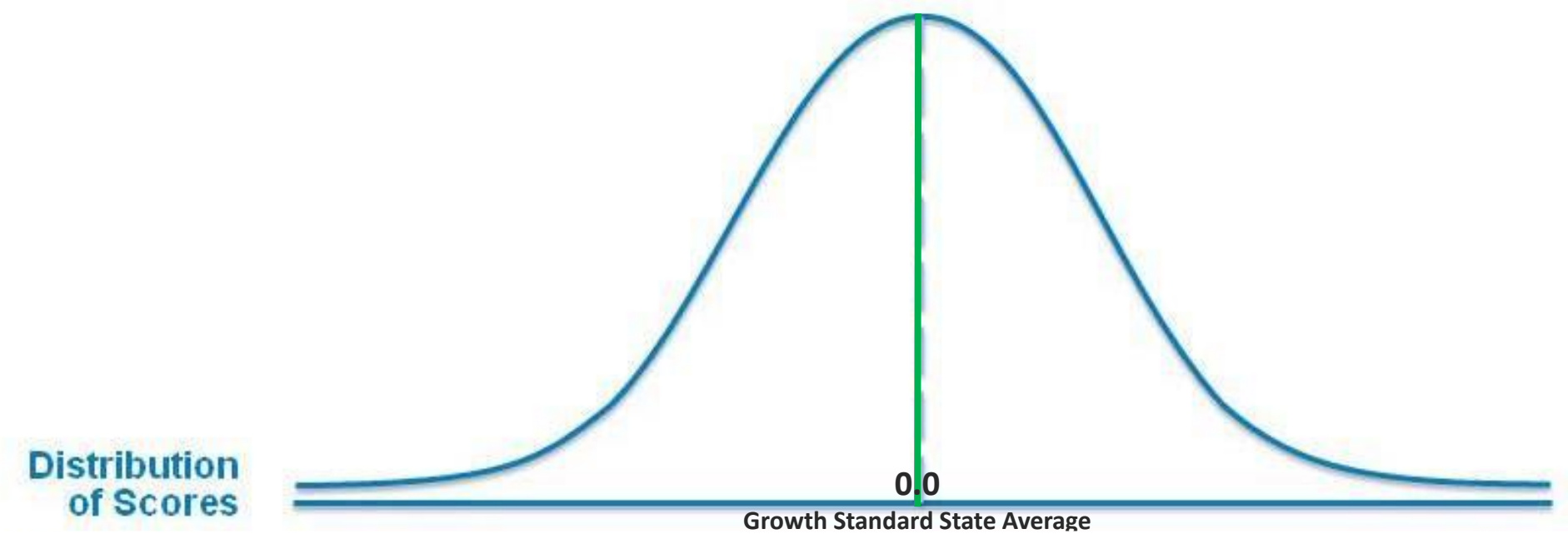
Does Not Meet Expected Growth

- **Does Not Meet Expected Growth:** Estimated mean NCE gain is below the growth standard by more than 2 standard errors.

What does Standard Error look like?



What is a Normal Curve Equivalents (NCE)?

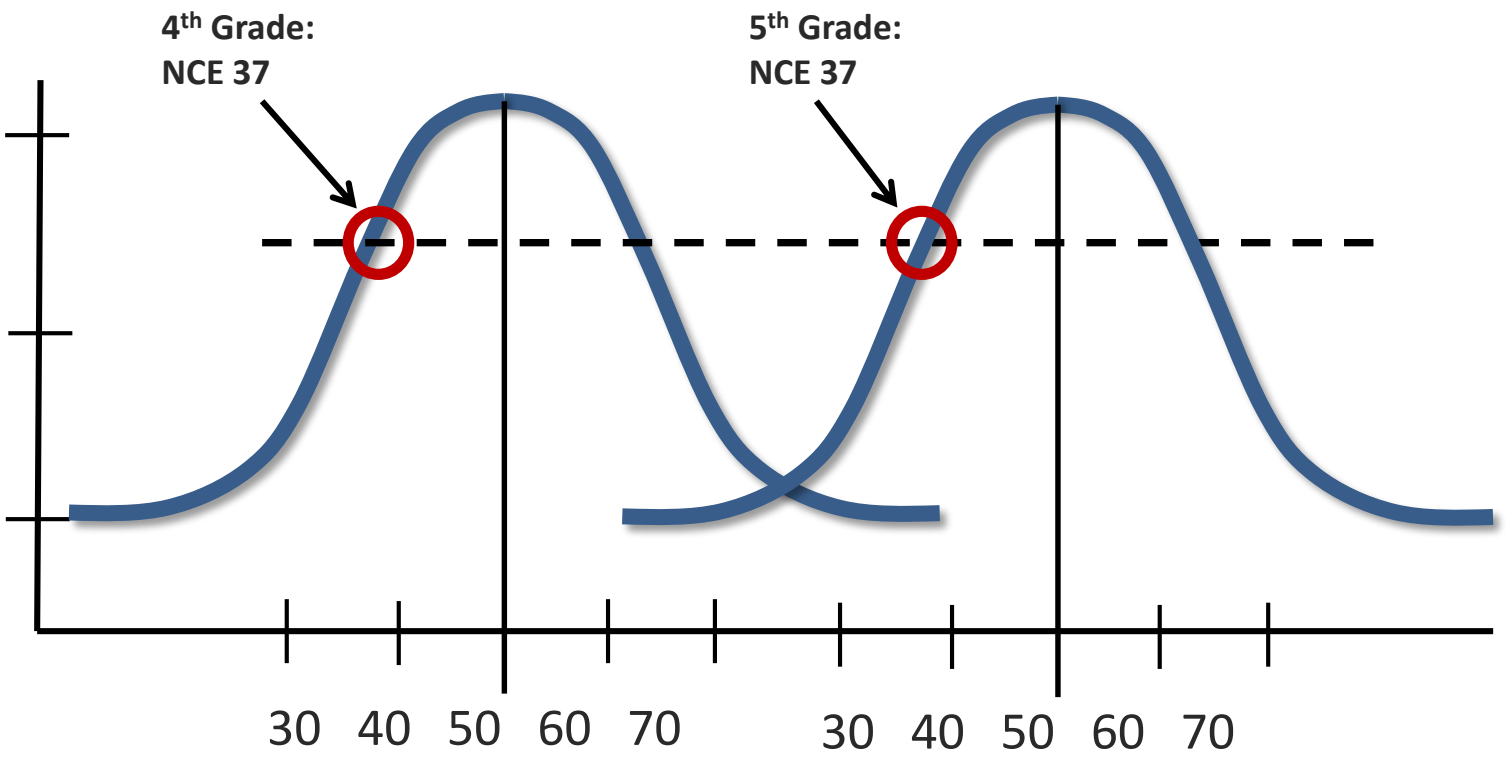


What is a Normal Curve Equivalents (NCE)?

When Cam Newton is at the 20 yard line and throws +30 yards, he's going to hit the 50 yard mark, no matter what stadium he is in.

Level Playing Field for ALL:
Districts (Conference)
Schools (Stadiums)
Teachers (Coaches)
Students (QBs)

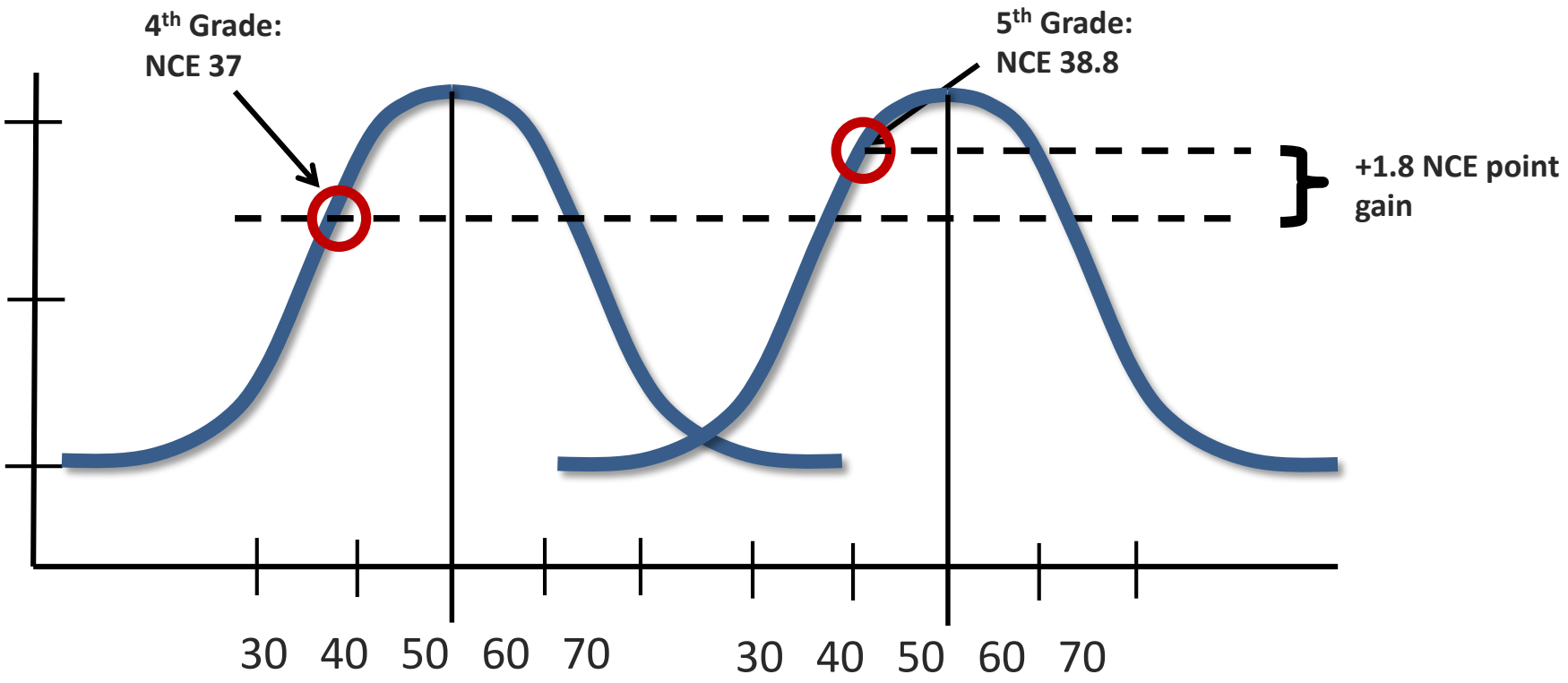
How do NCEs help measure growth?



5th grade NCE 37 — 4th grade NCE 37 = 0 = State Growth Standard

The State Growth Standard (0.0) is achieved when students do not lose ground from year to year, relative to other students, across the state, who take the same test. It signifies one year's growth.

How do NCEs help measure growth?



5th grade NCE 38.8 — 4th grade NCE 37 = +1.8 Above State Growth Standard

The State Growth Standard (0.0) is achieved when students do not lose ground from year to year, relative to other students, across the state, who take the same test. It signifies one year's growth.

NCE vs. Percentile

NCE

- We can compare tests from different years, forms, grades, courses and subjects because all tests are rescaled to a 0-100 scale **(EOG Reading and Math)**
- Along the distribution of student performance, NCEs are even intervals.
- A change in 1 NCE is the same change on the test no matter where along the distribution
- An NCE of any number in one grade is at the same place on the scale as that number in any other grade
- Growth Model

Percentile

- We cannot compare from year to year, due to the fact percentile rankings vary from year to year **(EOG Science, EOC, ACT, SAT, CTE, North Carolina Final Exams)**
- Along the distribution of student performance, percentiles cannot be reported out evenly. (Remember most students will be grouped close to the 50th percentile)
- A 1 percentile change is different depending on where in the distribution.
- A Percentile of any number in one grade is not at the same place on the scale as that number in an different grade
- Predicted Model

NCE vs. Percentile

A= 2012 B= 2013

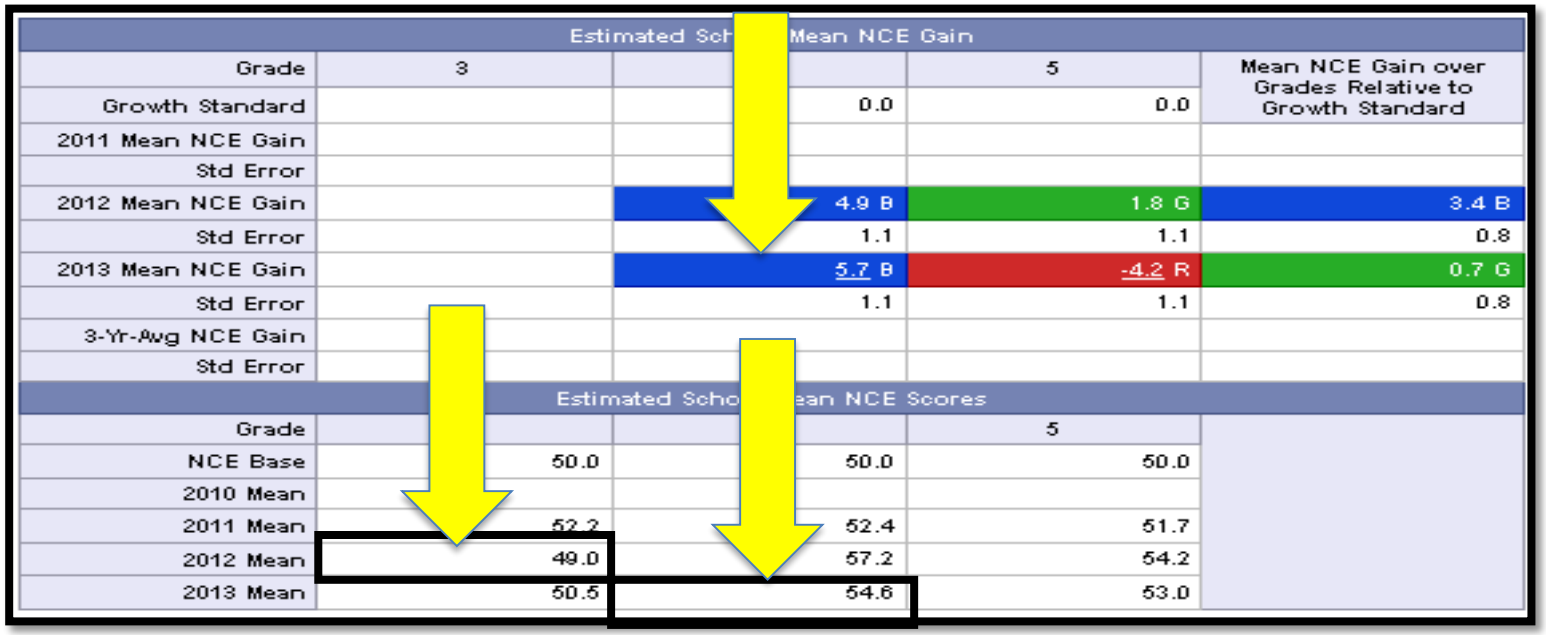
- In 2012 students that scored a 46 placed them at the 30th percentile
- In 2013 students that scored a 46 placed them at the 90th percentile

The graphic to the right shares why percentiles can be misleading, but when converted to NCEs scores can be compared from year to year, same subject.

A	B
58	50
56	46
54	32
54	30
52	30
50	23
48	23
46	22
44	21
42	20

What does the Gain Model show?

The EVAAS growth measure is a function of the difference between what the student's or group of students previous mean from their current mean.



Estimated Sch Mean NCE Gain				
Grade	3		5	Mean NCE Gain over Grades Relative to Growth Standard
Growth Standard		0.0	0.0	
2011 Mean NCE Gain				
Std Error				
2012 Mean NCE Gain		4.9 B	1.8 G	3.4 B
Std Error		1.1	1.1	0.8
2013 Mean NCE Gain		5.7 B	-4.2 R	0.7 G
Std Error		1.1	1.1	0.8
3-Yr-Avg NCE Gain				
Std Error				

Estimated Scho ean NCE Scores				
Grade			5	
NCE Base	50.0	50.0	50.0	
2010 Mean				
2011 Mean	52.2	52.4	51.7	
2012 Mean	49.0	57.2	54.2	
2013 Mean	50.5	54.6	53.0	

What does the Predictive Model show?

The EVAAS growth measure is a function of the difference between what the students' are predicted to score and what they actually scored, when tested.

Predictive Model Requirements

To be included in the Predictive Model

- A minimum of 3 prior test scores is required for each student

To receive a Value Added Report

- Minimum 10 students with a minimum of 3 prior test scores, each
- At least 6 full time students at 60% membership of the 10 with 3 prior tests

Subject	Grade	Year	N	Mean Student Score	Mean Score %-ile	Mean Pred Score	Pred Score %-ile	School Effect	Effect Std Err	School vs State Avg
Science	5	2011	108	157.7	57	157.6	57	0.1	0.5	Meets Expected Growth
		2012		157.1		157.8		-0.7	0.5	Meets Expected Growth
		2013	100	250.3	46	252.2	55	-1.8	0.5	Does Not Meet Expected Growth

How Are Students Grouped in Reports?

Gain Model

Placement based on average of two most recent scores in subject

Tests and Subjects:

EOG Math and Reading/ELA, Grades 4-8

Predictive Model

Placement based on predicted scores

Tests and Subjects:

Science Grades 5-8, all HS Tests and NC Final Exams

Students are placed into one of five groups based on where their achievement level profiles in the distribution of all students statewide in the same grade and subject or course.

Lowest	Low-Mid	Middle	Mid-High	Highest
Achievement falls between 0-20% of the state distribution	Achievement falls between 20-40% of the state distribution	Achievement falls between 40-60% of the state distribution	Achievement falls between 60-80% of the state distribution	Achievement falls between 80-100% of the state distribution

How Are Students Grouped in Reports?

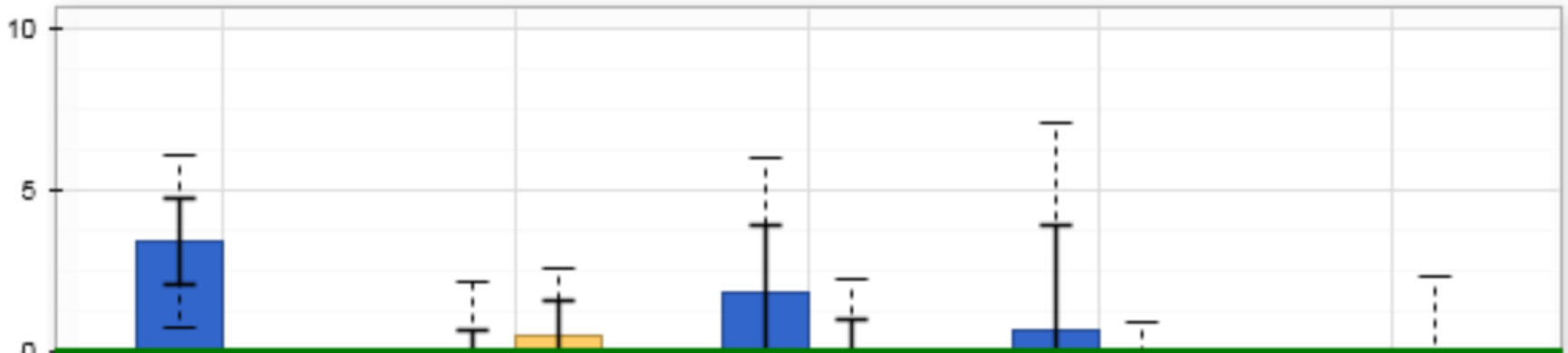
•**Diagnostic**: Students are placed into groups based on where their achievement falls in the state distribution.

•**Performance Diagnostic**: Students are placed into groups based on the state performance level range in which they are expected to score.

•**Custom Diagnostic**: Students are placed into groups based on where their achievement falls in the distribution of students you select for the report.

School Diagnostic | School Performance Diagnostic | School Custom Diagnostic

Filter By: **Subgroup**

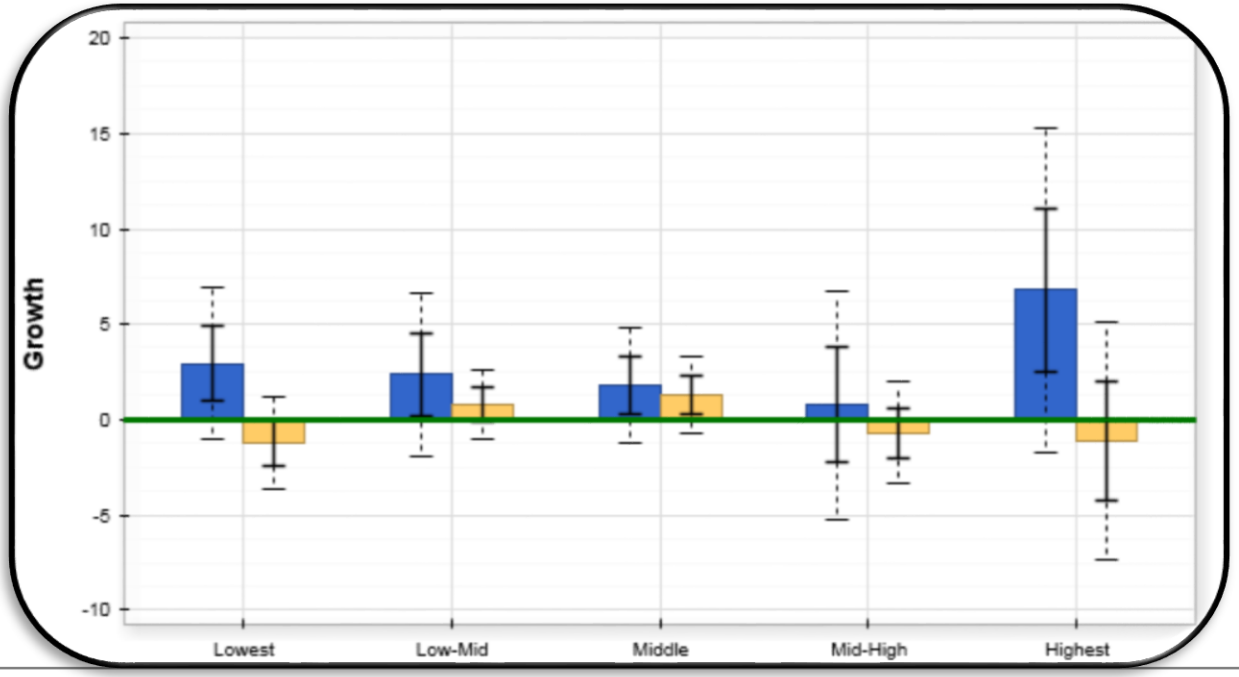


Diagnostic Reports

The **School Diagnostic Report** disaggregates progress for students who enter a course or grade at different levels of achievement.

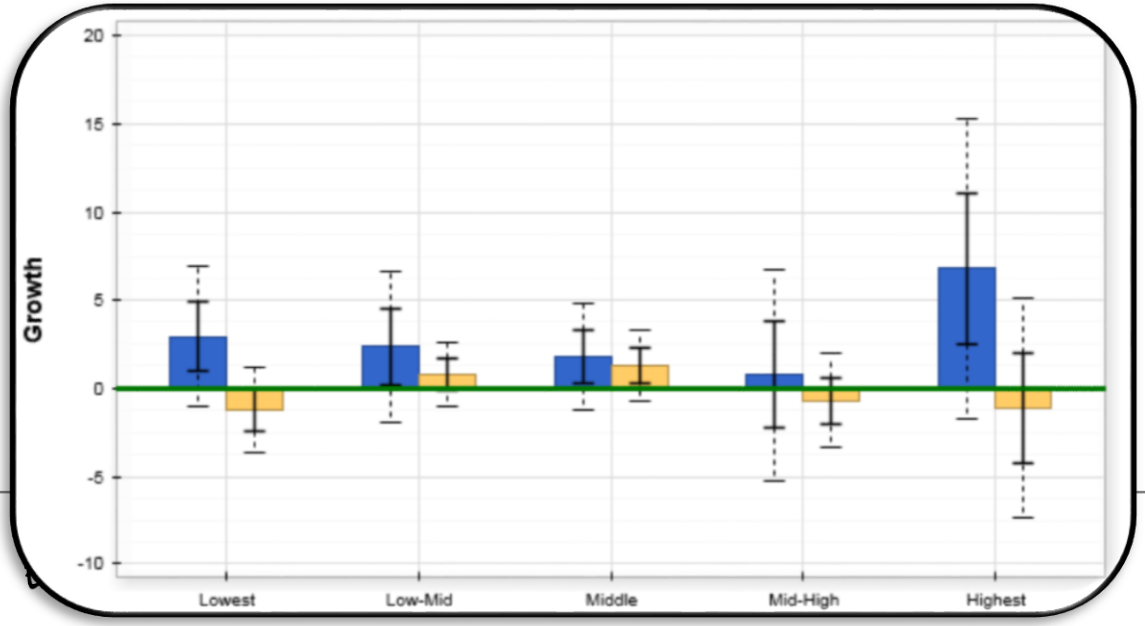
With this report, you can:

- Identify patterns or trends
- Assess progress against the Growth Standard
- Determine how well a school helps students at different achievement levels make growth

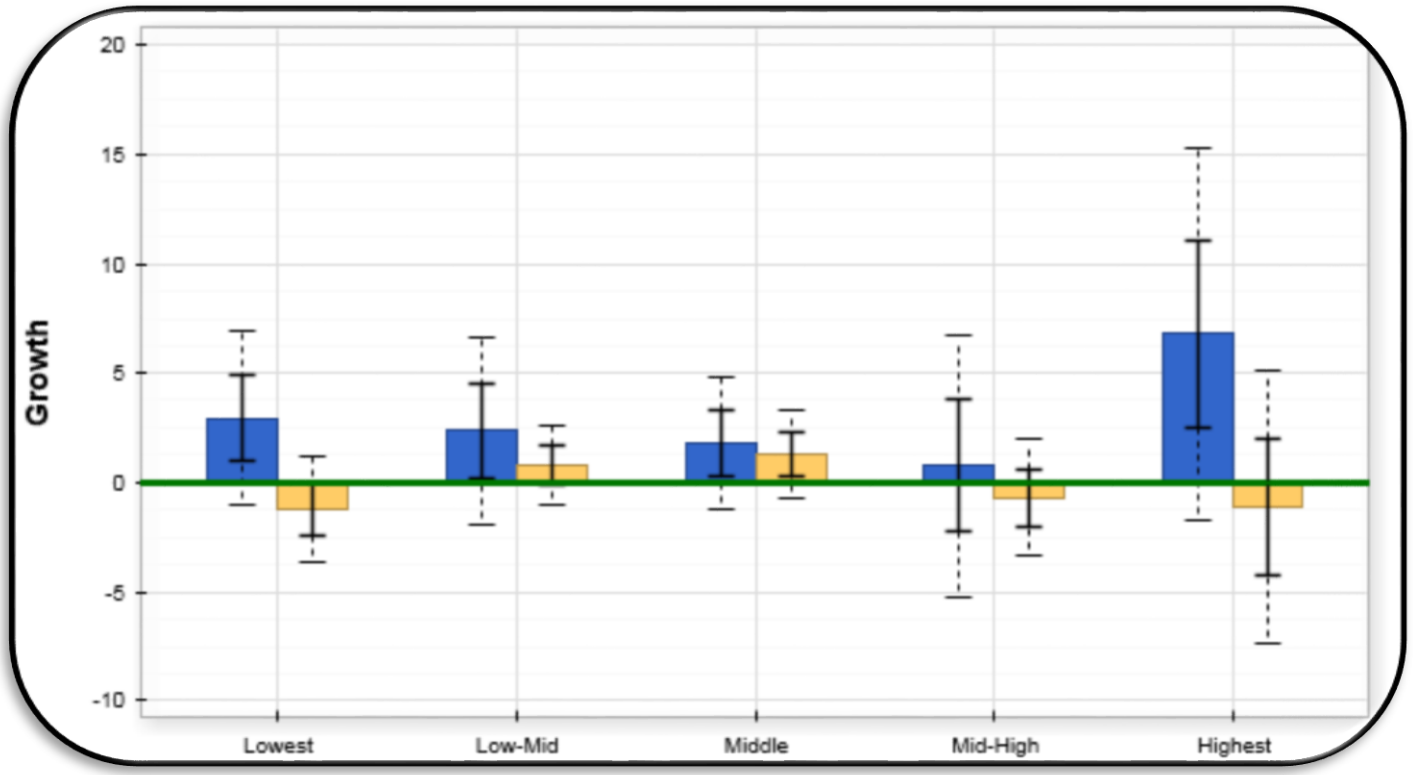


Diagnostic Reports

- Growth (blue or yellow bars)
  - The bars represent values that indicate the amount of academic growth students in the group made, on average, in the selected grade and subject or course.
- Growth Standard (green line)
  - The Growth Standard signifies the minimum amount of academic growth that educators should expect a group of students to make in a subject and grade or course.
  - In general, this signifies appropriate, expected academic growth.
  - The expectation is that regardless of their entering achievement level, students served by each district, school, or teacher should at least make enough progress to maintain their achievement level.
- Standard Error (black I bar)
  - this value defines a confidence band around the growth measure, which is helpful in determining how strong the evidence is that the group of students exceeded, met, or fell short of the Growth Standard.



What do the EVAAS charts say?



Blue Columns/Bars: 2015 Cohort

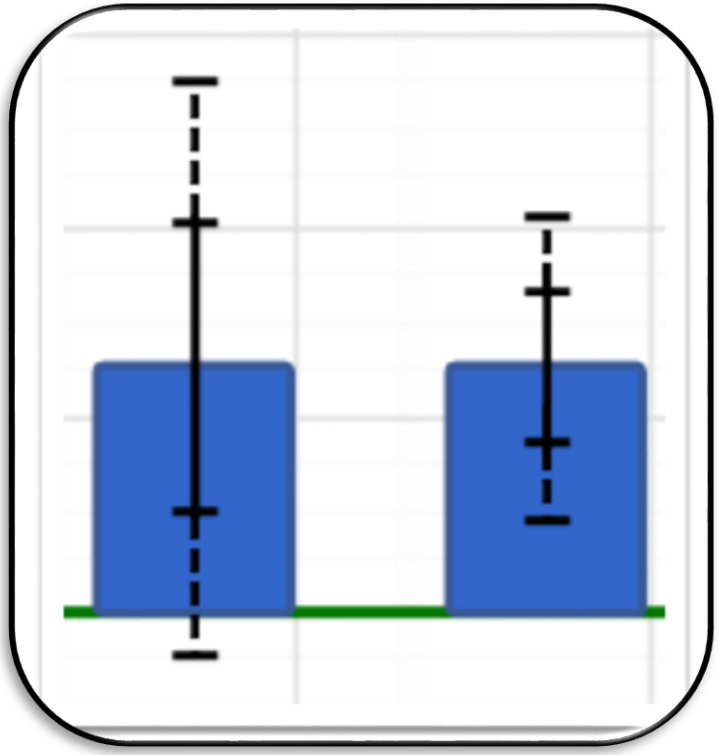
Yellow Columns/Bars: Previous Cohort

I: Confidence Interval Band / Standard Error

----------: Reference Line

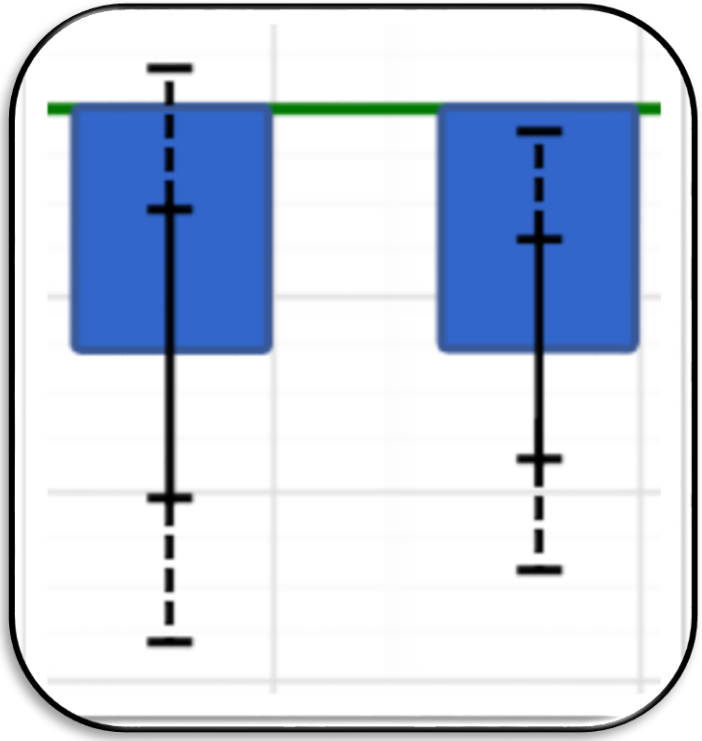
The amount of progress students must make to keep up with their peers

What do the EVAAS charts say?



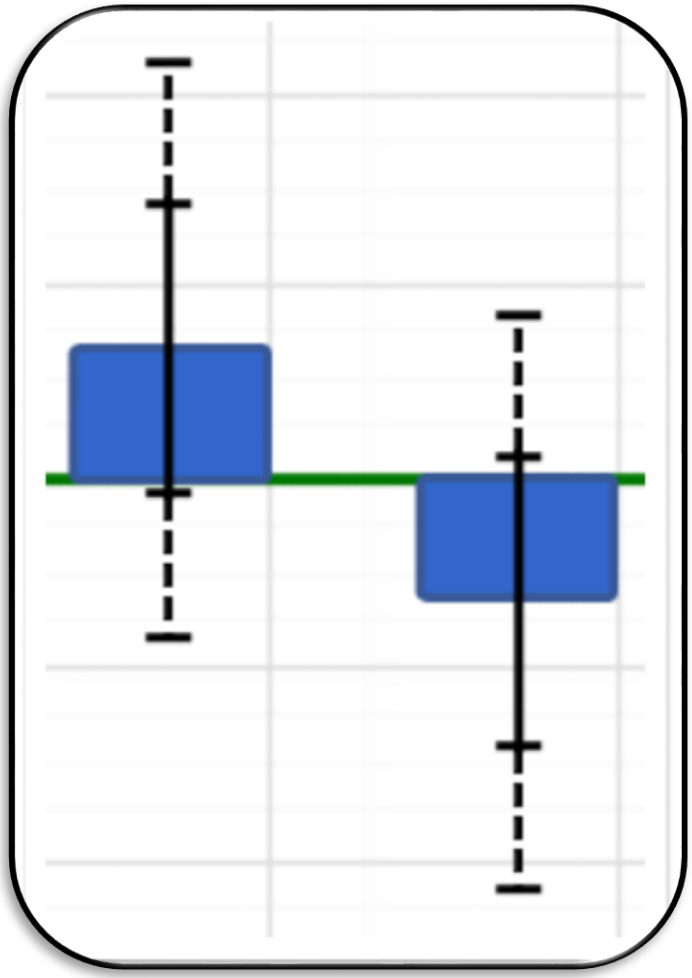
- A bar that is at least one standard error above the line suggests that the group's average achievement level increased.
- If the bar is at least two standard errors above the line, the evidence of growth is even stronger.

What do the EVAAS charts say?



- Likewise, if the bar is at least one standard error below the green line, the group likely lost ground academically, on average.
- If the bar is at least two standard errors below the line, the evidence is stronger

What do the EVAAS charts say?



- Regardless of whether the bar is above or below the green line, if it is within one standard error of the line, the evidence suggests the group's average achievement did not increase or decrease.

What questions should I be asking?

- Did each group make enough growth to at least meet the Growth Standard?
- Is there a difference in the amount of growth the groups made?
- If there is a difference in the amount of growth across groups, what factors might have contributed to the differences?

For Diagnostic and Performance Diagnostic reports:

- Is the overall pattern of growth consistent across grades for the same subject?
- Is the overall pattern of growth consistent across subjects in the same grade?
- Is the overall pattern of growth consistent across courses?
- How does the pattern of growth for demographic subgroups compare to the pattern for all students?
- How can this information inform course placement, instructional practices, strategies, and academic programs?

TRC in EVAAS

MEASURE OF PROFICIENCY

TRC LEVELS	BOY	MOY	EOY
Kindergarten	RB-B	C	D
1st	D	G-H	J-K
2nd	J-K	L	M-N
3rd	M-N	O	P-Q

VS.

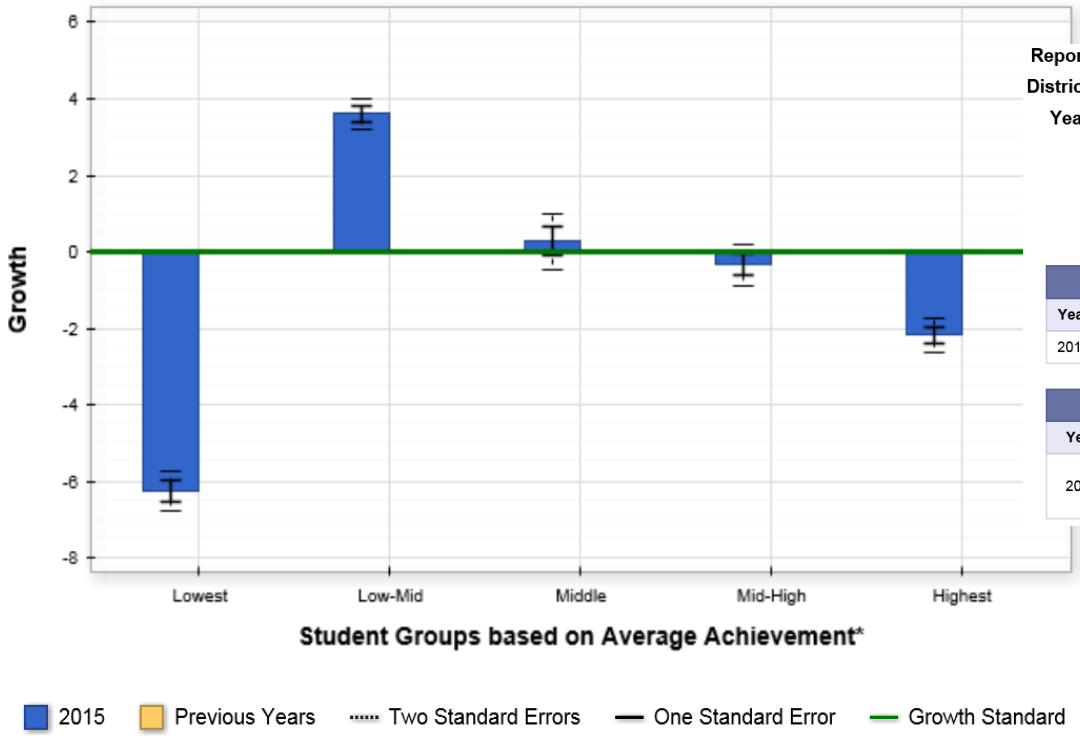
Subject: Text Reading and Comprehension					
	Year (Grade or Subject Tested)				
	K-2 Assessment (Text Reading and Comprehension)				
	2013(1)	2014(1)	2014(2)	2014(2)	2015(2)
State NCE	73	68	91	92	82
%-ile	86	80	97	98	93
Perf Level	J	L	P	R	R
Lexile/Quantile	n/a	n/a	n/a	n/a	n/a

MEASURE OF GROWTH

Kindergarten TRC Growth Data 2015

District Diagnostic | District Performance Diagnostic

Filter By: Subgroup



Report: District Value Added
District: Charlotte-Mecklenburg Schools
Year: 2015
Test: K-2 Assessment
Subject: Text Reading and Comprehension
Grade: Kindergarten

LEARN HOW TO USE THIS REPORT (Flash required)
Gain Model | Predictive Methodology

Estimated District Growth Measure

Year	From Semester	To Semester	Growth Measure	Standard Error	Growth Standard
2015	Winter	Spring	-1.0 R	0.1	0.0

Estimated District Average Achievement

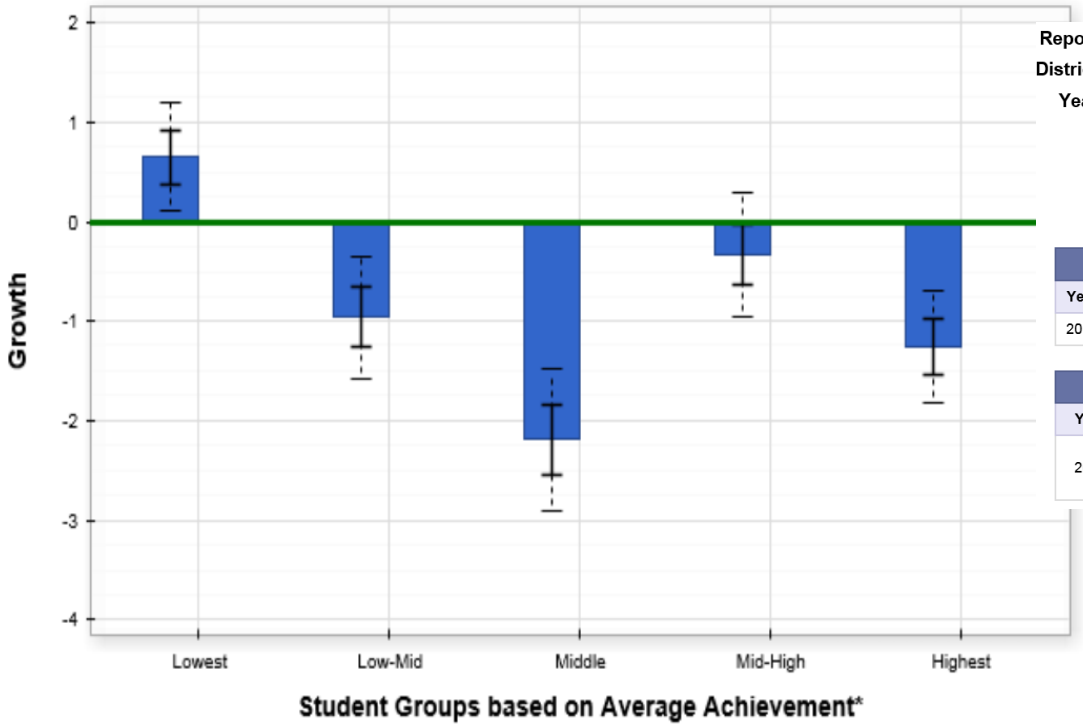
Year	Semester	Average Achievement	State Average Achievement
2015	Winter	53.7	50.0
	Spring	52.7	50.0

Calculated MOY to EOY

First Grade TRC Growth Data 2015

District Diagnostic | District Performance Diagnostic

Filter By: Subgroup



Report: District Value Added
District: Charlotte-Mecklenburg Schools
Year: 2015
Test: K-2 Assessment
Subject: Text Reading and Comprehension
Grade: 1st Grade

LEARN HOW TO USE THIS REPORT (Flash required)
Gain Model | Predictive Methodology

Estimated District Growth Measure

Year	From Semester	To Semester	Growth Measure	Standard Error	Growth Standard
2015	Fall	Spring	-0.8 R	0.1	0.0

Estimated District Average Achievement

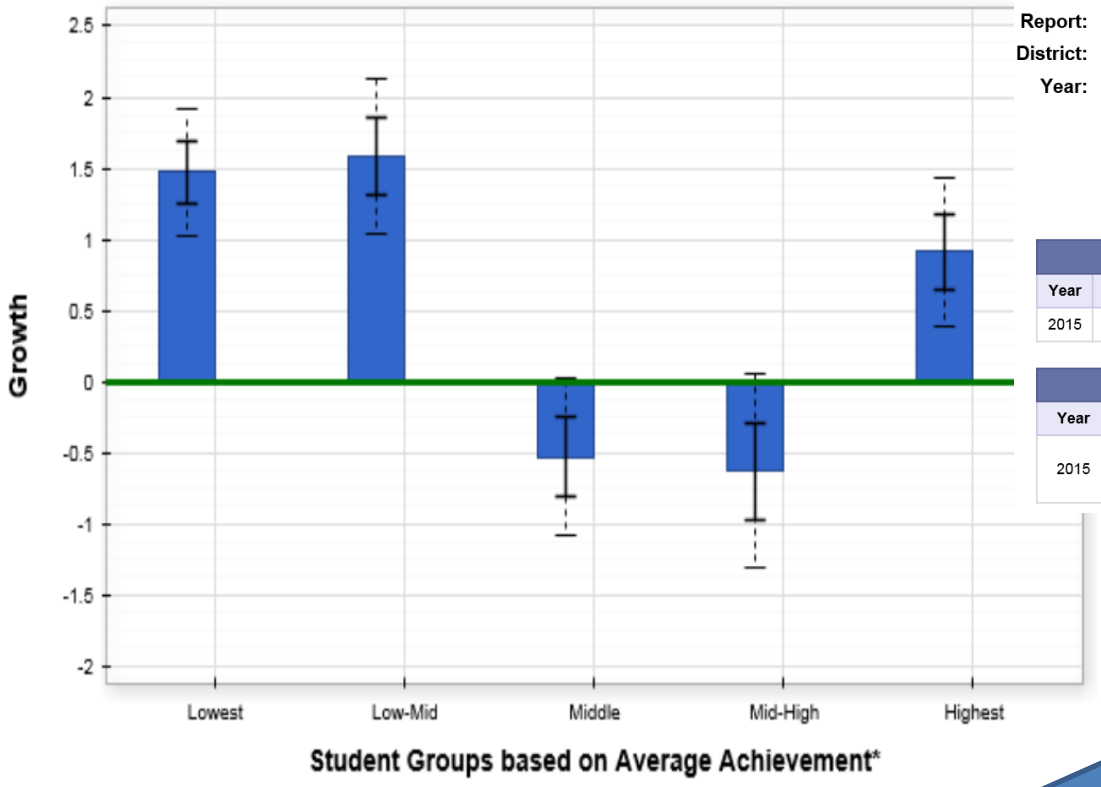
Year	Semester	Average Achievement	State Average Achievement
2015	Fall	52.6	50.0
	Spring	51.8	50.0

Calculated BOY to EOY

Second Grade TRC Growth Data 2015

District Diagnostic | District Performance Diagnostic

Filter By: Subgroup



Report: District Value Added
District: Charlotte-Mecklenburg Schools
Year: 2015
Test: K-2 Assessment
Subject: Text Reading and Comprehension
Grade: 2nd Grade

LEARN HOW TO USE THIS REPORT (Flash required)
Gain Model | Predictive Methodology

Estimated District Growth Measure

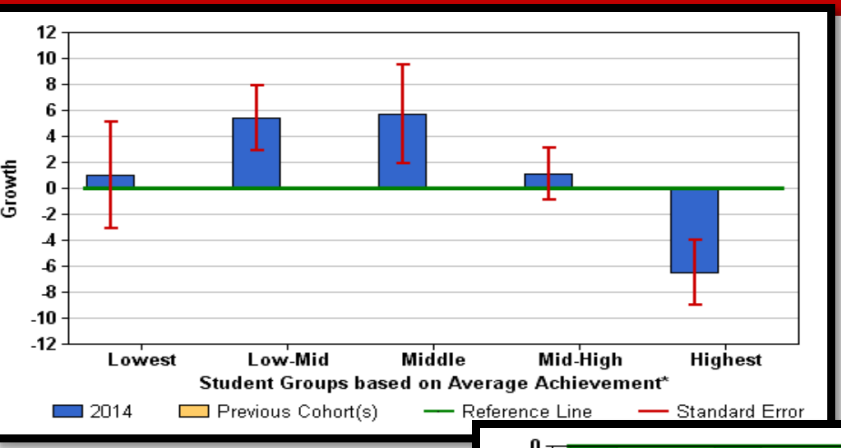
Year	From Semester	To Semester	Growth Measure	Standard Error	Growth Standard
2015	Fall	Spring	0.6 B	0.1	0.0

Estimated District Average Achievement

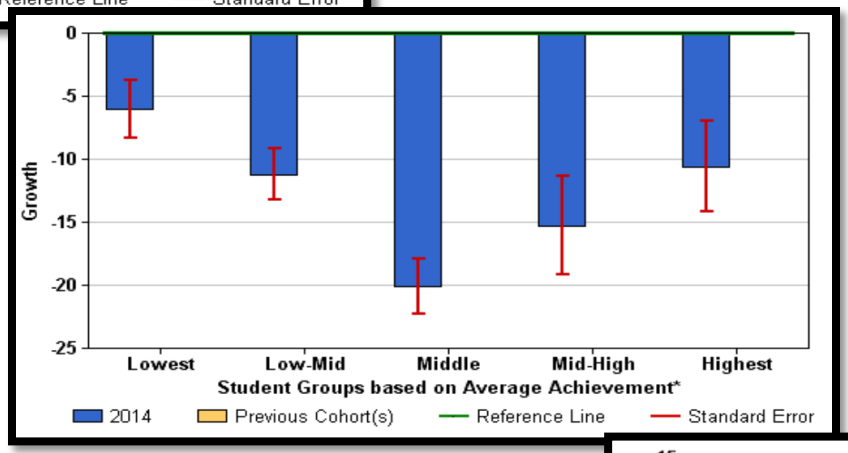
Year	Semester	Average Achievement	State Average Achievement
2015	Fall	50.3	50.0
	Spring	50.9	50.0

Calculated BOY to EOY

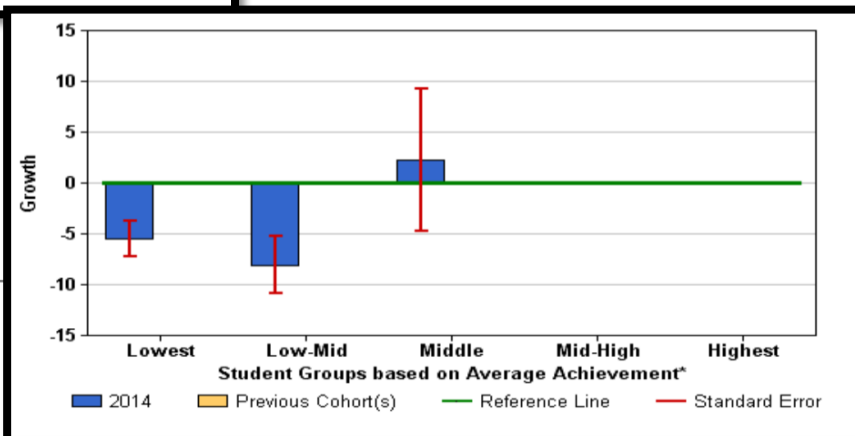
TRC Reading Leadership Move



Kindergarten

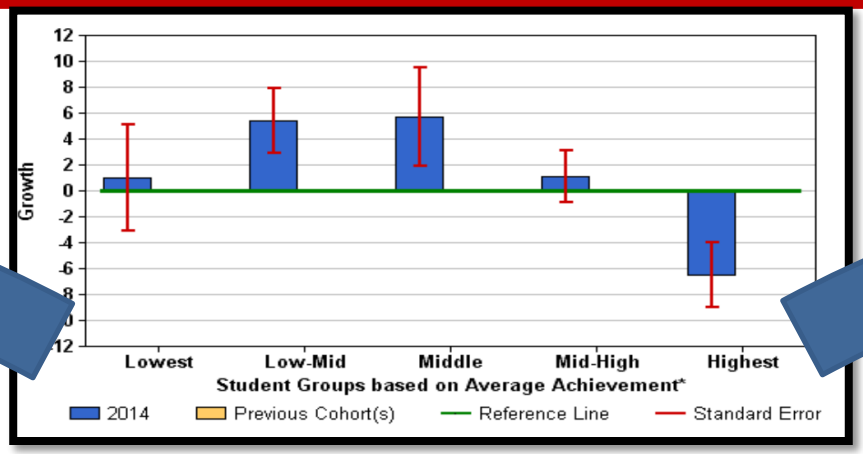


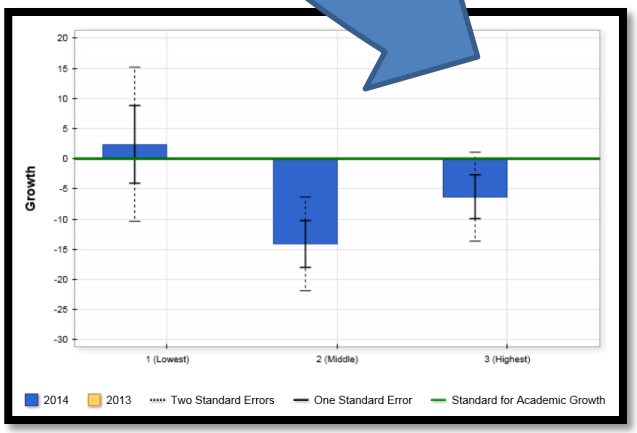
1st Grade



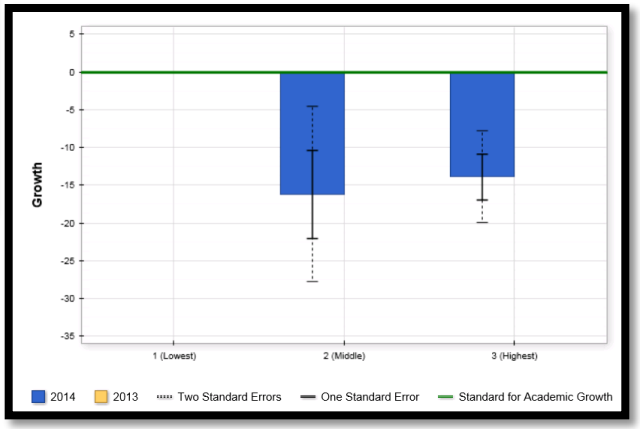
2nd Grade

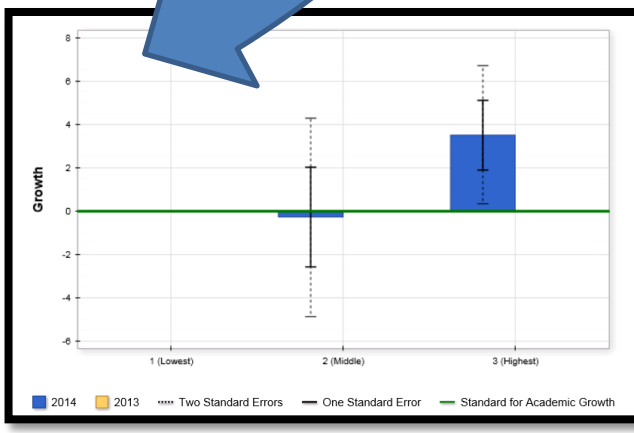
TRC Reading Leadership Move





Kindergarten students above are now with these 1st Grade Teachers





Reading EOG Value Add Data 2015

District: Charlotte-Mecklenburg Schools **Subject:** Reading

Year: 2015

LEARN HOW TO USE THIS REPORT (Flash required)

Gain Model | Predictive Methodology

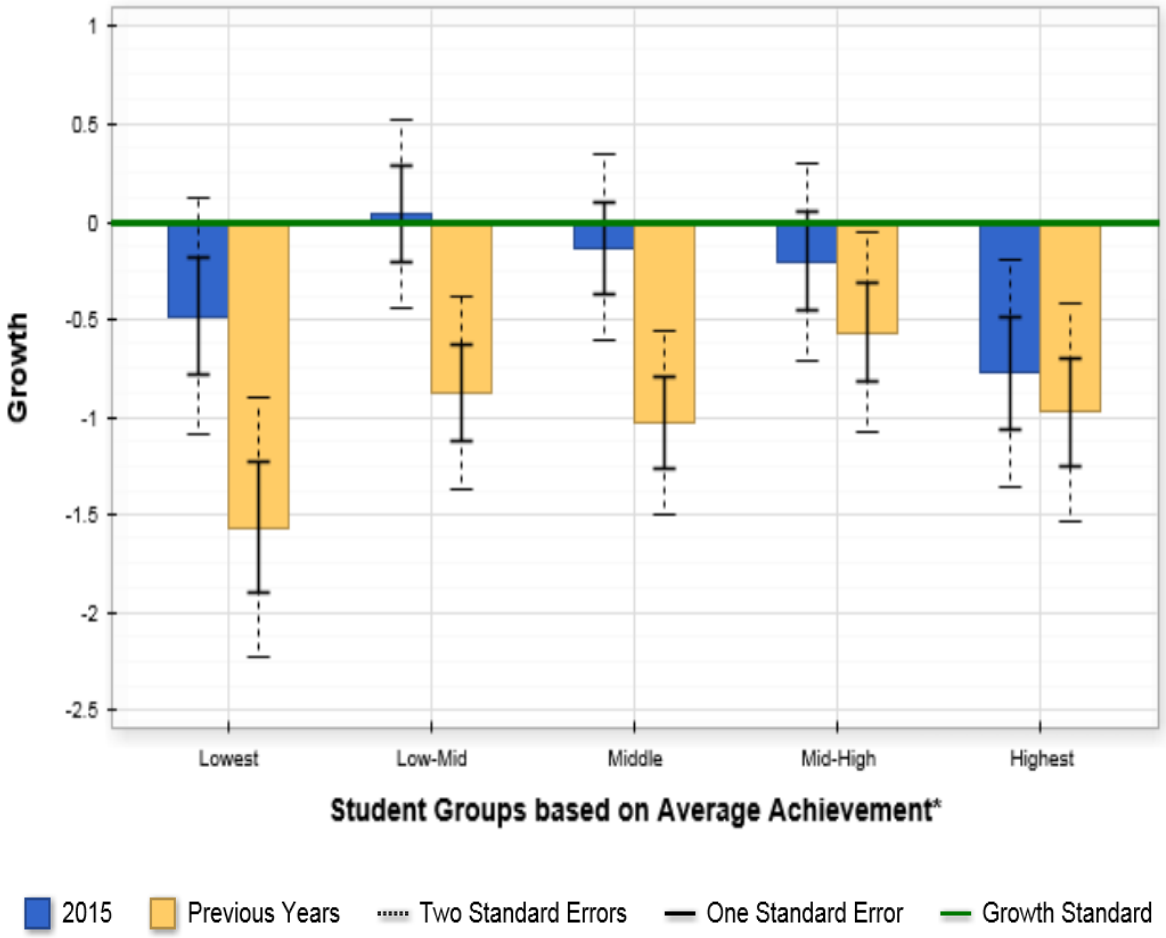
Estimated District Growth Measure

Grade	3	4	5	6	7	8	Growth Measure over Grades Relative to Growth Standard
Growth Standard	0.0	0.0	0.0	0.0	0.0	0.0	
2013 Growth Measure		-0.4 R	0.7 B	0.1 G	0.8 B	0.9 B	0.4 B
Standard Error		0.1	0.1	0.1	0.1	0.1	0.1
2014 Growth Measure	-1.0 R	-0.3 R	0.1 G	-0.4 R	-0.5 R	0.4 B	-0.3 R
Standard Error	0.1	0.1	0.1	0.1	0.1	0.1	0.1
2015 Growth Measure	-0.2 G	-0.2 G	-0.1 G	-0.0 G	0.7 B	1.0 B	0.2 B
Standard Error	0.1	0.1	0.1	0.1	0.1	0.1	0.1
3-Year-Average Growth Measure		-0.3 R	0.2 B	-0.1 G	0.3 B	0.8 B	0.1 B
Standard Error		0.1	0.1	0.1	0.1	0.1	0.0

Estimated District Average Achievement

Grade	3	4	5	6	7	8
State NCE Average	50.0	50.0	50.0	50.0	50.0	50.0
2012 Average Achievement	51.1	50.3	51.2	50.6	51.5	51.1
2013 Average Achievement	50.9	50.7	51.0	51.3	51.4	52.4
2014 Average Achievement	50.7	50.6	50.9	50.6	50.8	51.8
2015 Average Achievement	50.5	50.5	50.5	50.9	51.4	51.8

Third Grade Reading EOG Growth Data 2015

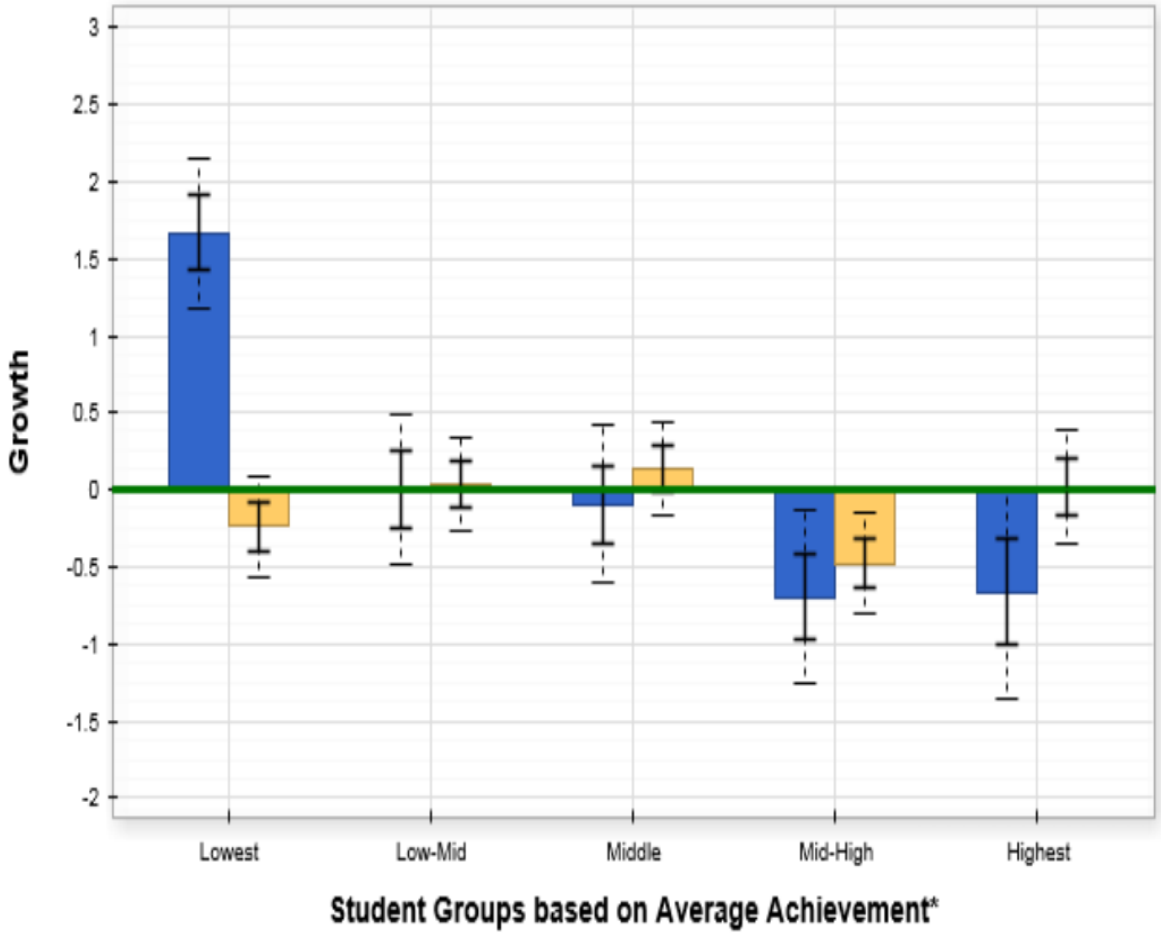


2015 Student Groups based on Average Achievement (11374)

- Lowest (2379)
- Low-Mid (2213)
- Middle (2227)
- Mid-High (2168)
- Highest (2387)

Calculated BOG to EOG

Fourth Grade Reading EOG Growth Data 2015



2015 Student Groups based on Average Achievement (10348)

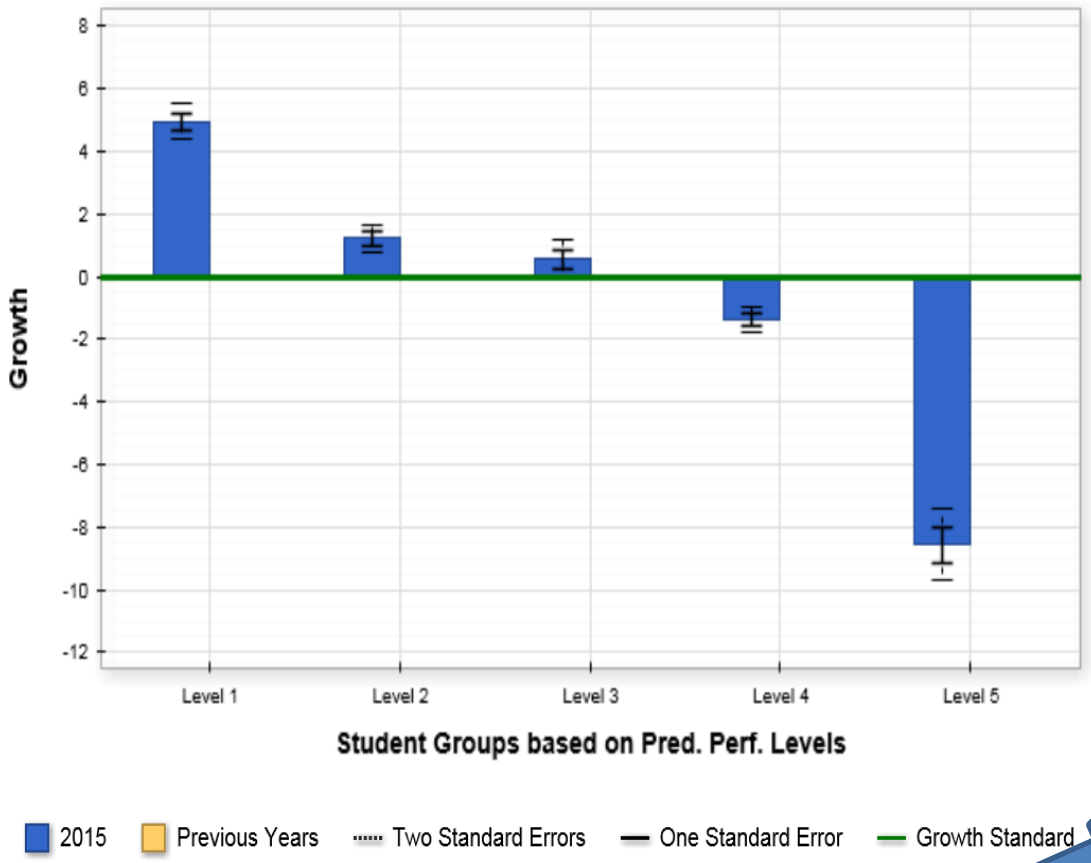
- Lowest (2156)
- Low-Mid (2004)
- Middle (1991)
- Mid-High (2083)
- Highest (2114)

Groups based on Average Achievement

Fourth Grade Reading EOG Growth Data 2015

District Diagnostic | **District Performance Diagnostic**

Filter By: Subgroup



2015 Student Groups based on Predicted Performance Levels (10059)

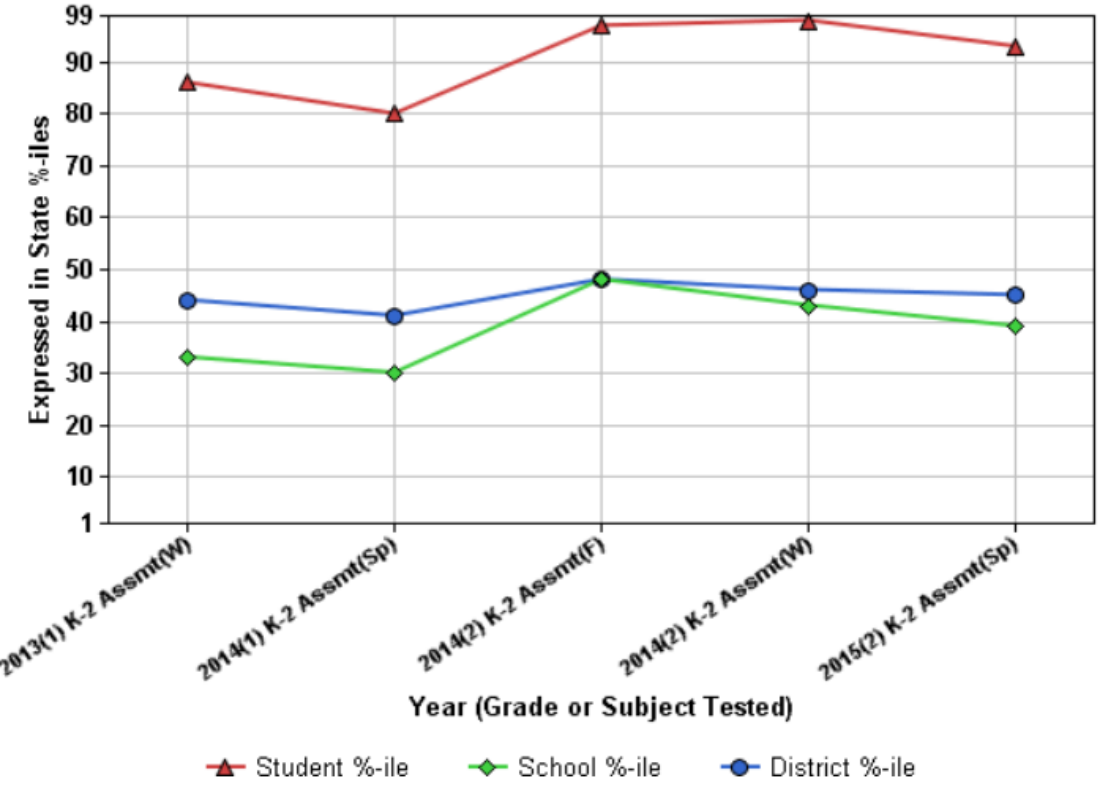
- Level 1 (1673)
- Level 2 (2212)
- Level 3 (1371)
- Level 4 (4138)
- Level 5 (665)

Groups based on Predicted Achievement

Student Pattern Report

Student	2013 State NCE	2014 State NCE	Avg State NCE	2014 Percentile	Perf Level
	72	54	63.0	57	L4
	50	45	47.5	40	L3
	28	22	25.0	9	L1
	40	32	36.0	20	L2
	72	67	69.5	78	L4
	28	37	32.5	27	L2
	46	55	50.5	60	L4
	40	26	33.0	13	L1
	38	34	36.0	22	L2
	31	31	31.0	18	L1
	33	24	28.5	11	L1
	60	45	52.5	40	L3
	28	16	22.0	6	L1
	75	99	87.0	99	L5
	60	52	56.0	54	L4
	21	11	16.0	3	L1
	38	26	32.0	13	L1

Student Pattern Report



Subject: Text Reading and Comprehension					
	Year (Grade or Subject Tested)				
	K-2 Assessment (Text Reading and Comprehension)				
	2013(1)	2014(1)	2014(2)	2014(2)	2015(2)
State NCE	73	68	91	92	82
%-ile	86	80	97	98	93
Perf Level	J	L	P	R	R
Lexile/Quantile	n/a	n/a	n/a	n/a	n/a

Blue dot: Estimated mean state percentile ranking for the district where the student was tested.

Green diamond: Estimated mean percentile for the school.

Red triangle: Student's state percentile in a given subject and grade.

Teacher Evaluation Dashboard Report

Standard	Status				
Standard One: Teachers demonstrate leadership.	Not Demonstrated	Developing	Proficient	Accomplished	**Distinguished**
Standard Two: Teachers establish a respectful environment.	Not Demonstrated	Developing	Proficient	Accomplished	**Distinguished**
Standard Three: Teachers know the content they teach.	Not Demonstrated	Developing	Proficient	**Accomplished**	Distinguished
Standard Four: Teachers facilitate learning for their students.	Not Demonstrated	Developing	Proficient	**Accomplished**	Distinguished
Standard Five: Teachers reflect on their practice.	Not Demonstrated	Developing	Proficient	Accomplished	**Distinguished**

Teacher Evaluation Dashboard Report

Standard Six: Teachers contribute to the academic success of their students.

Fewer Details

	Does Not Meet Expected Growth	Meets Expected Growth	Exceeds Expected Growth
Base Year 2011 - 2012 Individual Teacher Growth Index: -0.03 School-wide Growth Index: -0.70 Year Growth Index: -0.23		**Meets Expected Growth**	
School Year 2012 - 2013 Year Growth Index: -0.13		**Meets Expected Growth**	
School Year 2013 - 2014 Year Growth Index: -1.00		**Meets Expected Growth**	
School Year 2014 - 2015			
Average of Strongest Two Years **			

Evaluation and EVAAS

- The North Carolina Educator Effectiveness System (NCEES) has six standards of performance for teachers and eight standards for principals.
- NC has a *conjunctive* model, meaning that teachers and principals must be proficient (or better) on all standards in order to receive an overall effectiveness rating. We do not average or index these standards.
- Unlike the observational standards, student growth (standard 6 for teacher, standard 8 for principals), requires three years of valid data in order to generate a rating.

Teachers

Principals (and other Administrators)

Evaluation and EVAAS

Teacher Status

1. In Need of Improvement

Standards 1-5
In the year

Any rating ***lower than proficient***

and/or

Standards 6
Three year rolling average

Does Not Meet *Expected Growth*

Evaluation and EVAAS

Teacher Status

2. Effective

Standards 1-5
In the year

Demonstrate Leadership	Establish Environment	Know Content	Facilitate Learning	Reflect on Practice
1	2	3	4	5

***Proficient or Higher** on Standards 1 - 5*

and

Standard 6
Three year rolling average

(6 *2 years ago* + 6 *1 year ago* + 6 *This year*) / 3

***Meets or Exceeds** Expected Growth*

Evaluation and EVAAS

Teacher Status

3. Highly Effective

Standards 1-5
In the year

Demonstrate Leadership	Establish Environment	Know Content	Facilitate Learning	Reflect on Practice
4	4	4	4	4

***Accomplished or Higher** on Standards 1 - 5*

and

Standard 6
Three year rolling average

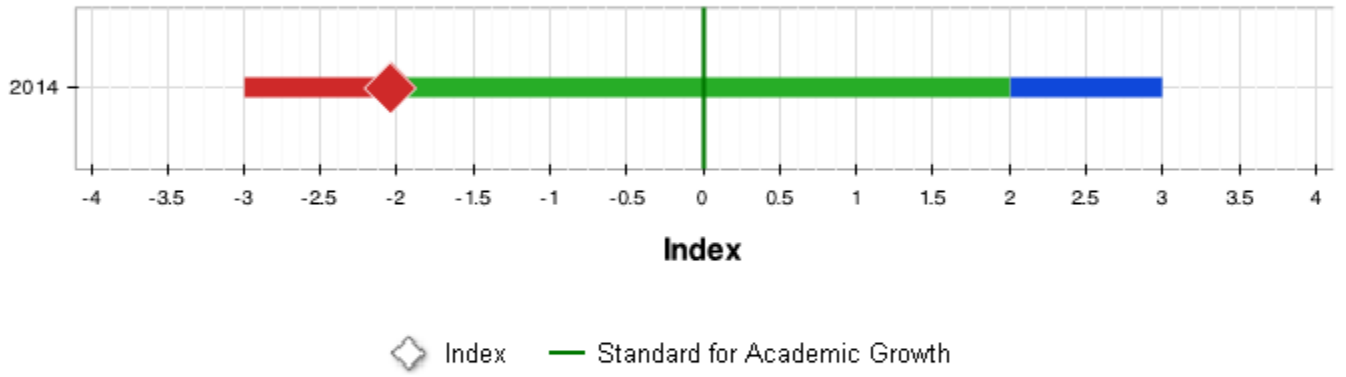
(2 years ago 5 + 1 year ago 5 + This year 5) / 3

***Exceeds** Expected Growth*

Teacher Value Added Report

Teacher Value Added | Teacher Diagnostic | Teacher Custom Diagnostic

View: Value Added Graph | **Student List**



Show:

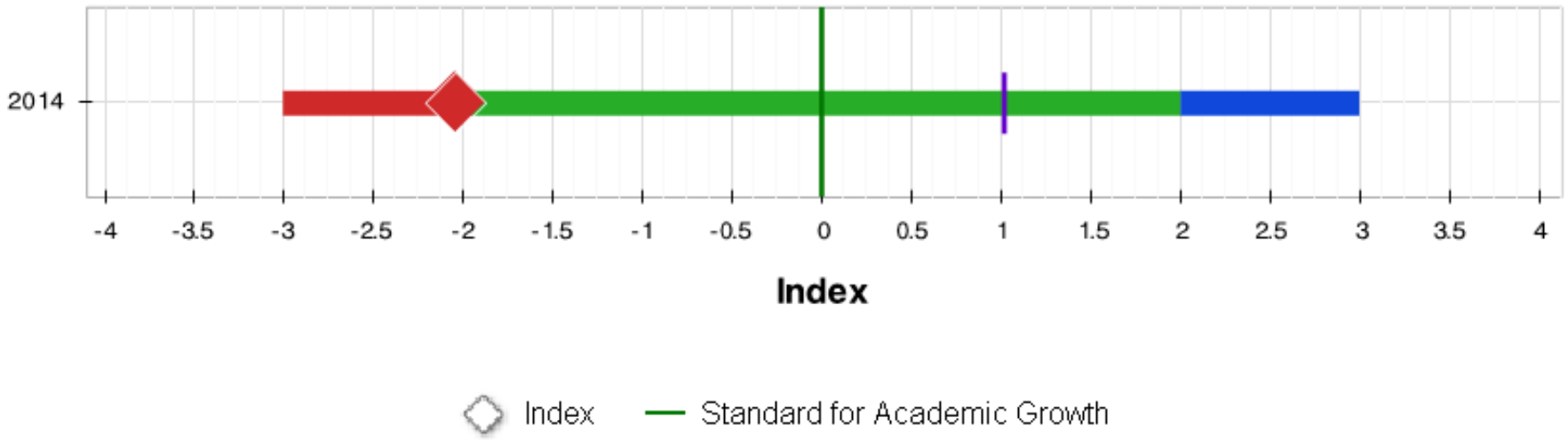
Average Teacher in District | Index Graph

Teacher Growth Measures and Standard Errors				
Year	Growth Measure	Standard Error	Index	Level
2014	-4.7	2.3	-2.05	Does Not Meet Expected Growth

Teacher Value Added Report - Index

Teacher Value Added | Teacher Diagnostic | Teacher Custom Diagnostic

View: Value Added Graph | Student List



Teacher Growth Measures and Standard Errors				
Year	Growth Measure	Standard Error	Index	Level
2014	-4.7	2.3	-2.05	Does Not Meet Expected Growth

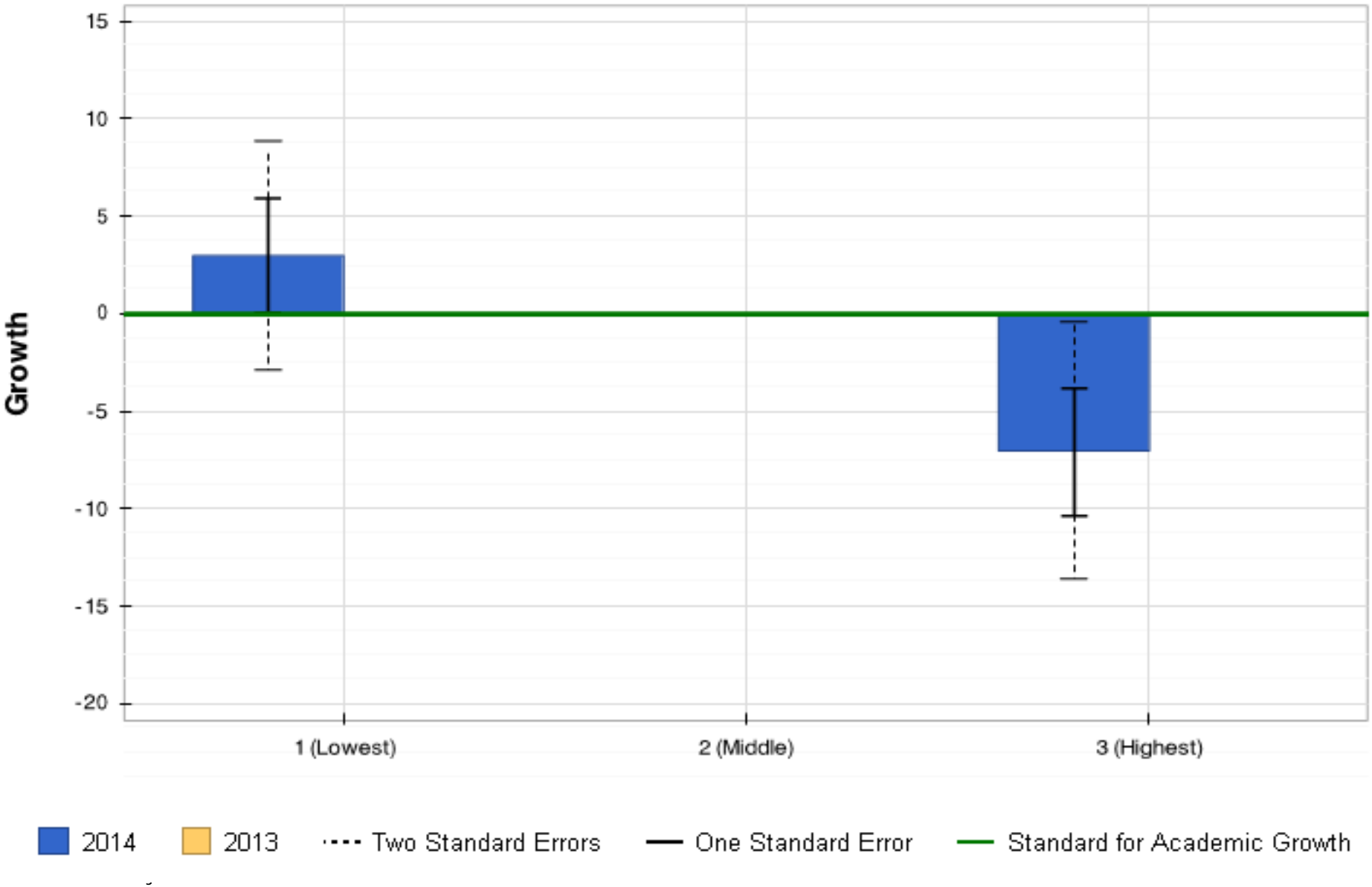
Teacher Value Added Report - Growth

Teacher Value Added | Teacher Diagnostic | Teacher Custom Diagnostic

View: Value Added Graph | **Student List**

Teacher Growth Measures and Standard Errors				
Year	Growth Measure	Standard Error	Index	Level
2014	-4.7	2.3	-2.05	Does Not Meet Expected Growth

Teacher Diagnostic Report



Teacher Diagnostic Report

		Achievement Groups		
		1 (Lowest)	2 (Middle)	3 (Highest)
Standard for Academic Growth		0.0	0.0	0.0
2014	Growth	3.1		-7.0
	Standard Error	3.0		3.3
	Nr of Students	6	4	11
	% of Students	28.6	19.0	52.4

▼ 1 (Lowest) (6)

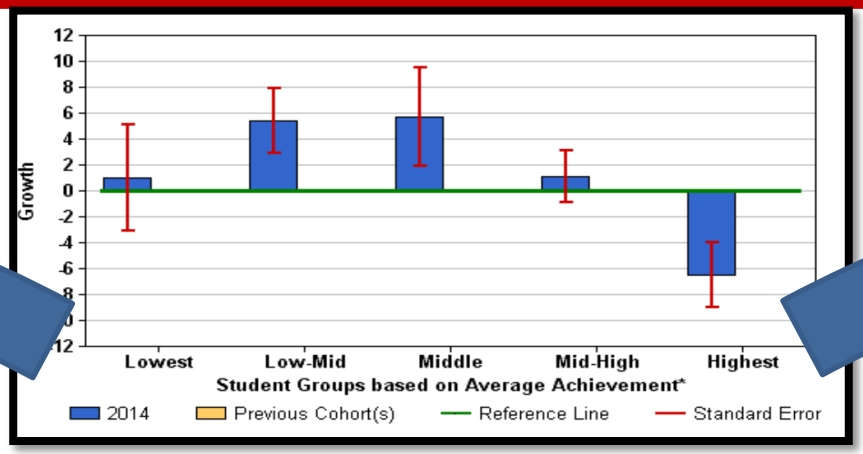
Student	2014 State NCE	Perf Level
	32	B
	48	D
	20	RB
	32	B
	32	B
	43	D

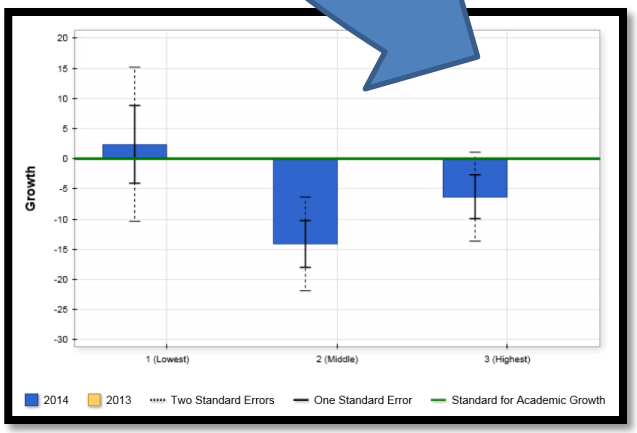
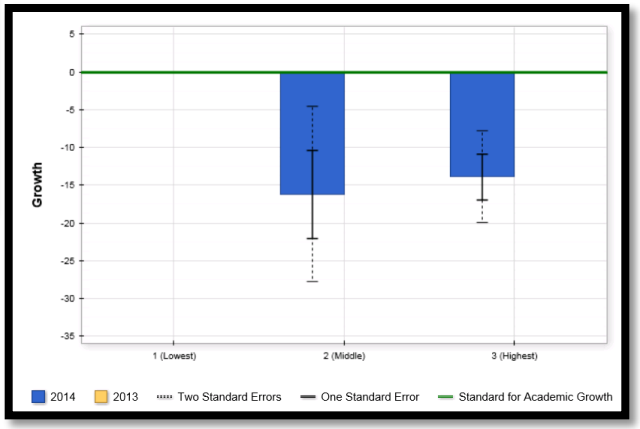
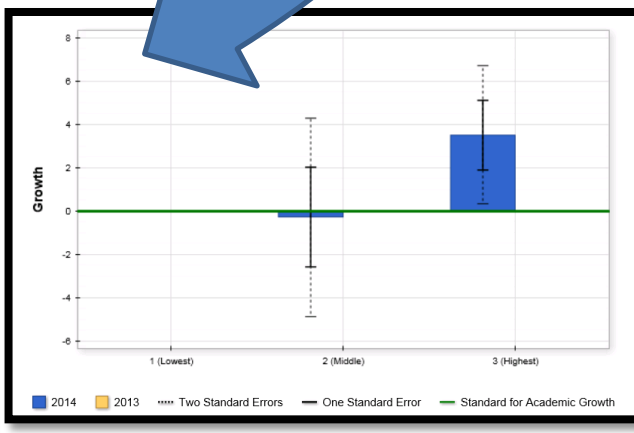
▶ 2 (Middle) (4)

▶ 3 (Highest) (11)

▶ Students Not Used in Analysis (1)

Leadership Move





Kindergarten students above are now with these 1st Grade Teachers