



SC EDUCATION OVERSIGHT COMMITTEE

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AGENDA

Joint Academic Standards and Assessments & Public Awareness

Subcommittee Meeting

Monday, March 28, 2022

Blatt Building, Room 433

1:00 P.M.

I. Welcome Matthew Ferguson

II. Approval of ASA\PA Minutes, January 24, 2022.....Dr. Patti Tate

III. Discussion Items:

Year Round Modified School Calendars:

Lessons Learned Dr. Glenn Carrozza,
Wake County Public Schools,
Assistant Superintendent for Planning

Accountability: Initiating answers to enhance

student outcomes Dr. Christy Hovanetz,
ExcelinEd,
Senior Policy Fellow

Neil C. Robinson, Jr.

CHAIR

Barbara B. Hairfield

VICE CHAIR

IV. Action Items for Accountability:

Student Progress:

Student growth that adds value Dr. Matthew Lavery

Terry Alexander

April Allen

Melanie Barton

Neal Collins

Bob Couch

Raye Felder

School Quality:

On-Track for Graduation Measure Dana Yow

Greg Hembree

5th Year Graduation Rate Dana Yow

Kevin L. Johnson

Sidney Locke

V. Executive Director Update Matthew Ferguson

Dwight Loftis

Brian Newsome

VI. Adjournment

Jamie Shuster

Molly Spearman

Patti J. Tate

Scott Turner

Ellen Weaver

Academic Standards and Assessments

Dr. Patti Tate, Chair

Barbara Hairfield

Sen. Greg Hembree

Sidney Locke

Sen. Dwight Loftis

Neil Robinson

Dr. Scott Turner

Public Awareness

Barbara Hairfield, Chair

Rep. Terry Alexander

Rep. Raye Felder

C. Matthew Ferguson, Esq.
EXECUTIVE DIRECTOR

SOUTH CAROLINA EDUCATION OVERSIGHT COMMITTEE

ASA & Public Awareness Joint Subcommittee Meeting

Minutes of the Meeting

January 24, 2022

Members Present (in-person or remote): Rep. Terry Alexander; Rep. Raye Felder; Barbara Hairfield; Dr. Patti Tate; Sen. Greg Hembree; Sen. Dwight Loftis; Dr. Scott Turner (Remote); and Neil C. Robinson Jr. (Remote)

EOC Staff Present: Matthew Ferguson, Gabrielle Fulton, Dr. Matthew Lavery, Dr. Jenny May, Dr. Rainey Knight, Hope Johnson-Jones, Dana Yow

Guest(s): Georgia Mjartan, SC First Steps; Mark Barnes, SC First Steps; Chelsea Richard, SC First Steps; Kaitlyn Richards, SC First Steps; Dr. Jennifer Garrett, CERRA; Dr. Jenna Hallman, CERRA; and Diane Sigmon, EOC Consultant (Remote)

Mr. Robinson called the meeting to order and as the first order of business, members voted on the approval of minutes from the last ASA and Public Awareness Joint Subcommittee Meeting held on November 15, 2021. The minutes were approved unanimously.

As the next item, Dr. Jenny May presented the 2022 CERDEP report. This report sought to answer four key questions: 1) How many 4K students are in SC and of those, how many are in poverty? 2) How many children are served by CERDEP programs? 3) What is the financial investment by SC in CERDEP? 4) What is the impact of the State-funded CERDEP program on Kindergarten readiness?

In the 2020-21 school year, there were an estimated 57,030 4K students. Of these, 35,951 (63%) were in poverty. CERDEP 4K increased enrollment by 51% from 2020-21 and 15% from pre-pandemic. Dr. May explained that Head Start and CERDEP are looked at together because students who are eligible for Head Start are likely eligible for CERDEP, but cannot participate in both programs. Based on KRA results, controlled for poverty, CERDEP students demonstrated higher readiness than CERDEP eligible students who did not participate in the program (21% versus 18%).

The report contained the following four key recommendations: 1) Expand opportunities for CERDEP access, 2) Evaluate program quality, 3) Evaluate CERDEP assessment, and 4) Continue and expand coordination and collaboration efforts.

As part of expanding opportunities for CERDEP access, it is recommended that the student reimbursement rate be increased to \$5,100, that recruitment efforts are focused on districts that opt out of CERDEP 4K with a high percentage of eligible children, and that heterogeneous grouping in CERDEP classes be explored.

Ultimately, this is part of building to universal 4K eligibility. Mr. Ferguson noted that currently 18,000 students are CERDEP-eligible but not receiving services because the school district opted not to participate. Looking at the KRA report, students in poverty tend to do better who have been served in CERDEP 4K classrooms.

Mr. Robinson thanked Dr. May and introduced Dr. Jennifer Garrett, of CERRA, who presented the 2021 Supply and Demand Report. This survey was sent to personnel directors in all SC public school districts at the beginning of each school year. This survey includes questions about teaching/service positions, new hires, departures, and vacancies. A report on the results is released in November/December and can be found on the CERRA site.

From 2020-2021, approximately 6,900 teachers did not return to a teaching/service position in the same district. 34% cited external reasons for departure, 18.5% retired, and 27% did not provide a reason or the district did not collect this information. Regardless of the reason for departure, 23% are now teaching in another SC public school district.

Dr. Garrett noted that teachers are often reluctant to state their reason for departure if it is an internal reason or an issue of job dissatisfaction. Therefore, CERRA will conduct a focus group later this year in order to get genuine feedback.

Dr. Garrett next defined early-career departures, which are departures by teachers with five or fewer years of experience. Early-career departures decreased this year and 35% of all teachers who left had five or less years of experience, while 12% had one or fewer. Thirty percent of first-year teachers hired for 2020-21 did not return to a position in the same district in 2021-22.

Approximately 7,000 teachers were hired for the 2021-22 school year. Regarding vacant positions, districts reported more vacancies in almost all teaching/service fields. Dr. Garrett stated that this increase is mostly attributable to the rise in teacher departures.

Mr. Ferguson asked if CERRA is tracking how many positions are newly created. Dr. Garrett stated that most vacancies are a result of teachers leaving, but that there should be some that are a result of new positions.

Dr. Garrett explained that supply and demand are reported in FTEs and that in any given year, there are approximately 6-7,000 departures.

Mr. Ferguson noted that vacancies have been created and that approximately all but 200 have been filled. Dr. Garrett confirmed this, but that over the years some increase can also be attributed to new inclusions of service positions, etc.

CERRA conducted a mid-year follow up in February 2021 to address changes due to COVID. Districts reported approximately 700 additional departures and 500 vacancies. This will be done again next week and results will be on the CERRA website by the end of the month. CERRA will conduct focus groups in sample districts based on teacher turnover, size, poverty level, etc. and that results will be available by the end of FY22.

Dr. Garrett provided the following three key conclusions: 1) Districts reported an increase in teacher departures, new hires, and vacancies; 2) The most notable increase was in the number of vacant positions after the start of the school year; and 3) Districts are struggling to fill positions regardless of why they became vacant. This concluded her presentation and members were invited to ask questions.

Mr. Robinson thanked Dr. Garrett and welcomed Dana Yow for her presentation on On-Track graduation measures.

Ms. Yow provided background on an On-Track measure, which helps to determine if 9th graders are predicted to graduate on time. Students are almost four times as likely to graduate on time if

they are on track at the end of their ninth grade year. On Track data is beneficial because it is actionable and can be used as an early warning system. Ms. Yow noted that this allows instructors to see which students are in trouble and then act on it.

Ms. Yow then provided information about other states' use of On-Track indicators in their state ESSA plans, using the particular examples of Arkansas and Connecticut.

In 2019-20, 3,969 students (1.7%) dropped out. Approximately 27% occurred in the ninth grade, meaning that if students are going to drop out, many will do so early on. With this, Ms. Yow invited members to ask questions.

Next, Ms. Yow presented information on five-year graduation rates. The Accountability Advisory Committee recommended that extended graduation rate be included with the following parameters: Extended graduation rate should have less influence than the four-year rate in order to maintain on time graduation as the primary goal and extended graduation rate should not decrease accountability scores. After introducing other states who have incorporated extended year graduation rate indicators, Ms. Yow opened the floor to discussion.

Based on a question asked in a previous meeting by Dr. Turner, Ms. Yow presented on JROTC and career readiness. Ms. Yow first introduced JROTC and provided background information on the program's history, model, and coursework. Ms. Yow noted that in 2020, the Accountability Adv. Committee discussed use of ASVAB and JROTC for career readiness, but concern was noted because of the low bar set by ASVAB.

Ms. Yow then introduced other states' use of JROTC/ASVAB in accountability. JROTC as a program is more highly prevalent in the southeast as compared to the rest of the US. This can be attributed, at least in part, to JROTC's use of retired military as instructors.

In South Carolina, there are six school districts without JROTC programs. Regarding JROTC's impact on academic achievement, there have not been many studies into correlation between the two. JROTC is typically seen in lower economic areas. Each branch has a minimum threshold for enlisting, but a majority of JROTC students do not enlist after graduating. With no questions, Ms. Yow concluded her presentation.

Next, Dr. Lavery presented a review of growth measurement and added value. Dr. Lavery introduced the current model, which compares students to average learning gains. Dr. Lavery posed the question, "What if the average is low and 'better than average' isn't enough to move students to proficiency?"

With this, Dr. Lavery defined the difference between Norm-Referenced and Criterion-Referenced, which refer to interpretations of test scores. Norm-Referenced compares to other students, while Criterion-Referenced compares to the standard.

Looking at average growth, it is only sufficient to maintain current achievement levels in ELA and is usually sufficient to maintain in math, but may lead some students to drop. For students who have not met the standard, Average Growth does not add value. Looking at added-value growth, even growth at the 70th percentile is not enough for the lowest achieving students. This means that the lower achieving students have higher, more unrealistic targets.

Therefore, our Norm-Referenced model is likely not enough. Dr. Lavery notes that this also makes a strong case for earlier intervention. Dr. Lavery then noted the key goals of an added-value

growth model, noting that growth and achievement are separate, but related goals. Based on TAR's (SCASA's testing and achievement round table) feedback on the Accountability Manual, it is likely that a different way of looking at growth may be well received.

Dr. Lavery noted that more information will be provided at the next meeting and opened the floor to questions.

Mr. Ferguson then provided a brief Executive Director update, informing the Subcommittee that the Accountability Manual is on track for completion, following the timeline for its release midyear. Members were invited to contact Mr. Ferguson with any questions and told that more information will be brought back in March.

With no further business, the meeting adjourned.



Accountability: Initiating answers, not excuses, to enhance student outcomes.

South Carolina - Education Oversight Committee

Monday, March 21, 2022

Accountability: Initiating answers, not excuses, to enhance student outcomes.

Please converse with your neighbor about these statements:

- Information regarding student educational outcomes is critical for students, teachers, parents, and policymakers.
- The public deserves transparency into the K-12 education system's performance.
- There is a federal role to ensure all students have access to high-quality education.
- Education funding should strive for equity, meaning students who the system has historically underserved should have the most resources applied to their education.
- Information and transparency should create opportunities for students and families to select other options if the zoned public school is not meeting their needs.

Why We Bother with Accountability



Holding schools accountable for their results is relatively new in education policy.

- Prior to No Child Left Behind, schools were primarily accountable for processes, resources, and inputs, but that did not ensure equitable outcomes for all students and created more regulation and red-tape.
- Rather than focusing on class size, teacher's degrees, number of computers in the building, there was a shift to giving back local control in exchange for expectations on student outcomes.
- Stay the course on standards and accountability, the nation made progress in the early days helping every student when we focused on student learning outcomes - need to refocus with a back to basic approach.
- Accountability systems serve as a signal of school performance to insight people to look into the data for making policy, resource, and enrollment decisions.



Transparent school accountability makes the conversation about education policy accessible.

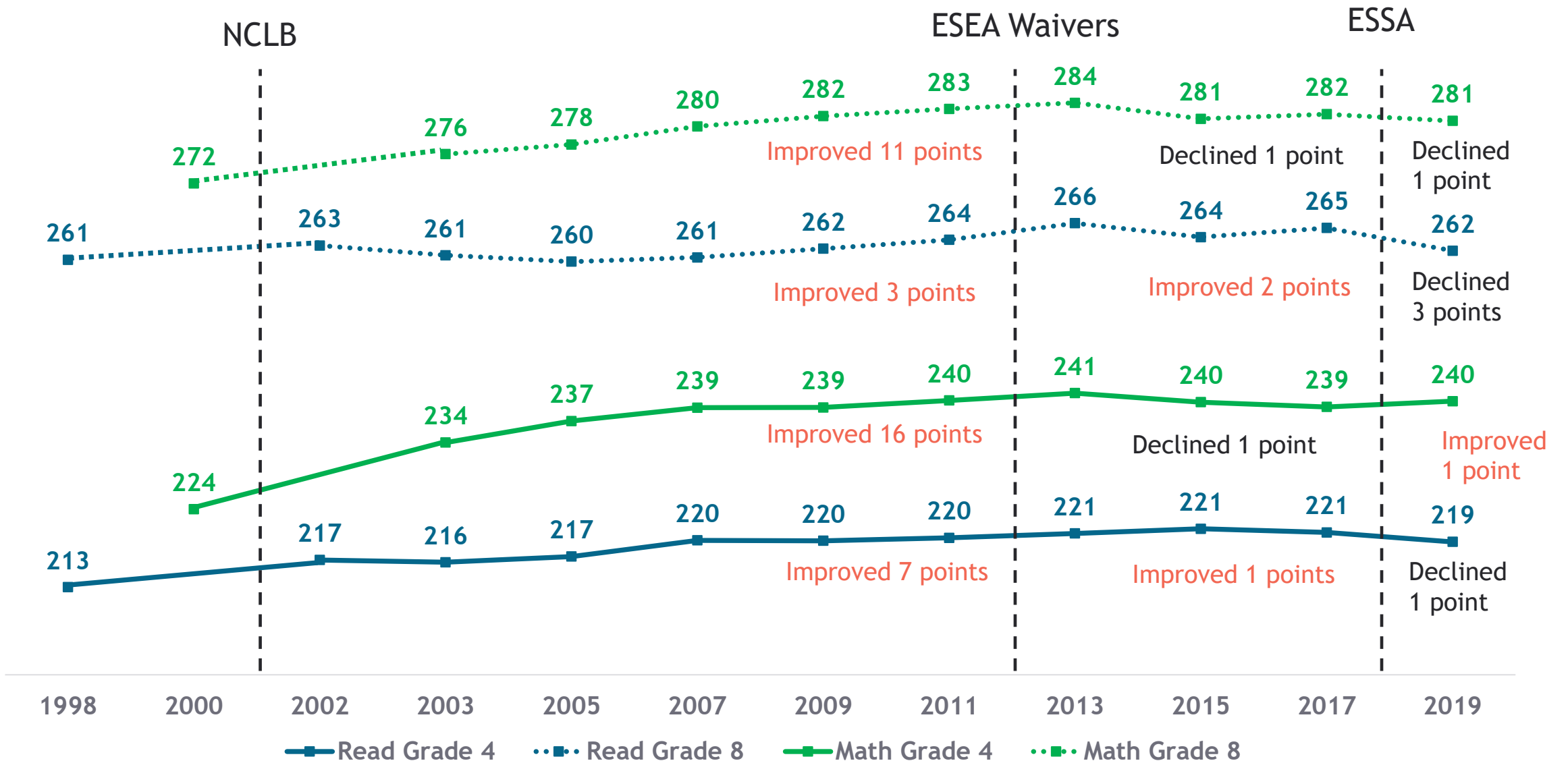
Accountability itself does not improve student outcomes, but the data it produces should inspire action that will improve student outcomes.



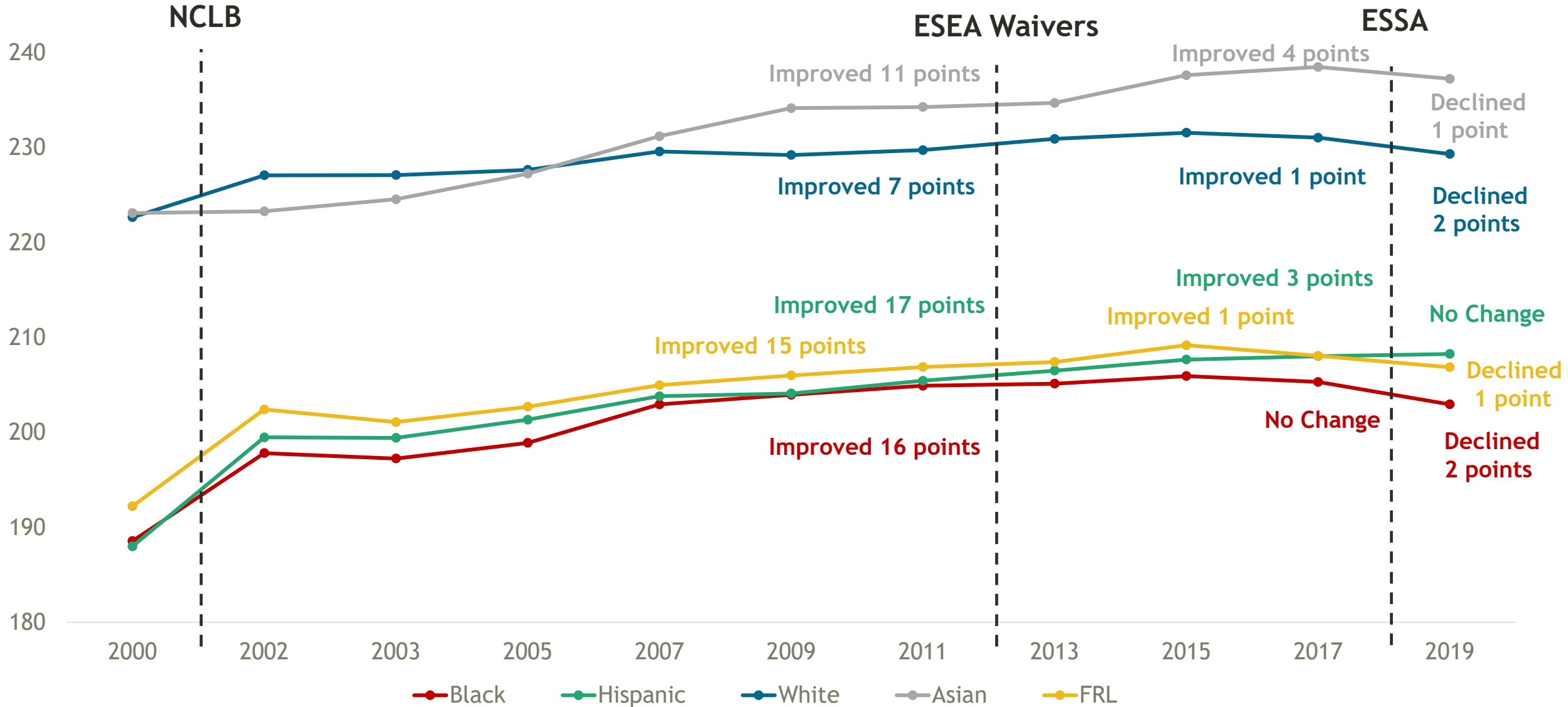
State accountability systems serve as a signal of school performance to insight people to look further into the data for policy and enrollment decisions.

- For **educators**, a state level school accountability rating, such as A-F, can provide external validation to local- and school-level determinations about student performance. They differentiate effectiveness of schools, districts and providers in helping students achieve long-term success and can help **administrators** determine the allocation of local resources, staffing, and professional development needs.
- **Policymakers** can use the results to best allocate state resources, develop state policy, and measure the critical need for economic and workforce readiness.
- **Business leaders** can also use school accountability results to determine the supply of workforce to meet their hiring needs and the location to best fit their economic development strategies.
- **Taxpayers** can use a strong accountability system to hold policymakers and administrators accountable for efficient use of public resources today and preparing for the future.
- **Parents** need state school accountability information to make informed choices for their children's education and to decide where to enroll their child, how to engage with the school and what support their child might need outside of school.

2019 National Assessment for Educational Progress (NAEP)



National Assessment of Educational Progress (NAEP) Grade 4 Reading: National Public Average by Student Group



National Assessment for Educational Progress (NAEP)



Student performance improves and gaps narrow with federal accountability.

NAEP Read Grade 4	2000	2019	Improvement 2000 to 2019
Black	189	203	14
Hispanic	188	208	20
White	223	229	7
Asian	223	237	14
FRL	192	207	15

NAEP Math Grade 4	2000	2019	Improvement 2000 to 2019
Black	203	224	21
Hispanic	207	231	24
White	233	249	15
Asian*	230	261	31
FRL	208	229	21

*1996 baseline, no 2000 data available.

NAEP Read Grade 8	2002	2019	Improvement 2002 to 2019
Black	244	244	-1
Hispanic	245	251	6
White	271	271	0
Asian	265	281	16
FRL	249	249	0

NAEP Math Grade 8	2000	2019	Improvement 2000 to 2019
Black	243	259	16
Hispanic	252	268	16
White	283	291	8
Asian	287	309	22
FRL	253	266	13

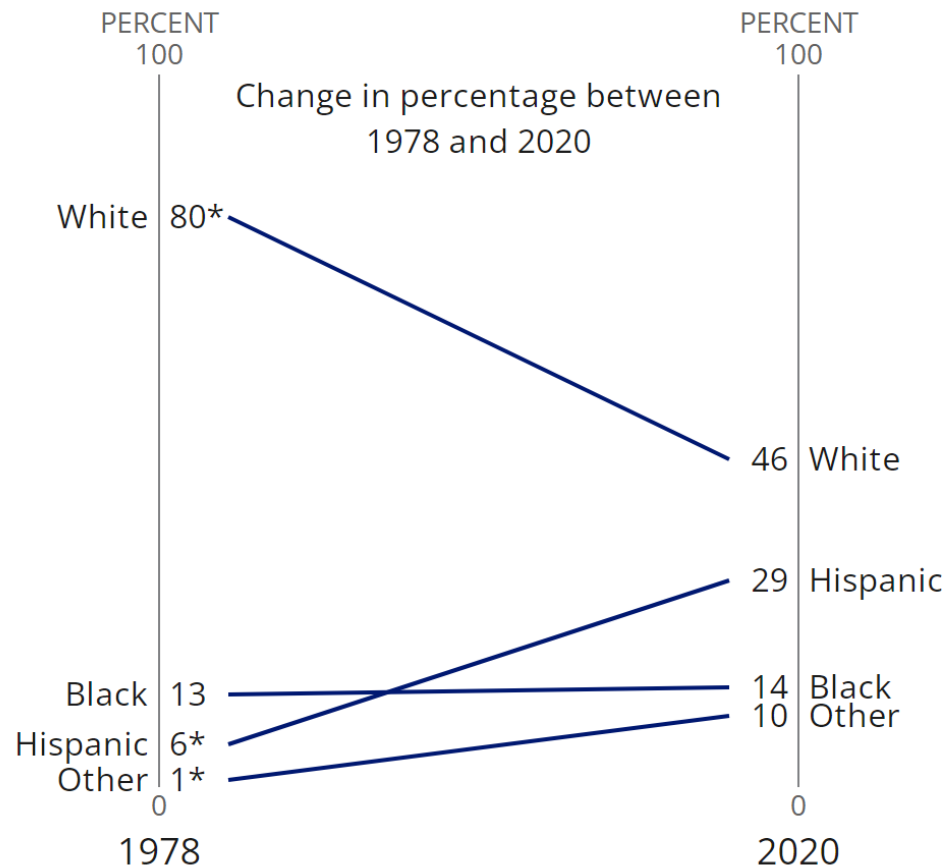
10 points is equal to one grade level. For example, in Math Grade 4, Black students improved 21 points. In 2019 Black 4th graders are performing over two grade levels HIGHER compared to their peers in 2000.



FIGURE | Percentage distribution of 13-year-old students in NAEP long-term trend mathematics, by race/ethnicity: 1978 and 2020

DISPLAY AS **GRAPH** TABLE

[Download chart](#)



LEGEND

* Significantly different ($p < .05$) from 2020.

NOTE: Results for 1978 are from the [original assessment format](#)[®], and results for 2020 are from the [revised assessment format](#)[®]. "Other" includes Asian/Pacific Islander, American Indian/Alaska Native, and unclassified, which was used in the NAEP long-term trend assessment prior to 2012 and was classified as Two or More Races in 2012 and later assessment years.

Rigorous Accountability in Florida and Mississippi produce results



ALL children can learn. Achievement gaps are not defensible. No excuses.

2019 NAEP	Minnesota			Florida			Mississippi			South Carolina			National Public	
	Scale Score	Rank	Gap	Scale Score	Rank	Gap	Scale Score	Rank	Gap	Scale Score	Rank	Gap	Scale Score	Gap
Grade 4 Math														
All Students	248	1		246	4		241	23		237	39		240	
White	258	2		254	4		251	15		249	21		249	
Black	226	14	31	233	2	21	230	5	21	220	29	29	224	25
Hispanic	224	43	34	242	2	12	244	1	7	230	17	19	231	18
FRL	231	12	28	239	1	17	236	2	21	227	32	27	229	24

2019 NAEP	Minnesota			Florida			Mississippi			South Carolina			National Public	
	Scale Score	Rank	Gap	Scale Score	Rank	Gap	Scale Score	Rank	Gap	Scale Score	Rank	Gap	Scale Score	Gap
Grade 4 Read														
All Students	222	12		225	6		219	29		216	43		219	
White	231	15		233	9		230	19		229	22		229	
Black	201	22	30	211	4	23	209	7	21	199	35	31	203	26
Hispanic	202	43	29	221	1	12	221	2	9	211	16	19	208	21
FRL	205	40	29	216	1	22	215	3	24	204	42	32	207	28

	Minnesota	Florida	Mississippi	South Carolina
Student Population	889,304	2,846,444	471,298	780,882
Black	11%	22%	48%	33%
Hispanic	10%	34%	4%	10%
White	66%	37%	44%	50%
Free/Reduced Lunch	36%	55%	74%	62%
Per Pupil Expenditure	\$ 12,910	\$ 9,663	\$ 8,909	\$10,705

EDUCATION OVERSIGHT COMMITTEE

DATE: January 24, 2022

COMMITTEE:

Joint Academic Standards & Assessments and Public Awareness Subcommittees

ACTION ITEM:

Use of Added-Value Growth Model in Elementary and Middle School Accountability

PURPOSE/AUTHORITY

Title 59: Section 59-18-900

Annual report cards; performance ratings; criteria; annual school progress narrative; trustee training; data regulations; military-connected student performance reports.

(A) The Education Oversight Committee, working with the State Board of Education, is directed to establish the format of a comprehensive, web-based, annual report card to report on the performance for the State and for individual primary, elementary, middle, high schools, career centers, and school districts of the State. The comprehensive report card must be in a reader-friendly format, using graphics whenever possible, published on the state, district, and school websites, and, upon request, printed by the school districts. The school's rating must be emphasized and an explanation of its meaning and significance for the school also must be reported. The annual report card must serve at least six purposes:

- (1) inform parents and the public about the school's performance including, but not limited to, that on the home page of the report there must be each school's overall performance rating in a font size larger than twenty-six and the total number of points the school achieved on a zero to one hundred scale;
- (2) assist in addressing the strengths and weaknesses within a particular school;
- (3) recognize schools with high performance;
- (4) evaluate and focus resources on schools with low performance;
- (5) meet federal report card requirements; and
- (6) document the preparedness of high school graduates for college and career.

(B)(1) The Education Oversight Committee, working with the State Board of Education and a broad-based group of stakeholders, including, but not limited to, parents, business and industry persons, community leaders, and educators, shall determine the criteria for and establish performance ratings of excellent, good, average, below average, and unsatisfactory for schools to increase transparency and accountability as provided below:

(a) Excellent-School performance substantially exceeds the criteria to ensure all students meet the Profile of the South Carolina Graduate;

(b) Good-School performance exceeds the criteria to ensure all students meet the Profile of the South Carolina Graduate;

(c) Average-School performance meets the criteria to ensure all students meet the Profile of the South Carolina Graduate;

(d) Below Average-School performance is in jeopardy of not meeting the criteria to ensure all students meet the Profile of the South Carolina Graduate; and

(e) Unsatisfactory-School performance fails to meet the criteria to ensure all students meet the Profile of the South Carolina Graduate.

(2) The same categories of performance ratings also must be assigned to individual indicators used

to measure a school's performance including, but not limited to, academic achievement, student growth or progress, graduation rate, English language proficiency, and college and career readiness.

(3) Only the scores of students enrolled continuously in the school from the time of the forty-five-day enrollment count to the first day of testing must be included in calculating the rating. Graduation rates must be used as an additional accountability measure for high schools and school districts.

(4) The Oversight Committee, working with the State Board of Education, shall establish student performance indicators which will be those considered to be useful for inclusion as a component of a school's overall performance and appropriate for the grade levels within the school.

(C) In setting the criteria for the academic performance ratings and the performance indicators, the Education Oversight Committee shall report the performance by subgroups of students in the school and schools similar in student characteristics. Criteria must use established guidelines for statistical analysis and build on current data-reporting practices.

(D) The comprehensive report card must include a comprehensive set of performance indicators with information on comparisons, trends, needs, and performance over time which is helpful to parents and the public in evaluating the school. In addition, the comprehensive report card must include indicators that meet federal law requirements. Special efforts are to be made to ensure that the information contained in the report card is provided in an easily understood manner and a reader-friendly format. This information should also provide a context for the performance of the school. Where appropriate, the data should yield disaggregated results to schools and districts in planning for improvement. The report card should include information in such areas as programs and curriculum, school leadership, community and parent support, faculty qualifications, evaluations of the school by parents, teachers, and students. In addition, the report card must contain other criteria including, but not limited to, information on promotion and retention ratios, disciplinary climate, dropout ratios, dropout reduction data, dropout retention data, access to technology, student and teacher ratios, and attendance data.

CRITICAL FACTS

EOC staff recommends an Added-Value Growth Model be used in determining indicator and overall ratings for elementary and middle schools beginning in School Year 2023-24. Data from School Year 2022-23 will be reported on the School Report Cards, although not used for the calculation of ratings.

TIMELINE/REVIEW PROCESS

Calculation will impact ratings beginning in SY 2023-24.

ECONOMIC IMPACT FOR EOC

No impact

ACTION REQUEST

For approval

For information

ACTION TAKEN

Approved
 Not Approved

Amended
 Action deferred (explain)

The Added-Value Growth Model

A Value-Added Model that Adds Value to Student Proficiency Levels

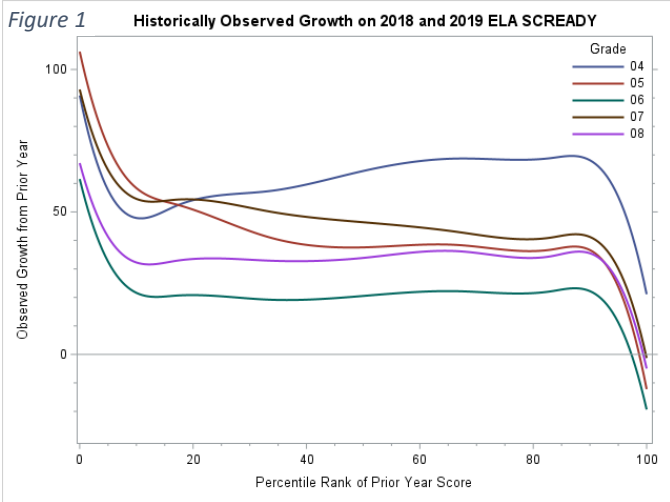
The state of South Carolina currently uses a norm-referenced value-added model to compare achievement gains of students enrolled at a given school to those of similar students statewide who have similar prior achievement. The current model, provided by Education Analytics, analyzes matched current and prior year test scores for all students to estimate the amount of growth that is associated with prior achievement and with various student demographic attributes (such as poverty status, English learner status, disability status, or racial/ethnic identity) to determine the degree to which students enrolled at a given school perform better or worse than the statewide average for similar students.

In this way, the scores expected for each individual student are based on the scores observed for all other students in the state who took the same test in that same year. Schools whose students systematically perform better than similar students with similar prior achievement have higher value-added scores, while schools whose students systematically score worse than similar students have lower scores. Norm-referenced value-added scores cannot be projected or predicted in advance of testing since these scores are determined in comparison to the other tests taken at the same time and not in comparison to a predefined set of fixed criteria.

One criticism of commonly used value-added models is that, regardless of how well or poorly all students perform on the academic achievement test used in the model, about half of all students will demonstrate better than average growth and about half will demonstrate below-average growth. If the declared goal of the South Carolina accountability system is to improve educational outcomes for all students, then the norm-referenced nature of the current model seems to run counter to that goal. For example, if all students were to demonstrate extraordinary growth one year and were all to exceed expectations on the SCREADY, then growth that year would still be higher than average for about half of those students. Thus, students with below-average growth would still count negatively toward their schools' evaluation, even though they exceeded expectations.

By contrast, the educational disruptions caused by the COVID-19 pandemic negatively impacted student learning statewide (see [EOC, 2021](#)). Although achievement testing, ratings, and value-added growth estimates were suspended during the pandemic, analyses of interim and benchmark assessment data from the same time suggested that average student growth statewide would have been unacceptably low if it had been measured, with more than seven out of ten students statewide expected to fall short of grade level expectations. In this case, a substantial number of students could have counted positively toward their schools' evaluations, even though their progress was insufficient to meet or maintain expectations. If the goal of the accountability system is to improve outcomes for all students, then that system should report it accurately when all students do poorly and properly recognize schools when all students do well. The current growth model does neither.

This paper explores the implications of norm-referenced growth models on student achievement in grades 3 through 8 and proposes an empirically derived, criterion-referenced growth model as a possible alternative. The first section presents some exploratory analyses of historical achievement data to understand the nature and magnitude of average learning gains and their implications for student achievement. The second section describes the proposed Added-Value Growth Model including the results of some simulations run with historical achievement data. The third section explores the implications of the proposed model for instruction, including possible applications with interim and benchmark assessments that could provide meaningful feedback on student progress toward meeting added-value growth targets. Finally, the paper closes with EOC Staff recommendations for adoption and implementation of the proposed model.



Historical Growth Data

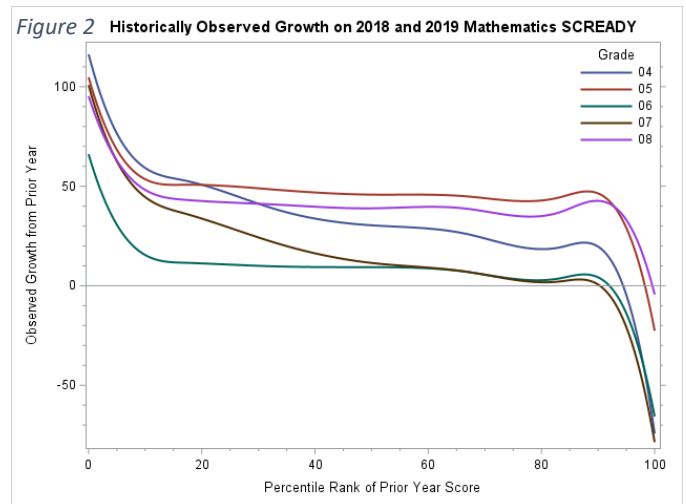
Determining Expected Gains

Because the SCREADY achievement test uses a common vertical scale across grade levels, year over year changes in scores can be compared to determine the mean growth for each test at each point in the score distribution by grade level. We analyzed historical records that included 344,877 students with a score for the ELA SCREADY and 345,914 students with scores for the Mathematics SCREADY taken in 2017, another 352,375 students with scores for the ELA SCREADY and 352,491 students with scores for the Mathematics SCREADY taken in

2018, and 355,693 students with scores for the ELA SCREADY and 356,110 students with scores for the Mathematics SCREADY taken in 2019. We then matched records for students who tested in both 2017 and 2018 as well as those who tested in both 2018 and 2019, dropping records without a match.

Students must be continuously enrolled at the same school from the 45th day to the 160th day of the school year with no break in enrollment to be included in the Student Progress indicator for accountability that year. Thus, we removed records for students who were not continuously enrolled for the second year of each matched data set. Since no such requirement exists for continuous enrollment during the prior school year, no additional records were dropped for non-continuous enrollment. Because we were interested in identifying general historical trends for student growth from year to year rather than trends for a specific year, we combined these data sets to produce a single data set for the ELA SCREADY (containing 531,483 records) and a separate data set for the Mathematics SCREADY (containing 532,578 records). Both data sets contained scores from students continuously enrolled for the “current” year (i.e., tests taken in the spring of either 2018 or 2019) matched with scores from the prior year (i.e., the spring of either 2017 or 2018).

Analyses of historical achievement growth data indicates that, on average, South Carolina students gain about 40 vertical scale score points ($M = 41.0$, $Mdn = 40.0$, $SD = 58.2$) on the ELA SCREADY and 29 vertical scale score points ($M = 28.7$, $Mdn = 29.0$, $SD = 63.2$) on the Mathematics SCREADY, regardless of current grade level and prior year score. However, as demonstrated by Figures 1 and 2 (above and right), mean growth from year to year is meaningfully different by grade level and depends on the student’s position on the prior year score distribution. Specifically, students scoring at or below the fifth percentile of their grade-level peers typically exhibit much higher gains in a single year than students who score above the tenth percentile. Similarly, at the top of most score distributions, average growth becomes negative.



Since observed growth varies at each point along the score distribution, we further analyzed these growth data to determine not only typical gains for similarly scoring students, but progressively better than average gains as well. For these analyses, students were grouped together by grade level according to their prior year SCREADY score, rounded down to the nearest ten. For example, any sixth grade student who scored from 520 to 529 on the fifth grade ELA SCREADY in the data set would be analyzed together to determine growth expectations for that test, grade level, and prior achievement. Specifically, observed learning gains for the 50th, 55th, 60th, 65th, 70th, 75th, and 80th percentiles were

estimated and graphed in SAS using PROC SGPLOT with PBSPLINE to smooth the curves. Estimates were recorded for expected gains at each percentile rank of growth at each point on the score distribution for each test and grade level.

Applying Expected Gains

To determine the implications of historically observed expected gains, we considered the score trajectory of hypothetical students who are members of the Average family. For example, with a vertical scale score (VSS) of 314, Ashley Average scored the median historically-observed score in the Does Not Meet achievement level on the 3rd grade ELA SCREADY. Historically, students who scored from 310 to 319 on the ELA test in grade 3 demonstrated median achievement gains of 46 vertical scale points, giving Ashley a score of 360 on the 4th grade test. Students who scored from 360 to 369 on the ELA test in grade 4 demonstrated median achievement gains of 54 points, giving Ashley a score of 414 in grade 5. Ashley's score continues to progress in the same way, increasing by the median gains for students with a similar score on the prior year test until she ultimately scores 511 on the 8th grade ELA test, which is still in the Does Not Meet achievement level.

Table 1

Progression of ELA Scores for Hypothetical Average Students Making Median Gains from Grades 3 through 8

Student	3 rd Grade		4 th Grade		5 th Grade		6 th Grade		7 th Grade		8 th Grade	
	VSS	Level	VSS	Level	VSS	Level	VSS	Level	VSS	Level	VSS	Level
Adam A.	579	Exceeds	642	Exceeds	671	Exceeds	690	Exceeds	729	Exceeds	762	Exceeds
Annie A.	494	Meets	565	Meets	604	Meets	629	Meets	671	Meets	708	Meets
Alberto A.	408	Appr	468	Appr	507	Appr	528	Appr	576	Appr	611	Appr
Ashley A.	314	DNM	360	DNM	414	DNM	432	DNM	483	DNM	511	DNM

Note: ELA = English language arts. DNM = Does Not Meet. Appr = Approaches. Score progression assumes that students made gains equivalent to the median observed for students with similar prior scores for that test and grade on historical SCREADY tests taken in 2017, 2018, and 2019.

The other members of the Average family similarly demonstrated the median observed score of their respective achievement levels on the initial 3rd grade ELA SCREADY test. Like Ashley, these students also demonstrated median historically observed gains for students with similar prior year scores from year to year from grade 3 through grade 8, leading each of them to the final scores shown in Table 1. We then repeated this same process for the Mathematics SCREADY, again with each member of the Average family demonstrating the historical median score for their respective achievement levels in 3rd grade and demonstrating median growth for similarly-scoring students each year until 8th grade. The results of the progression of Mathematics SCREADY scores are shown in Table 2.

Table 2

Progression of Mathematics Scores for Hypothetical Average Students Making Median Gains from Grades 3 through 8

Student	3 rd Grade		4 th Grade		5 th Grade		6 th Grade		7 th Grade		8 th Grade	
	VSS	Level	VSS	Level	VSS	Level	VSS	Level	VSS	Level	VSS	Level
Adam A.	596	Exceeds	609	Exceeds	650	Exceeds	650	Exceeds	650	Exceeds	685	Exceeds
Annie A.	488	Meets	514	Meets	558	Meets	565	Meets	571	Appr	609	Appr
Alberto A.	402	Appr	438	Appr	484	Appr	492	Appr	509	Appr	547	Appr
Ashley A.	319	DNM	379	DNM	431	DNM	438	DNM	472	DNM	511	DNM

Note: DNM = Does Not Meet. Appr = Approaches. Score progression assumes that students made gains equivalent to the median observed for students with similar prior scores for that test and grade on historical SCREADY tests taken in 2017, 2018, and 2019. Note that median annual achievement gains led Annie Average to drop from the Meets achievement level to Approaches in 7th and 8th grade.

By these analyses, median growth is insufficient to improve the academic achievement of any of the students in the Average family. In fact, median growth on the Mathematics SCREADY led Annie to fall below grade level expectations in 7th and 8th grade. The children in the Average family, although an interesting thought experiment, do not give us a clear sense of how median year to year growth might affect the distribution of achievement levels among students in South Carolina schools. Thus, we used the same method of projecting median growth for all students who took a 3rd grade SCREADY test in either 2017 or 2018 ($n = 107,950$ for ELA and $n = 108,164$ for Math) to determine their final achievement levels at the end of 8th grade.

Applying historically observed median growth from grade 3 through grade 8 for the ELA SCREADY leads to the achievement level changes shown in Figure 3. Median growth leads 85% of students to maintain the same achievement level that they demonstrated in the 3rd grade. Only 15% of all students tested move to a higher achievement level under median growth, and only 14% of students who had not met the standard in grade 3 (8,360 students statewide) were able to reach proficiency by the end of grade 8.

Figure 3 - ELA Achievement Progression (Median Growth)

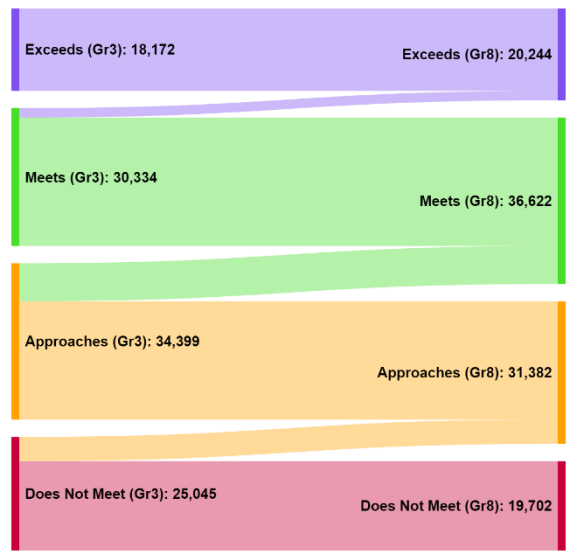
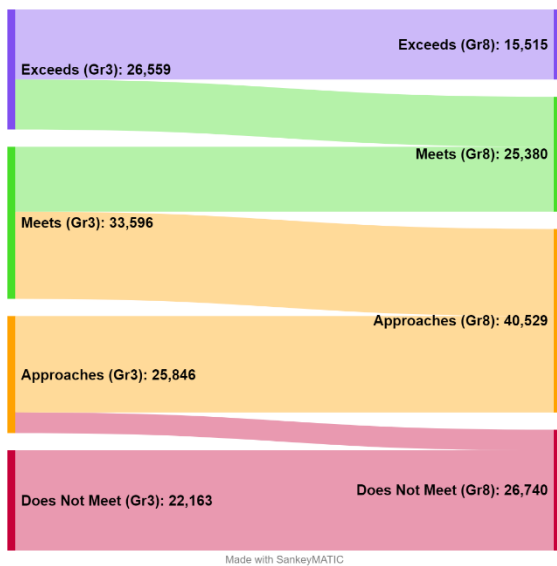


Figure 4 - Math Achievement Progression (Median Growth)



For the Mathematics SCREADY (see Figure 4), no students improve their achievement level from grade 3 through grade 8 with median growth. In fact, 32% of all students in the state fall to a lower achievement level and 32% of all students who had demonstrated proficiency in 3rd grade fall below expectations by the end of 8th grade.

If typical growth generally does not lead students reach proficiency in ELA and leads to a general decline in achievement in Mathematics, then it raises the question whether better-than-typical growth is sufficient to move students who have not met expectations in grade 3 to proficiency by the end of 8th grade. More accurately, we sought to discern *how much* better than typical must achievement gains be for students who do not meet expectations in grade 3 to reach proficiency by grade 8.

To answer this question, we applied year to year achievement gains to the same sample of historically observed 3rd grade SCREADY scores at each percentile rank for which growth estimates had been generated. Table 3 (on the next page) displays the number and proportion of students who initially scored at each achievement level on the 3rd grade test, as well as the number and proportion of students who would score at each proficiency level after five years of steady achievement gains at the indicated percentile rank. For simplicity, results are only shown for growth at the 50th, 60th, 70th, and 80th percentile ranks, although analyses were also conducted with growth estimates at the 55th, 65, and 75th percentiles as well.

The findings displayed in Table 3 suggest that, for the students demonstrating the lowest initial achievement in 3rd grade to meet or exceed the grade level standard by the end of 8th grade, they must make annual achievement gains that are as high or higher than were observed for 80% of similar students in the historical data set. Although achievement gains at the 80th percentile rank ensure that all students meet the standard within five years, goals set at this level are onerous and it may not be necessary to set goals this high for all students, particularly those who have already met or exceeded the grade level standard. Thus, a system of progressive targets for annual achievements may best support the goals of the South Carolina accountability system. We explored several possible methods with which to determine individual student achievement growth targets, desiring a system that would both move students to achieve proficiency by 8th grade

and guarantee that all students either maintain or improve the achievement level they demonstrated on the 3rd grade SCREADY. The features of the system which best meets the needs of South Carolina are described in the next section.

Table 3

Number and Proportion of Students Scoring at the Different Achievement Levels on the 8th Grade SCREADY after Demonstrating Five Years of Consistent Achievement Growth at Various Percentile Ranks

Achievement Level	Initial (Grade 3)	After PR50 Gains	After PR60 Gains	After PR70 Gains	After PR80 Gains
	n (%)	n (%)	n (%)	n (%)	n (%)
ELA SCREADY					
Exceeds	18,172 (16.8%)	20,244 (18.8%)	46,241 (42.8%)	72,213 (66.9%)	97,696 (90.5%)
Meets	30,334 (28.1%)	36,622 (33.9%)	31,981 (29.6%)	26,130 (24.2%)	10,254 (9.5%)
Meets or Exceeds	48,506 (44.9%)	56,866 (52.7%)	78,222 (72.5%)	98,343 (91.1%)	107,950 (100.0%)
Approaches	34,399 (31.9%)	31,382 (29.1%)	29,575 (27.4%)	9,603 (8.9%)	— (0.0%)
Does Not Meet	25,045 (23.2%)	19,702 (18.3%)	153 (0.1%)	— (0.0%)	— (0.0%)
Not Met	59,444 (55.1%)	51,084 (47.3%)	29,728 (27.5%)	9,603 (8.9%)	— (0.0%)
Mathematics SCREADY					
Exceeds	26,559 (24.6%)	15,515 (14.3%)	39,180 (36.2%)	71,309 (65.9%)	97,617 (94.0%)
Meets	33,596 (31.1%)	25,380 (23.5%)	32,129 (29.7%)	25,806 (23.9%)	6,209 (6.0%)
Meets or Exceeds	60,155 (55.6%)	40,895 (37.8%)	71,309 (65.9%)	97,115 (89.8%)	103,826 (100.0%)
Approaches	25,846 (23.9%)	40,529 (37.5%)	36,855 (34.1%)	11,049 (10.2%)	— (0.0%)
Does Not Meet	22,163 (20.5%)	26,740 (24.7%)	0 (0.0%)	— (0.0%)	— (0.0%)
Not Met	48,009 (44.4%)	67,269 (62.2%)	36,855 (34.1%)	11,049 (10.2%)	— (0.0%)

Note: PR50 = 50th percentile rank. PR60 = 60th percentile rank. PR70 = 70th percentile rank. PR80 = 80th percentile rank. Initial scores were taken from students in South Carolina who took the 3rd grade SCREADY either in 2017 or 2018. Score progression assumes that students made gains through 8th grade equivalent to those at the indicated percentile rank observed for students with similar prior scores for that test and grade on historical SCREADY tests taken in 2017, 2018, and 2019.

The Proposed Added-Value Growth Model

Setting Individual Student Growth Targets

We propose using a criterion-referenced value-added model, the Added-Value Growth Model, to measure student progress in the SC accountability system. Under the proposed model, each student in grades 4 through 8 will have two individualized target scores for each of the SCREADY assessments that they will take that year based upon their prior year SCREADY scores. The first target shall be a median annual growth target (MAGT), which shall be set to the median level of growth observed for students with similar scores on the prior year test. Any student who meets or exceeds their MAGT will earn at least one point for their school in the accountability model. Near the top of the distribution for prior achievement, when historically observed median growth becomes negative, MAGTs shall be set to 0 so that all students are always expected to earn the same VSS or higher than they earned the previous year.

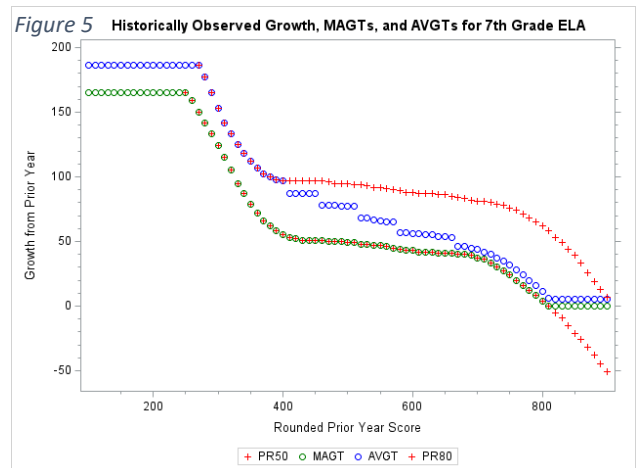
The second target shall be an added-value growth target (AVGT), which is a target set progressively according to prior year achievement levels based on the analyses described in the previous section. The percentile ranks of historically-observed achievement gains upon which AVGTs are set are shown in Table 4. Any student who meets or exceeds their individual AVGT will earn additional points for their school in the accountability model, with more points awarded for more ambitious targets.

AVGTs shall be set for students whose prior year SCREADY score falls in the Exceeds achievement level based on historically observed growth at the 55th percentile rank of similarly scoring students. At the top of the score distribution for prior achievement, when historically observed growth at the 55th percentile becomes negative, AVGTs shall be set to 5 so that all students are expected to improve on the VSS earned in the prior year. The 55th percentile is used for the Exceeds achievement level because this is the minimum level of historically-observed growth at which all students who performed at the Exceeds level in 3rd grade maintained that achievement level through the end of 8th grade. AVGTs for students with prior achievement at the Meets level shall be based on 60th percentile growth because this is the level of historical growth at which all students at the Meets level in grade 3 maintained or improved that level through grade 8.

Table 4
Percentile Ranks Used to Set Added-Value Growth Targets (AVGTs) at Various Prior Achievement Levels

Current Grade Level:	4 th Grade	5 th Grade	6 th Grade	7 th Grade	8 th Grade
Exceeds					
Prior ELA score range:	540 – 825	593 – 850	653 – 875	668 – 900	705 – 925
Prior Math score range:	544 – 825	563 – 850	622 – 875	628 – 900	650 – 925
AV growth target based on historical percentile:	55				
Meets					
Prior ELA score range:	452 – 539	509 – 592	558 – 652	576 – 667	615 – 704
Prior Math score range:	438 – 543	482 – 562	536 – 621	543 – 627	578 – 649
AV growth target based on historical percentile:	60				
Approaches 2					
Prior ELA score range:	408 – 451	464 – 508	504 – 557	516 – 575	562 – 614
Prior Math score range:	402 – 437	441 – 481	490 – 535	498 – 542	531 – 577
AV growth target based on historical percentile:	65				
Approaches 1					
Prior ELA score range:	359 – 407	419 – 463	450 – 503	455 – 515	512 – 561
Prior Math score range:	360 – 401	402 – 440	448 – 489	454 – 497	488 – 530
AV growth target based on historical percentile:	70				
Does Not Meet 2					
Prior ELA score range:	314 – 358	356 – 418	405 – 449	412 – 454	462 – 511
Prior Math score range:	313 – 359	366 – 401	411 – 447	414 – 453	451 – 487
AV growth target based on historical percentile:	75				
Does Not Meet 1					
Prior ELA score range:	100 – 313	100 – 355	100 – 404	100 – 411	100 – 461
Prior Math score range:	100 – 312	100 – 365	100 – 410	100 – 413	100 – 450
AV growth target based on historical percentile:	80				

For students who have not met grade level expectations, the Approaches and Does Not Meet achievement levels have each been split at the median historically-observed score for that level to allow for a smoother progression of growth targets. Students whose prior year score falls in the lower half of the Does Not Meet achievement level (“Does Not Meet 1”; DNM1) have AVGTs based on 80th percentile gains. Students in the upper half (“Does Not Meet 2”; DNM2), have AVGTs based on 75th percentile growth. Students in “Approaches 1” (Appr1) have AVGTs based on the 70th percentile and students in “Approaches 2” (Appr2) have AVGTs based on the 65th percentile. Near the floor of the score distribution, there were points at which the sample of historical scores was too small to accurately estimate median and 80th percentile growth for DNM1. In these cases, growth targets at the lowest historical score for which growth could be estimated are also used as the targets for scores from 100 to that score. Figure 5 shows the historically observed gains at the 50th and 80th percentile (PR50 and PR80) plotted as plusses with MAGTs and AVGTs plotted as circles for the 7th grade ELA SCREADY to illustrate how growth targets are set for the Added-Value Growth Model.



To find an individual student’s target score for the SCREADY, round their prior-year VSS down to the nearest multiple of 10 and find that score in the gray, center column of Table 5. For the ELA SCREADY, track left on that row to the student’s current grade level to find growth targets for this year’s test. Follow the same procedure for the Mathematics SCREADY but track right to the current grade level to find growth targets for this year’s test. The minimum VSS point gains that are needed to meet the MAGT goal are shown in the unshaded column and gains needed to meet the AVGT goal are shown in the shaded column. To find the target scores for the student for this year’s test, add the number of points shown to their prior year VSS for that test. An example is given in the next paragraph.

Table 5

Median-Annual Growth Target (MAGT) and Added-Value Growth Target (AVGT) Lookup Table (continued on next page)

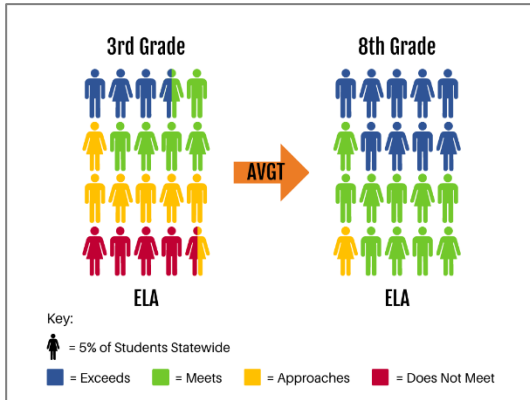
Growth Targets for ELA SCREADY										Prior Year Score (round down)	Growth Targets for Mathematics SCREADY									
Grade 4		Grade 5		Grade 6		Grade 7		Grade 8			Grade 4		Grade 5		Grade 6		Grade 7		Grade 8	
MAGT	AVGT	MAGT	AVGT	MAGT	AVGT	MAGT	AVGT	MAGT	AVGT		MAGT	AVGT	MAGT	AVGT	MAGT	AVGT	MAGT	AVGT	MAGT	AVGT
211	347	205	289	187	190	165	186	269	144	100	251	283	265	279	322	187	299	302	334	194
202	347	206	286	187	190	165	186	269	144	110	242	276	260	273	334	187	299	302	327	194
193	309	206	281	187	190	165	186	269	144	120	233	268	254	266	344	187	296	302	318	194
183	275	205	274	187	190	165	186	269	144	130	223	258	246	260	351	187	292	302	309	194
172	246	204	267	187	190	165	186	269	144	140	212	246	239	253	352	187	287	302	301	194
161	216	201	259	187	190	165	186	269	144	150	200	233	232	245	348	187	281	302	291	194
151	193	196	248	187	190	165	186	269	144	160	190	222	222	238	341	187	274	302	281	194
141	174	191	239	187	190	165	186	269	144	170	179	210	214	232	330	187	266	302	271	194
130	161	184	228	187	190	165	186	269	144	180	167	197	206	226	316	187	257	302	260	194
119	151	175	215	187	190	165	186	261	144	190	156	184	196	218	300	187	248	302	252	194
109	141	166	203	187	190	165	186	251	144	200	146	173	187	211	281	187	236	302	241	194
100	132	157	192	187	190	165	186	238	144	210	137	163	178	204	261	187	225	302	230	194
90	126	145	179	173	190	165	186	228	144	220	126	153	167	197	236	187	214	302	219	194
82	120	135	169	156	190	165	186	217	144	230	117	144	158	188	215	187	202	302	209	194
75	114	126	159	141	190	165	186	205	144	240	109	136	149	179	194	187	191	279	200	194
67	109	115	148	127	173	165	186	195	144	250	99	128	138	170	174	179	179	253	190	194
60	104	106	139	114	155	159	186	184	144	260	90	120	130	163	155	168	168	229	181	194
55	102	98	132	102	139	150	186	172	144	270	84	115	121	155	137	156	157	207	172	194
52	100	90	123	91	124	142	177	162	144	280	77	110	111	145	121	144	146	188	164	194
49	98	83	118	81	111	133	165	152	144	290	71	105	103	136	107	135	136	171	157	194
47	98	77	112	72	102	124	153	140	144	300	65	101	95	129	94	125	126	157	150	194
46	99	72	107	64	94	115	142	130	144	310	60	98	86	122	81	116	117	145	142	184
46	87	67	104	56	88	105	133	121	144	320	56	88	79	114	71	107	108	135	135	171
47	89	63	101	49	82	95	125	109	137	330	52	85	73	108	62	97	99	126	127	160
49	91	60	99	42	77	87	118	100	128	340	49	83	66	102	53	88	91	118	120	150
50	93	57	97	36	73	79	112	91	120	350	46	81	61	98	45	81	82	111	111	140
52	85	54	86	31	69	72	107	81	112	360	44	72	56	95	38	75	74	104	105	131
54	87	51	84	27	66	66	102	73	105	370	41	70	52	84	31	69	67	98	96	123
56	90	49	83	24	65	62	100	66	97	380	39	68	50	82	24	63	60	91	87	116
58	91	47	82	21	64	58	98	57	91	390	38	67	48	82	19	59	54	85	78	108
60	93	45	81	19	64	55	97	51	86	400	36	66	47	82	15	57	48	80	70	102
62	86	43	80	18	54	53	87	45	81	410	34	56	46	74	11	45	43	68	64	96
64	87	42	70	17	54	52	87	39	77	420	33	55	46	74	9	44	38	63	57	92
65	89	40	70	17	55	51	87	35	74	430	32	54	46	75	7	44	34	59	51	88
66	90	40	69	17	56	51	87	32	73	440	30	46	46	75	7	44	30	56	46	85
68	91	39	69	17	47	51	87	30	72	450	29	45	45	67	6	36	27	54	43	83
69	83	39	68	18	48	51	78	29	73	460	28	44	45	67	6	37	24	46	40	73
70	84	38	60	19	49	50	78	28	64	470	27	43	45	67	7	38	21	44	39	72
70	84	38	60	19	50	50	78	28	65	480	26	42	45	67	7	39	19	42	38	73
71	84	39	60	20	51	50	77	29	67	490	25	41	44	59	8	32	17	40	38	65
71	84	39	60	21	52	49	77	30	69	500	24	40	44	59	8	32	15	32	38	66
70	84	39	53	22	44	49	77	31	70	510	24	39	44	59	8	32	13	30	38	66
70	84	39	53	23	44	48	68	31	62	520	23	38	43	58	8	32	11	29	38	66
69	83	40	53	23	45	48	68	32	63	530	22	37	43	58	8	32	9	28	38	59
68	75	40	53	24	45	47	67	33	63	540	21	36	43	58	7	23	8	27	38	59

Growth Targets for ELA SCREADY										Prior Year Score (round down)	Growth Targets for Mathematics SCREADY									
Grade 4		Grade 5		Grade 6		Grade 7		Grade 8			Grade 4		Grade 5		Grade 6		Grade 7		Grade 8	
MAGT	AVGT	MAGT	AVGT	MAGT	AVGT	MAGT	AVGT	MAGT	AVGT		MAGT	AVGT	MAGT	AVGT	MAGT	AVGT	MAGT	AVGT	MAGT	AVGT
67	74	40	53	24	46	47	66	34	63	550	20	29	43	59	7	22	7	20	38	59
65	72	39	53	25	39	46	65	34	63	560	18	28	43	59	6	21	6	19	38	59
63	70	39	52	25	39	45	65	35	56	570	16	27	42	51	5	21	5	18	38	59
61	68	38	52	25	39	44	57	36	57	580	15	26	42	51	5	20	4	17	37	51
59	66	37	51	25	39	43	57	36	57	590	13	24	42	50	4	20	3	16	37	51
56	63	36	43	25	38	43	56	37	58	600	10	22	41	50	3	20	3	16	37	51
52	60	35	42	25	38	42	56	37	58	610	7	20	40	49	3	20	2	15	36	51
49	57	33	40	24	38	42	55	38	51	620	4	18	39	49	2	20	2	15	36	50
45	53	32	39	24	37	42	55	38	51	630	1	15	38	48	1	11	1	7	36	50
40	48	29	37	23	36	41	54	38	51	640	0	11	37	46	1	10	1	7	36	50
35	43	27	34	21	35	41	54	38	51	650	0	7	36	45	0	9	0	6	35	43
30	38	24	32	20	27	41	53	38	51	660	0	5	34	43	0	8	0	5	35	43
24	33	20	28	19	25	40	46	37	50	670	0	5	32	41	0	6	0	5	35	42
18	27	17	24	17	23	40	46	37	50	680	0	5	30	38	0	5	0	5	34	42
11	21	13	20	15	21	39	45	36	49	690	0	5	27	36	0	5	0	5	34	42
5	16	7	15	12	19	37	44	35	48	700	0	5	24	33	0	5	0	5	33	41
0	10	3	10	10	17	36	42	34	41	710	0	5	22	30	0	5	0	5	32	41
0	5	0	5	7	14	33	40	33	39	720	0	5	19	27	0	5	0	5	32	40
0	5	0	5	4	11	30	37	31	38	730	0	5	15	23	0	5	0	5	31	40
0	5	0	5	0	8	27	35	30	37	740	0	5	12	20	0	5	0	5	30	39
0	5	0	5	0	5	24	32	28	34	750	0	5	9	16	0	5	0	5	29	38
0	5	0	5	0	5	20	28	26	32	760	0	5	4	11	0	5	0	5	27	37
0	5	0	5	0	5	16	24	23	30	770	0	5	0	6	0	5	0	5	25	36
0	5	0	5	0	5	12	20	20	26	780	0	5	0	5	0	5	0	5	23	34
0	5	0	5	0	5	8	16	16	23	790	0	5	0	5	0	5	0	5	21	32
0	5	0	5	0	5	4	11	13	20	800	0	5	0	5	0	5	0	5	19	29
0	5	0	5	0	5	0	6	8	15	810	0	5	0	5	0	5	0	5	16	26
0	5	0	5	0	5	0	5	3	11	820	0	5	0	5	0	5	0	5	13	23
		0	5	0	5	0	5	0	7	830			0	5	0	5	0	5	9	19
		0	5	0	5	0	5	0	5	840			0	5	0	5	0	5	6	14
		0	5	0	5	0	5	0	5	850			0	5	0	5	0	5	2	11
				0	5	0	5	0	5	860					0	5	0	5	0	6
				0	5	0	5	0	5	870					0	5	0	5	0	5
						0	5	0	5	880							0	5	0	5
						0	5	0	5	890							0	5	0	5
						0	5	0	5	900							0	5	0	5
								0	5	910									0	5
								0	5	920									0	5

Note that, because MAGTs and AVGTs are assigned based on rounded-down scores, all students whose prior year scores round down to the same score are assigned the same target gains, even if the rounded score falls into a different achievement level than the student’s unrounded score. For example, imagine that Anna is in 5th grade and scored 419 on the ELA SCREADY last year. Anna’s score falls within the Appr1 range (for which growth targets are set to the 70th percentile). However, since the rounded score of 410 falls within the DNM2 range, Anna’s growth target is based on 75th percentile gains. Table 5 indicates that MAGT = 43 and AVGT = 80 for Anna. Thus, if Anna scores 462 or higher (i.e., her prior year score of 419 plus her MAGT of 43) on the ELA SCREADY in 5th grade, she will earn at least one point for her school in the accountability system. If Anna scores 499 or higher (i.e., 419 + 80) on the 5th grade ELA test, she will earn additional points for meeting her AVGT. Although the exact scoring structure will be determined after an additional year of data has been collected and analyzed, several scoring systems have been tested using historical data and will be discussed in general terms in the next section.

Applying the Added-Value Growth Model

Figure 6 - Achievement Levels in ELA under AVGTs



On the 8th grade ELA test, after five years of consistently meeting AVGTs, 44% of students would score at the Exceeds level, 51% at the Meets level, and only 5% at the Approaches level (see Figure 6). On the Mathematics test, 36% would score at the Exceeds level, 51% at the Meets level, and only 13% at the Approaches level (see Figure 7). After consistently meeting AVGTs, the students whose achievement remains below grade level expectations all started at the DNM1 achievement level in grade 3, scored at the Appr2 level in grade 8, and had scores within 13 points of Meets for ELA and within 26 points of Meets for Mathematics.

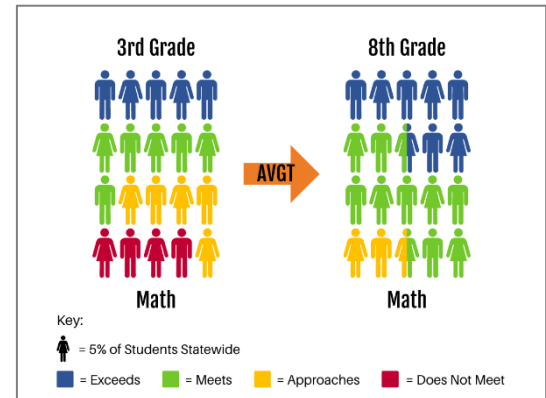
As a second test, we applied the proposed model to generate estimated Ratings Points and Ratings for schools using available historical data. This approach allowed us to compare estimated scores that schools would have received under the Added-Value Growth Model in 2018 and 2019 to the scores that schools received under the norm-referenced growth model that was in use at the time. We also tested estimated scores for relationships with known school characteristics. Note that we are not yet recommending a specific scoring system for the Added-Value Growth Model until after the scoring systems currently being considered can be tested against an additional year of collected growth data. However, all scoring systems tested met the following criteria:

- Students whose SCREADY scores fall short of their individualized MAGTs earn zero Indicator Points for their school.
- Students who meet or exceed their MAGTs earn at least one Indicator Point for their school.
- Students who meet or exceed their AVGTs earn substantially more Indicator Points for their school.
- Students whose AVGTs are based on higher percentile gains earn more Indicator Points for meeting those targets than students with AVGTs based on lower percentile gains.

In addition to criteria (a) through (d), some scoring systems were tested in which a portion of the additional Indicator Points available for meeting AVGTs could be earned for gains that are higher than MAGTs, but which fall short of reaching the AVGT. All scoring systems tested were designed to minimize the correlation between the criterion-referenced value-added score and the proportion of students in poverty served by the school. In addition, since Academic Achievement and Student Growth are different but related constructs, scores generated by the proposed growth model are expected to correlate with Academic Achievement scores, but that correlation should not be too strong. Ideally, the magnitude of correlation between Added-Value Growth Model scores and both the school poverty index and Academic Achievement scores is expected to be less than 0.20. Finally, if the proposed criterion-referenced growth model is measuring the same or very similar construct of student achievement growth that the existing norm-referenced growth model measures, then scores generated by the proposed model should be strongly correlated with previously awarded Student Progress ratings. Most of the scoring systems tested met these performance criteria, and all tested scoring systems correlated with norm-

As a first test of how effectively the proposed model moves students to grade-level proficiency, we applied its growth targets to the same sample of historical 3rd grade SCREADY scores analyzed in the previous sections. For each of the 107,950 3rd grade ELA scores and each of the 108,164 3rd grade Mathematics scores, we assumed that the students in question exactly met the expected achievement gains described by the AVGTs shown in Table 5 when they took the 4th grade tests. We then used that predicted score to generate the AVGTs for the 5th grade test, and so on each year to determine the students' final achievement level at the end of 8th grade.

Figure 7 - Achievement Levels in Math under AVGTs



referenced value-added scores at 0.80 or greater. These findings suggest that an additional year of data will allow us to select the most appropriate scoring system for use in the SC accountability system.

Student Growth Applied Beyond Accountability

One possible advantage of the proposed criterion-referenced value-added model and the method it uses to assign individual growth targets is that similar methods can be applied to interim and benchmark assessments used throughout the school year to appropriately measure a student's progress toward their AVGT. For example, according to publicly released information about the [Conditional Growth Percentile](#) reported by NWEA's MAP assessments, this metric is calculated and reported in a manner that will allow it to be directly compared to the percentile ranks shown in Table 4 that were used to determine AVGTs. In this way, MAP data could provide timely insight into whether students are making enough growth to meet their AVGTs.

Providers of the other interim and benchmark assessment systems approved for use in South Carolina may already provide similar metrics or could be encouraged to add them to reporting systems that support the state's effort to promote student growth that adds value to proficiency levels. These kinds of applications could make the Added-Value Growth Model useful for instructional planning and progress monitoring and not just for the purposes of accountability. The South Carolina Department of Education has already begun exploring methods with which to leverage this model for instructional applications, and EOC Staff are committed to supporting such efforts in any way possible. We recommend continuing to explore how the features of this model can be used to inform teaching and instructional interventions.

A Value-Added Model that Meets the Needs of SC

Desiderata for a Growth Model

According to the [Education Accountability Act of 1998, as last amended by Act 94 of 2017](#), its declared goal is to establish a performance-based accountability system to improve teaching and learning so that all students are equipped with a strong academic foundation and are prepared to meet the Profile of the South Carolina Graduate. The SC accountability system has included a measure of student achievement growth for many years and has incorporated a value-added model since the 2017-18 school year. Including a measure of student growth is critically important to the goal of the accountability system.

Although the goal remains to ensure that all students meet or exceed grade level expectations each year, a student could arrive at a school far enough behind previous grade level expectations that getting them to proficiency in a single year would be a monumental and extremely difficult task. Our current norm-referenced value-added growth model encourages schools to ensure that such students demonstrate more gains than most other similar students in the state. Unfortunately, the analyses in this paper demonstrate that better than average growth is often insufficient to move students to proficiency. In these situations, it is in the interest of the State and all its residents to encourage schools to promote sufficient growth each year that students move closer to achieving grade level proficiency.

As EOC Staff began to explore a criterion-referenced value-added model to move students to proficiency, we identified eight desiderata (or desired attributes) for a model that would meet the state's needs. The desired growth model would:

- Desiderata 1:** Produce a specific, individualized growth target for each student based on that student's prior achievement.
- Desiderata 2:** Produce growth targets that, if met, would move all students toward proficiency and either maintain or improve all students' prior achievement levels.
- Desiderata 3:** Produce targets that can be understood by, calculated by, and communicated to all stakeholders.

- Desiderata 4:** Produce targets that are as rigorous as necessary to attain grade level proficiency, but do not unnecessarily inflate targets to avoid setting expectations that are seen as unreasonable or impossible.
- Desiderata 5:** Make it possible for all students and schools to perform well (or to perform poorly) against previously established criteria, independent of the performance of other students or schools.
- Desiderata 6:** Support a scoring system that can be understood by and projected by school and district leaders.
- Desiderata 7:** Produce school scores that are as uncorrelated as possible with the proportion of pupils in poverty served by the school.
- Desiderata 8:** Produce scores that are minimally correlated with Academic Achievement scores.

Staff Recommendations

The Added-Value Growth Model described in this paper meets all eight of these desiderata. In addition, the proposed model has exciting implications for applications which support classroom instruction and instructional interventions at the school and district level. The proposed model is appropriate for an accountability system that promotes continuous improvement and supports improved outcomes for all students.

For these reasons, EOC Staff recommend adopting the Added-Value Growth Model to replace the current norm-referenced growth model for the Student Progress indicator in the South Carolina educational accountability system. Specifically, we make the following recommendations:

- Recommendation 1:** 2023 School Report Cards shall report both the existing norm-referenced student growth model and the proposed Added-Value Growth Model. School Rating Points and Ratings shall be calculated using the same model and method described in the FY 2021-22 Accountability Manual. Added-Value Growth Model metrics shall be defined in the FY 2022-23 Accountability Manual without associated Ratings Points or Ratings and shall appear on Report Cards for informational purposes only.
- Recommendation 2:** EOC Staff shall analyze FY 2021-22 accountability data, seeking input from SCDE and select stakeholders, to further explore the Added-Value Growth Model scoring methods currently under consideration. EOC Staff shall make a final recommendation to EOC members for a scoring system to be published in the FY 2023-24 Accountability Manual.
- Recommendation 3:** EOC Staff, in collaboration with SCDE, will produce Added-Value Growth Model scores based on FY 2022-23 accountability data to disseminate to school and district leaders for their reference in preparation for full transition to the proposed model in the FY 2023-24 Accountability Manual.
- Recommendation 4:** 2024 School Report Cards shall report Added-Value Growth Model metrics and shall use those metrics to calculate Ratings Points and Ratings. The previously used norm-referenced growth model shall no longer be reported on these or subsequent report cards.

EDUCATION OVERSIGHT COMMITTEE

DATE: January 24, 2022

COMMITTEE:

Joint Academic Standards & Assessments and Public Awareness Subcommittees

ACTION ITEM:

Use of On-Track Measure in High School Accountability

PURPOSE/AUTHORITY

Title 59: Section 59-18-900

Annual report cards; performance ratings; criteria; annual school progress narrative; trustee training; data regulations; military-connected student performance reports.

(A) The Education Oversight Committee, working with the State Board of Education, is directed to establish the format of a comprehensive, web-based, annual report card to report on the performance for the State and for individual primary, elementary, middle, high schools, career centers, and school districts of the State. The comprehensive report card must be in a reader-friendly format, using graphics whenever possible, published on the state, district, and school websites, and, upon request, printed by the school districts. The school's rating must be emphasized and an explanation of its meaning and significance for the school also must be reported. The annual report card must serve at least six purposes:

- (1) inform parents and the public about the school's performance including, but not limited to, that on the home page of the report there must be each school's overall performance rating in a font size larger than twenty-six and the total number of points the school achieved on a zero to one hundred scale;
- (2) assist in addressing the strengths and weaknesses within a particular school;
- (3) recognize schools with high performance;
- (4) evaluate and focus resources on schools with low performance;
- (5) meet federal report card requirements; and
- (6) document the preparedness of high school graduates for college and career.

(B)(1) The Education Oversight Committee, working with the State Board of Education and a broad-based group of stakeholders, including, but not limited to, parents, business and industry persons, community leaders, and educators, shall determine the criteria for and establish performance ratings of excellent, good, average, below average, and unsatisfactory for schools to increase transparency and accountability as provided below:

(a) Excellent-School performance substantially exceeds the criteria to ensure all students meet the Profile of the South Carolina Graduate;

(b) Good-School performance exceeds the criteria to ensure all students meet the Profile of the South Carolina Graduate;

(c) Average-School performance meets the criteria to ensure all students meet the Profile of the South Carolina Graduate;

(d) Below Average-School performance is in jeopardy of not meeting the criteria to ensure all students meet the Profile of the South Carolina Graduate; and

(e) Unsatisfactory-School performance fails to meet the criteria to ensure all students meet the Profile of the South Carolina Graduate.

(2) The same categories of performance ratings also must be assigned to individual indicators used

to measure a school's performance including, but not limited to, academic achievement, student growth or progress, graduation rate, English language proficiency, and college and career readiness.

(3) Only the scores of students enrolled continuously in the school from the time of the forty-five-day enrollment count to the first day of testing must be included in calculating the rating. Graduation rates must be used as an additional accountability measure for high schools and school districts.

(4) The Oversight Committee, working with the State Board of Education, shall establish student performance indicators which will be those considered to be useful for inclusion as a component of a school's overall performance and appropriate for the grade levels within the school.

(C) In setting the criteria for the academic performance ratings and the performance indicators, the Education Oversight Committee shall report the performance by subgroups of students in the school and schools similar in student characteristics. Criteria must use established guidelines for statistical analysis and build on current data-reporting practices.

(D) The comprehensive report card must include a comprehensive set of performance indicators with information on comparisons, trends, needs, and performance over time which is helpful to parents and the public in evaluating the school. In addition, the comprehensive report card must include indicators that meet federal law requirements. Special efforts are to be made to ensure that the information contained in the report card is provided in an easily understood manner and a reader-friendly format. This information should also provide a context for the performance of the school. Where appropriate, the data should yield disaggregated results to schools and districts in planning for improvement. The report card should include information in such areas as programs and curriculum, school leadership, community and parent support, faculty qualifications, evaluations of the school by parents, teachers, and students. In addition, the report card must contain other criteria including, but not limited to, information on promotion and retention ratios, disciplinary climate, dropout ratios, dropout reduction data, dropout retention data, access to technology, student and teacher ratios, and attendance data.

CRITICAL FACTS

EOC staff recommends an on-track measure for high school accountability – to be used in determining indicator and overall ratings for these schools – beginning in School Year 2023-24. Data from School Year 2022-23 will be reported on the School Report Cards, although not used for the calculation of ratings.

Staff recommends a phase-in approach for the integration of the on-track measure, allowing schools to make the transition by grade level. Beginning in 2023-24, the on-track measure will focus on the number/percentage of 9th grade students with 6 or more credit hours – to include both a mathematics and an English credit. Subsequent years will integrate 10th grade on-track and 11th grade measures, assigning points to the percentage of students meeting specific milestones in each grade level.

TIMELINE/REVIEW PROCESS

Impact data from School Years 2021-22 and 2022-23 will inform detail on the specific calculations and how ratings will be determined. Calculation will impact ratings beginning in SY 2023-24.

ECONOMIC IMPACT FOR EOC

No impact

For approval

ACTION REQUEST

For information

ACTION TAKEN

Approved
 Not Approved

Amended
 Action deferred (explain)

Use of On-Track Measure in High School Accountability

for ASA/PA Subcommittee consideration 3/21/2022

EOC Staff Recommendation:

Use an on-track measure for high school accountability – to be used in determining indicator and overall ratings for these schools – beginning in School Year 2023-24. Data from School Year 2022-23 will be reported on the School Report Cards, although not used for the calculation of ratings.

Staff recommends a phase-in approach for the integration of the on-track measure, allowing schools to make the transition by grade level. Beginning in 2023-24, the on-track measure will focus on the number/percentage of 9th grade students with 6 or more credit hours – to include both a mathematics and an English credit. Subsequent years will integrate 10th grade on-track and 11th grade measures, assigning points to the percentage of students meeting specific milestones in each grade level.

Impact data from School Years 2021-22 and 2022-23 will inform detail on the specific calculations and how ratings will be determined.

SQSS Indicators in Accountability

Current SQSS Indicators in SC Accountability System

Elementary/Middle Schools	High Schools
<ul style="list-style-type: none">• Preparing for Success (10 pts)• School Climate (10 pts)	<ul style="list-style-type: none">• Preparing for Success (5 pts)• College/Career Ready (25 pts)• School Climate (10 pts)

The Every Students Succeeds Act (ESSA) requires state accountability plans to include five indicators: 1) proficiency on assessments, which may include growth in proficiency in high school; 2) growth in proficiency in grades below high school or another academic indicator; 3) high school graduation rates; 4) progress of English Learners (ELs) toward proficiency; and 5) a fifth “other” indicator. The law

requires this indicator to be a valid, reliable and comparable measure of school quality or student success (SQSS) within each state’s accountability system. The SQSS indicator is expected to allow for meaningful differentiation between schools and to be given less than “substantial weight” in accountability calculations. In the aggregate, the other four required indicators must be given “much greater weight” than the measure of SQSS.

STAT 1836: “(v)(I) For all public schools in the State, not less than one indicator of school quality or student success that— “(aa) allows for meaningful differentiation in school performance; “(bb) is valid, reliable, comparable, and statewide (with the same indicator or indicators used for each grade span, as such term is determined by the State); and “(cc) may include one or more of the measures described in subclause (II). “(II) For purposes of subclause (I), the State may include measures of— “(III) student engagement; “(IV) educator engagement; “(V) student access to and completion of advanced coursework; “(VI) postsecondary readiness; “(VII) school climate

and safety; and “(VIII) any other indicator the State chooses that meets the requirements of this clause.”

Does an On-Track Measure assist in preventing failure?

Much of the work on the on-track indicator was developed in the late 1990s by researchers at the University of Chicago Consortium on Chicago School Research (UChicago CCSR). The indicator provides a simple quantitative measure of whether 9th graders are making adequate progress to graduation based on credit completion and course failures.

Do On-Track Help Students Graduate On-Time?

Students who end their 9th grade year **on-track** were almost **4 times more likely to graduate from high school** than those who were off-track.

A student's **on-track** status was more predictive of high school graduation than their race/ethnicity, level of poverty, or test scores.

"The On-Track Indicator as a Predictor of High School Graduation", Consortium on Chicago School Research at the University of Chicago, 2005

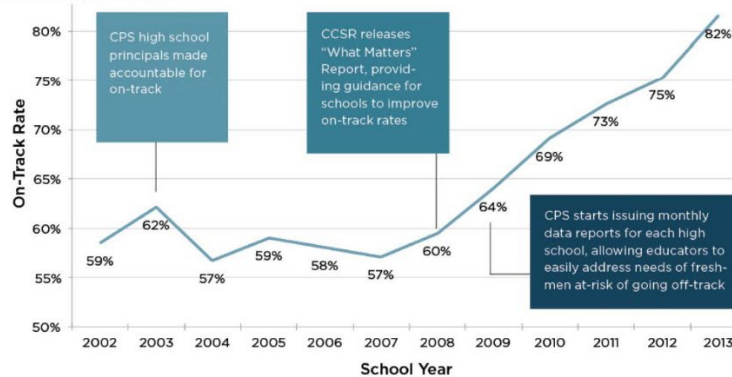


The UChicago CCSR definition of on-track: a student is considered “on-track” to graduate if she or she earns at least five full-year course credits and no more than one semester F in a core course (English, math, science, or social science) in their first year of high school.

Students who end their 9th grade year on-track are almost 4 times more likely to graduate from high school than those who are off-track. A student's on-track status is more predictive of high school graduation than race/ethnicity, level of poverty, or test scores. The “moment-in-time” indicator also captures a key developmental transition that students go through with a quantitative measure that can be easily calculated, monitored, and acted upon. It is an outcome that can be improved up on with targeted school-based strategies.

Actionable Data

Ninth grade on-track rates improved most when schools acted on real time data about student absences and course performance.



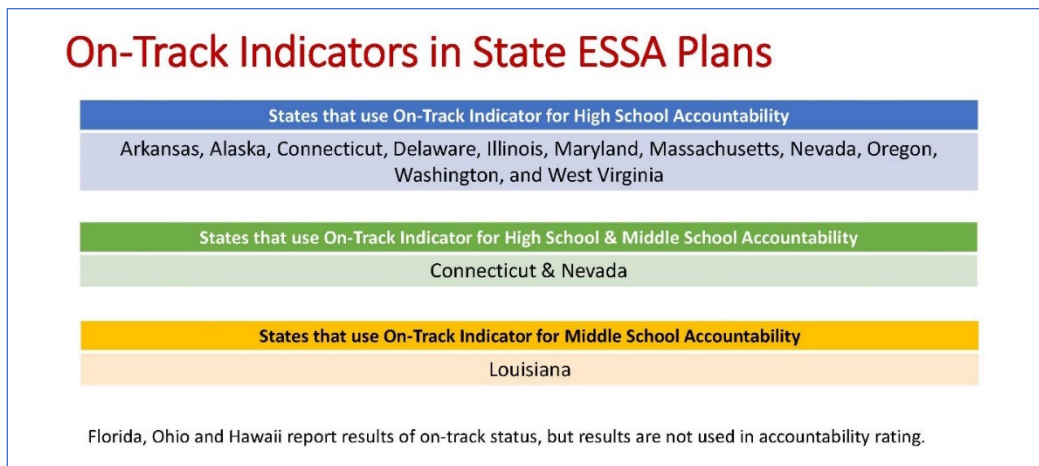
Note: This figure represents first-time freshmen who are not receiving special education services and are not enrolled in a charter or alternative school.

In 2006, researchers from Achieve and the Carnegie Corporation suggested that identifying potential dropouts in the system by building an accurate Early Warning System that would identify students as early as 9th grade (some earlier) who were most in need of intervention would pay dividends down the road.


In 2014-15, an analysis done by the Oregon Dept. of Education showed that students who had not met the requirements for on-track status dropped out at a rate more than 16 times higher than their peers who had met the requirements. They began collecting this indicator as a state in 2013-14.

States implementing on-track measures in accountability

Although the pandemic has paused the implementation of many state accountability plans, a number of states use on-track/SQSS indicators in their accountability systems.



Arkansas and Connecticut are two notable examples of states using an on-track indicator.



- Arkansas requires 22 credits for a high school diploma.
- They use an A-F school rating system but that has been suspended for the last 2 school years.
- 15% of accountability weighting for HIGH SCHOOLS is the School Quality/Student Success measure which includes an accumulation of points on multiple measures:
 - Earning a composite score of 19 or higher on the ACT exam
 - Meeting college- and career-readiness benchmarks on the ACT exam
 - Earning a final high school GPA of 2.8 or higher
 - Attaining course credits in community service learning, computer science, AP, IB, or dual enrollment
 - Accumulating annual credits in grades nine through 11 to remain on-time to graduate in four years**

Grade 9: completed at least 5.5 credits = 1 pt.

Grade 10: completed at least 11 credits = 1 pt.

Grade 11 completed at least 16.5 credits = 1 pt.

- Connecticut requires 25 credits for a high school diploma.
- Connecticut uses a point system which create an accountability index.
- 5% of accountability weighting for **MIDDLE SCHOOLS that include an 8th grade** is the **On-Track in 9th Grade Indicator**, which is the percentage of ninth graders earning at least five full-year credits in the year. The measure is used for the feeder middle schools.
- 3% of accountability weighting for **HIGH SCHOOLS** is the **On-Track in 9th Grade Indicator**, which is the percentage of ninth graders earning at least five full-year credits in the year.



What are SC's course requirements for students to earn a SC HS Diploma?

State Board Regulation: 43-234. Defined Program, Grades 9-12 and Graduation Requirements.

Each school district board of trustees must ensure quality schooling by providing a rigorous, relevant curriculum for all students. Each school district must offer a standards-based academic curriculum organized around a career cluster system that provides students with individualized education pathways and endorsements. Students must earn a total of twenty-four units of credit.

Subject Area	Units of Credit
English/Language Arts	4.0
Mathematics	4.0
Science	3.0
U.S. History and the Constitution	1.0
Economics	0.5
U.S. Government	0.5
Other Social Studies course(s)	1.0
PE or JROTC	1.0
Computer Science	1.0
Foreign Language or CTE	1.0
Electives	7.0
TOTAL	24.0

SC School District Promotion Requirements

Students must meet the following basic requirements to be classified in the following grade levels.

Pickens County School District High Schools	
9th grade	Promotion from the 8th grade
10th grade	5 units: 1 must be a required language arts unit and 1 must be a required math unit
11th grade	10 units: 2 must be required language arts units and two must be required math units
12th grade	16 units: 3 must be required language arts units or student must be currently enrolled in coursework that will permit graduation by the end of the school year

Union County School District High Schools	
9th grade	Promotion from 8th grade
10th grade	5 units including one unit each in English and Math.
11th grade	11 units including two units each in English and Math.
12th grade	17 units including three units each in English and Math. Students must be able to complete all units needed for graduation by the end of second (spring) semester.

Some SC districts have board-approved policies for keeping 9th-12th grade students on track for graduation. The School District of Pickens County and Union County Schools have such policies.

EDUCATION OVERSIGHT COMMITTEE

DATE: January 24, 2022

COMMITTEE:

Joint Academic Standards & Assessments and Public Awareness Subcommittees

ACTION ITEM:

Use of Extended Year (5-Year) Cohort Graduation Rate in High School Accountability

PURPOSE/AUTHORITY

Title 59: Section 59-18-900

Annual report cards; performance ratings; criteria; annual school progress narrative; trustee training; data regulations; military-connected student performance reports.

(A) The Education Oversight Committee, working with the State Board of Education, is directed to establish the format of a comprehensive, web-based, annual report card to report on the performance for the State and for individual primary, elementary, middle, high schools, career centers, and school districts of the State. The comprehensive report card must be in a reader-friendly format, using graphics whenever possible, published on the state, district, and school websites, and, upon request, printed by the school districts. The school's rating must be emphasized and an explanation of its meaning and significance for the school also must be reported. The annual report card must serve at least six purposes:

- (1) inform parents and the public about the school's performance including, but not limited to, that on the home page of the report there must be each school's overall performance rating in a font size larger than twenty-six and the total number of points the school achieved on a zero to one hundred scale;
- (2) assist in addressing the strengths and weaknesses within a particular school;
- (3) recognize schools with high performance;
- (4) evaluate and focus resources on schools with low performance;
- (5) meet federal report card requirements; and
- (6) document the preparedness of high school graduates for college and career.

(B)(1) The Education Oversight Committee, working with the State Board of Education and a broad-based group of stakeholders, including, but not limited to, parents, business and industry persons, community leaders, and educators, shall determine the criteria for and establish performance ratings of excellent, good, average, below average, and unsatisfactory for schools to increase transparency and accountability as provided below:

(a) Excellent-School performance substantially exceeds the criteria to ensure all students meet the Profile of the South Carolina Graduate;

(b) Good-School performance exceeds the criteria to ensure all students meet the Profile of the South Carolina Graduate;

(c) Average-School performance meets the criteria to ensure all students meet the Profile of the South Carolina Graduate;

(d) Below Average-School performance is in jeopardy of not meeting the criteria to ensure all students meet the Profile of the South Carolina Graduate; and

(e) Unsatisfactory-School performance fails to meet the criteria to ensure all students meet the Profile of the South Carolina Graduate.

(2) The same categories of performance ratings also must be assigned to individual indicators used

to measure a school's performance including, but not limited to, academic achievement, student growth or progress, graduation rate, English language proficiency, and college and career readiness.

(3) Only the scores of students enrolled continuously in the school from the time of the forty-five-day enrollment count to the first day of testing must be included in calculating the rating. Graduation rates must be used as an additional accountability measure for high schools and school districts.

(4) The Oversight Committee, working with the State Board of Education, shall establish student performance indicators which will be those considered to be useful for inclusion as a component of a school's overall performance and appropriate for the grade levels within the school.

(C) In setting the criteria for the academic performance ratings and the performance indicators, the Education Oversight Committee shall report the performance by subgroups of students in the school and schools similar in student characteristics. Criteria must use established guidelines for statistical analysis and build on current data-reporting practices.

(D) The comprehensive report card must include a comprehensive set of performance indicators with information on comparisons, trends, needs, and performance over time which is helpful to parents and the public in evaluating the school. In addition, the comprehensive report card must include indicators that meet federal law requirements. Special efforts are to be made to ensure that the information contained in the report card is provided in an easily understood manner and a reader-friendly format. This information should also provide a context for the performance of the school. Where appropriate, the data should yield disaggregated results to schools and districts in planning for improvement. The report card should include information in such areas as programs and curriculum, school leadership, community and parent support, faculty qualifications, evaluations of the school by parents, teachers, and students. In addition, the report card must contain other criteria including, but not limited to, information on promotion and retention ratios, disciplinary climate, dropout ratios, dropout reduction data, dropout retention data, access to technology, student and teacher ratios, and attendance data.

CRITICAL FACTS

EOC Staff recommends the implementation of a 5-year cohort graduation calculation – to be used in determining indicator and overall ratings for high schools beginning in School Year 2023-24. Data from School Year 2022-23 will be reported on the School Report Cards, although not used for the calculation of ratings.

This staff recommendation is reflective of the Accountability Advisory Committee recommendation to include an extended (5-year) graduation rate with the following parameters: extended rates should have less influence than the traditional 4-year rate to maintain on-time graduation as the primary goal. Furthermore, the extended graduation rate alone should not decrease accountability scores.

TIMELINE/REVIEW PROCESS

Impact data from School Years 2021-22 and 2022-23 will inform detail on the specific calculations and how ratings will be determined. Calculation will impact ratings beginning in SY 2023-24.

ECONOMIC IMPACT FOR EOC

No impact

ACTION REQUEST

For approval

For information

ACTION TAKEN

Approved
 Not Approved

Amended
 Action deferred (explain)

Use of Extended Year (5-year) Cohort Graduation Rate in High School Accountability

for ASA/PA Subcommittee consideration 3/21/2022

EOC Staff Recommendation:

Implement a 5-year cohort graduation calculation – to be used in determining indicator and overall ratings for high schools beginning in School Year 2023-24. Data from School Year 2022-23 will be reported on the School Report Cards, although not used for the calculation of ratings.

This staff recommendation is reflective of the Accountability Advisory Committee recommendation to include an extended (5-year) graduation rate with the following parameters: extended rates should have less influence than the traditional 4-year rate to maintain on-time graduation as the primary goal. Furthermore, the extended graduation rate alone should not decrease accountability scores.

Impact data from School Years 2021-22 and 2022-23 will inform detail on the specific calculations and how ratings will be determined.

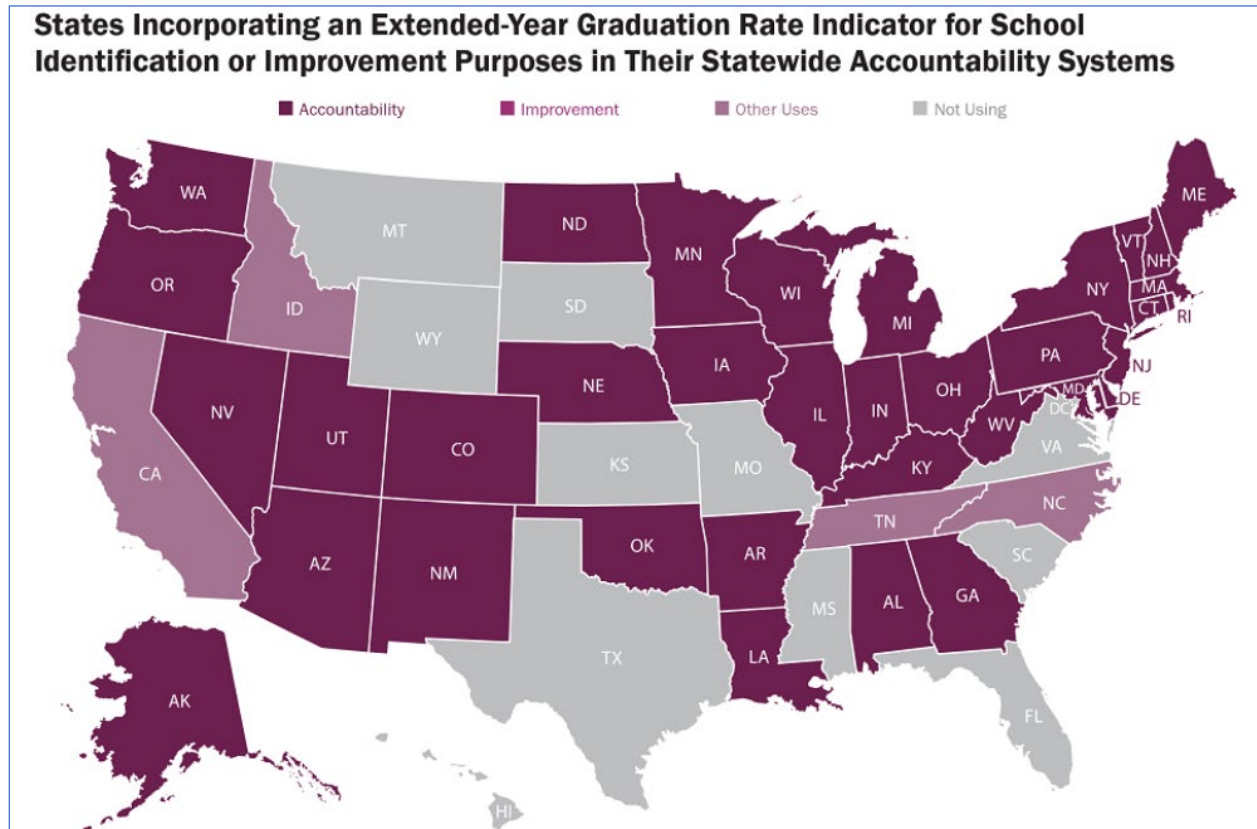
Extended-Year Adjusted Cohort Graduation Rates in ESSA

The Extended-Year Graduation Rate is referenced in Section 8101 of the Elementary and Secondary Education Act (ESEA), as re-authorized by the Every Student Succeeds Act (ESSA).

395 ESEA OF 1965 Section 8101(23) Extended-Year Adjusted Cohort Graduation Rate. --

(A) IN GENERAL.—The term “extended-year adjusted cohort graduation rate” means the fraction—(i) the denominator of which consists of the number of students who form the original cohort of entering first-time students in grade 9 enrolled in the high school no later than the date by which student membership data must be collected annually by State educational agencies for submission to the National Center for Education Statistics under section 153 of the Education Sciences Reform Act of 2002 (20 U.S.C. 9543), adjusted by—(I) adding the students who joined that cohort, after the date of the determination of the original cohort; and (II) subtracting only those students who left that cohort, after the date of the determination of the original cohort, as described in subparagraph (B); and (ii) the numerator of which— (I) consists of the sum of— (aa) the number of students in the cohort, as adjusted under clause (i), who earned a regular high school diploma before, during, or at the conclusion of— (AA) one or more additional years beyond the fourth year of high school; or (BB) a summer session immediately following the additional year of high school; and (bb) all students with the most significant cognitive disabilities in the cohort, as adjusted under clause (i), assessed using the alternate assessment aligned to alternate academic achievement standards under section 1111(b)(2)(D) and awarded a State-defined alternate diploma that is— (AA) standards-based; (BB) aligned with the State requirements for the regular high school diploma; and (CC) obtained within the time period for which the State ensures the availability of a free appropriate public education under section 612(a)(1) of the Individuals with Disabilities Education Act (20 U.S.C. 1412(a)(1)); and (II) shall not include any student awarded a recognized equivalent of a diploma, such as a general equivalency diploma, certificate of completion, certificate of attendance, or similar lesser credential.

An extended-year graduation rate is allowable as an option for states to use in accountability systems. The following map shows the 2018 implementation in state ESSA plans:



<https://learningpolicyinstitute.org/product/essa-equity-promise-extended-year-grad-brief>

Overview of the Five-Year Cohort Graduation Rate

The five-year cohort graduation rate is: a) the number of students who graduated from high school at the selected entity-level (e.g., school, district, or state) within five years with a regular high school diploma, divided by b) the number of students who form the final four-year adjusted cohort from the preceding year at the same selected entity-level, plus c) any new students who transfer to and graduate from the selected entity-level during the five-year cohort outcome period.

The methodology for calculating the five-year cohort graduation rate is typically a process to determine the year 5 high school outcomes for non-graduates included in the four-year adjusted cohort graduation rate from the preceding year. As such, the four- and five-year cohort graduation rates share the same cohort of students in common, all of whom started grade 9 at the same time and were expected to graduate on-time four years later. Unlike the four-year “on-time” graduation rate, the five-year cohort is not adjusted by adding students who transferred in during year 5, subtracting students who transferred out during year 5, or removing students who emigrated to another country or transferred to a prison or juvenile facility during year 5. Rather, the five-year cohort is largely held constant in year 5 to reduce artificial fluctuations in the five-year cohort graduation rate based solely on cohort adjustments to the

denominator (transfers in, transfers out, and removals) that are allowed in the four-year graduation rate.

For the purposes of calculating the five-year cohort graduation rate, the preceding four-year final cohort serves as the denominator for the five-year cohort graduation rate. From there, the following cohort "adjustments" are proposed to be permitted when calculating the five-year cohort graduation rate:

- Students who transfer to and subsequently graduate from a SC public high school during year 5 are added to the receiving school's cohort (denominator) and counted as graduates (numerator) in the five-year cohort graduation rate for the receiving school. These same students will remain in the sending school's cohort (denominator) and be counted as a "transfer" (numerator) in the five-year cohort outcome for the sending school.
- Students who were removed from the four-year cohort for a valid reason that return to a SC public high school and graduate during year 5 are added to the receiving school's cohort (denominator) and counted as graduates (numerator) in the five-year cohort graduation rate for the receiving school.
- Students who die during year 5 are removed entirely from the school's cohort (denominator) and will not affect the year 5 outcome.
- Students whose four-year cohort outcome (numerator) has changed in year 5, positively or negatively, will be updated in the five-year cohort graduation rate to reflect the most recent status.