SC EDUCATION OVERSIGHT COMMITTEE
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AGENDA

Full Education Oversight Committee Meeting

Monday, August 9, 2021
Anderson Institute of Technology
9:00 AM

I. Welcome .....Ellen Weaver

II. Approval of Full Committee Minutes, June 14, 2021 ....Ellen Weaver

III. Student Presentations of Learning .....Anderson School District Students

IV. Subcommittee Reports:
Strategic Planning Subcommittee..... Dr. Bob Couch

Action Item:
SC Education Oversight Committee Strategic Plan, 2021-2025

V. Presentations
Review of the Accountability System in 2017-18 & 2018-19 ..... Dr. Kevin Andrews

Executive Director Update ..... Matthew Ferguson

VI. Adjournment

* Lunch and tour of Anderson Institute of Technology to follow adjournment

SOUTH CAROLINA EDUCATION OVERSIGHT COMMITTEE

Minutes of the Meeting

June 14, 2021

Members Present (in-person or remote): Ellen Weaver, Chair; Rep. Terry Alexander; April Allen (remote); Melanie Barton; Rep. Neal Collins; Dr. Bob Couch, Rep. Raye Felder; Barbara Hairfield; Sen. Greg Hembree; Sen. Kevin Johnson; Sidney Locke (remote); Dr. Brian Newsome; Neil Robinson; Supt. Molly Spearman; Patti Tate (remote); and Dr. Scott Turner

EOC Staff Present: Dr. Kevin Andrews; Matthew Ferguson; Dr. Valerie Harrison; Hope Johnson-Jones; Dr. Rainey Knight; Dr. Matthew Lavery; and Dana Yow.

Guests Present: Dr. Lee D'Andrea, EOC Consultant; Diane Sigmon, EOC Consultant; Anne Pressley, SCDE; Dr. John Payne, Deputy Superintendent, SCDE; Georgia Mjarten, SC First Steps; Martha Strickland, SC First Steps; Derek Cromwell; SC First Steps

Ms. Weaver welcomed members and guests to the meeting.

The minutes of the April 12, 2021 EOC meeting were approved and seconded. Ms. Weaver asked Mr. Robinson to present the report of the Academic Standards and Assessments subcommittee meeting, which met on May 17. Mr. Robinson summarized the discussion on each of the three action items that came before the group as information.

Science SC College and Career Ready Academic Standards

At the subcommittee meeting, Dr. Rainey Knight provided an overview of the Cyclical Review of the 2021 SC College and Career Ready Science Standards. The EOC has authority for evaluating the content standards of all academic areas which are included in the accountability system. A national panel made up of five experts in science, curricular standards, and/or cognitive processes, were secured to review the standards and provide suggested revisions.

A state panel from across South Carolina also reviewed the standards. This panel was made up of parents, science teachers, teachers of exceptional education, teachers of English language learners, community members and representatives from business. The Cyclical Review of the Science standards was adopted by the EOC in December 2019 and forwarded on to the SC Dept. of Education.

The document the subcommittee evaluated and voted upon in April was the proposed Science Standards drafted by SC educators. These new standards reflect best practices from experts in the field of science and teaching and learning of science. The new science standards are also three-dimensional to include science and engineering practices (SEP); disciplinary core ideas (DCI); and crosscutting concepts (CC).

The ASA subcommittee recommendation is to approve the 2021 SC College and Career Ready Science Standards.

Ms. Hairfield commented on the strength of the new standards and stated that she believed that the teachers would appreciate the quality of these standards.

Supt. Spearman recognized Anne Pressley and her team on the work they did with these standards.

The EOC approved the standards as written.

Military-Connected Students Report

The ASA subcommittee received the 2021 Annual Report on the Educational Performance of Military-Connected Students. Every Student Succeeds Act or ESSA requires the identification and collection of Military-Connected Student data. Data reported by the South Carolina Department of Education (SCDE) regarding military-connected students are based on district entry of student information into the student information system.

Act 289 requests the EOC to develop an annual report on the educational performance of military-connected students that must at least address: attendance, academic performance in reading, math, science, and graduation rate.

There were over 18,000 military-connected students in SC public schools in school year 2019-20. Almost 70 percent of those students have at least one parent who is active duty. Of those students, approximately 80 percent of those students attended one of 10 school districts.

This year's report was limited in performance results due to COVID. EOC staff did look at the following data:

- Kindergarten Readiness Assessment (KRA)
- End-of Course Examination Program (EOCEP)
- Advanced Placement (AP) Course Performance
- Career and Technology Education Certification/Credential Areas
- Graduation Rate
- Attendance

Overall, military-connected students tend to outperform their peers statewide.

The ASA subcommittee approved the Military-Connected Report for school year 2019-20, and recommends the full committee follow suit.

Ms. Barton stated she was interested especially in the attendance data. She wanted to know if there was data for attendance rates for the State. Dr. Andrews stated that we had not received statewide data for comparison from the SCDE.

The EOC approved the Military-Connected Report.

Parent Survey Report

Dr. Andrews provided the subcommittee in May with the annual Parent Survey Report. This year's report is brief since COVID prevented the Parent Survey from being distributed.

Section 59-28-190 of the Parental Involvement in Their Children's Education Act requires the Education Oversight Committee (EOC) to *"survey parents to determine if state and local efforts are effective in increasing parental involvement."*

For the first time, in the Spring of 2021, the parent survey will be administered using electronic devices, including smart phones. Parents may access the survey using a personal computer with

internet access or using their smart phone. With these changes, the survey will now be made available to parents of students at all grade levels.

Another benefit of moving to electronic presentation is that content changes can be made more easily. Some content changes were already proposed and implemented.

Dr. Andrews did point out some questions and concerns about the survey changes, specifically the concern that parents taking the same survey each year for multiple children may lead to fatigue. Staff is continuing to monitor revisions.

The ASA subcommittee approved the Parent Survey Report for school year 2019-20, and Ms. Weaver said that was wonderful that we were finally moving to electronic distribution.

Rep. Alexander asked what we are looking for with the Parent Survey. Mr. Robinson stated that we are looking for any number of things but what happens after the survey goes out is what is most important.

Ms. Barton said as a parent on an SIC, she asked for the survey each year. It is the responsibility of the SIC to look at it. Dr. Turner said the Parent Survey results are looked at in principal evaluations.

Rep. Alexander said it was difficult to find out how many pages the survey was. Ms. Felder said that he wasn't sure which of the appendixes was the actual survey. Appendix C is the translation to an online version.

The committee adopted the Parent Survey report.

Ms. Weaver called upon Dr. Couch to present the report of the EIA subcommittee which also met on May 17.

<u>EIA Program Update</u>

Dr. Couch reviewed the details outlined at subcommittee for the EIA programs. Dr. Rainey Knight provided an update for the subcommittee on the status of the state budget and the EOC's EIA budget recommendations. Much of the state budget remains in flux. Staff is continuing to monitor the process and will provide an update once the budget is finalized.

Dr. Knight had discussed the EIA application process during summer/fall 2021. New this year, EOC staff will provide training webinars for EIA program participants during the summer focused on EIA application completion and the development of SMART goals for the EIA programs.

At subcommittee Mr. Ferguson also presented plans to institute an in-depth review and evaluation cycle for EIA programs. Staff categorized current EIA programs into the following groups: improving teacher quality; increasing school readiness and ensuring early learning success; supporting struggling students; emphasizing learning in content areas; improving connections across education levels and with world of work; measuring and evaluating success; and miscellaneous programs.

EOC staff plans to begin the EIA evaluation reviews during fall 2021 with the programs categorized as improving teacher quality. The results of the evaluation will be presented to the EIA subcommittee for their consideration. The plan is for other EIA program areas to be considered for evaluation and review in subsequent years.

Teacher Loan Program Report for FY 2019-20

The EIA subcommittee received the Teacher Loan Program Report for Fiscal Year 2019-20, as required by the Teacher Quality Act of 2000. The report provided information about implementation of the Teacher Loan Program, how the Teacher Loan program measures against goals set by an advisory group, and information about South Carolina's teacher workforce that supports the need for the SC Teacher Loan Program.

Key Findings related to implementation of the Teacher Loan Program Report included the following:

1. TLP applicants and recipients decreased slightly in 2019-20.
2. There was an increase of 3.6 percent in TLP administrative costs in 19-20 from 18-19.
3. Historically, applicants to the TLP have been predominantly white (79%) and/or female (80%), consistent with trends observed in national and South Carolina teacher workforce profiles.

Key Findings related to the Advisory Group Goals for the Teacher Loan Program included the following:

4. The percentage of African American TLP applicants (18%) mirrors the percentage of African Americans in the South Carolina teaching force.
5. But the percentage of African American TLP recipients did not mirror the percentage of African Americans in the South Carolina teaching force (15%).
6. The number of TLP recipients at historically African American institutions decreased to only 4 in 2019-20.
7. TLP male applicant representation closely mirrors the percent of males in the South Carolina educator workforce, but TLP male recipients was below that observed in the South Carolina educator workforce.

Key Findings related to the South Carolina Educator Force included the following:

8. The number of SC students who graduated with a bachelor's degree and teacher certification eligibility declined from the previous year. Only 24 percent of new hires are recent graduates of an in-state teacher preparation program.
9. About 700 certified positions were still vacant at the beginning of the 2020-21 school year. This is a 26% increase compared to 2019-20, even though school districts reported fewer teacher departures overall.

The EIA subcommittee recommendation is to adopt the Teacher Loan Report for Fiscal Year 2019-20.

Once Dr. Couch concluded his update, Ms. Weaver followed up on a previous question about whether the Teacher Loan Program could access the revolving loan program. Ray Jones said that this was addressed this year so no denials should occur due to lack of funding.

Ms. Felder said that the percentage of dollars spent on administration went up significantly in 2019-20. Mr. Jones said that it went up that year when the Student Loan Corp. staff was reduced.

That year was the first year of the conversion of the loan to FirstMark Services, so that was the cost associated with that conversion. There was a flat fee associated with converting files to the FirstMark Services system. Sen. Hembree asked if that percentage should drop down next year. Mr. Jones said it would go down. Rep. Alexander asked about whether the other HBCUs were part of the program. Mr. Jones said that all HBCUs are part of the program; there may only be small numbers of borrowers from HBCUs. Dr. Turner asked if all academic criteria for the program are weighted equally. Mr. Jones said that they are all kick-outs; if you don't meet it on one criterion, you can qualify in a different area. Dr. Turner asked about Career Changers loans. Anyone seeking initial certification can enter a forgivable program.

The EOC approved the Teacher Loan report.

SCDE Presentation

At the conclusion of subcommittee reports, Ms. Weaver turned over the agenda to Supt. Spearman to provide an update. Ms. Spearman stated that for the reading summer camps, approx. 33,000 were invited to participate in some type of Summer Reading camp at their schools. They will be there at a minimum of 96 hours for those students attending. Districts have been working on their Academic Recovery Plans, which came in last week. Each were evaluated using five different indicators. Fifteen plans were sent back to districts; many needed to develop measurable outcomes. All the plans will be posted to the website. It was evident they used the Rally tool. Summer school and additional instructional days are often used. They are using the resources the State has purchased. Curriculum audits have been completed in the Palmetto Literacy schools (215). If they are not using the best materials, the SCDE is purchasing appropriate materials. As of June 9, some districts are completing state testing, so they don't have the final numbers yet. Ms. Spearman also updated the committee on school board consolidation. Eleven school districts are in the process of consolidating. Hampton 1 and 2 will become Hampton Schools July 1, 2021. Clarendon 1 and 3 will be Clarendon 4 on July 1, 2021. On July 1, 2022, Clarendon 2 will join, and they will all become Clarendon Consolidated. Bamberg 1 and 2 as well as Barnwell 19 and 29 consolidate effective July 1, 2022. Also, Florence 4 and Florence 1 will be consolidated by July 1, 2022. That is foundational progress and long overdue, according to Ms. Spearman.

Sen. Hembree says that it is nice to see the hard work bear fruit. The ESSER III money can be used for construction of facilities. The money is going directly to the school districts; there is nothing stopping them from using the money. There is a gigantic amount of money flowing to the districts so this an opportunity to take care of the facility needs.

Rep. Alexander thanked Supt. Spearman for consolidation. He said that we are consolidating poor districts; he wants to make sure we don't create bigger poor school districts. We need to think about how we are financing schools and districts across the state. Supt. Spearman said that the situation with the index of taxpaying ability in rural areas is an area that needs to be fixed. Counties must take care of their own within the counties. There is still significant work to do, with old structures in place that don't serve us today.

Dr. John Payne was then asked to explain the three different pots of ESSER funds, especially the ESSER III funds. He presented a PowerPoint to the committee.

During the presentation, Supt. Spearman talked about the focus on learning loss and what they are doing with districts. They are working with the SC Afterschool Alliance and the SC Arts Commission on handling some funds and showing outcomes with some of the federal funds.

Sen. Johnson asked if he could get a copy of Dr. Payne's presentation; EOC staff will send to all members.

Ms. Barton asked how we will know what worked and how well it worked. There is a disconnect between what State wants and what school districts want. Dr. Payne said that the SCDE will be facilitating a conversation with districts next month. He said we must be attentive to hiring people and buying a bunch of stuff. They will hire additional staff at SCDE to monitor and make changes, an "MTSS system for school districts."

Ms. Weaver asked if we would be coding students who receive different interventions. Dr. Payne said that is something that they are discussing internally now.

Rep. Alexander asked for the allowable uses of money. Dr. Payne said he would send it. We need to look at 3rd grade piece; this is an area that we really need to focus on. Supt. Spearman talked about some of the challenges like local control. Some of the curriculum that districts are using doesn't match with what the needs of the children are.

Rep. Collins asked about the learning loss of children and the funds going to districts versus the State. He asked what we think is the best use of these funds. Dr. Payne said high dosage tutoring and wellness strategies work -- really looking at quality programs to get learning caught up or accelerated. Ms. Spearman said that districts are hiring additional people to help with the high dosage tutoring, people who are equipped with the strategies to help students. Finding personnel is a challenge since we already have a teacher shortage. We are working with other states to work with college students and students in pre-service programs to get more people to work with students. Finding people is a huge challenge right now.

Ms. Hairfield stated that the most important thing is the quality of the teacher in the classroom. Can any of the money be used to help teachers get further training? Dr. Payne said yes, there is an opportunity for professional development, and they are encouraging districts to use the funds for this purpose. There are many vendors out there already, but there needs to be proof that it works. Some districts are giving retention bonuses to their teachers. Ms. Hairfield said that teachers aren't often incentivized enough to go to professional development.

Dr. Newsome asked if we had looked at other states and how they are using the money, specifically NC, GA, and Mississippi. Some of the other states are getting together to talk about opportunities and how they are handling all the monies. At the end of the day, we want to make sure we are good stewards of taxpayer monies. There are weekly discussions with CCSSO. A number of states are contacting us about how we moved so quickly on our private school monies.

Sen. Hembree thanked Dr. Payne for his presentation. He asked if the hardware and software were well in place. Dr. Payne stated that that is the SCDE's assumption. He thinks most of those purchases were made last Spring. There were some issues with delivery. Dr. Hembree asked about new office the SCDE was standing up to manage this funding. Will the work be contracted out? Dr. Payne said the office is going to be stood up in-house, until 2024 – a temporary grant position. They have also contracted with outside firms to assist with facility design. The concern is having enough people to do this. This is a tremendous undertaking. Ms. Spearman said they are hiring 40 people total for that office. Sen. Hembree stated that gives him comfort. Districts

have until August 24 to submit their plans. Districts will have the ability to amend plans as well. Sen. Hembree asked about money being available for mental health counselors and social emotional issues. Ms. Spearman said that something that has become a problem is that insurance companies need to upgrade the location from where services must be provided -- for federal employees and some other state insurance providers. It is an issue when services are provided inside a school. This is a low-hanging fruit that needs to be fixed. Sen. Hembree also asked about the teacher training and leadership training – can districts use money for sponsoring scholarships for students to go into education? Dr. Payne said yes, they money could be used as an incentivize to cover a practicum or come in and work to help students. This would help us increase the pipeline.

Districts must use this additional funding for projects that are reasonable, allowable, and necessary (linked or caused by the pandemic.) This level of new funding has created an emergency industry. There will be an army of smart people coming in to sell to districts. He is afraid that some of this money is going to be wasted. He is also worried that when this money ends, there will be a turn to the General Assembly to tell them they are underfunding education. We can't get accustomed to this level of funding because it is unsustainable.

Dr. Couch said there are a lot of good programs out there, where teachers must be trained by a provider. There must be whole school reform when you come in with this type of money. He is also concerned that he hasn't heard anything about career and technical. As we move forward, what is the plan of the districts to engage students holistically. Ms. Spearman said she agreed with this. She stated they are working with Dr. Hardee and the Technical College system. There are things they plan on doing to expand CTE in the State.

Ms. Weaver thanked Ms. Spearman and Dr. Payne for their work. She was enthused by the back-to-the-basics approach.

KRA Report

Following discussion, Dr. Lavery was called upon to present the KRA Report to the EOC. He presented the results to the committee. Ms. Spearman thanked Dr. Lavery for his report. She asked what was different about the administration of the test and asked if that would impact the results. He said it did affect the results, but we can't really say how. This is part of why the vendor was adamant about not comparing the scores from year to year. She also was happy about changing the date of the administration of the KRA. It was not indicated when the test was administered although some were given closer to the beginning of school, during LEAP days. We have given permission to schools to administer the KRA before school starts. Ms. Barton was pleased the report showed the positive impact of 4K programs. Rep. Felder thanked him for the report. She wanted to know if there was a consideration of getting a formal KRA result returned by testing vendor sooner than January. Ms. Spearman said that she would relay that information to the SCDE staff.

Executive Director's Report

Mr. Ferguson reminded the members about the EOC Retreat plans and encouraged members to make their reservations.

There being no further business, the meeting adjourned.

Education Oversight Committee Strategic Plan 2021-2025

Summary Strategies and Objectives

approved by Strategic Planning Subcommittee, May 17, 2021

Strategy I: Report Facts

To support all stakeholders in making informed decisions for the continuous improvement of schools and student outcomes, the EOC will advocate for, access, and use a comprehensive, quality, statewide data system

Objective A: Enhance the EOC's direct access to comprehensive, quality, statewide data for reporting information

- Advocate for EOC staff to have secure, administrative-user access to Student Information System data
- Institute processes for EOC staff to have co-equal access to files that contain student-level data used for accountability
- Establish quality control processes to ensure accurate accountability reporting

Objective B: Advocate for the synthesis of existing data sources into a comprehensive, quality statewide data system that is secure, transparent and relevant to decision making for schools and student outcomes

- Partner with existing stakeholder groups to establish policies and processes to connect existing data systems
- Advocate for the establishment of policies and processes to ensure the security, privacy, and appropriate use of all stakeholder data

Objective C: Transform data into information that equips multiple stakeholder groups to act for the continuous improvement of schools and student outcomes

- Create information, to include data visualizations, that empowers multiple stakeholders to take more action-oriented approaches to continuous improvement of schools and student success
- Increase the use of state and school report cards and other sources of data for decision making and continuous school and student improvement
- Streamline the accessibility and transparency of information

Strategy II: Measure Change

To more accurately and efficiently measure change, the EOC will refocus accountability to emphasize school improvement and the success of students

Objective D: Align system-wide (PK-12) accountability measures with characteristics of college and career readiness (CCR)

- Study the ability of current accountability measures to predict college and career success
- Select accurate and appropriate measures of CCR progress throughout the PK-12 system
- Establish a framework to include international and national benchmarks of student success
- Monitor student CCR success and the continuous improvement of schools

Objective E: Design and implement an educational accountability system that enables stakeholders to take action and focus on continuous improvement

- Research the needs of multiple stakeholder groups to determine appropriate measures
- Develop measures to meet identified needs

Objective F: Identify and reward school accountability success

- Recognize schools that demonstrate success
- Include select awards on school report cards

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Strategy III: Promote Progress

To more effectively promote progress throughout South Carolina schools, the EOC will strengthen partnerships with key stakeholders and promote collaborative, coordinated action for the continuous improvement of schools and student success

Objective G: Clarify the role of the Education Oversight Committee as the authority in PK-12 school accountability

- Solidify the EOC's role as responsible for the development of federal and state accountability
- Become a co-equal partner in the procurement of measures used for school accountability (e.g. assessments, surveys)

Objective H: Realign EOC resources to become a more effective advisor and honest broker to multiple stakeholder groups

- Research the needs of multiple stakeholder groups
- Serve as a bridge to connect research to policy and practice for the following stakeholder groups: policy makers, educators, families / students, and business / community leaders

Objective I: Collaborate with other agencies, schools, and organizations to jointly explore topics relevant to school and student success

- Convene stakeholders to collaboratively update the accountability standards for a Vision 2030 document
- Convene forums / speakers on relevant education topics

Review of the South Carolina Accountability System for Public Schools 2017-18 & 2018-19

Contents

Section I: INTRODUCTION

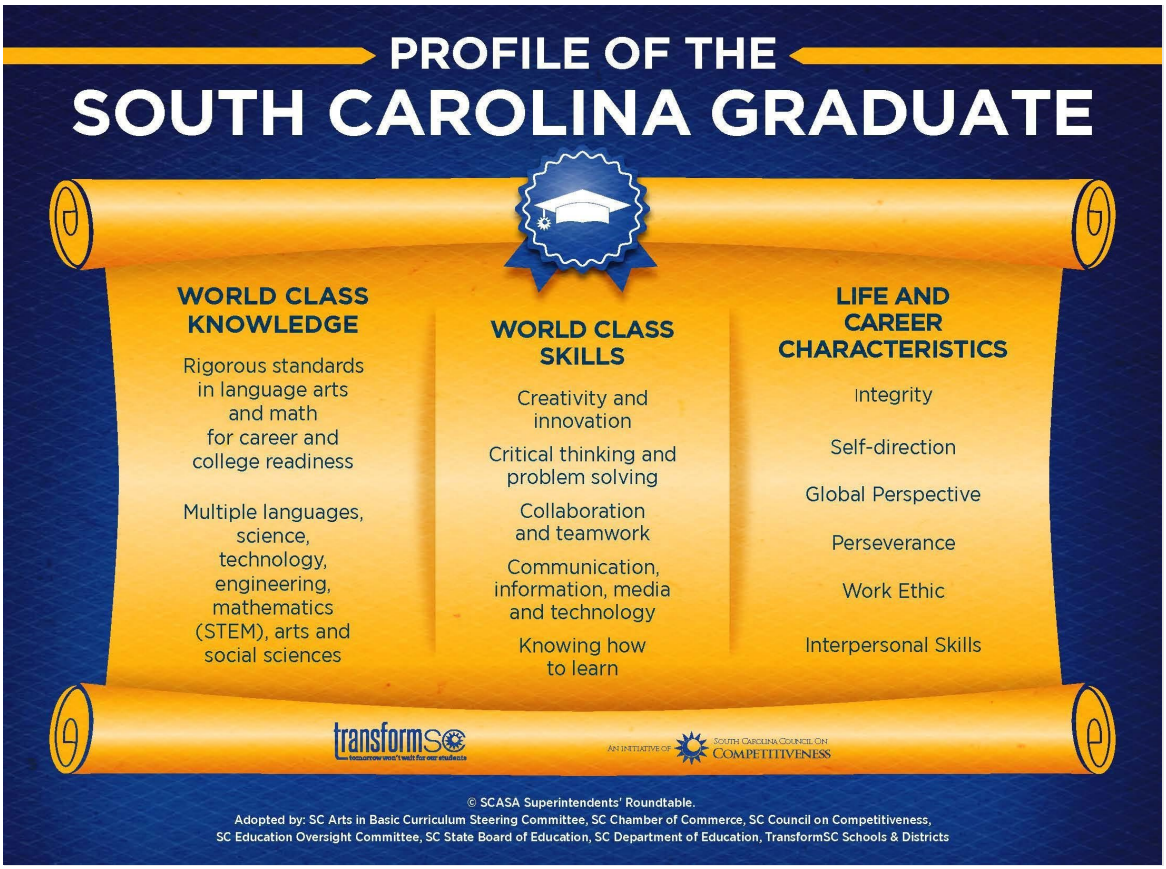
This review is of the accountability system as it was in place for the 2017-18 and 2018-19 academic years. References to all parts of the accountability system in the present refer to these years. Accountability system ratings were suspended for the 2019-2020 and 2020-2021 academic years due to COVID-19. This review does not consider changes that were made for any subsequent years.

System Purposes

The Education Accountability Act of 1998, as last amended by Act 94 of 2017, provides the foundation and requirements for the South Carolina accountability system for public schools and school districts. The enabling legislation includes the following preamble and purposes:

> §59-18-100. The General Assembly finds that South Carolinians have a commitment to public education and a conviction that high expectations for all students are vital components for improving academic achievement. It is the purpose of the General Assembly in this chapter to establish a performance-based accountability system for public education which focuses on improving teaching and learning so that students are equipped with a strong academic foundation. Moreover, to meet the Profile of the South Carolina Graduate, all students graduating from public high schools in this State should have the knowledge, skills, and opportunity to be college ready, career ready, and life ready for success in the global, digital, and knowledge-based world of the twenty-first century as provided in Section 59-1-50. All graduates should have the opportunity to qualify for and be prepared to succeed in entry-level, credit-bearing college courses, without the need for remedial coursework, postsecondary job training, or significant on-the-job training. Accountability, as defined by this chapter, means acceptance of the responsibility for improving student performance and taking actions to improve classroom practice and school performance by the Governor, the General Assembly, the State Department of Education, colleges and universities, local school boards, administrators, teachers, parents, students, and the community.

The expressed goal of the accountability system is to improve teaching and learning so that students are equipped with a strong academic foundation and to ensure that all students graduate with the world-class knowledge as defined by the *Profile of the South Carolina Graduate,* and further, to promote the world class skills and life/career characteristics outlined in *the Profile* (§59-1-50). The accountability system is designed to promote high levels of student achievement through strong and effective schools.



State law defines the purpose and elements of the annual report card:

- The report card is "a performance indicator system that is logical, reasonable, fair, challenging, and technically defensible, which furnishes clear and specific information about school and district academic performance and other performance to parents and the public" (§59-18-110(2))

- The report card must be:

  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. (S.C. Code §59-18-900(A))

- The 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. (S.C. Code § 59-18-900(D))

The accountability system must also meet the federal requirements of the Elementary and Secondary Education Act of 1965 (ESEA), as reauthorized by the Every Student Succeeds Act (ESSA) of 2015 and South Carolina's ESSA Consolidated State plan which was approved on May 3, 2018. A link to South Carolina's approved ESSA Plan is available online at https://ed.sc.gov/newsroom/every-student-succeeds-act-essa/consolidated-state-plan-approved-by-usde-on-may-3-2018/. A summary of the federal requirements in ESSA and how South Carolina chose to meet the requirements are below:

- The ESSA was enacted December 10, 2015. This reauthorization of the ESEA allows states greater flexibility in designing the school accountability system mandated under federal law. South Carolina used this opportunity to combine existing state and federal accountability requirements into one cohesive system.
- Section 1111 of the ESSA outlines the federal accountability requirements, and South Carolina's accountability system and Report Card are designed to address those requirements.

The accountability system in place for 2017-18 and 2018-19 contained the following elements by school level:

Elementary and Middle Schools

- Academic Achievement: based on federally required reading/language arts and mathematics assessments. The SC READY assessments of English/language arts and mathematics meet these federal requirements.
- Student Progress or another Academic indicator: currently, because of state law, a value-added system must be used to describe growth. The name of this indicator is Student Progress.
- Progress in achieving English Proficiency: South Carolina has designed a set of interim targets to acknowledge students who are on-track to become proficient in English within a five-year period.
- At least one indicator of school quality or student success: South Carolina has two metrics; one is based on the results of a student engagement survey, and the second was based student success based on science and social studies for the 2017-18 academic year, and only on student success in science for the 2018-19 academic year[1].

High Schools

- Academic Achievement and Student Progress: South Carolina chose not to include Student Progress for high school students. Academic Achievement must be based on the federally required ELA and mathematics high school assessments. The end-of-course tests administered in Algebra 1 and English 1 meet the federal mandate for testing students in ELA and mathematics.
- The four-year adjusted graduation rate and at the state's discretion, an extended year graduation rate. South Carolina chose not to include an extended graduation rate.
- Progress in achieving English Proficiency: South Carolina has designed a set of interim targets to acknowledge students who make progress toward becoming proficient in English within a five-year timeframe.
- At least one indicator of school quality or student success: South Carolina has two metrics; one is based on the results of a student engagement survey, and the second was based student success based on science and social studies.
- College and Career Readiness: South Carolina allows students to demonstrate college readiness by meeting the criteria in at least one of 6 ways (ACT, SAT, Advanced Placement, Cambridge International, and International Baccalaureate assessments, and dual enrollment coursework) and career readiness by meeting the criteria in at least of 4 areas (ASVAB, a ready to work assessment, an appropriate industry credential, or a state approved work-based learning experience).

[1] Social studies was no longer a state required assessment for the 2019-20 academic year.

Components of the System

Ratings and indicators

Beginning with the 2018 report cards, each elementary, middle, or high school that has been operational for at least one academic year received one of the overall performance Ratings outlined below as defined in S.C. Code § 59-18-900. As a special note, per state law, no school district will receive a performance Rating.

- Excellent: School performance substantially exceeds the criteria to ensure all students meet the Profile of the South Carolina Graduate.
- Good: School performance exceeds the criteria to ensure all students meet the Profile of the South Carolina Graduate.
- Average: School performance meets the criteria to ensure all students meet the Profile of the South Carolina Graduate.
- Below Average: School performance is in jeopardy of not meeting the criteria to ensure all students meet the Profile of the South Carolina Graduate.
- Unsatisfactory: School performance fails to meet the criteria to ensure all students meet the Profile of the South Carolina Graduate.

State law further stipulates that the performance Rating must meet certain requirements, including being based on a 100-point scale:

> "Performance Rating" means the classification a school will receive based on the percentage of students meeting standard on the state's standards-based assessment, student growth or student progress from one school year to the next, graduation rates, and other indicators as determined by federal guidelines and the Education Oversight Committee, as applicable. To increase transparency and accountability, the overall points achieved by a school to determine its 'Performance Rating' must be based on a numerical scale from zero to one hundred, with one hundred being the maximum total achievable points for a school. § 59-18-120 (7)

The Overall Rating is based on a school's performance on the following indicators. Depending upon the grade level and number of students served and based upon state and federal law, these indicators include:

Academic Achievement: The level of a school's academic performance in the areas of English/language arts (ELA) and mathematics based on the SC READY assessment results in grades 3 through 8, South Carolina Alternative Assessments for students with significant cognitive disabilities, and end-of-course (EOCEP) assessment results in Algebra 1 and English 1 for high school. This indicator applies to all elementary, middle and high schools.

Student Progress: State law requires a value-added measure (S.C. Code § 59-18-1960). The academic progress of all students in ELA and mathematics is compared to other students in South Carolina who initially scored at the same levels, and the academic progress of the lowest performing 20 percent of students in a school is compared to students statewide who initially scored at the same level. In other words, the expectation of progress is based upon how the individual students within the group performed compared to other students like them across the state. Measures of progress from these two groups of students are combined to create an index of student progress for the school. This indicator applies to elementary and middle schools.

Preparing for Success: For elementary and middle schools, the Preparing for Success indicator measured the level of performance of students using SC-PASS science and SC-PASS social studies. For high schools, the Preparing for Success indicator measured the EOCEP Biology 1, U.S. History and the Constitution. South Carolina Alternate Assessments were available for students with significant cognitive disabilities in these subjects. This indicator applies to elementary, middle and high schools.

Student Engagement: Student Engagement as reported by students who take the AdvancED Student Engagement Survey to measure student's engagement in learning. This indicator applies to elementary, middle and high schools.

English Learners' Proficiency Progress: This indicator measures how well students who are not initially proficient in English are learning the English language. The ESSA requires states to measure the progress of English learners (EL) towards proficiency in English. This indicator applies to elementary, middle and high schools.

Graduation Rate: This indicator measures the four-year adjusted cohort graduation rate, which is the percentage of students who enter 9th grade, adjusted for students who transfer in or out of the cohort after 9th grade, and who graduate within four years. This indicator applies only to high schools.

College & Career Readiness: Using various measures, this indicator measures the percentage of the students earning their South Carolina State Diploma who graduate college or career ready. For 2017-18, the denominator to compute this percentage was the number of graduates: for 2018-19 the denominator was the number of students who should graduate. This change was made to satisfy federal requirements. This indicator applies only to high schools.

For each of the above indicators as applicable, schools will also receive a Rating for the indicator as required by S.C. Code §59-18-900. The same performance Ratings – Excellent, Good, Average, Below Average and Unsatisfactory – apply.

There will also be other data reported for these indicators that do not "count" in the Rating but are required by state or federal law or provide additional information to assist educators and the

public in understanding the accomplishments and challenges of the school and in designing interventions to improve outcomes, these items are not discussed here.

How ratings were determined for the initial year of the current accountability system:

Three sources of input were used to create the initial target percentages of schools receiving each rating for the Overall indicator, the Academic Achievement indicator, and the Preparing for Success indicator. The first was the history of absolute ratings from 2002 to 2014, the second was the 2015 NAEP scores for Reading and Mathematics in grades 4 and 8, and the third was calculations made using data from the 2017-18 academic year. All other indicators used some other process to determine their initial target percentages.

Two notes need to be made here:

1) The target percentages were to be used only for the initial year. Using these percentages cut-scores were developed, and the cut-scores created were to be maintained for a 5-year period, at which time they were to be re-evaluated.
2) Only these three indicators used this process. Each of the remaining indicators had some unique aspects that made applying this process inappropriate.

Some stakeholders expressed the concern that this process is inappropriate because the NAEP percentages are measures of students, not of schools. Although the NAEP results do not provide distributions of school results, the NAEP percentages are, indeed, means; they are the mean percentages of students in each NAEP category for all students in the state. The NAEP percentages are neither student-level nor school-level information, they are state-level information. Additionally, the NAEP percentages were viewed in conjunction with the prior history of absolute ratings, which is based on the distributions of school ratings. That these percentages have some consistency and could be used to create targets may not be a perfect process, but we believe it to be justifiable.

Using these three sources of information, the target percentages for the Overall, Academic Achievement, and Preparing for Success Indicators were: 10% Excellent, 15% Good, 40% Average, 25% Below Average, and 10% Unsatisfactory.

Table 1.
References to Establish Initial Target Percentages of Schools Receiving each Rating for the 2018-19 Academic Year

2015 NAEP Performance in SC	% of SC Schools and Ratings for 2017-18	% of SC Schools by Rating – 2002 to 2014	Initial Target Percentages
Proficient and Advanced 25 to 37%	Excellent – 15% Good – 20%	Excellent – 19% Good – 23%	Excellent – 10% Good – 15%
Basic 31 to 44%	Average – 35%	Average – 36%	Average – 40%
Below Basic 21 to 35%	Below Average – 20% Unsatisfactory – 10%	Below Average – 16% Unsatisfactory – 7%	Below Average – 25% Unsatisfactory – 10%

The Student Progress indicator, by current state law, utilizes a value-added methodology. Value-added processes create score distributions that tend to be more symmetric, with the score for a school making typical or average growth assigned to be the mean of the score range. To determine target percentages for the Student Progress indicator, the information included in Table 1 was used, but because value-added processes usually result in symmetric distributions of scores, the target percentages were modified to be symmetric in the middle of the distribution, with slightly more schools receiving a rating of Excellent than receive a rating of Unsatisfactory. The target percentages for the Student Progress indicator were: 15% Excellent, 20% Good, 35% Average, 20% Below Average, and 10% Unsatisfactory. Again, using these percentages, cut-scores were developed, which were intended to remain constant for five years and evaluated for their appropriateness at that time.

Each of the remaining indicators had percentages of schools receiving each rating that were determined by some other process which did not have target percentages of schools receiving each rating. The processes for the remaining indicators are discussed here.

The ratings for the English Learners' Progress indicator scores were not associated with any preconceptions of percentages of schools receiving each rating. The English Learners' Progress indicator scores were simply the percentage of students that met their annual growth targets in a school. Simulations based on data from 2016 to 2017 indicated the percentages of students that would meet these targets would range from 0 to 100; since the complete range of percentages was represented, these percentages could be used as indicator scores (divided by 10 to create a 10 point scale). Based on this range of percentages observed, the percentages of students meeting the annual growth criteria were divided into 5 categories (80-100, 60-79, 40-59, 20-39, and 0-19) for the ratings categories Excellent through Unsatisfactory, respectively. These ranges were also to remain fixed for a 5-year period before reconsideration.

At the time the accountability system was being developed a student engagement survey had not been procured. In the absence of any information of scores that may have resulted from the

survey, the decision was made to base scores on the percentile ranks of the scores obtained from the unknown assessment. For elementary and middle schools, the Student Engagement indicator was worth 10 points, which suggests a simple use of deciles to define the ranges of scores for each of the scores, 1 through 10. Including a score of 0 necessitated that the lowest decile be divided into two categories (percentile ranks 1 through 5, and 6 through 10). Using this process ensured that scores obtained would use the entire range of points allocated to the indicator. The ratings were assigned based on the points used to divide the distributions into 11 groups (10 deciles with the lowest decile divided into two groups). Using these 11 groups, the ratings were obtained in the following way: Excellent (9-10), Good (7-8), Average (4-6), Below Average (2-3), and Unsatisfactory (0-1). Using this process, the percentages of schools receiving each rating in the first year would be: Excellent (20%), Good (20%), Average (30%), Below Average (20%), and Unsatisfactory (10%). More importantly, the scores that define the ranges of points that define each rating were to be defined in the first year and remain fixed for five years.

Scores and ratings for the Graduation Rate indicator were based on two benchmarks: 1) a graduation rate of 90% or higher would receive a rating of Excellent, and 2) a graduation rate less than 70% would result in a rating of Unsatisfactory. The transformation of graduation rates used (see p. 61) results in 20 points or more for a school to obtain a rating of Excellent and 10 points or less for a school to receive a rating of Unsatisfactory. Without regard to any prior distributions of school graduation rates, the 10 points between a rating of Excellent and a rating of Unsatisfactory were divided so that 4 points were associated with the rating Good, and 3 points were associated with the ratings Average and Below Average. The ranges of graduation rates associated with each rating were to be fixed for five years.

In a similar way, the College/Career Ready ratings were not based on any preconception of the percentages of schools that would receive each rating. At the time of the development of the rating system, all criteria for both college readiness and career readiness had not yet been developed. Preliminary analyses were conducted using student ACT and WorkKeys scores indicated that the school percentage of graduates that would meet the criterion for being identified as College/Career Ready ranged from slightly less that 50 percent to 100 percent. The ranges of percentages of students that were College/Career ready were associated with ratings in the following way: Excellent (80-100), Good (70-79.9), Average (60-69.9), Below Average (50-59.9), and Unsatisfactory (0-49.9). These ranges were to remain fixed for the next five years before re-evaluation, and were not changed when the denominator for the College/Career Ready calculation changed from graduates in 2017-18 to students who should have graduated in 2018-19.

In sum, the ranges of scores that initial ratings for the Overall indicator, the Student Achievement indicator, the Preparing for Success indicator, and the Student Progress indicator were based on: (1) absolute ratings from the prior accountability system (2002 through 2014), (2) South Carolina NAEP scores form 2015 in Reading and Mathematics for grades 4 and 8, and (3) preliminary information from 2017 student achievement scores. All other indicators were defined using processes that did not define the percentages of schools that would receive each rating. For all

indicators, the ranges of scores that define each rating were to remain constant for five years, which was to allow schools to demonstrate progress with respect to consistent criteria.

As a final note, in the second year the accountability system was in place, it was necessary to make modifications to the Student Progress indicator. A change in the vendor performing value-added analyses necessitated a slight modification in the scoring process; the changes implemented did not change the ranges of scores that defined each rating.

Summary

1) The accountability system was created to meet the requirements of South Carolina state law and federal requirements as proscribed by ESSA.
2) The indicators included in the system as originally created fulfilled, and exceeded, the requirements of ESSA.
3) The ratings system employed is prescribed in state law.
4) The original ratings and ranges of scores were developed using criteria appropriate for each indicator.
5) To be able to observe changes over time, the score ranges that define each rating were to remain constant for a 5-year period.

Section II: ARE WE ASSESSING THE PROFILE OF THE SOUTH CAROLINA GRADUATE?

As has already been stated, the expressed goal of the accountability system is to improve teaching and learning so that students are equipped with a strong academic foundation and to ensure that all students graduate with the world-class knowledge, skills and characteristics as defined by the *Profile of the South Carolina Graduate*. The ratings schools receive are stated in terms of how well a school meets the *Profile of the South Carolina Graduate*.

An appropriate question to ask is how well the *Profile of the South Carolina Graduate* is assessed in the current accountability system. First, we will examine each section of the *Profile*, World Class Knowledge, World Class Skills, and Life & Career Characteristics to see how well they are represented in the current accountability system. For each of the elements of the Profile, meaningful questions to ask are:

1) How is this element best defined?
2) How can this element be measured?
3) What inferences can we make regarding student proficiency in the element?

As each element is investigated, the inability to provide answers to the first two questions makes it challenging to provide a clear answer to the third.

Important considerations to keep in mind when evaluating whether a specific element of the *Profile* is included in the accountability system are:

1) Is a clear, concise, agreed upon definition of the element in place?
2) Does the measure of the element reflect the school's contribution to a student's overall propensity to achieve success post K-12 education?
3) Will measuring the element create desirable changes in school and student behaviors?
4) Are the conditions in place for all schools to be successful on a measure of the element?
5) Can the element be measured with fidelity?
    a. Does the method of measurement correctly quantify the element?
    b. Can the element be measured consistently over time?
    c. Does the measurement process work equally well in all school contexts?
6) Do all schools have the ability to demonstrate proficiency on the element?
    a. Does the school have faculty available and adequately trained to teach the element?
    b. Does the school have access to support materials necessary to teach the element (e.g., musical instruments)?

If all schools cannot demonstrate proficiency on an element, the accountability system may be advantaging schools with greater resources rather than schools that more effectively educate their students.

For an element to be included in the accountability system, there must be an effective measure of the element. An effective measure must:

1) Be recognizable as a reasonable measure of the element.

2) Be robust to school efforts to “game the system”. That is, schools cannot instruct students how to respond to the measure to increase their score without a positive change in the school behavior on the element.
3) Lead to changes in the teaching/learning process that result in positive changes in student behavior with respect to the element in the short term and help prepare students for greater success in life in the long term.

The following discussion will demonstrate that these conditions currently fail to be met for many of the elements of the Profile of the South Carolina Graduate. The short comings are the result of limitations that exist in trying to measure the elements of the Profile, not the result of any attempt to circumvent measurement of the Profile.

Profile Element: World Class Knowledge

Two elements appear in the World Class Knowledge section of the *Profile of the South Carolina Graduate*:

- Rigorous standards in English/Language Arts and Mathematics for career and college readiness.
- Multiple languages, science, technology, engineering, mathematics (STEM), arts and social sciences.

The standards for English/language arts and mathematics appear to be well represented in the current accountability system. The Academic Achievement indicator assesses these two subject areas through the SC-Ready assessment in elementary and middle schools, and currently through the English I and Algebra I EOCEP assessments in high school. These assessments were created to assess the state standards, with scores associated with reporting levels created by teams of teachers in each content area and grade range. Evidence suggests these measures capture the essential academic components associated with college and career readiness which contributes to the validity of the intended use and interpretations of the scores from the accountability system.

Multiple languages are not currently assessed in the accountability system; however, not all elementary and middle schools offer multiple world languages. To include a measure of world languages for elementary and middle schools would mean some schools have scores for this indicator and others do not; this may unfairly advantage those schools with resources to offer more world language classes. For high schools, the graduation requirement for students is to receive 1 credit of either foreign language or career and technical education; therefore, not all high school students have to take a foreign language. Again, the result is that all schools cannot be compared using information on student foreign language achievement based on all students.

STEM classes are represented through the Preparing for Success indicator; for elementary and middle school students the Science assessment of SC-PASS Science is administered to students in grades 4 and 6, and for high schools the Biology I EOCEP assessment is used. The SC-PASS Science assessment appears to be a reasonable measure to use for accountability purposes, as it is written to assess grade-level standards. EOCEP Biology I is used because it is the high school science course all students must take in order to graduate; lower level courses such as General Science and higher level science courses such as Chemistry and Physics are not required for all students. As a reflection of the general field of science, the breadth of Science assessed by Biology I may be limited and therefore the generalizability of results of the Biology I assessment as a measure of student abilities in Science may be questioned, but there is no reason to question the EOCEP Biology assessment as a valid measure of what it assesses, or whether it is a reasonable assessment to be used in the accountability system.

At this time the teaching of engineering is not ubiquitous or universal enough to be included in the accountability system.

Social Studies was previously a part of the accountability system and was removed from elementary and middle school in 2018 to minimize school testing and because it was not federally required. As a measure that informs students' Global Perspective, it should be considered for reinstatement as a part of the accountability system.

Currently, the arts are not represented in the accountability system. In the Spring of 2019, the SC Arts Commission created an Arts Accountability Working Group to explore the possibility of including a measure of the Arts in school accountability with the goals of encouraging "… the arts as a vital part of school life." The Working Group concluded that: 1) Not all schools have the same resources to provides opportunities in the arts to students, 2) Measures of student participation are not a reflection of the quality of schools' arts programs, and most importantly, 3) a measure of the quality of school arts programs that treats all schools fairly could not be created at this time. The work group also agreed that should such a measure become available; it should be included in the accountability system.

In sum, English/Language arts and Mathematics are well addressed for elementary and middle schools; however, the accountability system would benefit from including the assessment of Science at each grade level, 3 through 8, and the inclusion of Social Studies. Should a viable measure of the outcomes of school arts programs be developed, it should also be included.

Profile Element: World Class Skills

The following elements appear in the World Class Skills section of the *Profile of the South Carolina Graduate*:

- Creativity and Innovation
- Critical thinking and problem solving
- Collaboration and teamwork
- Communication, information, media and technology
- Knowing how to learn.

Creativity and Innovation

Creativity is a concept that does not lend itself to assessment; three reasons are presented here. First, as described by Beghetto (2018), creativity is a construct that is recognized in retrospect. If a solution strategy demonstrated by a student can be predicted it cannot, by definition, be creative. Second, creativity is subject specific; that is, someone may be creative in one area (e.g., language, mathematics, or science) but may not be creative in other areas. Finally, any assessment that attempts to assess creativity can best do so with respect to some specific context. Even for a specific subject, students may be creative in their abilities to solve problems in one context, but not another.

Treffinger et al. (2002) identified more than 100 definitions of creativity. These definitions reflect that creativity is not a single construct, rather it manifests itself in a wide variety of ways. Creativity can be measured with instruments that address specific constructs; however no single assessment of creativity can address the variety of constructs that together define the breadth of the construct we think of as creativity. Importantly, they assert that provided adequate instruction under appropriate conditions creativity can be taught, but do not provide insight in how to teach creativity.

According to Treffinger et al. (2002), four characteristics are common to the different manifestations of the constructs we think of as creativity: generating ideas, digging deeper into ideas, openness and courage to explore ideas, and listening to one's inner voice. Generating ideas involves critical and divergent thinking, digging deeper into ideas involves analyzing, synthesizing ideas, reorganizing and seeing relationships, bringing order to disorder, and understanding complexity. Openness involves aspects of mental perspective that allow free thinking such as sensitivity, curiosity, sense of humor, fantasy and imagination. Listening to one's inner voice allows a person to pursue personal interests with vision and commitment.

To assess creativity, these authors identify four kinds of information that should be collected: behavior or performance data through observations made by others, self-report data regarding solution strategies used, rating scales in which others assess a person's creativity, and tests. They assert that well-constructed objective tests can assess creativity when test items require the use of creative processes to provide correct responses. Fixed response assessments that require the use of creative processes do not assess factual information, rather, they explore the thought processes involved in solving a problem. A final assessment of an individual's creativity is made by considering all information collected and identifying the level of creativity most consistently identified by this information.

Collecting information on individuals in this way seems to be more time-intensive than can be conducted for the purposes of accountability, where each student is to be assessed annually in grades 3 through 8. As a result, implementing the teaching and assessment of creativity statewide does not seem reasonable at this time.

Beghetto's (2019) view of creativity is that it can only be identified in retrospect; we make judgments that a person has utilized or demonstrated creative processes based on reflection upon their solution, and more importantly, their solution strategies. Specific to large scale assessments, he asserts that there is an inherent disconnect between large scale assessments and the assessment of creativity. His view is that any assessment with fixed responses cannot assess student creativity because they demand the same outcome for all students, and therefore the assessment of processes is made more difficult. He does, however, allow the possibility that better assessments may provide insights in the processes students use in problem solving when the assessment scoring protocol captures the processes and experiential data students use to solve problems.

Performance assessments have been proposed as more effective means to assess the creative process. Whether scorers of performance assessments can be taught to score whether a response is creative or different needs to be investigated.

Both of these authors seem to recognize the possibility that good assessments can demand the use of creative solution strategies. When assessments provide insight into the strategies students use to solve problems, they can provide some evidence for student creativity. An item-level evaluation of the assessments currently used in the accountability system may provide some insight as to whether or how creativity is required to provide correct item responses.

As a final note, Jules and Sundberg (2018) discuss how creativity is necessary in the knowledge-based economy, and therefore has been valued and assessed with respect to two international assessments (TIMS & PISA). Their presentation does not provide details regarding how to assess creativity, it simply provides evidence for its importance.

In sum, creativity is a multi-dimensional construct that cannot consistently, comparably, or comprehensively be assessed for all students using a single instrument. The process necessary to evaluate student creativity thoroughly involves the use of multiple assessments in a variety of conditions. This makes the assessment of creativity too time consuming and resource-consuming for the purposes of accountability. Although some evidence for creativity can be obtained from well-constructed tests, it is not clear the extent to which current assessments used for accountability are able to provide information regarding students' creative processes.

Critical Thinking and Problem Solving

Haynes et al. (2016) describe the use of the Critical Thinking Assessment Test (CAT) created by Tennessee Technological University to evaluate the critical thinking of its students. The assessment is based on a definition of critical thinking that is predicated on problem solving and creativity, and assesses students with respect to the ability to:

- Separate factual information from inferences that might be used to interpret those facts.
- Identify inappropriate conclusions.
- Understand the limitations of correlational data.
- Identify evidence that might support or contradict a hypothesis.
- Identify new information that is needed to draw conclusions.
- Separate relevant from irrelevant information when solving a problem.
- Learn and understand complex relationships in an unfamiliar domain.
- Interpret numerical relationships in graphs and separate those relationships from inferences.
- Use mathematical skills in the context of solving a larger real-world problem.
- Analyze and integrate information from separate sources to solve a complex problem.
- Recognize how new information might change the solution to a problem.

The CAT assessment is created by faculty members and is comprised of short answer essay questions, which are then scored by faculty members. The following quote summarizes their justification for using this format of assessment:

> Specifically, many authentic real world situations that require critical thinking and problem solving do not have a simple answer or a simple set of alternatives from which to choose the best answer. Providing such alternatives on a test can dramatically alter the original problem and greatly simplify the complexity of the task. Additionally, communication and creativity skills cannot be evaluated with a multiple-choice test. Many would argue that the reasons given to support a specific answer are as important as the answer itself (Haynes et al, p. 49).

Their reliance on essay items, where these items are both created and scored by faculty may be effective in their setting, but this process appears to be difficult to employ for assessing more than 50,000 students in each grade level each year.

Stobough (2012) has written texts on the assessment of critical thinking for elementary, middle, and high school students. She uses Bloom's revised taxonomy as a framework, characterizing critical thinking as the highest levels of the taxonomy (evaluating and creating). She describes how to incorporate what she refers to as "interpretive exercises" using sources such as scenarios, visual, and quotes through which she has students create questions that assess their higher order thinking skills. Students are then administered an assessment made up of the questions students create to measure their learning outcomes. She cites the work of Bob Linn and others who describe how multiple-choice questions based on sufficiently complex material can be created to assess the higher order skills she interprets as critical thinking.

Her process does not seem to lend itself to the large-scale testing situation for accountability because organizing students statewide to create questions does not seem practical. Her

argument that multiple-choice questions can be used to assess critical thinking may be tenable if the material the questions are based on is sufficiently complex; however, as the introductory material for test items becomes more complex the process of item creation becomes more involved and time consuming. To implement this strategy statewide would also require that a common curriculum be established for all schools, so that the questions students create would be based on the same subject content, and students would have been exposed to the content of the questions all other students could create. Two criticisms can be made of this process; (1) it does not seem to acknowledge that writing test items to address complex skills is quite difficult, and presumes students just learning critical thinking skills can write good items to assess them, and (2) there does not appear to be any verification of whether student created assessments actually assess critical thinking.

Similarly, Zandvakili et al (2018) create a hierarchy of student skill complexity that parallels and extends the revised Bloom's taxonomy and utilizes the concept of mastery learning as a framework to assess critical thinking. Their teaching emphasizes the critical thinking skills of what, when, why, who, where, and how. It utilizes concept maps as the vehicle through which critical thinking is developed as students create, compare, and combine concept maps. In their conceptualization of teaching critical thinking, students again create the assessments, in multiple-choice format, which are administered to assess final student skill attainment. The same criticisms of student created assessments of critical thinking processes apply here as above.

South Carolina currently administers a writing prompt called a text-dependent analysis (TDA) question to students on the SCReady ELA in grades 3 – 8. This type of item requires students to read a piece of text or passages of texts and draw upon those texts for their written responses. The type of texts that students read and respond to for the TDA item may be drawn from different genres or modes, but the type of writing that the students produce is not mode-specific. These TDA items may be an avenue to explore to assess critical thinking and problem solving.

In sum, the assessment of critical thinking is often conceptualized as requiring open-ended response items or performance assessments based on authentic situations. Assessing in this format is practically difficult when testing more than 50,000 students per grade. Fixed-response (multiple-choice) items may be used to limited effect if they are well-designed and based on sufficiently complex stimuli (e.g., reference materials). It seems reasonable that as the complexity of these tasks increases, the time necessary to process that material and, therefore, complete a test will increase, which adds to the practical challenges.

Collaboration and Teamwork

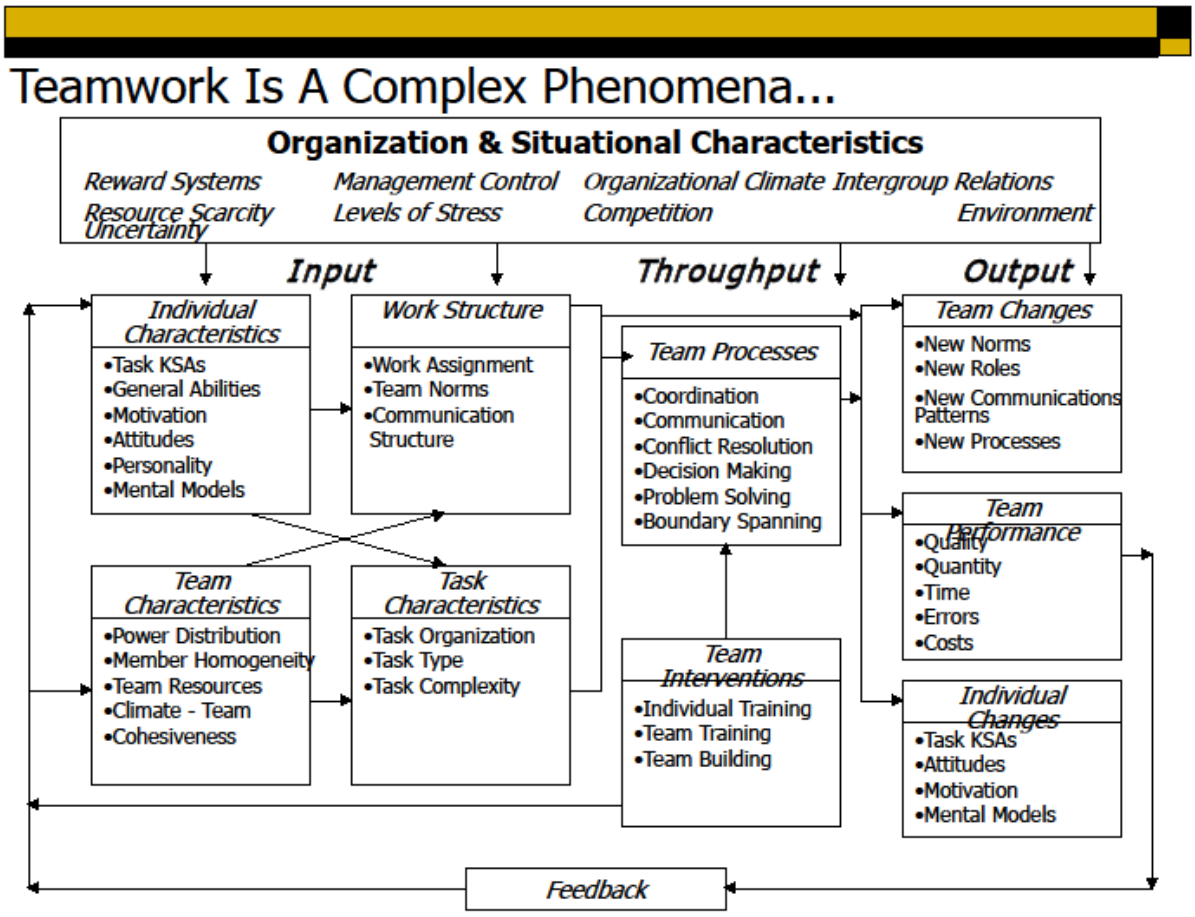
Scardemalia et al. (2010) describe measuring collaboration and teamwork through Social Network Analysis, which analyzes streams of communication among a group of cooperating individuals to identify whose communication an individual has read in the discussion, who they referenced, and whose ideas they built on in the discussion. Specifics about how to measure an individual's level of cooperation through Social Network Analysis are not provided.

Von Davier (2014) has developed a framework for assessing data from collaborative problem solving tasks, and notes the following difficulties: (1) scores obtained for individuals may depend on the tasks being used to measure cooperation, (2) people behave differently when they interact

in teams from when they work alone, and (3) the skills individuals display may not correlate highly with the team outcome. As a result, it may be most appropriate to create three scores for each individual, a score in isolation, a score in collaboration, and an overall team score.

Salas (2017) provides an example that demonstrates the complexity of the process of collaboration and suggests that to measure it requires triangulation using self-reports, team assessments, and observations by someone external to the collaborative effort. Through these measures the goal is to capture the attitudes, behaviors, and cognition of an individual. Salas emphasizes the necessity of defining with clarity the constructs being measured, while recognizing the context in which they are being assessed. Finally, he recognizes that difficulties in measuring cooperation because it is a dynamic trait of individuals, so that any measure of a student is appropriate for a specific moment in time.

A pictorial representation of the complexity of the cooperative process is presented below:



These discussions point out the complexity of the construct of cooperation, and how difficult measuring it is. Suggestions to use multiple data sources and to create multiple scores for each person make collecting information annually for use in school report cards difficult.

Communication, Information, Media and Technology

These items of the profile are interpreted as the ability of students to use communication methods and sources of information other than traditional written communication. Information is accessible through a variety of electronic sources. The ability to use these sources effectively includes (1) finding sources, (2) recognizing the whether the source is truthful and reliable, and (3) identifying whether the source has a specific perspective. Whether students can also create communication to effectively convey their knowledge, opinions, and perspectives is also an important part of this aspect of the Profile. Students can write about the sources they identify, and through critiques of the quality of the source and the perspectives presented by the source address items (2) and (3) above.

South Carolina currently administers a writing prompt called a text-dependent analysis (TDA) question to students on the SCReady ELA in grades 3 – 8. This type of item requires students to read a piece of text or passages of texts and draw upon those texts for their written responses. The type of texts that students read and respond to for the TDA item may be drawn from different genres or modes, but the type of writing that the students produce is not mode-specific. These TDA items and the types of source information provided to students may be avenues to explore to assess the skills outlined above, specifically (2) recognizing whether a source is truthful and reliable, and (3) identifying whether a source has a specific perspective.

For inclusion in an accountability system, difficulties occur when expecting students to create their own communication using technology, and assessing the quality of the communication they create consistently across schools. An assessment system for these skills is not available at this time; creating such a system for use in a large scale assessment environment is not available at this time.

Knowing How to Learn

Searching for sources that describe how to measure “knowing how to learn” yielded no results, instead, sources appeared that described “ownership of learning”. These results are described here.

One of the major responsibilities of schools is to teach children how to utilize a variety of resources to learn. We teach in this way because students need direction to identify quality sources of information, and practice in how to assimilate new information. Students can learn from a formal teacher, from one another, or from other examples that demonstrate the learning process.

Stone and Surmitis (2018) identify as one characteristic of ownership of learning that a student takes responsibility of their own learning. Thibedeaux et al (2019) describe ownership of learning with the acronym COVA – Choice, Ownership, and Voice through Authentic learning opportunities. Their perspective is based on constructivism, social learning, and active learning. Bray and McClaskey (2015) describe a learner as having ownership of the process when they are motivated, engaged, and self-directed. The learning process can be carried out as a solitary venture or it can occur in a social setting. However, none of these authors describe how to assess the degree to which learners have ownership of their learning. Do we have a clear definition of what we wish to measure when we talk of “knowing how to learn”? Are we to assess the sequential processes students develop to learn something new? Are we interested in measuring

their thought processes when learning? Do we measure how they adapt their learning to the unique aspects of any concept they are investigating?

Finally, schools are inherently social institutions as we group students into classrooms and establish common goals for common curricular elements. Further, as noted in the Profile, learning how to collaborate is another highly desirable outcome. As we envision measuring students' abilities to learn, are we interested in only the process of learning as a solitary venture?

Without any models that provide some definition of what to measure and how to measure "knowing how to learn" any explicit measures of this element of the Profile does not seem feasible at this time.

Profile Element: Life and Career Characteristics

The characteristics discussed are separate constructs, however, these constructs are imbedded within a person's being and daily life. It is not clear whether they should be measured as separate entities or whether they can best be assessed by evaluating a person's overall behavior. As many of these characteristics are developed through influences of both the home and school environments. To be included in the state accountability system, a clear argument should be made as to how schools are able to influence these student characteristics, and how these influences can be measured.

Integrity

As a life characteristic, personal integrity is highly valued. Erhard, Jensen, and Zaffron (2016) have defined integrity as "honoring one's word". They recognize that integrity, morality, ethics, and legality are perceived as overlapping, yet assert that these four constructs are distinct. They also assert that integrity is causally associated with increased performance, quality of life, and value creation for individuals, groups, organizations, and societies.

The Defining Issues Test (DIT, Dong, n.d.) produced at the University of Alabama at the Center for the Study of Ethical Development assesses moral schemas through a series of moral dilemmas. The DIT was developed based on Kohlberg's stages of moral development. Scores provided give insight into subjects' moral integrity and provides scores in the areas of Personal Interest (Stages 2 and 3), Maintaining Norms (Stage 1), Postconventional Schema (Stages 5 and 6), and an N2 score which relates personal interest items to postconventional items. Norms are available for students in grades 10-12, with 2 forms available.

This assessment may be considered for high school students, but its administration should be designed so that students are only administered the assessment one time during their high school years. Because two forms are available, a sampling scheme could be created in which students in different grades would take the assessment, so that school results are not based on students from only one grade.

Self-Direction

Self-directed learning can be conceived of in a variety of ways. It can be as simple as students searching for new information on their own and assimilating the new information to address an interesting topic, or more complicated such as designing a learning path, selecting resources and investigation methods in a conceptualization more consistent with Socrates or Aristotle, in what may best be described as a Montessori framework.

In order to assess student direction at a state-wide level a common definition must be agreed upon and communicated to students and schools. Then, a measure must be created to quantify how well the accepted definition has been met. Finally, schools and students must be working toward the goal of fostering student self-directed learning.

At this time, it does not appear likely many, if any, of these conditions are being satisfied; currently, student learning in school remains fairly structured. Although teachers work to provide student selected projects and the freedom for students to complete these projects using their own initiative, of necessity much school work involves teachers providing instruction in how to select

topics, define the scope of an investigation, identify valid and reliable sources of information, how to assemble this information, and how to draw conclusions and make inferences based on the results. Some students can perform the tasks associated with independent learning on their own; however, schooling is the process which provides students direction to learn these habits.

How to assess whether teachers are teaching, and students are acquiring these skills has not been addressed, and as a result is not ready for either reporting on a school report card or including in school report card calculations.

Global Perspective

In 2015, UNESCO published a document providing guidance on teaching global citizenship education. The document describes addressing global citizenship education in three domains of learning: cognitive, socio-emotional, and behavioral. Key learning outcomes are described as are key attributes of learners. Nine key topics are identified with learning objectives identified for four age groups of students: 5-9, 9-12, 12-15, and 15-18+. These nine key topics are nested within three domains of learning: cognitive, socio-emotional, and behavioral. This framework may be a useful resource for the development of social studies standards that guide student instruction.

Unfortunately, the document does not provide guidance regarding how to assess the degree to which students have assimilated the perspectives of global citizenship. It also does not provide guidance regarding how to measure the extent to which schools are teaching the perspectives of global citizenship.

Previously, students in grades 3 through 8 were assessed using the SC-PASS Social Studies test. This assessment was eliminated from the accountability system: (1) because Social Studies assessment is not federally required, and (2) to decrease the time students spent on state assessments. Two counter-arguments to this policy change are: (1) without the state assessment of Social Studies, schools may be tempted to de-emphasize its teaching, and (2) the time spent to assess Social Studies for the state accountability system was one day, with most students completing the assessment in less than two hours.

Perseverance

SRI International (2018) published “Promoting Grit, Tenacity, and Perseverance: Critical Factors fo Success in the 21st Century”. As an initial step in defining the construct of perseverance, it discusses whether perseverance is a disposition of a person or whether it is a set of processes. If viewed as a disposition, perseverance can be measured by asking people about their tendencies to pursue long-term goals in a variety of contexts; if viewed as a set of processes, measurement would focus on “the sequence of behaviors, emotions, physiological reactions, and/or thoughts” that occur during the learning process.

The major approaches to measuring perseverance are self-report, report by an observer, school records, and performance on behavioral tasks. One example of self-report is the Grit Scale developed by Duckworth et al. (2007), another is the Self-Regulation Questionnaire (Brown, Miller, & Lawendowski, 1999). Because both measures are self-reported, they have the same limitation, which is that individuals often do not have realistic views of their own skills. Another problem is that students may be taught to provide desirable answers without changing their behaviors. An 8 item short form of the GRIT scale is available online (http://www.sjdm.org/dmidi/files/Grit-8-item.pdf), and contents of the Self-Regulation

Questionnaire are also available online which may compromise the use of either of these measures for accountability (https://casaa.unm.edu/inst/SelfRegulation%20Questionnaire%20(SRQ).pdf).

In the school setting, reports by an observer are often completed by the teacher. Input from more than one observer is desirable, especially if one observer gives ratings that are not consistent with rating guidelines. The authors also describe the Devereux Student Strengths Assessment (DESSA; LeBuffe, Shapiro & Naglieri, n.d.) which can be used for children from kindergarten through grade 8, but note that it does not measure perseverance as its own construct, instead, it measures eight dimensions of behavior (self-awareness, social awareness, self-management, goal-directed behavior, relationship skills, personal responsibility, decision making, and optimistic thinking). The authors do not identify any specific instrument to be used by an observer to measure perseverance.

School records of grades, standardized test scores, attendance, discipline, and use of social work resources are used to identify students who do not persevere. The specific inferences made from these data sources to student perseverance need to be documented, and would have to be communicated to schools for use in an accountability system. More importantly, it is not ethical to encourage a student who needs social services not to receive them if it counts against a school's report card rating or is reported in some way on a school's report card.

Measurement of behavioral task performance may involve, for instance, how students interact with unsolved problems: the amount of time spent working on them, how frequently students return to them, and the number of different strategies students employ to attempt to solve them, and different measures of how students access available help. These interactions may be measurable more easily in an online learning situation, but in a traditional classroom setting would require a teacher to keep track of these additional characteristics of each student frequently enough to be able to make a valid assessment of his or her perseverance. These additional behavioral recording demands place a greater burden on teachers, may not be consistently applied across schools, and may be compromised under the pressures of an accountability system.

Work Ethic

Work ethic is often associated with attributes of achievement drive and dependability, but can also be thought of as conscientiousness or the ability to demonstrate self-discipline. It can be measured using either self-ratings or ratings by others. The concepts of conscientiousness and self-discipline can be measured by items such as:

- I am always prepared.
- I pay attention to details.
- I get chores done right away.
- I like order.
- I follow a schedule.
- I am exacting in my work.
- I never forget my belongings.
- I always end up being helpful to most things.
- I often remember where I last put my things.
- I give attention to my duties.

Whether self-reported or other-reported, any responses to questions of this type are not measuring the work ethic of students in a work setting, instead, they are measures that provide some insight to how we believe students will behave in the work setting.

Interpersonal Skills

Several assessments exist that may be considered to provide information that could be considered appropriate as measures of students' interpersonal skills. These are described below:

MicroBurst

MicroBurst Learning (2015) has created a certification system to teach soft skills, with assessments in each of ten areas: employment basics, interpersonal relationships, communication skills*, teamwork*, conflict resolution*, dependability/reliability*, flexibility/adaptability*, planning and organization, productivity, and initiative*. Six of these skills, noted with an asterisk, can be associated with specific elements of the Profile of the South Carolina Graduate in the areas of World Class Skills and/or Life and Career Characteristics. Although originally designed for the workplace setting, the MicroBurst framework has been expanded, first to high schools and career centers, then to middle school, and finally to elementary school. Instruction is provided through a series of activities, either classroom or internet based. After these activities, students take an assessment that measures each of the ten areas. Students must pass the assessment in all ten areas and receive the endorsement of their instructor in order to receive a certification, which serves to verify that the student demonstrates the behaviors in the ten areas. A process is in place for students that do not receive the certification to repeat the process. MicroBurst does not focus on skills related to any specific work context, rather they address the ten skills identified above because they are appropriate for any work context. MicroBurst is currently used as one component of the College and Career Ready Indicator.

WIN Career Readiness Courseware & Credentials (WIN, n.d.)

Ready to Work (R2W) is a career readiness assessment administered to all eleventh grade students in SC to determine student achievement in three key subjects:

1. Applied Mathematics
2. Locating Information
3. Reading for Information

R2W also includes the Essential Soft Skills (ESS) assessment that provides information about a student's skills in the following five areas:

- Cooperation with Others
- Resolving Conflicts and Negotiation
- Solving Problems and Making Decisions
- Observing Critically
- Taking Responsibility for Learning

The Essential Soft Skills assessment focuses on essential soft skills, such as problem solving, goal setting, decision-making, and self-direction. The questions in this subject

area present situations that the learner might encounter at work and possible actions that could be used to deal with the situation. Essential Soft Skills questions require the student to select the best and worst option for that particular situation. The test is timed at 60 minutes. There are 45 items, with 2 answers for each question. The Essential Soft Skills Assessment is scored as Pass or Not Passed based on the total questions answered correctly.

Essential Soft Skills Assessment

Pass/Not Passed	Scale Score
Not Passed	0-68
Pass	70-100

An Example of Implementation

West, Pier, Fricke, Hough, Loeb, Meyer, & Rice (2020) describe the measurement of social-emotional development in the CORE districts of California, a network of large urban districts. These districts cooperated in the creation of assessments of social-emotional learning with respect to four constructs of social-emotional learning - growth mindset, self-efficacy, self-management, and social awareness – which were assessed in grades 4 through 12. School districts have made their own choices as to how this information is used, some using it as information for strategic planning but not displaying it publicly, and others making the information publicly available. These results are not used in any accountability systems.

In their discussion, West et al (2020) raise the issue of whether measures of social-emotional learning should be included in accountability systems. Inclusion may cause students to respond differently to the survey, and may inspire teachers and administrators to encourage students to respond to the survey differently. Toch & Miller (2019) and Hough, Kalogrides and Loeb (2017), analyzing results of these same CORE districts, also caution against the use of social-emotional learning scores for accountability. Hough et al. cite a technical limitation of data, that only the highest and lowest districts can be distinguished from one other, while Melnick, Cook-Harvey, and Darling-Hammond (2017) encourage the use of these measures to improve instruction rather than for accountability.

Note that these concerns exist, even when the measurement instruments utilized were viewed to appropriately measure the constructs addressed and be of high technical quality (West. Et al., 2020).

Summary

1) Measures of World Class Knowledge related to language arts and mathematics are in place and appear to be appropriate measures.
2) Direct assessment of many of the World Class Skills and Life and Career Characteristics are problematic until more clarity of each construct is obtained, measures (direct of indirect) are identified, and practical constraints of assessment are overcome.
3) For most elements of the World Class Skills and Life and Career Characteristics, recommendations are to assess using several methods and create a consensus based on these measures. Consequences of these processes are that:
    a. More time for assessment would be necessary.
    b. Measuring students on the same World Class Skills or Life and Career Characteristics in repeated years may alter the integrity of the instruments.
4) Developing a theory of action for each of the World Class Skills and Life and Career Characteristics would be helpful. Each theory of action would better define the specific skills and characteristics to be measured, and how schools are to promote these skills and characteristics. Evidence of how well each the skills and characteristics should be considered before inclusion in the accountability system.
5) The question of whether to include measures of some elements of the Profile of the South Carolina Graduate in an accountability system should be more fully considered, as they may be better utilized to inform the learning process than for accountability.

Section III: EVALUATION OF THE INDICATORS

For each indicator, the following are presented:

1) The purpose of the indicator, with reference to either South Carolina law or the South Carolina ESSA plan.
2) The data used to compute the indicator point total.
3) The process used to compute the indicator point total.
4) Summary statistics of indicator point totals for 2018 and 2019, including a visual presentation.
5) The indicator ratings for 2018 and 2019, as well as changes in the ratings from 2018 to 2019.
6) Correlations of each indicator with all other indicators.
7) Correlations of each indicator from 2018 to 2019.

Comments are made regarding the strengths and weaknesses of each indicator as they contribute, or fail to contribute, to the stated goals of the accountability system.

Indicator: Academic Achievement

Purpose:

To obtain a measure that reflects the levels of academic achievement of students. Academic Achievement has been defined by the United States Department of Education (USDE) as achievement in English/language arts and mathematics.

Data:

For elementary and middle schools, data for the academic achievement indicator come from the SC-Ready assessment which assesses students in the areas of English/language arts (ELA) and mathematics. Calculations are based on students who were enrolled on the 45th day of the school year and on the 160th day of the school year, with no break in enrollment. The intent is to hold schools accountable for students who receive their education for the year at the school.

For high schools, the calculation is based on students who initially enrolled as grade 9 students 3 years prior, and should graduate in the current year (the 4-year graduation cohort base file). Student scores from the Algebra 1 and English 1 assessments of the End-of-Year Examination Program (EOCEP) are used in the calculation. All students should complete these courses in order to receive a high school diploma; taking an EOCEP exam is required of all students in these classes. High schools are held accountable for students who should graduate in the current year, though these students may have received instruction in Algebra 1 or English 1 at another school.

Points are earned based on converting student EOCEP assessment results to points using Table 2.

Table 2.

Test Score Level to Points Conversion

Points	SC READY Level Descriptor	EOCEP Grade Level	Alternate Assessment Level Descriptor
0	Does Not Meet Expectations	F	Level 1: Foundational
1	Approaches Expectations	D	Level 2: Emerging
2	Meets Expectations	C	Level 3: Meets
3	Exceeds Expectations	B	Level 4: Exceeds
4		A	
Max	3	4	3

Steps in creating the Academic Achievement:

1. For each student/test combination, points are awarded using Table 2.
2. For each student/test combination, a maximum number of possible points is also assigned, which differs by assessment and appears in the bottom row of Table 2.
3. The sum of the points awarded is obtained by summing across students and tests.
4. The sum of the possible points is obtained by summing across students and tests.
5. The percentage of possible points earned is obtained by dividing the total obtained in (3) by the total obtained in (4).
6. The number of points on the 40-point scale is determined by multiplying the percentage of possible points obtained in step 5 by 40.
7. The number of points on the 35-point scale is determined by multiplying the percentage of possible points obtained in step 5 by 35.
8. Point totals are converted to Ratings using Table 3.

Table 3.

Converting Academic Achievement Points to Ratings

RATING	ELEMENTARY		MIDDLE		HIGH	
	With ELP	**Without ELP**	**With ELP**	**Without ELP**	**With ELP**	**Without ELP**
Excellent	21.43 – 35.00	24.49 – 40.00	20.10 – 35.00	22.97 – 40.00	15.91 - 25.00	19.09 - 30.00
Good	18.55 - 21.42	21.19 - 24.48	16.72 - 20.09	19.11 - 22.96	13.45 - 15.90	16.14 - 19.08
Average	13.36 - 18.54	15.27 - 21.18	12.00 - 16.71	13.71 - 19.10	10.22 - 13.44	12.26 - 16.13
Below Average	9.62 - 13.35	10.99 - 15.26	8.37 - 11.99	9.57 - 13.70	7.22 - 10.21	8.66 - 12.25
Unsatisfactory	0 - 9.61	0 - 10.98	0 - 8.36	0 - 9.56	0 - 7.21	0 - 8.65

Note: If a school tests less than 95 percent of eligible students, then the school's Rating in Academic Achievement will be reduced by one Rating level.

Summary of Point Totals – 2018 and 2019:

Presented in Table 4 are summary statistics of the academic achievement indicator point totals for 2018 and 2019, and effect sizes to provide insight as to whether the differences between the mean point totals for 2018 and 2019 are large enough to suggest that schools changed with respect to their Academic Achievement. Points for elementary and middle schools are expressed on a 40-point scale, and points for high schools are expressed on a 30-point scale. Figure 1 presents a visual display of the distributions of overall point totals by school type.

Table 4.
Academic Achievement Point Total Summary Statistics – 2018 and 2019

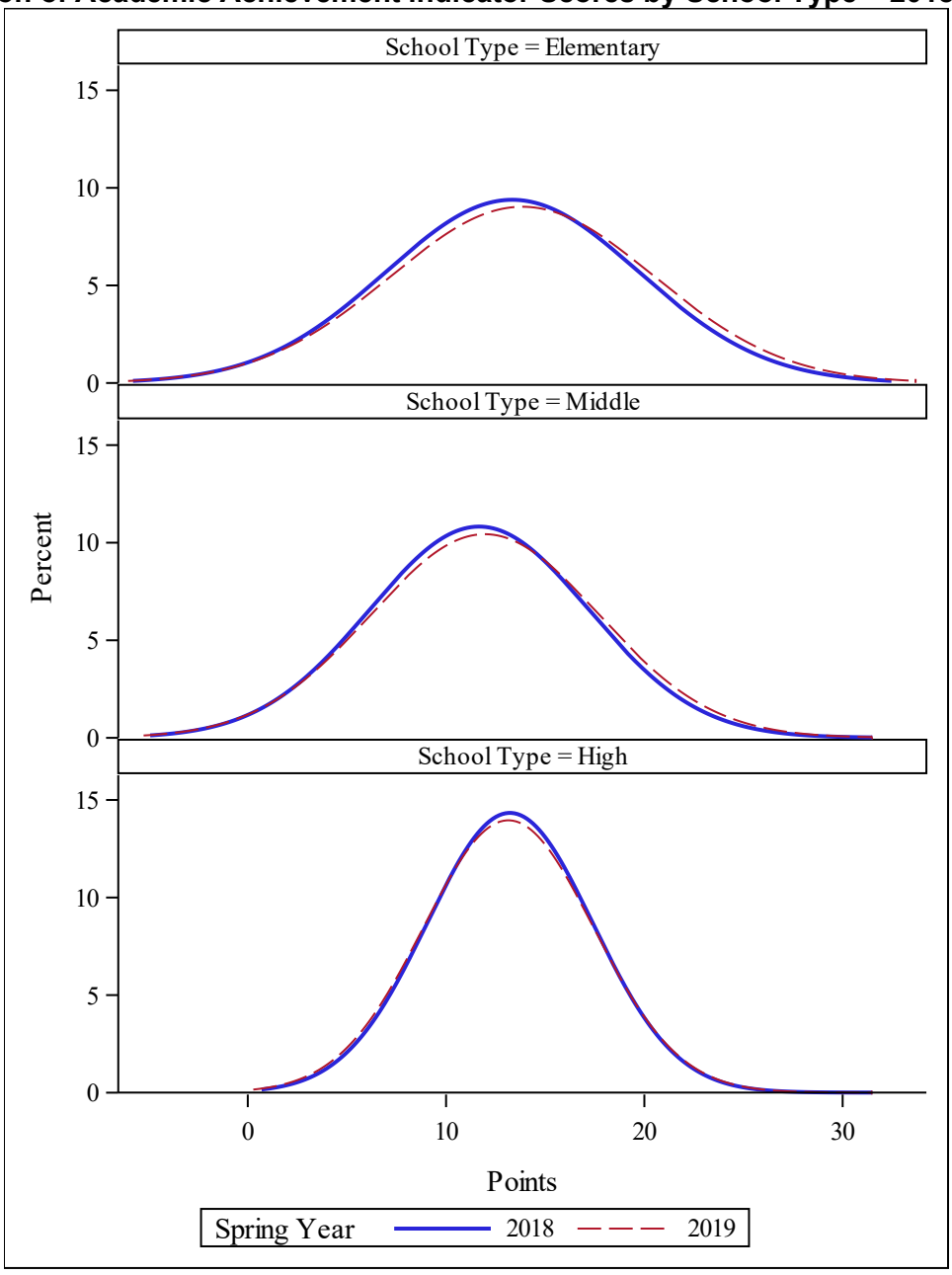
School Type	Year	Number of Schools	Mean	Standard Deviation	Minimum	Maximum	Mean Difference	Effect Size*
Elementary	2018	657	13.3	6.4	2.1	30.6	0.5	0.08
	2019	664	13.8	6.6	2.2	31.0		
Middle	2018	320	11.7	5.5	3.3	25.8	0.3	0.05
	2019	322	12.0	5.7	3.5	28.6		
High	2018	228	13.3	4.1	3.5	29.4	0.0	0.00
	2019	227	13.3	4.1	4.8	29.4		

* Range of scores associated with a rating of average for schools with 20 or more ELP students.

The difference in mean Academic Achievement point totals from 2018 to 2019 are: 0.5 points for elementary schools, 0.3 points for middle schools, and 0.0 points for high schools. For each school type an effect size is also presented, which is a measure that provides some context to the difference between the means for 2018 and 2019. An effect size compares the difference between the means to the standard deviations of the measures. According to Kraft (2020), an effect size less than 0.05 should be considered small, an effect size from 0.05 to 0.20 should be considered medium, and an effect size larger than 0.20 should be considered large. According to these criteria, the effect size for elementary schools is judged to be medium, and the effect sizes for middle and high schools are small.

The visual presentation in Figure 1 demonstrates that the 0.5 difference in mean scores for elementary schools appears to be a slight increase in the Academic Achievement scores across the range of possible scores. Similarly, the middle school increase of 0.3 points is also manifest throughout the range of possible scores. High schools do not appear to be different in their Academic Achievement scores from 2018 to 2019, consistent with the mean gain of 0.0 point.

Figure 1
Distribution of Academic Achievement indicator Scores by School Type – 2018 and 2019



These point totals ultimately result in differences in the distributions of ratings for 2018 and 2019, which are presented in Table 5. For elementary schools, the percentage of schools that received a rating of excellent increased by 3.8 percent, the percentage of schools that received a rating of good increased by 4.0 percent, and the percentages of schools that received ratings of Average, Below Average, or Unsatisfactory all decreased; this is consistent with the small increase in scores evident in Figure 1. For middle schools, the percentages of schools with ratings of Excellent and Average increased, and the percentages of schools that received all other ratings decreased; there is a clear pattern that indicates overall increases in student achievement. For high schools there also is evidence of a slight increase in achievement, as the percentages of schools that received ratings of Average or Good increased by 3.4 and 1.5 percent, respectively,

and the percentages of schools that received ratings of Below Average and Unsatisfactory decreased.

Table 5.
Percentages of Schools Receiving each Overall indicator Rating: 2018 and 2019 by School Type.

Rating	Elementary		Middle		High	
	2018	2019	2018	2019	2018	2019
Excellent	14.1	17.9	11.2	13.6	8.2	8.2
Good	14.7	18.7	17.1	14.9	11.7	15.1
Average	37.3	35.1	37.4	40.9	33.8	35.3
Below Average	24.1	20.6	24.0	21.7	26.8	23.3
Unsatisfactory	9.9	7.7	10.3	9.0	19.5	18.1
Total	660	664	321	323	231	232

Viewing the distributions of ratings for 2018 and 2019 is a partial picture of how scores changed from 2018 to 2019. Table 6 presents a summary of the changes in ratings from 2018 to 2019 for individual schools. For all school types the most frequently occurring change was no change (69 percent of elementary schools, 85 percent of middle schools, and 70 percent of high schools). The percentages of schools that had a lower rating was smaller for all school types than the percentage of schools that had a higher rating: Only 6 percent of elementary schools decreased their rating while 24 percent increased their rating, thirteen (13) percent of middle schools decreased their rating while 33 percent increased their rating, and 22 percent of high schools decreased their rating while 44 percent increased their rating. These results are consistent with the increase in Overall indicator scores and ratings presented in Table 4, Table 5, and in Figure 1.

Table 6.
Changes in Academic Achievement Ratings: 2018 and 2019 by School Type. Number and Percentage (in parentheses)

School Type	Change in Rating					
	-2	-1	0	1	2	Total
Elementary	0 (0)	40 (6)	448 (69)	157 (24)	0 (0)	645
Middle	0 (0)	13 (4)	261 (85)	33 (11)	0 (0)	307
High	1 (0)	21 (10)	155 (70)	39 (18)	5 (3)	221

Relationship to Other indicators

How the Academic Achievement indicator relates to all other indicators is examined through the correlations of the point total for the Academic Achievement indicator with the points obtained for each indicator (Table 7). Some differences appear in these correlations by school type. The correlations of Academic Achievement with the Overall indicator are lowest for middle schools, higher for elementary schools, and highest for high schools. The correlations are highest for high

schools because they do not have a Student Progress component in their Overall indicator. Second, the student engagement survey correlates near 0 for elementary schools, and more importantly, is negatively correlated with Academic Achievement for middle and high schools. The correlations with Student Progress are, by design, very low; this enables any school, regardless of the achievement levels of its students, to display high academic progress. The correlations with the Preparing for Success indicator are higher for high schools than elementary or middle schools, and correlations with English Learners' Progress indicators are consistent across school types. For high schools, the correlations of the Academic Achievement with all indicators other than Student Engagement range from .49 to .94, all of which can be categorized as moderate or higher, suggesting these indicators work together in the accountability system.

Table 7.
Correlations of the Academic Achievement indicator with All Other indicators by School Type.

School Type	Year	Overall indicator	Preparing for Success	Student Progress	English Learners	Student Engagement	Grad Rate	College /Career Ready
Elementary	2018	0.53	0.62	0.15	0.56	-0.02	.	.
	2019	0.53	0.62	0.14	0.60	0.01	.	.
Middle	2018	0.31	0.64	0.06	0.54	-0.40	.	.
	2019	0.39	0.64	0.07	0.54	-0.31	.	.
High	2018	0.88	0.94	.	0.43	-0.25	0.58	0.81
	2019	0.88	0.94	.	0.49	-0.28	0.60	0.78

Consistency from 2018 to 2019

The consistency of the Academic Achievement indicator from 2018 to 2019 is represented by the correlations between the overall point totals for the two years (Table 8); these correlations, all above .90, are very high. There are two perspectives from which to view these data. One is that very high correlations from year to year are desirable because schools are not likely to change much. The other perspective is that high correlations imply that schools cannot change their ratings from year-to-year. Recall that Table 6 demonstrated that schools do change in their Academic Achievement ratings.

Table 8.
Correlations of the Academic Achievement indicator: 2018 with 2019 - by School Type.

School Type	Correlation
Elementary	0.92
Middle	0.90
High	0.94

Discussion

Awarding points for four levels (elementary school, middle school, and alternative assessments) or five levels (high school) of student achievement is a positive. Using four categories means that there are three transition points that can be used as milestones for students to improve their academic achievement. This is highly preferable to an accountability system that has only one transition point and therefore encourages schools to focus their accountability efforts on a single group of “bubble students”.

Awarding points 0 to 4 simple and straight-forward, and best reflects the ordinal nature of the achievement levels. Criticism has been made that the calculation is too complicated because of the use of obtained and possible points. Providing schools an easy to use excel template may be desirable to address this concern.

The criticism has been made a school can only receive the maximum number of points if all of its students are at the highest achievement level for both the ELA and Mathematics assessments. This is true, however, the observed maximum number of points has been 31.0 for elementary schools, 28.6 for middle schools, and 29.4 for high schools, all of which are approximately 75 percent of the maximum attainable score. Schools will likely improve their achievement over time, by an unknown amount. The current scale does not require any future adjustment to accommodate school improvement.

The Academic Achievement indicator clearly addresses the World Class Knowledge portion of the Profile of the South Carolina Graduate.

Indicator: Student Progress

Purpose:

To obtain a measure that reflects the progress students make over a 1-year period. More specifically, to provide a measure that all schools can have equal opportunity to demonstrate success on, regardless of the prior academic achievement of their students.

According to state law, the Student Progress indicator must use a value-added methodology. For the 2017-18 school year the computations were performed by SAS, and for the 2018-19 school year the computations were performed by Education Analytics (EA). These vendors used different value-added computational methods which resulted in slightly different scores. Two important consequences of these results were that: (1) a slight modification was made to the process of creating points awarded to schools, and (2) using the same modification for both elementary and middle school schools resulted in a larger difference between the distributions from 2017-18 to 2018-19 for middle schools than for elementary schools.

Details of the model used by EA can be found in the Technical Report on the South Carolina School Value-Added Model Academic Year 2018-2019 (https://ed.sc.gov/data/information-systems/accountability-resources/2018-2019-technical-report-on-the-south-carolina-school-value-added-model/). The model predicts current year achievement in ELA and Math separately by grade level, and uses the same set of covariates as predictors for both ELA and Math: assessment scores in ELA and Math from the previous year or 2 years if available, and the previous year mean scores in ELA and Math for the school. Results for each subject/grade level combination are normalized and combined into a single measure.

The Student Progress indicator is an average of two value-added measures from each school. The first is from all students, the second is from the lowest 20 percent of students from each school. The lowest 20 percent of students is determined based on the previous year scores in ELA and Mathematics. Because the lowest 20 percent of students is determined by school, these students will likely differ in their academic achievement across schools.

Data:

Data for the Student Progress indicator come from the SC-Ready assessment which assesses students in the areas of English/language arts (ELA) and mathematics. Calculations are based on students who were enrolled on the 45th day of the school year and on the 160th day of the school year, with no break in enrollment. The intent is to hold schools accountable for students who receive their education for the year at the school. As long as a student meets the continuous enrollment criterion for the current year, they are included in the Student Progress calculation, even though their previous year SC Ready test administration may have been at another school.

Specifics of students included or excluded from the calculations are detailed in the Accountability Manual.

Steps in creating the Student Progress indicator:

- Average the growth indices based on all students with the growth indices based on the lowest 20 percent of students in each school.
- Create progress scores based on all students on a 40-point scale by:
    - Assigning all growth indices greater than 6 to have a growth index of 6.
    - Assigning all growth indices less than -6 to have a growth index of -6.
    - Multiplying the growth indices by 20/6.
    - Adding 20 to each growth index.
    - Round each growth index to hundredth's place (e.g., 16.47).
- Multiply these progress scores by 35/40 to obtain progress scores on a 35-point scale.
- Point totals are converted to Ratings using Table 9.

Table 9.
Student Progress, Elementary & Middle
Converting Points to Ratings

RATING	ELEMENTARY		MIDDLE	
	With ELP	Without ELP	With ELP	Without ELP
Excellent	24.57 – 35.00	28.08 – 40.00	27.20 – 35.00	31.08 – 40.00
Good	19.78 – 24.56	22.60 – 28.07	20.72 – 27.19	23.68 – 31.07
Average	14.32 – 19.77	16.36 – 22.59	12.49 – 20.71	14.27 – 23.67
Below Average	9.06 – 14.31	10.35 – 16.35	5.64 – 12.48	6.45 – 14.26
Unsatisfactory	0.00 – 9.05	0.00 – 10.34	0.00 – 5.63	0.00 – 6.44

Summary of Point Totals – 2018 and 2019:

Presented in Table 10 are summary statistics of the Student Progress indicator point totals for 2018 and 2019, where the point totals are expressed on a 40-point scale. Effect sizes are presented to provide a guide for whether the observed mean differences in point totals are small, medium, or large. For elementary schools the mean point total decreased by 0.33 points, which resulted in an effect size of -0.07; this effect size is in the low end of the range that indicates an effect size is average. For middle schools, the observed difference in the mean point totals of 1.84 point results in an effect size of 0.21, which is slightly above the criteria to be characterized as large.

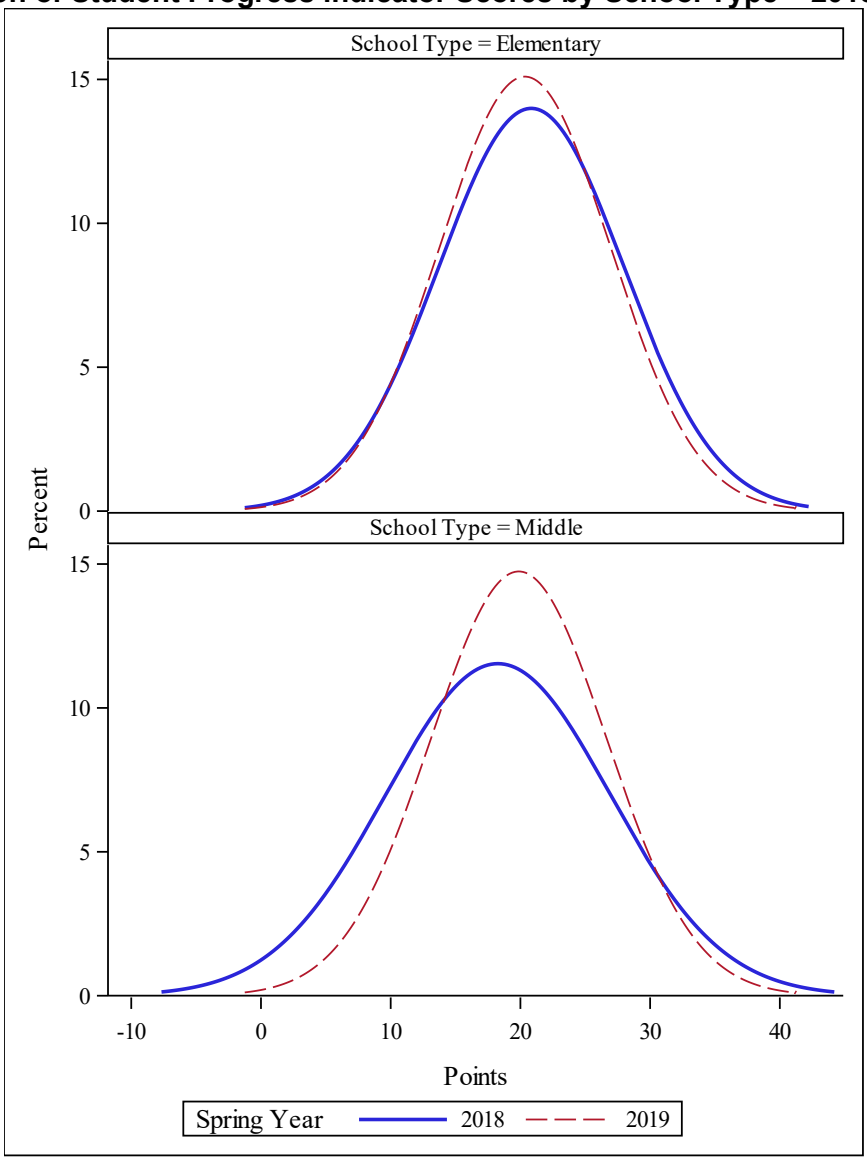
Table 10.
Student Progress Point Summary Statistics – 2018 and 2019

School Type	Year	Number of Schools	Mean	Standard Deviation	Minimum	Maximum	Mean Difference	Effect Size
Elementary	2018	657	20.8	7.1	0.0	40.0	-0.33	-0.07
	2019	666	20.3	6.6	0.1	40.0		
Middle	2018	320	18.3	8.6	0.0	40.0	1.84	0.21
	2019	323	19.9	6.8	0.0	39.4		

Figure 2 presents a visual display of the distributions of overall point totals by school type. Several differences appear in the distribution of mean Student Progress point totals for 2018 to 2019 for elementary schools that impact the ratings schools receive. Comparing the distribution for 2019 to the distribution for 2018, the distribution is slightly more narrow with a higher peak, and the location of the peak is slightly lower on the scale which is consistent with the decrease of 0.5 points in the mean point total. Also, the highest scores obtained are lower in 2019 than in 2018.

The distributions of mean Student Progress point totals also differ for middle schools. The distribution for 2019 is much more concentrated with a higher peak. This peak occurs high on the point total scale, consistent with the mean difference between 2018 and 2019 of 1.84 points. The lowest point totals in 2019 are approximately 5 points higher than the lowest point totals for 2018, which is manifest as fewer schools receiving the lowest ratings. Finally, there are slightly fewer schools receiving the highest point totals in 2019 compared to 2018, which is manifest in fewer schools receiving the highest rating for this indicator.

Figure 2
Distribution of Student Progress indicator Scores by School Type – 2018 and 2019



How these differences in point totals result in differences in the distributions of ratings for 2018 and 2019 which are presented in Table 11. For elementary schools, the percentage of schools that received a rating of excellent, good or unsatisfactory all decreased, and the percentages of schools that received ratings of Below Average or Average increased. For middle schools, the percentages of schools with ratings of Excellent, Below Average, or Unsatisfactory decreased, and the percentages of schools that received ratings of Average or Below Average increased. The differences in the percentages of schools receiving each rating are consistent with the changes in the point total distributions observed in Figure 2.

To reiterate the point previously made, changes in the distributions of point totals, and therefore ratings, particularly for middle schools, are primarily a result of a change in the value-added model being employed and should not be interpreted as a change in Student Progress from 2017-18 to 2018-19. As a result, a summary of changes in ratings from 2017-18 to 2018-19 for schools is

not presented for the Student Progress indicator, as the changes presented in that analyses would imply differences in Student Progress over time.

Table 11.
Percentages of Schools Receiving each Student Progress Indicator Rating: 2018 and 2019 by School Type.

Rating	Elementary		Middle	
	2018	2019	2018	2019
Excellent	15.5	12.6	7.2	5.0
Good	25.1	21.9	17.8	22.9
Average	32.9	38.3	43.8	53.6
Below Average	19.5	21.2	23.4	16.4
Unsatisfactory	7.0	6.0	7.8	2.2
Total	657	666	320	323

Relationship to Other indicators

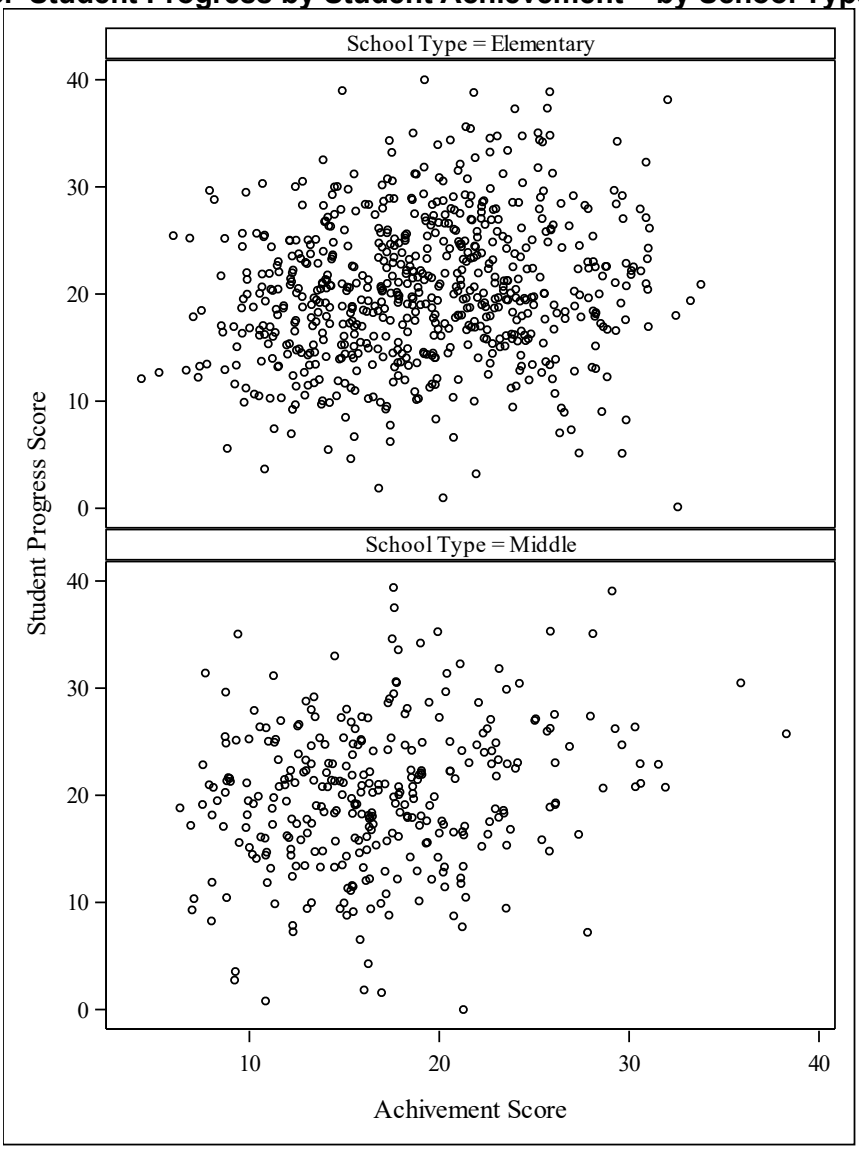
How the Student Progress indicator relates to all indicators that are a part of it is examined through the correlations of the point total for the Student Progress indicator with the points obtained for each indicator (Table 12). The Student Progress indicator is correlated minimally with all other indicators in the accountability system. This occurs by design so that any school, regardless of the prior level of achievement of its students as manifest in the Academic Achievement and Preparing for Success indicators, can have any level of Student Progress of their students. The low correlations with the English Learners' indicator follow that same pattern.

The correlations of the Student Progress indicator with the Overall indicator range from .71 to .83; these relatively high values suggest that the Student Progress indicator has a substantial effect on the Overall indicator, as it is either 35 or 40 percent of the Overall Indicator score. Figure 3 presents the relationship between Student Progress and Student Achievement Scores; regardless of the level of Student Achievement, a school can obtain any Student Progress Score.

Table 12.
Correlations of the Student Progress Indicator with All Other Indicators by School Type.

School Type	Year	Overall Indicator	Academic Achievement	Preparing for Success	English Learners	Student Engagement
Elementary	2018	0.71	0.15	0.13	0.04	0.10
	2019	0.71	0.14	0.20	0.06	0.15
Middle	2018	0.83	0.06	0.13	0.00	0.22
	2019	0.77	0.07	0.14	0.08	0.12

Figure 3. Student Progress by Student Achievement – by School Type - 2019.



Consistency from 2018 to 2019

The consistency of the Student Progress from 2018 to 2019 is represented by the correlations between the point totals for the two years (Table 13). These correlations, .32 and.43 are higher than was observed in the previous accountability system when Student Progress was measured using a transition table with a near zero correlation of Student Progress with academic achievement.

Table 13.
Correlations of the Academic Achievement Indicator: 2018 with 2019 - by School Type

School Type	Correlation
Elementary	0.32
Middle	0.43

Discussion

One of the primary goals of the Student Progress indicator is to provide a measure on which all schools can demonstrate that they are making academic progress with the students they have in their school, just as well as any other school, regardless of the prior academic achievement of their students. The low correlations of the Student Progress indicator with all other indicators demonstrate that this goal has been met.

The Student Progress indicator addresses the Profile of the South Carolina Graduate in two areas: first as a measure of World Class Knowledge as it relies on the English/Language Arts and Mathematics assessments of SC-Ready, and as a measure of perseverance as students must consistently apply themselves in these academic areas in order to demonstrate progress.

As has been pointed out, the value-added scores on which this indicator are based were obtained using different methodologies in 2018 and 2019. All differences between 2018 and 2019 point total and rating distributions should not be interpreted as either improvement or decline in school performance on this indicator. With that limitation in mind, having correlations between scores from 2018 and 2019 above .30 is encouraging, because any indicator on which schools dramatically change from year-to-year may not be perceived as a valid indicator of a school's performance on the indicator.

One limitation of the current method is that schools cannot compute their Student Progress point totals; the computational process requires access to student scores from all schools in the state associated with their current school of enrollment, which is not possible.

Also, value-added methods require the implementation of statistical methods that many districts do not have personnel with the expertise to either conduct or explain. As a result, value-added methods are not viewed as transparent and are not well understood by school personnel, with the consequence that they are not used as fully as they could be.

A related limitation is that schools cannot define achievement goals for students that can be associated with the school receiving a higher Student Progress rating. Value-added methods are norm-referenced in that students receive points for exceeding a target, but that target is not known in advance. Teachers, then, are hampered when trying to set individual student goals as an instructional motivator. Perhaps a value-added methodology that fixes the equations that define

expected growth based on data pooled from 2017-18 and 2018-19 can be used to publish expected growth tables by grade level and subject areas so that teachers can set individual goals.

An important question that deserves further investigation is whether, when a school demonstrates higher levels of Student Progress for two consecutive years, the student achievement levels in the school also increase. This analysis is not as simple as it may appear on first blush, because any Student Progress measure assesses two different groups of students in any two consecutive years. For example, consider an elementary school that serves students in grades 3, 4, and 5. Only the students moving from grade 3 to 4 in year 1, and grade 4 to 5 in year 2 are common to both years' Student Progress calculations. The year 1 measure of Student Progress includes students' progress from grades 4 to 5, students who moved out of the school for year 2. Similarly, in year 2 the measure of Student Progress includes students' progress from grade 3 to 4, students who were not in the year 1 measure. With this context in mind, perhaps the Student Progress scores by subject and grade level could be used to explore the possibility of verifying whether how a Student Progress indicator can be associated with increases in the levels of student achievement.

Another issue is whether expected growth as defined by students coincides with increasing student levels of achievement. If a student who makes expected growth does not make progress toward being college and career ready, the definition of expected growth are not consistent with the stated goals of the accountability system.

As a final note, when considering alternate methods of analyzing Student Progress, methods that use the differences between the scale scores students receive in 2018 and 2019 are not possible at this time. Figures 3 and 4 present growth models for 2019 SC Ready ELA and mathematics, respectively. The differences between the curves for adjacent grade levels (e.g., grade 3 to 4) for the same percentage of students (percentile rank) represents typical gains made in a year. Score gains are dependent on grade level and percentile rank; for ELA the gains made from grade 4 to 5 are substantially smaller than for any other grade pair, and for Mathematics, score gains from grades 5 to 6 are nearly 0, and score gains from grades 6 to 7 are nearly 0 for percentile ranks above 70. These irregular patterns of growth, especially for Mathematics, make modeling growth expectations by grade level difficult.

Figure 3
SC Ready Growth Model: English/Language Arts - 2019

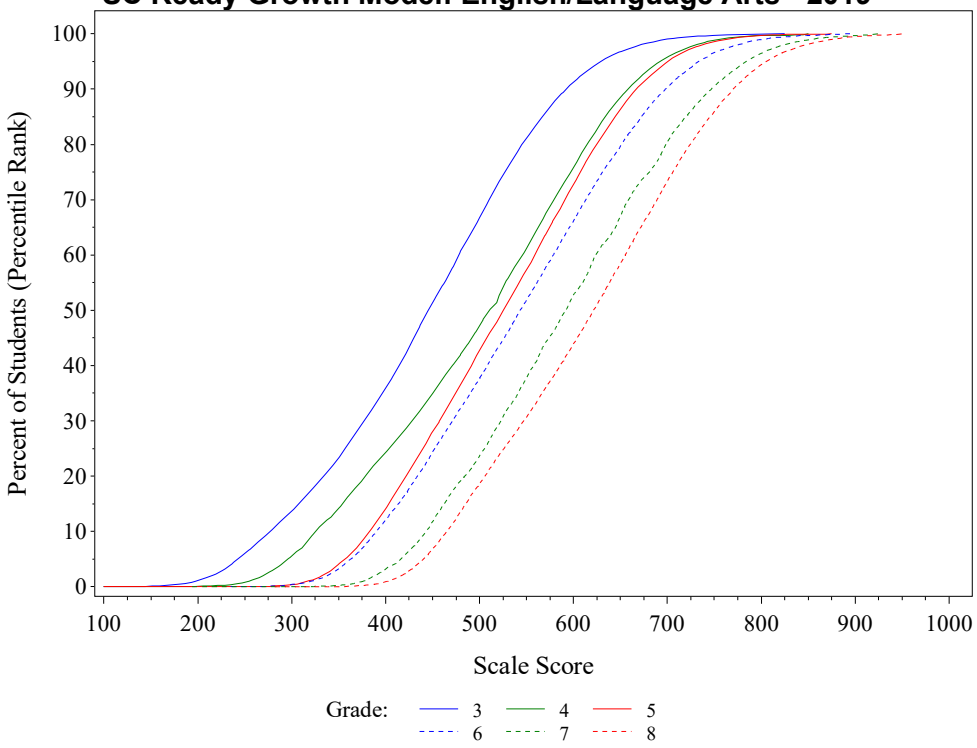
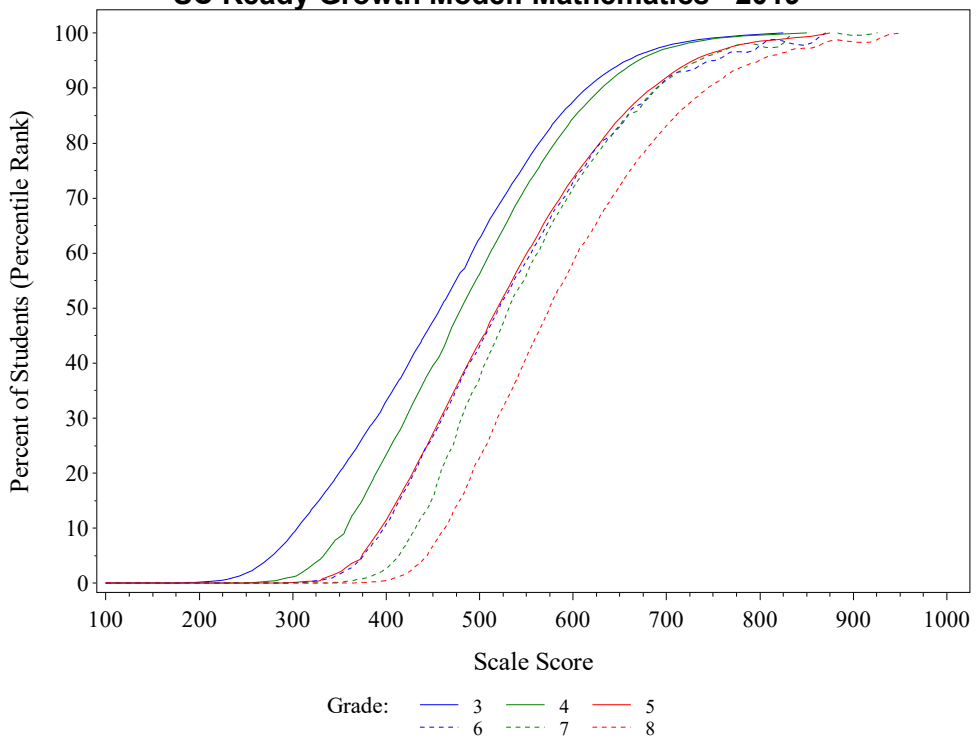


Figure 4
SC Ready Growth Model: Mathematics - 2019



Indicator: Preparing for Success

Purpose:

The Preparing for Success indicator was originally created to include student achievement in the areas of science and social studies in the accountability system. SCDE initiatives to decrease testing have eliminated social studies tests in grades 3 through 8 entirely, and limited the testing of science in elementary and middle schools to grades 4 and 7. In high schools, students are assessed using EOCEP exams in Biology and U.S. History.

Data:

For elementary and middle schools, data for the Preparing for Success indicator come from the SC-PASS science assessment. Calculations are based on students who were enrolled on the 45th day of the school year and on the 160th day of the school year, with no break in enrollment. The intent is to hold schools accountable for students who receive their education for the year at the school.

Student scores from the Biology 1 and U. S. History and the Constitution assessments of the End-of-Year Examination Program (EOCEP) are used in the calculation. For Biology 1, the calculation is based on the 4-year graduation cohort base file. For U.S. History and the Constitution, calculations are based on all students who completed the course in the current academic year.

Points are earned based on converting student assessment results on the following assessments to points using Table 14.

Table 14.

Test Score Level to Points Conversion

Points	SC READY Level Descriptor	EOCEP Grade Level	Alternate Assessment Level Descriptor
0	Does Not Meet Expectations	F	Level 1: Foundational
1	Approaches Expectations	D	Level 2: Emerging
2	Meets Expectations	C	Level 3: Meets
3	Exceeds Expectations	B	Level 4: Exceeds
4		A	
Max	3	4	3

Steps in creating the Preparing for Success:

1. For each student/test combination, points are awarded using Table 2.
2. For each student/test combination, a maximum number of possible points is also assigned, which differs by assessment and appears in the bottom row of Table 14.
3. The sum of the points awarded is obtained by summing across students and tests.
4. The sum of the possible points is obtained by summing across students and tests.

5. The percentage of possible points earned is obtained by dividing the total obtained in (3) by the total obtained in (4).
6. The number of points awarded is obtained by multiplying percentage of possible points obtained in step 5 by 10.
7. Point totals are converted to Ratings using Table 15.

Table 15.
Converting Preparing for Success Points to Ratings

Rating	Elementary	Middle	High
Excellent	6.54 – 10.00	6.64 - 10.00	6.20 - 10.00
Good	5.76 – 6.53	5.75 – 6.63	5.30 – 6.19
Average	4.35 – 5.75	4.41 – 5.74	3.75 – 5.29
Below Average	3.22 – 4.34	3.23 – 4.40	2.43 – 3.74
Unsatisfactory	0 – 3.21	0 – 3.22	0 – 2.42

Summary of Point Totals – 2018 and 2019:

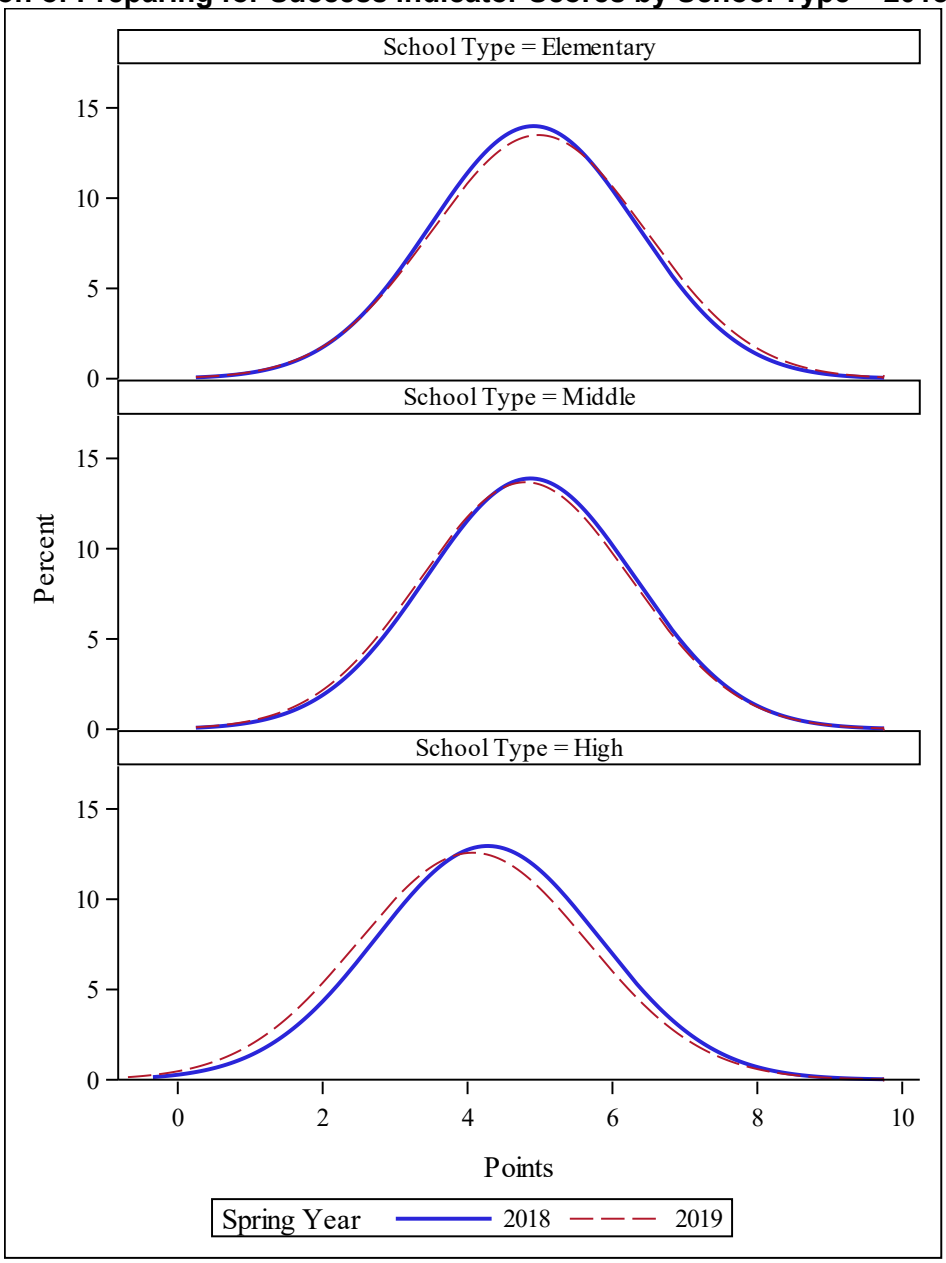
Presented in Table 16 are summary statistics of the Preparing for Success indicator point totals for 2018 and 2019, and effect sizes to provide insight as to whether the differences between the mean point totals for 2018 and 2019 are large enough to suggest that schools changed with respect to the knowledge and skills associated with the Preparing for Success indicator. Figure 5 presents a visual display of the distributions of overall point totals by school type.

Table 16.
Preparing for Success Point Total Summary Statistics – 2018 and 2019

School Type	Year	Number of Schools	Mean	Standard Deviation	Minimum	Maximum	Mean Difference	Effect Size
Elementary	2018	659	4.9	1.4	1.1	9.1	0.1	0.07
	2019	663	5.0	1.5	1.1	8.6		
Middle	2018	321	4.9	1.4	2.1	9.5	0.1	-0.07
	2019	323	4.8	1.5	1.4	9.6		
High	2018	227	4.3	1.5	1.0	9.5	-0.2	-0.13
	2019	231	4.1	1.5	0.9	9.6		

The differences in mean Preparing for Success point totals from 2018 to 2019 are: 0.1 points for elementary schools, 0.1 points for middle schools, and -0.2 points for high schools. All of these differences result in effect sizes that can be characterized as medium. The visual presentation in Figure 5 demonstrates that the 0.1 difference in mean scores for elementary schools and the -0.1 difference for middle schools appear to be small, but the effect sizes suggest the differences may be more important. High schools had a slightly larger difference, a decline of 0.2 points, even this difference is not judged to be large.

Figure 5
Distribution of Preparing for Success indicator Scores by School Type – 2018 and 2019



These point totals ultimately result in differences in the distributions of ratings for 2018 and 2019, which are presented in Table 17. For elementary schools, the slight increase in mean score was accompanied by slightly higher percentages of schools with ratings of Excellent and Good, with a decrease in the percentage of schools with a rating of Average; the percentages of schools with ratings of Below Average or Unsatisfactory changed only slightly. For middle schools a systematic change in the percentages of schools by rating is not apparent, as the percentages of schools with ratings of Excellent, Below Average, and Unsatisfactory increased, while the percentage of schools with a rating of Good decreased. For high schools the ratings trended lower, consistent with the decline in mean score. The percentages of schools with ratings of Excellent and Good decreased, and the percentages of schools with ratings of Below Average and Unsatisfactory increased.

Table 17.
Percentages of Schools Receiving each Preparing for Success Indicator Rating: 2018 and 2019 by School Type.

Rating	Elementary		Middle		High	
	2018	2019	2018	2019	2018	2019
Excellent	14.3	16.4	11.2	11.8	10.8	9.2
Good	14.3	16.0	15.6	13.3	14.4	12.6
Average	35.4	33.0	36.5	36.5	37.0	32.8
Below Average	23.2	21.7	21.5	22.9	25.7	30.3
Unsatisfactory	12.9	12.8	15.3	15.5	12.7	15.1
Total	659	663	321	323	230	238

Viewing the distributions of ratings for 2018 and 2019 is a partial picture of how scores changed from 2018 to 2019. Table 18 presents a summary of the changes in ratings from 2018 to 2019 for individual schools. For all school types the most frequently occurring change was no change (66 percent of elementary schools, 77 percent of middle schools, and 73 percent of high schools). The percentages of schools that had a lower rating was smaller for elementary schools than the percentage of schools that had a higher rating: Only 14 percent of elementary schools decreased their rating while 19 percent increased their rating, 14 percent of middle schools decreased their rating while 10 percent increased their rating, and 21 percent of high schools decreased their rating while 7 percent increased their rating. These results are consistent with the increase in Overall indicator scores and ratings presented in Table 16, Table 17, and in Figure 5.

Table 18.
Changes in Preparing for Success Ratings: 2018 and 2019 by School Type.
Number and Percentage (in parentheses)

School Type	Change in Rating					
	-2	-1	0	1	2	Total
Elementary	1 (0)	88 (14)	427 (66)	124 (19)	4 (0)	644
Middle	0 (0)	41 (14)	236 (77)	30 (10)	0 (0)	307
High	0 (0)	45 (21)	161 (73)	15 (7)	0 (0)	221

Relationship to Other indicators

The correlations between the Preparing for Success indicator and all other indicators are presented in Table 19. Some differences appear in these correlations by school type. The correlations of Preparing for Success with the Overall indicator are lowest for middle schools, higher for elementary schools, and highest for high schools. The correlations are highest for high schools because they do not have a Student Progress component in their Overall indicator. Second, the student engagement survey correlates near 0 for elementary schools, and more importantly, is negatively correlated with Preparing for Success for middle and high schools. The correlations with Student Progress are, by design, very low; this enables any school, regardless

of the achievement levels of its students, to display high academic progress. The correlations with the Preparing for Success indicator are higher for high schools than elementary or middle schools, and correlations with English Learners' Progress indicators are consistent across school types. For high schools, the correlations of the Preparing for Success with all indicators other than Student Engagement range from .49 to .94, all of which can be categorized as moderate or higher, suggesting these indicators work together in the accountability system.

Table 19.
Correlations of the Preparing for Success indicator with All Other indicators by School Type

School Type	Year	Overall indicator	Academic Achievement	Student Progress	English Learners	Student Engagement	Grad Rate	College /Career Ready
Elementary	2018	0.70	0.62	0.13	0.53	0.08	.	.
	2019	0.75	0.62	0.20	0.59	0.08	.	.
Middle	2018	0.59	0.64	0.13	0.51	-0.31	.	.
	2019	0.68	0.64	0.14	0.51	-0.30	.	.
High	2018	0.86	0.94	.	0.49	-0.32	0.56	0.83
	2019	0.85	0.94	.	0.51	-0.30	0.57	0.77

Consistency from 2018 to 2019

The consistency of the Overall indicator from 2018 to 2019 is represented by the correlations between the overall point totals for the two years (Table 20); these correlations, all above .90, are very high. There are two perspectives from which to view these data. One is that very high correlations from year to year are desirable because schools are not likely to change much. The other perspective is that high correlations imply that schools cannot change their ratings from year-to-year. Recall that Table 18 demonstrated that schools do change in their Preparing for Success ratings.

Table 20.
Correlations of the Preparing for Success indicator: 2018 with 2019 - by School Type

School Type	Correlation
Elementary	0.92
Middle	0.97
High	0.95

Discussion

Because the process of creating scores for the Preparing for Success indicator is highly similar to the process for the Academic Achievement indicator, it is not surprising that many of the results are similar.

Both Academic Achievement and Preparing for Success award points for four levels (elementary school, middle school, and alternative assessments) or five levels (high school) of student

achievement is a positive. Using four categories means that there are three transition points that can be used as milestones for students to improve their Preparing for Success. This is highly preferable to an accountability system that has only one transition point and therefore encourages schools to focus their accountability efforts on a single group of "bubble students". As stated previously, awarding points 0 to 4 is simple and straight-forward, and best reflects the ordinal nature of the achievement levels.

The observed maximum number of points has been 8.6 for elementary schools, and 9.6 for middle and high schools, are 86 and 96 percent of the maximum attainable score, respectively.

Originally created to include social studies and science in the accountability system, this indicator would be improved by returning social studies assessments to the state assessment system and including them again for this indicator. Additionally, science assessment in more grades would also be desirable. Including more of these assessments would send an important to educators of the importance of these subjects in a student's education.

Indicator: English Learners' Progress

Purpose:

One of the requirements of ESSA is to include as a part of accountability a measure that documents the progress of students whose native language is not English toward English language proficiency.

Toward that end, the computation assesses growth toward the exit criteria on the WIDA ACCESS for ELLs assessment (4.4) which is to be achieved within five years after the initial assessment of English as a Second Language (ESL) as stipulated in the State's approved ESSA plan.

Data:

For all students, data for the English Learners indicator come from the WIDA ACCESS for ELLs assessment.

Students to be included in the calculation are those students who on school entry indicated that English was not their primary language, did not demonstrate proficiency in the English language on a WIDA ACCESS screener, and had a score on the WIDA ACCESS for ELL assessment in the previous school year.

The state's definition of English proficiency on ACCESS is a 4.4 (Bridging composite score) with no sub-score below 4.0 in reading, writing, speaking, or listening. A series of interim targets have been developed to measure the percentage of students that have achieved proficiency or are on-track to achieve proficiency within five years. Points are awarded for the percentage of ELP students who score a composite 4.4 or achieve the interim target based on their initial identification and number of years in South Carolina's English Learners (EL) program. Annually, points are earned for the percentage of ELs meeting expected growth targets on ACCESS 2.0 using the progress to proficiency table (Table 21). This allows students to have expected growth targets towards proficiency every year.

Table 21.

WIDA ACCESS Composite Annual Target Scores

Screener Level	Year 1	Year 2	Year 3	Year 4	Year 5 until exited
1	1.9	2.9	3.8	4.1	4.4
2	2.6	3.2	3.8	4.1	4.4
3	3.3	3.6	3.8	4.1	4.4
4	4.1	4.2	4.3	4.4	4.4
Access -ALT	A1	A2	A3	P1	P1

Steps in creating the English Learners Point Total:

1. For each student, identify the initial WIDA ACCESS score, or the WIDA ACCESS Screener scores.
2. Identify the number of years the student has been receiving ESL instruction.
3. Use Table 21 and the information from (1) and (2) to identify the student target.
4. Compare the student's current year ACCESS test score with target. Students receive 1 point for meeting or exceeding the target, 0 points for not meeting the target.
5. Compute the percentage of students meeting their target.
6. Multiply the percentage of students meeting their target expressed as a decimal by 10, rounded to tenths (e.g., 84% meeting target: .84 * 10 = 8.4).
7. Points are assigned using Table 22.
8. When a school has fewer than 20 students contributing to the English Learners indicator, the indicator is not reported, and is not utilized in the calculation of the Overall indicator point total or rating.

Table 22.
English Learners' Proficiency Progress
Converting Percent of Students Meeting Targets to Ratings

Rating	Percent of Students Meeting Proficiency Targets
Excellent	80.0% - 100%
Good	60.0% - 79.9%
Average	40.0% - 59.9%
Below Average	20.0% - 39.9%
Unsatisfactory	Less than 20%

Summary of Point Totals – 2018 and 2019:

Presented in Table 23 are summary statistics of the English Learners indicator point totals for 2018 and 2019, and effect sizes to provide insight as to whether the differences between the mean point totals for 2018 and 2019 are large enough to suggest that English Learners have changed in their acquisition of the English language. Points for all schools are expressed on a 10-point scale. Figure 6 presents a visual display of the distributions of point totals by school type for 2018 and 2019.

As a first note, for the 2019 report cards, 53 percent of elementary schools, 54 percent of middle schools, and 46 percent of high schools had fewer than 20 students contributing to the English Learners indicator in 2019, and therefore did not have scores for this indicator reported or included in the calculation of the Overall Indictor.

Elementary school students clearly have the greatest success meeting their annual targets, as the mean score is 5.5 for 2018 and 5.8 for 2019. The average score for high school students is 4.6 for both years. The mean score for middle schools students is the lowest, 3.7 in 2018 and 4.0 in 2019. Multiplying these numbers by 10 gives the simple percentages of students. There is no surprise that the youngest students are most able to learn a new language most readily, it is a little surprising that high school students have the next highest percentage.

Table 23.
English Learners' Progress Point Total Summary Statistics – 2018 and 2019

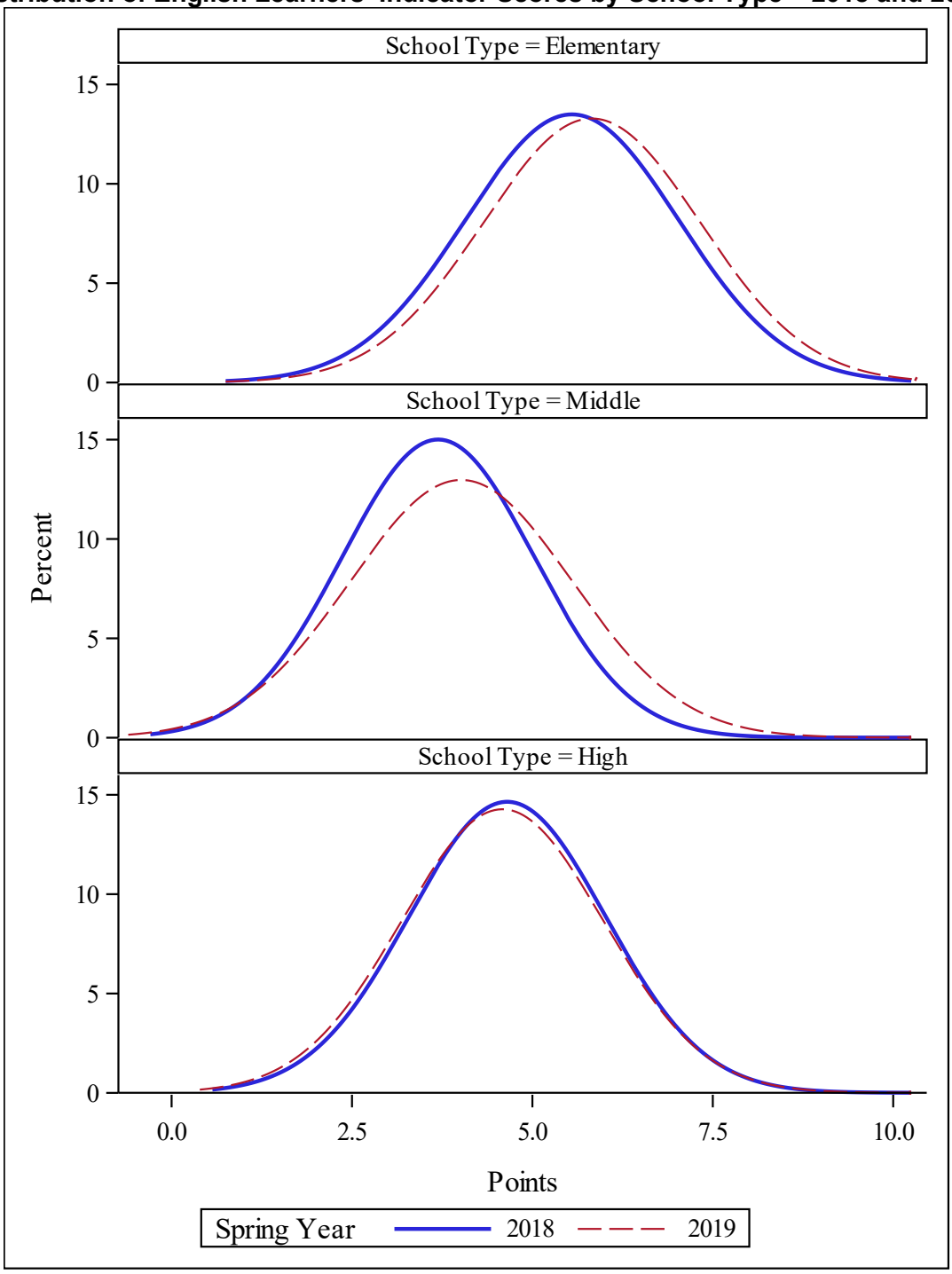
School Type	Year	Number of Schools	Mean	Standard Deviation	Minimum	Maximum	Mean Difference	Effect Size
Elementary	2018	296	5.5	1.5	1.8	9.4	0.24	0.20
	2019	291	5.8	1.5	1.8	9.3		
Middle	2018	135	3.7	1.3	0.8	7.6	0.26	0.21
	2019	133	4.0	1.5	1.4	8.5		
High	2018	115	4.6	1.4	1.3	10.0	0.06	0.00
	2019	120	4.6	1.4	1.4	7.7		

The differences between the means for 2018 and 2019 for each school type is also expressed as an effect size. The effect sizes for elementary and middle schools are 0.20 and 0.21 which, according to Kraft (2020) are on the border between medium and large. Because the difference between the 2018 and 2019 means are 0.6 for high schools, the effect size is 0. For an effect size to be judged as large, it means that the difference in the means is greater than expected given the variability in the scores.

The distributions of the scores from 2018 and 2019 presented in Figure 6 demonstrate that the scores for elementary schools increased moderately, and did so throughout the distribution. For middle schools, the 2019 distribution is more positively skewed; the mean change of .26 points resulted from the highest scoring schools increasing their point total by more than the lowest scoring schools. High schools do not appear to differ in the distributions from 2018 to 2019, either viewing the evidence of the mean gain of 0.06 points or visually as presented in Figure 6.

Students in middle schools appear to have increased the gains in their English Language Proficiency the most from 2017-18 to 2018-19, followed by students in elementary schools. Students in high schools did not demonstrate a difference in their progress with English Language Proficiency from 2017-18 to 2018-19.

Figure 6
Distribution of English Learners' Indicator Scores by School Type – 2018 and 2019



The distributions of ratings for 2018 and 2019 are presented in Table 24. For elementary schools, the percentage of schools that received a rating of Excellent or Good increased by 8 percent, and the percentage of schools that received a rating of Average or Below Average both decreased by 4 percent. These changes are consistent with the trend of increasing scores at all point levels.

For middle schools, only 5 percent of schools had a rating of good in 2018 and no schools had a rating of Excellent. These percentages increased to 11 percent Good and 2 percent Excellent, however, the percentage of schools receiving a rating of Unsatisfactory was in essence the same. It appears that higher scoring schools gained more than lower scoring schools from 2018 to 2019, resulting in the distribution of scores for 2019 having a more positive skew than in 2018.

For high schools, although the mean scores change is 0.1 and the distributions appear to differ only slightly, the percentage of schools that received a rating of good or excellent increased 6 percent.

Table 24.
Percentage of Schools Receiving each English Learners' Indicator Rating: 2018 and 2019 by School Type

Rating	Elementary		Middle		High	
	2018	2019	2018	2019	2018	2019
Excellent	6	8	0	2	2	0
Good	34	40	5	11	13	21
Average	46	42	34	34	54	43
Below Average	14	10	55	46	30	33
Unsatisfactory	1	1	6	7	1	3
Total	296	291	135	133	116	120

For all school types, the percentage of schools that did not change ratings from 2018 to 2019 was 49 percent or higher (Table 25). For both elementary and middle schools the percentages of schools increasing their rating was larger than the percentage decreasing their rating. For high schools, the percentages of schools increasing and decreasing their rating differed by only 1 point.

These changes appear to be consistent with the changes in mean point totals and the differences between the distributions of ratings from 2018 to 2019.

Table 25.
Changes in English Learners' Ratings: 2018 and 2019 by School Type
Number and Percentage (in parentheses)

School Type	Change in Rating						
	-2	-1	0	1	2	3	Total
Elementary	3 (1)	41 (15)	155 (57)	67 (25)	6 (2)	1 (0)	273
Middle	0 (0)	24 (20)	65 (53)	27 (22)	7 (6)	0 (0)	123
High	0 (0)	29 (26)	55 (49)	24 (21)	4 (4)	0 (0)	112

Relationship to Other Indicators

The English Learners indicator score correlates approximately .50 with all other indicators except the Student Engagement indicator, with which it has nearly no correlation (Table 26).

Table 26.
Correlations of the English Learners Indicator with All Other Indicators by School Type

School Type	Year	Overall indicator	Preparing for Success	Student Progress	Student Engagement	Grad Rate	College /Career Ready
Elementary	2018	0.47	0.56	0.53	0.01	n/a	n/a
	2019	0.50	0.60	0.59	-0.04	n/a	n/a
Middle	2018	0.35	0.54	0.51	-0.07	n/a	n/a
	2019	0.54	0.54	0.51	-0.06	n/a	n/a
High	2018	0.56	0.43	0.49	-0.09	0.42	0.42
	2019	0.58	0.49	0.51	-0.19	0.35	0.35

Consistency from 2018 to 2019

The English Learners' indicator also seems to order schools consistently over time, with correlations of approximately .60 for all school types (Table 27).

Table 27.
Correlations of the English Learners Indicator: 2018 with 2019 - by School Type

School Type	Correlation
Elementary	0.69
Middle	0.59
High	0.61

Discussion

The English Learners' indicator seems to be functioning consistently across school types and across school years. It addresses the Profile of the South Carolina Graduate as it addresses students' knowledge of the English language.

Students in Elementary schools had the highest scores for both 2018 and 2019, consistent with the perception that youngest students are most able to learn new languages.

Middle schools clearly have improved this indicator more than elementary or high schools. If this result means that more middle school students become proficient in the English language, the measure is motivating the correct changes in behaviors.

Indicator: Student Engagement

Purpose:

One of the requirements of ESSA is to include as a part of accountability is at least one indicator of school quality or student success: the student engagement survey is one of three indicators used to meet this criteria.

Data:

The student engagement survey created by AdvancED was administered to students for the 2017-18 and 2018-19 report cards.

The online survey consists of 20 items categorized into three components or domains of engagement: behavioral, cognitive and emotional. Behavioral Engagement refers to a student's efforts in the classroom, while Cognitive Engagement examines a student's investment in learning. Emotional Engagement measures a student's emotions or feelings about the classroom and school.

Student responses for each domain are reported in three categories, with each category consisting of two levels (Table 28):

Table 28.
Domains of the Student Engagement Survey

Domains	Categories	Levels
Cognitive Engagement **Behavioral Engagement** **Emotional Engagement**	Committed	Immersed Invested
	Compliant	Strategic Ritual
	Disengaged	Retreatism Rebellion

All students in grades 3 through 12 who were enrolled in the school on the 45th day and were still enrolled through the last day of the published survey window were administered the survey. Also included were those students who took the survey during the survey window even if they exited before the last day of the published window.

Steps in creating the Student Engagement Point Total:

The points awarded for the Student Engagement indicator is based on the percentage of students who are *Committed* on all three domains of the Student Engagement Survey: Cognitive Engagement, Behavioral Engagement, and Emotional Engagement. The percentage of students committed was converted to point totals and ratings using Table 29. The conversion differs by school type. Elementary and middle schools have 10 points for this indicator, high schools have 5 points.

For any school with a participation rate of less than 80 percent, the percentage *Committed* is reduced by the factor (actual participation / 80). For example, a school that administered the survey to 62 percent of its students would have their point total reduced by the factor (62/80).

Table 29.
Converting Student Engagement Percentage of Students Committed to Points and Ratings

Rating	Points	Percent Committed		High	
		Elementary	Middle	Points	Percent Committed
Excellent	10	75.0 - 100	68.6 - 100	5	64.4 - 100
	9	71.8 – 74.9	64.6 - 68.5	4.5	58.9 – 64.3
Good	8	69.4 – 71.7	60.3 – 64.5	4.0	55.6 - 58.8
	7	67.7 – 69.3	57.4 – 60.2	3.5	52.4 - 55.5
Average	6	66.5 – 67.6	55.3 – 57.3	3.0	50.6 - 52.3
	5	65.7 – 66.4	53.3 – 55.2	2.5	48.7 - 50.5
	4	64.6 – 65.6	51.9 – 53.2	2.0	46.5 - 48.6
Below Average	3	63.4 – 64.5	49.9 – 51.8	1.5	44.6 - 46.4
	2	61.7 – 63.3	47.8 – 49.8	1.0	41.8 - 44.5
Unsatisfactory	1	59.8 – 61.6	45.4 – 47.7	0.5	31.8 - 41.7
	0	0 – 59.7	0 – 45.3	0	0 - 31.7

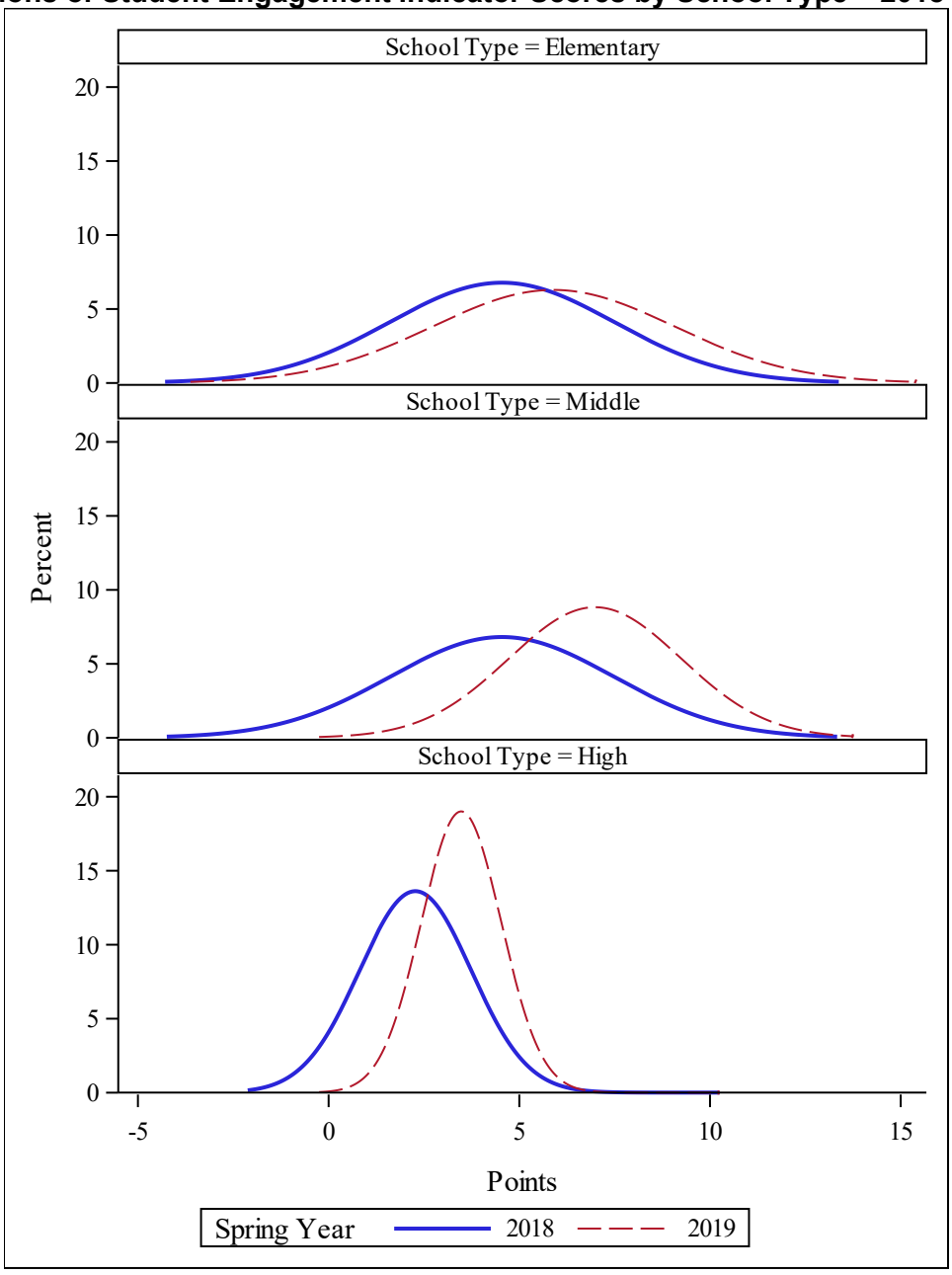
Summary of Point Totals – 2018 and 2019:

Presented in Table 30 are summary statistics of the Student Engagement indicator point totals for 2018 and 2019, and effect sizes to describe the difference between the mean point totals for 2018 and 2019. The mean differences and effect sizes suggest that for all school types, the changes in their Student Engagement scores were large. The effect sizes for the Student Engagement indicator are the largest for any indicator in the accountability system. Points for elementary and middle schools are expressed on a 10-point scale, points for high schools are expressed on a 5-point scale. Figure 7 presents a visual display of the distributions of point totals by school type for 2018 and 2019, the differences between the distributions are visibly large for all school types..

Table 30.
Student Engagement Point Total Summary Statistics – 2018 and 2019

School Type	Year	Number of Schools	Mean	Standard Deviation	Minimum	Maximum	Mean Difference	Effect Size
Elementary	2018	650	4.5	2.9	0.0	10	1.37	0.46
	2019	664	5.9	3.2	0.0	10		
Middle	2018	308	4.5	2.9	0.0	10	2.51	0.96
	2019	323	7.0	2.3	0.0	10		
High	2018	223	2.3	1.4	0.0	5	1.21	1.00
	2019	231	3.5	1.0	0.5	5		

Figure 7
Distributions of Student Engagement Indicator Scores by School Type – 2018 and 2019



The percentages of schools that received a rating of Excellent or Good increased from 30 percent in 2018 to 54 percent for elementary schools, 64 percent for middle schools, and 61 percent for high schools (Table 31). At the same time the percentage of schools that received a rating of Below Average or Unsatisfactory decreased from 40 percent to 28 percent for elementary schools, 9 percent for middle schools, and 5 percent for high schools.

Table 31.
Percentages of Schools Receiving each Student Engagement Indicator Rating: 2018 and 2019 by School Type

Rating	Elementary		Middle		High	
	2018	2019	2018	2019	2018	2019
Excellent	10	26	10	27	10	27
Good	20	26	20	37	20	34
Average	30	20	30	28	30	34
Below Average	20	16	21	7	20	4
Unsatisfactory	20	12	19	2	20	1
Total	650	664	308	323	228	242

A summary of individual school changes in Student Engagement ratings are presented in Table 32. Twenty-one (21) percent of elementary schools decreased their rating from 2018 to 2019 while 49 percent increased their rating. For middle schools only 6 percent of schools decreased their rating and 67 percent increased their rating. For high schools only 1 percent of schools decreased their rating and 63 percent of schools increased their rating.

Table 32.
Changes in Student Engagement Ratings: 2018 and 2019 by School Type
Number and Percentage (in parentheses)

School Type	Change in Rating									
	-4	-3	-2	-1	0	1	2	3	4	Total
Elementary	1 (0)	9 (1)	37 (6)	90 (14)	190 (30)	147 (23)	95 (15)	44 (7)	24 (4)	637
Middle	0 (0)	0 (0)	1 (0)	17 (6)	81 (27)	104 (35)	66 (22)	25 (8)	3 (1)	297
High	0 (0)	0 (0)	0 (0)	2 (1)	78 (35)	78 (35)	44 (20)	13 (6)	6 (3)	221

In sum, the changes in Student Engagement point totals and ratings from 2018-19 are by far the most dramatic changes in ratings among all of the indicators.

Relationship to Other Indicators

The Student Engagement indicator score correlates negatively or near 0 with both the Academic Achievement and the Preparing for Success indicators (Table 33). It has a near zero correlation with the Student Engagement indicator, and correlates negatively with the College/Career Ready indicator.

These correlations suggest the Student Engagement survey does not behave consistently with other indicators in the accountability system, and its presence should be questioned.

Table 33.
Correlations of the Student Engagement Indicator with All Other Indicators by School Type

School Type	Year	Overall indicator	Academic Achievement	Preparing for Success	Student Progress	English Learners' Progress	Grad Rate	College /Career Ready
Elementary	2018	0.39	-0.02	0.08	0.10	0.01	n/a	n/a
	2019	0.41	0.01	0.08	0.15	-0.04	n/a	n/a
Middle	2018	0.23	-0.40	-0.31	0.22	-0.07	n/a	n/a
	2019	0.11	-0.31	-0.30	0.12	-0.06	n/a	n/a
High	2018	-0.08	-0.25	-0.32	n/a	-0.09	0.06	-0.23
	2019	-0.07	-0.28	-0.30	n/a	-0.19	-0.04	-0.18

Consistency from 2018 to 2019

While the scores from the Student Engagement indicator increased dramatically, there is some consistency to the rank ordering of schools from 2018 to 2019 (Table 34).

Table 34.
Correlations of the Student Engagement Indicator: 2018 with 2019 - by School Type

School Type	Correlation
Elementary	0.35
Middle	0.55
High	0.60

Discussion

At the time of this review irregularities in the administration of the survey have occurred for the second consecutive year, with the decision already made that this particular survey will not be the instrument used for the accountability system in the future. Future discussions of how this indicator will be replaced that will satisfy ESSA requirements are under way.

This decision is in the best interest of the current accountability system. The current student survey does not correlate positively with any other indicators, and because of its low correlation from year to year, it contributes error to the overall rating. This kind of error means that the Overall indicator score for a school can change from year to year without any change in how schools serve students toward the goals identified in the Profile of the South Carolina Graduate.

As a final indictment of the Student Engagement indicator, the changes in point totals from 2018 to 2019 were the largest for any indicator, with effect sizes of 0.46 for elementary schools, 0.96 for middle schools, and 1.00 for high schools. These effect sizes reflect changes in point totals for schools that are not likely to occur due to actual differences in Student Engagement.

Indicator: Graduation Rate

Purpose:

One of the requirements of ESSA is to include as a part of accountability is at least one indicator of graduation rate. Previous versions of the state accountability system included graduation rate as one of the high school components.

Data:

South Carolina uses the 4-year cohort method for computing a graduation rate. In this method, students whose initial enrollment as a 9th grade student was three years prior to the current year are students who should graduate in the current year. Students can be removed from the graduation cohort if they meet one of the following reasons: transfer to another diploma-granting high school, emigration to another country, transfer to prison or juvenile facility following adjudication, or death. Students may also be added to the graduation cohort if they transfer from another institution.

Steps in creating the Graduation Rate Point Total:

Schools receive either 25 or 30 points on the graduation rate indicator, depending on whether they have 20 or more students to create an English Learners' Progress indicator score. The point total on the 25-point scale is obtained from:

Points (25-point scale) = (On-Time Graduation Rate – 50) / 2
Points (30-point scale) = Points (25 point scale) x (30/25)
Points on both scales are rounded to the nearest hundredth (e.g., 21.43).

These points are then converted to ratings using the conversions in Table 35. The values obtained in Table 35 were based on two statements linking policy to school graduation rates: a school with a 90 percent graduation rate should receive a rating of Excellent, and a school with a graduation rate below 70 should receive a rating of Unsatisfactory. Using the point computation above, a 90 percent graduation rate corresponds to 20 points, and a 70 percent graduation rate corresponds to 10 points. The Below Average and Average ratings categories each contain 3 points, and the Good rating category contains 4 points.

Table 35.
Converting Graduation Rate Points to Ratings

Rating	Points of 25	Points of 30
Excellent	20.00 – 25.00	24.00 – 30.00
Good	16.01 – 19.99	19.21 – 23.99
Average	13.01 – 16.00	15.61 – 19.20
Below Average	10.01 – 13.00	12.01 – 15.60
Unsatisfactory	00.00 – 10.00	00.00 – 12.00

Summary of Point Totals – 2018 and 2019:

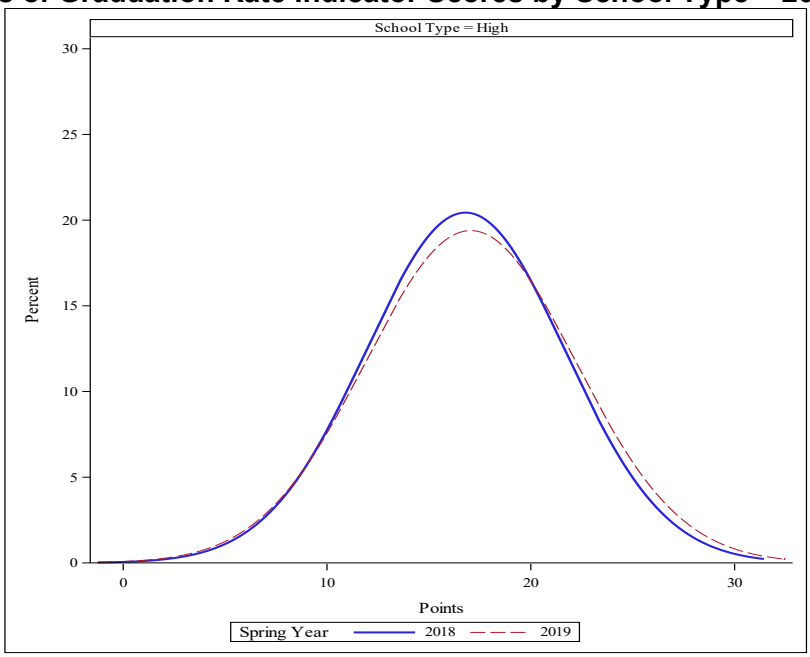
Presented in Table 36 are summary statistics of the Graduation Rate indicator point totals for 2018 and 2019, and the effect size associated with the difference between the point totals for 2018 and 2019. The effect size of 0.06 suggests that the change in graduation rate point totals is moderate in magnitude, which means that the difference between the mean point totals from 2018 to 2019 is moderate when compared to the observed variability in point totals. The difference in the mean point totals is not extremely large, but it does suggest that the graduation rate point totals have changed from 2018 to 2019.

Table 36.
Graduation Rate Point Total Summary Statistics – 2018 and 2019

Year	Number of Schools	Mean	Standard Deviation	Minimum	Maximum	Mean Difference	Effect Size
2018	228	17.0	4.7	0	25	0.29	0.06
2019	228	17.3	4.7	0	25		

The Graduation Rate point totals do not appear to differ between 2018 and 2019, either from the test of statistical significance or visually in Figure 8.

Figure 8
Distributions of Graduation Rate Indicator Scores by School Type – 2018 and 2019



Ratings for the Graduation Rate indicator for 2018 and 2019 are presented in Table 37, and changes in Graduation Rate ratings from 2018 to 2019 are presented in Table 38. Ratings appear to be stable from 2018 to 2019; there were 2 percent more schools with ratings of Excellent or Good in 2019 than 2018.

Table 37.
Percentages of Schools Receiving each Graduation Rate Indicator Rating: 2018 and 2019.

Rating	2018	2019
Excellent	21	28
Good	44	39
Average	20	20
Below Average	8	6
Unsatisfactory	7	7
Total	231	233

Fifty-seven (57) percent of schools increased their rating from 2018 to 2019 while 31 percent decreased their rating – a net difference of 26 percent of schools increasing their rating.

Table 38.
Changes in Graduation Rate Ratings: 2018 and 2019
Number and Percentage (in parentheses)

Change in Rating					
-2	**-1**	**0**	**1**	**2**	**Total**
5 (2)	26 (12)	133 (60)	54 (24)	3 (1)	221

Relationship to Other Indicators

The Graduation Rate indicator score correlates approximately .85 with the Overall indicator and approximately .50 with all other indicators except the Student Engagement indicator, with which is has a near zero correlation (Table 39). These correlations suggest the Graduation Rate indicator is an important part of the accountability system.

Table 39.
Correlations of the Graduation Rate Indicator with All Other Indicators by School Type

Year	Overall Indicator	Academic Achievement	Preparing for Success	English Learners' Progress	Student Engagement	College/Career Ready
2018	0.85	0.58	0.56	0.42	0.06	0.52
2019	0.84	0.60	0.57	0.35	-0.04	0.57

Consistency of differentiation from 2018 to 2019

The correlation of Graduation Rate point totals for 2018 with Graduation Rate point totals from 2019 is .84, which suggests that schools are very consistently differentiated on the Graduation Rate indicator using the point totals awarded.

Discussion

Graduation rates are one school outcome that is generally accepted as a measure of a school for accountability. The methodology is clear, and though some schools may have greater transiency in their graduation cohort, none argue about the quality of their data.

Using the graduation rate as a part of the accountability system assess students' perseverance in an academic setting, and assesses the Profile of the South Carolina Graduate in this way. It is an extremely stable measure over time; the changes in both point totals and ratings from 2018 to 2019 are modest.

One school person indicated an easier method for the computation would be to simply divide the graduation rate by 4 to obtain points. The difference between the two methods is in the range of points that separates schools that receive a rating of excellent from schools that receive a rating of Unsatisfactory. Using the method adopted, there are 10 points separating these schools, whereas simply dividing the graduation rate by 4, only 5 points separate these schools. The adopted methodology allows for schools to be better differentiated by using a greater number of points on the scale.

Graduation Rate	(Rate-50) / 2	Rate/4
90	(90-50) / 2 = 20	90 / 4 = 22.5
70	(70-50) / 2 = 10	70 / 4 = 17.5
Range of Points	20 – 10 = 10	22.5 – 17.5 = 5

Indicator: College and Career Ready

Purpose:

A major focus of the South Carolina Profile of the Graduate is that students graduate from high school College and Career Ready. As stated in §59-18-100, "All graduates should have the opportunity to qualify for and be prepared to succeed in entry-level, credit-bearing college courses, without the need for remedial coursework, postsecondary job training, or significant on-the-job training". This indicator explicitly addresses this goal.

Data:

For the 2018 and 2019 report cards, the College and Career Ready indicator was computed based on students who graduated in the current year. This decision was made to avoid having those students who did not graduate count against a school twice in the accountability system, once for the Graduation Rate indicator, and a second time for the College and Career indicator.

US Department of Education directives indicate that for future report cards the college and career ready indicator must be computed using the graduation cohort (all students who should graduate in the current year), rather than just graduates.

There are 6 ways a student can demonstrate that they are college ready, and 4 ways a student can demonstrate they are career ready. Specifics of these criteria can be found in the Accountability Manual.

Students can demonstrate college readiness by obtaining a qualifying score on the ACT, SAT, Advanced Placement, Cambridge International, International Baccalaureate assessments, or through dual enrollment coursework. Students need meet the stated criteria in any one of these areas to be identified as college ready.

Students can demonstrate career readiness by obtaining a qualifying score on the ASVAB, a career ready to work assessment (WorkKeys or WIN), by completing a career pathway and earning an appropriate industry credential, or by successfully completing a state-approved work-based learning exit evaluation from an employer. Students need meet the stated criteria in any one of these areas to be identified as career ready.

Steps in creating the College and Career Ready Rate Point Total:

- Each student will be identified as College Ready.
- Each student will be identified as Career Ready.
- Each student will be identified as College/Career Ready if they are identified as satisfying either (1) or (2).
- The number of students identified as either College or Career Ready will be divided by the number of students a) who earned a high school diploma (2017-18), or b) are in the current year graduation cohort (2018-19).
- The percentage of students is rounded to tenths place (e.g., 70.1).
- Points are determined by dividing the percentage of students by 4.

The points obtained will be converted to Ratings using Table 40. The Ratings were developed with the following benchmarks in mind: The South Carolina ESSA plan identified a goal of 90% of students who graduate with a high school diploma college, career and citizenship ready by 2035. Because the goal is to be achieved by 2035, a school with an Excellent indicator for College & Career Readiness would be a high school where at least 80 percent of the high school graduates are college/career ready. A high school with an Unsatisfactory indicator for College & Career Readiness would be a high school where less than 50 percent of the high school graduates are college & career ready.

Table 40.
College & Career Readiness
Converting Percent of Students College and Career Ready to Ratings

Rating	Points	% Students College & Career Ready
Excellent	20.0 – 25.0	80.0% – 100%
Good	17.5 – 19.9	70.0% – 79.9%
Average	15.0 – 17.4	60.0% – 69.9%
Below Average	12.5 -14.9	50.0% – 59.9%
Unsatisfactory	0 – 12.4	0 to 49.9%

Summary of Point Totals – 2018 and 2019:

Presented in Table 41 are summary statistics of the College and Career indicator point totals for 2018 and 2019, and the effect size to provide insight into whether the difference between the mean point totals for 2018 and 2019 is large enough to suggest that schools overall changed in their College and Career indicator point totals.

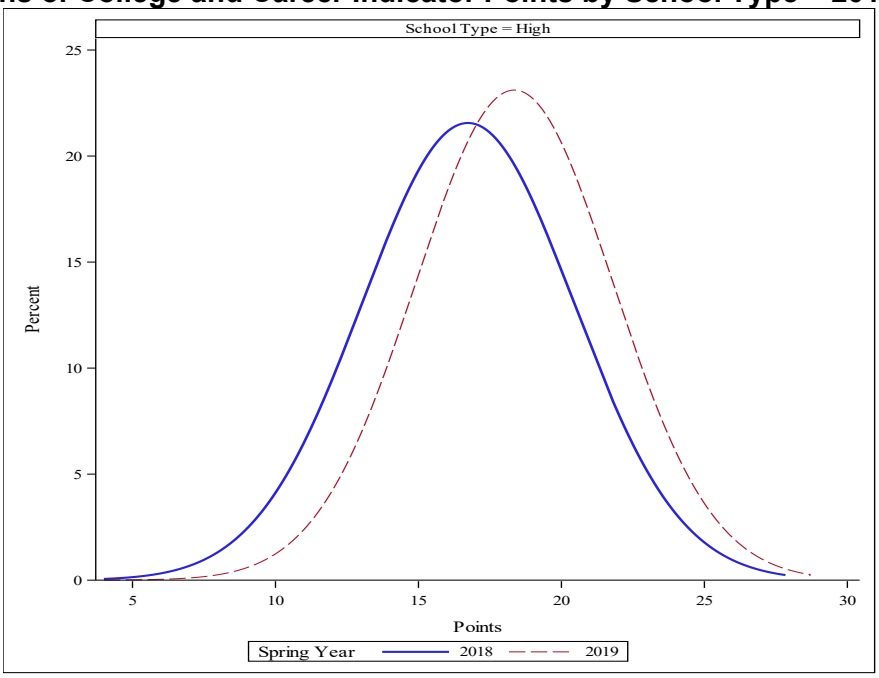
Table 41.
College and Career Point Total Summary Statistics – 2018 and 2019

Year	Number of Schools	Mean	Standard Deviation	Minimum	Maximum	Mean Difference	Effect Size
2018	227	16.7	3.7	5.0	25	1.65	0.47
2019	227	18.4	3.5	7.6	25		

The mean College and Career Ready point totals increased by 1.65 points from 2018 to 2019, and the effect size of 0.47 can be viewed as large. The effect size for the College and Career Ready indicator is the second largest of all indicators. Only the Student Engagement indicator has a larger effect size. The difference can be seen in Figure 9; the distribution of College and Career point totals is clearly higher on the point total scale. The magnitude of these differences suggests that the changes to the College and Career Ready indicator are larger than would normally be seen from year-to-year.

The concern that arises whenever changes to the point totals for an indicator appear to be extraordinarily large is that schools may have found ways to improve their point totals without improving how well they serve students with respect to the educational outcome being measured.

Figure 9
Distributions of College and Career Indicator Points by School Type – 2018 and 2019



College and Career Ready ratings for 2018 and 2019 are presented in Table 42, and changes in College and Career Ready ratings from 2018 to 2019 are presented in Table 43. Ratings increased dramatically from 2018 to 2019; there were 18 percent more schools with ratings of Excellent in 2019 than 2018, while the percentage of schools with a rating of Below Average or Unsatisfactory decreased by 11 percent.

Table 42.
Percentages of Schools Receiving Each College and Career Ready Indicator Rating: 2018 and 2019

Rating	2018	2019
Excellent	16	34
Good	30	30
Average	25	18
Below Average	17	12
Unsatisfactory	12	6
Total	228	227

Forty-eight (48) percent of schools increased their rating from 2018 to 2019 while only 7 percent decreased their rating – a net difference of 41 percent of schools increasing their rating.

Table 43.
Changes in College and Career Ready Ratings: 2018 and 2019
Number and Percentage (in parentheses)

Change in Rating					
-1	**0**	**1**	**2**	**3**	**Total**
16 (7)	97 (44)	78 (35)	24 (11)	5 (2)	220

Relationship to Other Indicators

The College and Career Ready indicator score correlates highly with the Academic Achievement and Preparing for Success indicators, and moderately with the English Learners' Progress and Graduation Rate indicators (Table 44). It is negatively correlated with the Student Engagement indicator.

Table 44.
Correlations of the College and Career Ready Indicator with All Other indicators by School Type

Year	Overall indicator	Academic Achievement	Preparing for Success	English Learners' Progress	Student Engagement	Graduation Rate
2018	0.85	0.81	0.83	0.42	-0.23	0.52
2019	0.86	0.78	0.77	0.35	-0.18	0.57

Consistency from 2018 to 2019

The correlation of College and Career Ready point totals for 2018 with Preparing for Success point totals from 2019 is .82. Schools are very consistency ordered on the College and Career Ready indicator from 2018 to 2019.

In sum, the CCR indicator coordinates well with other measures of the system, it correlates very highly with the Overall indicator and measures of Academic Achievement, and moderately with English Learners' Progress and Graduation Rate. It can be viewed as a constructive element in the accountability system.

Indicator: Overall

Purpose:

To combine all indicators appropriate for each school type (Elementary, Middle, and High) into a single measure. As described in state law the overall indicator must be expressed on a 100 point scale, and the ratings assigned to schools based on this indicator are: Excellent, Good, Average, Below Average, and Unsatisfactory.

Data: Data for the overall indicator comes from each of the separate indicators by school type.

Students Included in the rating:

There is not a criterion for student inclusion in the calculations of the Overall indicator. Rather, there are criteria unique to each indicator which are described for each indicator in this document, which borrows heavily from the Accountability Manual. For a school to have points assigned for any indicator (including the overall indicator) there must be 20 or more students contributing to the calculation of the score for that indicator.

Computation:

The Overall point total is the sum of the points obtained from the separate indicators, with the point totals for each indicator described in Table 45.

Approximately 50 percent of schools do not have 20 or more students contributing to the calculation of the indicator for English Learners' Proficiency (EL), and therefore do not receive a score for this indicator. When this occurs the 10 points for elementary and middle schools are reassigned to the Academic Achievement (5 points) and the Student Progress (5 points) indicators. For high schools the 5 points associated with the EL indicator are assigned to the Academic Achievement indicator.

Table 45.
Overall Indicator Point Totals by School Type

Indicator	Elementary/Middle Schools		High Schools	
	Without ELs	With ELs	Without ELs	With ELs
Academic Achievement	40	35	30	25
Preparing for Success	10	10	10	10
Student Progress All students & Lowest 20% of students	40	35	n/a*	n/a
Student Engagement	10	10	5	5
English Learners' Proficiency (EL)	0	10	0	10
Graduation Rate	n/a	n/a	30	25
College & Career Ready	n/a	n/a	25	25
TOTAL	100	100	100	100

*** n/a: Not Applicable**

Once the point total for the Overall indicator are determined, they are converted to school ratings using Table 46.

Table 46.
Converting Overall Point Totals to Ratings

Rating	Elementary	Middle	High
Excellent	61-100	56-100	67-100
Good	53-60	48-55	60-65
Average	42-52	36-47	49-59
Below Average	34-41	29-35	38-48
Unsatisfactory	0-33	0-28	0-37

Summary of Point Totals – 2018 and 2019:

Presented in Table 47 are summary statistics of the overall point totals for 2018 and 2019, and effect sizes to provide insight as to whether the differences between the mean point totals for 2018 and 2019 are large enough to suggest that schools changed in their Overall school ratings. Figure 10 presents a visual display of the distributions of overall point totals by school type.

Table 47.
Overall Point Total Summary Statistics – 2018 and 2019

School Type	Year	Number of Schools	Mean	Standard Deviation	Minimum	Maximum	Mean Difference	Effect Size*
Elementary	2018	660	48.6	11.4	11.6	86.5	2.02	0.17
	2019	664	50.6	11.3	19.7	87.8		
Middle	2018	321	43.6	12.1	15.2	79.7	4.77	0.40
	2019	323	48.2	10.7	14.6	84.6		
High	2018	227	56.5	12.4	24.3	96.9	2.99	0.24
	2019	227	59.5	12.3	25.1	97.5		

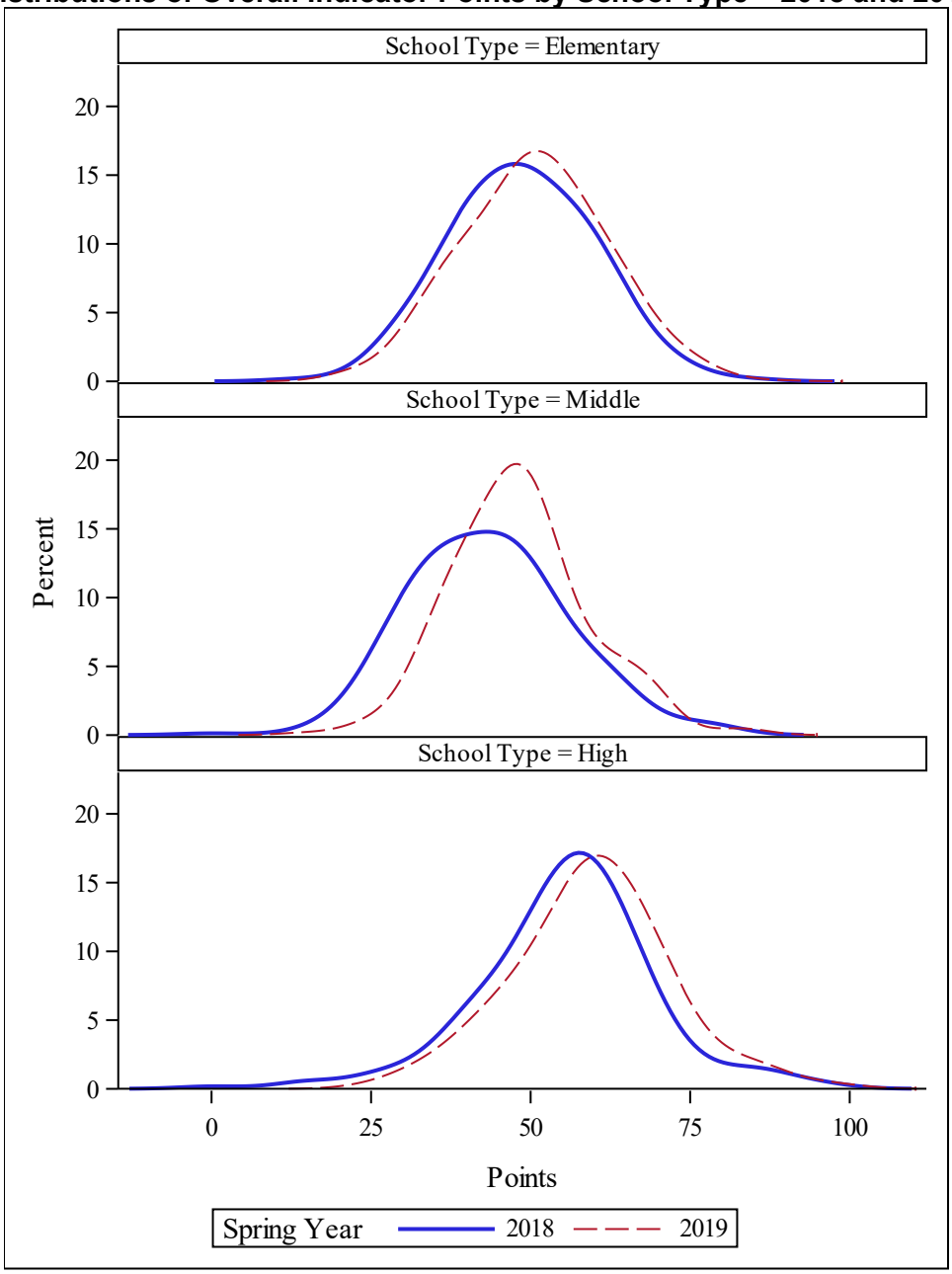
* Statistically significant at .05.

As prescribed by law, the Overall indicator is to be expressed on a 100-point scale. Considering scores obtained in 2018 and 2019, approximate ranges of points by school type are; 10 to 90 for elementary schools, 10 to 85 for middle schools, and 25 to 100 for high schools. The 100-point range appears to be utilized fairly completely for all school types.

The difference in mean Overall point totals from 2018 to 2019 are: 2.0 points for elementary schools, 4.7 points for middle schools, and 3.0 points for high schools. The effect sizes for these mean differences are 0.18, 0.40, and 0.24, respectively. The effect size for elementary schools is moderate, while the effect sizes for middle and high schools are large, though the effect sizes for elementary and high schools are more similar to one another than to middle schools.

Figure 10 presents the differences between the 2018 and 2019 Overall point distributions visually, with the 2019 distributions higher on the point scale than the 2018 distributions for all three school types. The visual impression of the differences in distributions presented in Figure 10 are consistent with the effect sizes noted above: the difference for elementary schools is moderate, the difference for high schools is slightly larger, and the difference for middle schools is largest.

Figure 10
Distributions of Overall Indicator Points by School Type – 2018 and 2019



These point totals ultimately result in differences in the distributions of ratings for 2018 and 2019, which are presented in Table 48. To examine differences in the distributions by year, consider the percentage of schools with either a Good or Excellent rating. For elementary schools the percentage increases 7.7 percent, for middle schools the percentage increases 15.9 percent, and

for high schools the percentage increases 11.4 percent. The changes are consistent with the pattern of mean point total gains by school type. It is noteworthy that high schools had the largest gain in the percentage of schools with a rating of Excellent (10.1 percent) compared to middle schools (4.8 percent) and elementary schools (3.5 percent). This somewhat anomalous outcome results from separate score ranges defining each rating for each school type.

Table 48.
Percentages of Schools Receiving each Overall Indicator Rating: 2018 and 2019 by School Type

Rating	Elementary		Middle		High	
	2018	2019	2018	2019	2018	2019
Excellent	15.2	18.7	15.9	20.7	15.9	26.0
Good	20.5	24.7	19.6	30.7	23.4	24.7
Average	36.5	34.0	36.8	37.5	32.6	27.8
Below Average	18.5	16.7	18.4	9.0	20.3	17.2
Unsatisfactory	9.4	5.9	9.4	2.2	7.9	4.4
Total	660	664	321	323	227	227

Viewing the distributions of ratings for 2018 and 2019 is a partial picture of how scores changed from 2018 to 2019. Table 49 presents a summary of the changes in ratings from 2018 to 2019 for individual schools. For all school types the most frequently occurring change was no change (40 percent of elementary schools, 38 percent of middle schools, and 56 percent of high schools). The percentages of schools that had a lower rating was smaller for all school types than the percentage of schools that had a higher rating: Only 24 percent of elementary schools decreased their rating while 37 percent increased their rating, fourteen (14) percent of middle schools decreased their rating while 47 percent increased their rating, and only 7 percent of high schools decreased their rating while 37 percent increased their rating. These results are consistent with the increase in overall indicator scores and ratings presented in Tables 48 and 48, and in Figure 10.

Table 49.
Changes in School Ratings: 2018 and 2019 by School Type
Number and Percentage by School Type (in parentheses)

School Type	Change in Rating								
	-3	-2	-1	0	1	2	3	4	Total
Elementary	4 (1)	25 (4)	122 (19)	257 (40)	170 (26)	55 (9)	11 (2)	1 (0)	645
Middle	1 (0)	4 (1)	40 (13)	117 (38)	101 (33)	40 (13)	4 (1)	0 (0)	307
High	0 (0)	0 (0)	15 (7)	123 (56)	78 (35)	4 (2)	0 (0)	0 (0)	220

Relationship to Other Indicators

How the Overall indicator relates to all indicators that are a part of it is examined through the correlations of the point total for the overall indicator with the points obtained for each indicator (Table 50). Several features of these data are evident in Table 50. First, for elementary and middle schools the correlations of Academic Achievement with the overall indicator are lower than for high school. This occurs because high schools do not have a Student Progress component in their overall indicator. Second, the Student Engagement survey correlates more highly with the overall indicator for elementary schools, followed by middle schools. For high schools the correlation is negative, that is, in high schools where students self-report higher levels of student engagement, all other measures of the accountability system decrease. Clearly, the current measure of student engagement has undesirable results.

Table 50.
Correlations of the Overall Indicator with All Other Indicators – by School Type

School Type	Year	Academic Achievement	Preparing for Success	Student Progress	English Learners	Student Engagement	Grad Rate	College /Career Ready
Elementary	2018	0.53	0.70	0.71	0.47	0.39	.	.
	2019	0.53	0.75	0.71	0.50	0.41	.	.
Middle	2018	0.31	0.59	0.83	0.35	0.23	.	.
	2019	0.39	0.68	0.77	0.54	0.11	.	.
High	2018	0.88	0.86	.	0.56	-0.08	0.85	0.85
	2019	0.88	0.85	.	0.58	-0.07	0.83	0.86

Consistency from 2018 to 2019

The stability of the Overall indicator from 2018 to 2019 is represented by the correlations between the Overall point totals for the two years (Table 51). There are two perspectives from which to view these data. One is that very high correlations from year to year are desirable because schools are not likely to change much. The other perspective is that with high correlations schools are not likely to be able to demonstrate change over time. The difficulty with the latter argument is that is essentially making the argument that correlation implies causation, which is incorrect.

Table 51.
Correlations of the Overall Indicator: 2018 with 2019 - by School Type

School Type	Correlation
Elementary	0.60
Middle	0.67
High	0.93

Internal Consistency Reliability:

Internal consistency reliability (coefficient alpha) is one measure of how the different elements of a measure work together to create an effective composite score. Presented in Table 52 are the

internal consistency reliabilities for the Overall indicator by school type, the correlation of each indicator with the Overall indicator, and what the internal consistency reliability would be if a measure were to be deleted from the Overall indicator.

The internal consistency reliability for high schools (.72) is considerably higher that for either elementary schools (.40) or middle schools (.25). As has been discussed previously, the Student Progress indicator, by design, has very low correlations with the measures of Academic Achievement and Preparing for Success. The low correlation between these indicators lowers the internal consistency reliability of the overall measure substantially.

For middle and high schools the largest increase in internal consistency reliability comes if the student engagement survey were deleted. This is true of elementary schools also, though not as dramatically. The inadequacies of the current student engagement measure have been discussed previously, and are evidenced again here by the negative correlations with the overall indicator.

As the severe limitations of the student engagement survey have been discussed here, the effect of removing the Student Engagement indicator on the reliability of the Overall indicator can be see in Table 52. For elementary schools, the internal consistency reliability of the Overall indicator increases from .40 to .41, for middle schools the internal consistency reliability increases from .25 to .35, and for high schools the internal consistency reliability increases from .72 to .78.

The previous version of the accountability system (2000 through 2014) provided separate scores for school status (Academic Achievement) and growth (Student Progress). By separating Student Progress from Academic Achievement several desirable outcomes are realized. The Academic Achievement component is more constant from year to year and is more clearly interpretable as the overall level of student achievement. As the Student Progress indicator correlates lower from year to year, the changes in the overall indicator are more affected by changes in the Student Progress indicator than Academic Achievement. Separating indicators makes their distinct functions for school accountability more transparent.

Table 52.
Internal Consistency Reliability (Coefficient Alpha) of the Overall Indicator in 2019

Indicator	Elementary		Middle		High	
	Correlation with Total	Alpha with indicator Deleted	Correlation with Total	Alpha with indicator Deleted	Correlation with Total	Alpha with indicator Deleted
Coefficient Alpha with No indicators Deleted	**.40**		**.25**		**.72**	
Academic Achievement	0.31	0.26	0.17	0.16	0.79	0.56
Preparing for Success	0.57	0.30	0.47	0.13	0.84	0.66
Student Progress	0.20	0.40	0.13	0.25	n/a	n/a
English Learners	0.36	0.35	0.34	0.17	0.34	0.73
Student Engagement	0.10	0.41	-.14	0.35	-.19	0.78
Graduation Rate	n/a	n/a	n/a	n/a	0.59	0.71
College / Career Ready	n/a	n/a	n/a	n/a	0.70	0.62

Effective Weights of the Indicators

The current system has the point totals as presented in Table 53. These point totals can be interpreted as the intended weights for each indicator in the accountability system, which must total 100. For elementary and middle schools, Student Achievement and Student Progress are weighted equally, and together account for 70 points when a school has at least 20 number of students who are English Learners, and 80 points when a school has less than 20 English Learners for this indicator to be included as a measure for a school.

Table 53.
Points for Each Indicator (Intended Weights) by School Type

Indicator	Elementary/Middle Schools		High Schools	
	With EL	Without EL	With EL	Without EL
Student Achievement	35	40	25	30
Preparing for Success	10	10	10	10
Student Progress	35	40	n/a	n/a
English Learners' Progress	10	n/a	10	n/a
Graduation Rate	n/a	n/a	25	30
College/Career Ready	n/a	n/a	25	25
Student Engagement	10	10	5	5

The actual weights of the indicators depend on two factors, the variability of each indicator and the correlations (covariances) between the indicators. The process for determining the effective weights of a composite score is described in the 3rd edition of Educational Measurement (Linn, 1989, p.230). Using this methodology, the weights presented in Table 54 were obtained.

Table 54.
Effective Weights by School Type

Indicator	Elementary Schools		Middle Schools		High Schools	
	With EL	Without EL	With EL	Without EL	With EL	Without EL
Student Achievement	36	17	35	19	31	27
Preparing for Success	9	9	8	9	11	10
Student Progress	37	59	42	69	n/a	n/a
English Learners' Progress	6	n/a	9	n/a	8	n/a
Graduation Rate	n/a	n/a	n/a	n/a	28	43
College/Career Ready	n/a	n/a	n/a	n/a	24	20
Student Engagement	12	15	6	3	-2	0

Fifty-three (53) percent of elementary schools and 54 percent of middle schools have a sufficient number or English Learners for the English Learners' Progress indicator to be a part of the Overall indicator. For these schools, the effective weights are similar to the intended weights. For Student Achievement the effective weights are within 1 point of the intended weight of 35 points, and the effective weights for Student Progress (37 and 42, respectively) are near the intended weights of 35 points. The effective weights for Preparing for Success, English Learners' Progress and Student Engagement are also close to the intended 10 points weights.

When schools do not have a sufficient number of English Learners for this indicator to be computed the effective weights for Student Achievement and Student Progress are not close to the intended weights; Student Progress has much larger effective weights (59 for elementary schools and 69 for middle schools), and Student Achievement has much smaller effective weights (17 for elementary schools and 19 for middle schools). The weights for Student Engagement are 15 for elementary schools and 3 for middle schools; for elementary schools the effective weight is 1.5 times the intended weight, and for middle schools the effective weight is one-third the intended weight. These weights should not be regarded as matching the intended weights, even though their absolute differences with the intended weights (10 points) are only 5 and 7 points, respectively. The Preparing for Success indicator is the only indicator that has effective weights that closely match the intended weights of 10 points (9 for both elementary and middle school).

For high schools the effective weights match the intended weights for most indicators. The Student Engagement indicator has weights of -2 when schools have a sufficient number of English Learners for this indicator to be included, and a weight of 0 when schools do not have a sufficient number of English Learners. The negative weight indicates that the Student Engagement indicator operates contrary to all other indicators.

When there are not a sufficient number of students in a high school to compute the English Learners indicator, the effective weight for the Graduation Rate indicator increases from 3 points more than the intended weight to 13 points more than the intended weight. In this circumstance the effective weights for Student Achievement, Preparing for Success, and College/Career Ready all decrease slightly; no one indicator has a more substantial decrease in its weight.

The differences between the effective weights for schools that have a sufficient number of students to have an English Learners' Progress indicator and those that do not was unexpected, and deserves some explanation. As already stated, effective weights depend largely upon the variabilities of the measures being combined. Comparisons of the standard deviations (a measure of variability) of the indicators for these two groups of schools can shed light on how these differences occur. Table 55 presents the standard deviations of each indicator for schools with and without the English Learners' Progress indicator for all school types.

Table 55.
Standard Deviations of Each Indicator for schools with and without the English Learners' Progress Indicator by School Type

Indicator	Elementary		Middle		High	
	With EL	Without EL	With EL	Without EL	With EL	Without EL
Student Achievement	5.2	3.0	4.6	3.1	3.4	4.9
PFS	1.4	1.6	1.2	1.6	1.3	1.8

Indicator	Elementary		Middle		High	
	With EL	Without EL	With EL	Without EL	With EL	Without EL
Student Progress	6.1	7.0	5.7	7.4	n/a	n/a
Graduation Rate	n//a	n/a	n/a	n/a	3.6	7.8
CCR	n/a	n/a	n/a	n/a	2.9	4.0
Student Engagement	3.1	3.2	2.1	2.3	0.8	1.1

For elementary and middle schools, two changes in the standard deviations are evident. First, the standard deviation of the Student Achievement indicator for schools that do not have the English Learners' Progress indicator in their Overall score is substantially smaller (roughly three-fifths (.6) that of schools that do have the EL indicator). At the same time the standard deviation for the Student Progress indicator is larger for schools that do not have the English Learners' Progress indicator included in their Overall score (7.0 vs 6.1 for elementary schools, and 7.4 vs 5.7 for middle schools). The standard deviations for the Preparing for Success indicator are also slightly larger for schools without the English Learners' Progress indicator, for both elementary and middle schools. As a result the weight of the Student Progress indicator increases substantially, and the effective weight of the Student Achievement indicator decreases substantially for schools that do not have the English Learners' Progress indicator.

For high schools, the standard deviations for Student Achievement and College and Career Ready indicators was approximately 1.4 times as large for schools that did not have the English Learners' Progress indicator as a part of their Overall indicator compared to schools that did have the English Learners' Progress indicator. At the same time, the standard deviation for the Graduation Rate indicator was 2.2 times higher for schools that did not have the English Learners' Progress indicator as a part of their Overall indicator. As a result, the effective weight for the Graduation Rate indicator increased from 28 to 43 points, while the effective weights for the Student Achievement indicator decreased from 31 to 27 points and the effective weight for the College and Career Ready indicator decreased from 24 to 20 points.

What do these effective weights imply for the accountability system?

First, for schools that have the English Learners' Progress indicator as a part of their Overall indicator score, the effective weights are reasonably close to the intended weights. This occurred because the numerical processes of creating scores for each indicator utilized, as much as possible, the entire range of points the indicator was defined to have. Had scores for the Student Achievement indicator, for example, only ranged from 28 to 40 points (70 to 100 percent of the total defined points) while all other indicators used the entire range of scores, its effective weight would have been substantially less. Consistent with this reasoning, any indicator that did not utilize the entire range of intended points would not have had the intended weight.

Second, although effective weights differ based on the presence of the English Learners' Progress indicator as a part of a school's Overall indicator score, these differences are not characteristics of the accountability system measures that can be controlled; for whatever reason, the variabilities for each indicator differ for these two groups of schools. This analysis simply reports these difference are present, and notes that in the current accountability system the effective weights for Student Progress (for elementary and middle schools) and Graduation Rate

(for high schools) are substantially larger for schools that do not have the English Learners' Progress indicator as a part of their Overall indicator.

Are ratings for school with a sufficient number of students to have an English Learners' Progress indicator comparable to the ratings for schools that do not have as many English Learners?

The ranges of points associated with each rating were developed separately for schools that have, and schools that do not have a sufficient number of students to have the English Learners' Progress indicator as a part of their Overall rating. This promotes the comparability of the ratings for all schools.
This analysis has brought the importance of the size of the English Learners population to light as an important characteristic of schools that should be considered for any process that makes school comparisons. This issue can be examined in terms of the current accountability system, and be considered as a factor for future versions of the accountability system.

As a final note, the deficiencies of the Student Engagement indicator were noted previously, and are evident again in the analysis of the effective weights of the components of the accountability system. The effective weights for the Student Engagement indicator are largest for elementary schools (12 and 15 points, respectively), decrease for middle schools (6 and 3 points, respectively), and become zero (0) for high schools. Especially for high schools, the Student Engagement indicator has no relevance in the accountability system except that it adds error; that is, the scores from the Student Engagement indicator add to Overall indicator point totals in a random fashion, they do not relate to any measure of school quality.

Discussion:

There are both positive and negative points to be made regarding the current Overall indicator. The positives are that most of the 100 point scale is utilized. Because the overall indicator is an average of 5 indicators for elementary and middle schools, and 6 measures for high school, the only way a school could obtain the maximum point total of 100 is for the school to obtain the highest score in all measures. From this perspective, the actual ranges of scores (10 to 90 for elementary, 10 to 85 for middle, and 25 to 100 for high) are reasonable. Because the Student Progress and Student Engagement indicators have very low correlations with the academic indicators it is not likely that there will be schools receiving the maximum number of points on all of these areas, making it unlikely that any school will receive the maximum number of points for the Overall indicator.

An example of this same phenomena is in the scoring of the decathlon. The decathlon contains 10 events, each of which is worth 1,000 points, giving a maximum score of 10,000 points. The highest scores recorded in the decathlon to date are approximately 8,500 points; this occurs because contestants who have the highest scores in running events are not as likely to also have the highest scores in strength events of the shot put or the discus; it is difficult for any one contestant to excel in all events. Recall that on our 100 point scale, the maximum scores for elementary and middle schools are 85 and 90 points, respectively, which are comparable to the relative maximum for the decathlon. It is difficult for any one school to excel in all of the measures of the accountability system, especially when the Student Progress indicator is designed to have as low a correlation as possible with the Student Achievement indicator.

The Academic Achievement and Preparing for Success indicators appear to provide good measures of the current levels of achievement. Awarding points for each of 4 levels (SC Ready) or 5 levels (EOCEP) promotes schools attending to the education of all of their students rather

than one group of “bubble kids”. The criticism that results from this process is that the computation is too complex. As educators, we strive to teach students to perform multi-step processes, paying attention to details in the completion of these tasks. The computations involved in creating the Academic Achievement and Preparing for Success indicators involve: multiplication, addition, division, and rounding.

The Student Progress indicator is based on student scores from SC Ready and utilizes a model with clearly defined inputs. It has two particular limitations from the perspective of schools; schools cannot perform analyses to obtain their ratings, and it does not provide a framework that enables teachers to establish growth targets for students. At the school level, because it is minimally correlated to measures of achievement is commendable, regardless of the achievement levels of students in a school, every school can demonstrate high growth of its students.

The English Learners’ Progress indicator, the Graduation Rate indicator, and the College and Career Ready indicator all appear to provide reasonable information regarding their intended goal so that schools can use these measures as indicators of success in these areas. In addition, they contribute constructively to the overall measure of a school.

The current measure for Student Engagement is detrimental to the overall indicator. It is negatively correlated to the overall indicator score for middle and high schools, and has a very low correlation for elementary schools.

Finally, the accountability system components contribute to the Overall indicator as intended, as measured by the assignment of points, for schools that have 20 or more English Learners. When schools have fewer than 20 English Learner, the actual (effective) weights do not match the intended weights. This particular aspect of the current accountability system cannot be changed, but it worth noting. It has implications for a future accountability system that may allow for different combinations of indicators to create overall ratings; the comparability of ratings based on different combinations of indicators may be in question.

Section IV: Summary

Any accountability system in South Carolina is subject to two masters: state and federal requirements. The current system meets the requirements of these two masters reasonably well. The accountability system is more focused on measures of academic proficiency and progress, largely because valid assessment of other elements of the Profile of the South Carolina Graduate are not possible. The current Student Engagement indicator is being discontinued. The current system weights the indicators as intended when schools have 20 or more English Learners, but not for schools that have fewer than 20 English Learners. The following summarizes these, and other aspects of the accountability system:

1) The accountability system was created to meet the requirements of South Carolina state law and federal requirements as proscribed by ESSA, with the goal of assessing the Profile of the South Carolina Graduate.
2) The original ratings and ranges of scores were developed using criteria appropriate for each indicator, and to be able to observe changes over time, the score ranges that define each rating were to remain constant for a 5-year period.
3) Not all Elements of the Profile are measured, particularly elements of World Class Skills and Life and Career Characteristics.
4) Reviews of the literature indicate that for most elements of the World Class Skills and Life and Career Characteristics, recommendations are to assess using several methods and create a consensus measure based on the separate measures. Consequences of these processes are that:
    a. More time for assessment would be necessary.
    b. The results of repeated measurement of the same trans-academic elements in successive years are unknown.
5) Most measures currently in place work to provide a meaningful measure of school performance.
6) The Student Engagement indicator is the one measure that does not function constructively, but it has been discontinued.
7) The Student Progress indicator is, by design, not correlated with measures of achievement status. Including the Student Progress indicator in an Overall indicator score decreases internal consistency reliability.
8) A major limitation of the Student Progress indicator is that teachers and students cannot use it to set annual growth targets unique to each student.
9) For schools that have 20 or more English Learners measured for accountability in their school, the indicators contribute to the overall score as intended by the relative point totals.
10) For schools that have fewer than 20 English Learners, the indicators do not contribute to the overall score as designed by the relative point totals.
11) For Elementary and Middle Schools, the Student Progress indicator in the Overall indicator has the largest effect on the Overall indicator. Because the Student Progress indicator is less stable over time, year-to-year changes may occur, with schools not understanding why.
12) Designing each indicator so that the complete range of its intended points are utilized helps ensure that the effective weights of the indicators match the intended weights.

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The SC Education Oversight Committee is an independent, non-partisan group made up of 18 educators, business persons, and elected leaders. Created in 1998, the committee is dedicated to reporting facts, measuring change, and promoting progress within South Carolina's education system.

ADDITIONAL INFORMATION
If you have questions, please contact the Education Oversight Committee (EOC) staff for additional information. The phone number is 803.734.6148. Also, please visit the EOC website at www.eoc.sc.gov for additional resources.

EDUCATION OVERSIGHT COMMITTEE

July 1, 2021 through June 30, 2022

Tentative Meeting Schedule

Subcommittees	Full Committee
	August 9, 2021
September 20, 2021	
	October 11, 2021
October 18, 2021*	
November 15 2021	
December 6, 2021 *	
	December 13, 2021
January 24, 2022	
	February 14, 2022
March 21, 2022	
	April 11, 2022
May 16, 2022	
	June 13, 2022

* The EIA and Improvement Mechanisms Subcommittee will tentatively meet in October, November and December, if needed, for EIA budget hearings and reviews.