AGENDA

SPECIAL CALL
Full Education Oversight Committee Meeting
Monday, January 11, 2021
Blatt Building, Room 110
1:00 P.M.

I.   Welcome ....Ellen Weaver

II.   <u>Information Item</u>

        Review of Remote Learning, Part 1................................. Matthew Ferguson

III.   Adjournment

Ellen Weaver
CHAIR

Bob Couch
VICE CHAIR

Terry Alexander

April Allen

Melanie Barton

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Raye Felder

Barbara B. Hairfield

Greg Hembree

Kevin L. Johnson

Sidney Locke

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Neil C. Robinson, Jr.

Jamie Shuster

Molly Spearman

Patti J. Tate

Scott Turner

C. Matthew Ferguson, Esq.
EXECUTIVE DIRECTOR

The South Carolina Education Oversight Committee's Review of Remote Learning's Impact on South Carolina's Students, Part 1

Recognizing the "unprecedented upheaval to the education of students in every corner of the state" and the need for a data driven approach to the state's response to COVID-19, the Education Oversight Committee (EOC) staff has undertaken a thorough review of the opportunities for innovation, lessons learned for future planning, and barriers to the success during emergency remote learning.

Specifically, EOC staff report includes the perspective of a variety of stakeholders to consider the following questions:

1) What were obstacles and innovations that impacted student learning?

2) What was the impact on school finances, to include expenses related to the pandemic as well as potential costs to prepare for future disruptions?

3) What are anticipated plans to mitigate lost instructional time?

4) What best practices can be gleaned from our state and other states?

Review of Remote Learning's Impact on Students in South Carolina

In early March 2020, <u>787,069 students</u> filled the classrooms and buildings of public schools across South Carolina.[1] Buses traversed the nooks of every county of the state, and <u>lunches</u> were served daily to over 473,000 students.[2] School buildings bustled with activity and laughter. A buzz of teaching and learning reverberated through the halls. Preparations were being made for end of year celebrations and assessments.

March 2020 marked a turning point for education both nationally and in South Carolina. On March 4, 2020, the Northshore School District in Bothell, Washington became the first U.S. district to close during the pandemic. When the School District of Philadelphia, PA initially closed, it declared that they would not require distance learning programs for students because it would not be possible for them to do so and provide a free appropriate public education (FAPE) to all students.[3] The United States Department of Education quickly clarified that during a pandemic, schools should try to continue some form of distance learning operation, and while they should try to meet the needs of all students, barriers to meeting those needs should not prevent schools from attempting anything at all.[4]

Throughout the middle weeks of March, as COVID-19 spread widely in the U.S., more cities and states began closing schools. On March 15, 2020, as a result of the global COVID-19 pandemic, South Carolina schools closed. It was hoped that school closings would be a temporary measure to help flatten the curve of the COVID-19 pandemic. However, on April 22, 2020, it was announced that school buildings would remain closed for the remainder of the year. South Carolina classrooms were effectively shuttered for the entire last quarter of the 2019-2020 school year.

Recognizing that the entire education system was required to transform over a weekend in mid-March, educators at all levels of the system made valiant efforts. They took swift action implementing necessary measures to ensure that children would continue to be taught even without the benefit of face-to-face instruction and brick-and-mortar classrooms. By late March, every state recognized that school systems would require

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[1] South Carolina Department of Education. (2020). Active Student Headcounts. Retrieved December, 2020, from https://ed.sc.gov/data/other/student-counts/active-student-headcounts/

[2] South Carolina Department of Education. (n.d.). National School Lunch Program. Retrieved December, 2020, from https://ed.sc.gov/districts-schools/nutrition/meal-programs/national-school-lunch-program/

[3] Wolfman-Arent, A., & Mezzacappa, D. (2020, March 18). Philly schools forbid graded 'remote instruction' during shutdown for equity concerns. WHYY. https://whyy.org/articles/philly-schools-forbid-remote-instruction-during-shutdown-for-equity-concerns/

[4] United States Department of Education, Office for Civil Rights, & Office of Special Education and Rehabilitative Services. (2020). Supplemental Fact Sheet Addressing the Risk of COVID-19 in Preschool, Elementary and Secondary Schools While Serving Children with Disabilities. https://www2.ed.gov/about/offices/list/ocr/frontpage/faq/rr/policyguidance/Supple%20Fact%20Sheet%203.21.20%20FINAL.pdf

additional guidance for addressing school closures, and all 50 state education departments (SDEs) published either a designated COVID-19 web page or a section on their home page.[5]

The implications for South Carolina's education system were tremendous. From March 2020 to July 2020, the South Carolina Department of Education (SCDE) published 75 separate memoranda offering guidance to districts on issues related to the COVID-19 closures (list of SCDE COVID memos). The topics of this guidance were far reaching and ranged from how to code student attendance during a pandemic to the availability of milk for the lunches sent home to students.

On March 23, 2020, SCDE communicated via memo that the U.S. Department of Education approved a waiver for Spring 2020 assessments.[6] On March 24, 2020, the Chair of the South Carolina Education Oversight Committee (EOC), sent a letter to EOC members acknowledging and thanking educators at all levels for their tireless efforts on behalf of students. The memo further recommended the suspension of school report card ratings in South Carolina for the 2019-2020 school year due to data gaps created by the COVID-19 pandemic and resulting federal waiver. The EOC unanimously approved this recommendation at its scheduled April 20, 2020 meeting.

Though all states received an initial federal waiver to bypass requirements around statewide assessments, nearly all state departments of education advocated some form of learning should continue. Of states that published sample schedules or guidance on daily plans, most recommended three to four hours of learning activities for older students (including time for physical exercise and art), with shorter schedules for younger students. Massachusetts offered the blanket guidance that schools should prepare learning activities that would take up about half of a typical school day. [7] Kansas recommended limits that expanded by grade band: "Pre-K: 30 minutes; Grades K-1: 45 minutes; Grades 2-3: 60 minutes; Grades 4-5: 90 minutes; Grades 6-12: 30 minutes per teachers (3 hours max in a day)." [8]

Originally, the plans for emergency remote learning in South Carolina followed the 200 minutes of daily instruction utilized during the EOC's eLearning Pilot Project and as

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[5] Justin Reich, et. al. (2020) Remote Learning Guidance from State Education Agencies during the COVID-19 Pandemic: A First Look. Retrieved from osf.io/k6zxy/

[6] South Carolina Department of Education. (2020, March 23) Spring 2020 Assessments and Accountability Updates Memorandum. Retrieved from https://ed.sc.gov/newsroom/school-district-memoranda-archive/spring-2020-assessment-and-accountability-updates/spring-2020-assessment-and-accountability-updates-memo/

[7] Massachusetts Department of Elementary and Secondary Education. (2020). Remote Learning Recommendations During COVID-19 School Closures. http://www.doe.mass.edu/covid19/2020-0326remote-learning.docx

[8] Kansas Department of Education. (2020). Continuous Learning Task Force. https://www.ksde.org/Portals/0/Communications/Publications/Continuous%20Learning%20Task%20Force%20Guidance.pdf?ver=2020-03-19-084325-833

outlined in Section 59-1-425 of the South Carolina Code of Laws. The law defines an instructional day for elementary students to be a minimum of 5.5 hours a day and for secondary students, 6.0 hours. Regulation 43-172 stipulates that "a pupil shall maintain membership in a minimum of 200 minutes of daily instruction or its equivalency for an annual accumulation of 36,000 minutes." To become a part of the EOC's eLearning Pilot, districts certified that each eLearning day would be 5.5 hours for students in kindergarten through grade 8 and 6.0 hours for students in grades 9-12, or a minimum of 200 minutes of daily instruction. Teacher hours should be 5.5 hours for students in kindergarten through grade 8 and 6.0 hours for 9-12 students. Lessons provided would require a minimum of 200 minutes of instruction (video, reading, listening); the remainder of the time is for student engagement, studying and work completion, etc.

On April 13, 2020, the SCDE revised the guidance to districts on the requirements for the instructional day in a memorandum titled Emergency Distance Learning Guidance Revisions.[9] Instead of 200 minutes of instruction per day, the following expectations were established for the instructional day in South Carolina during emergency remote learning:

Table A1. South Carolina Requirements for the Instructional Day in Remote Learning

Grade Level	Minimum	Maximum	Recommended Length of Sustained Attention
PreK	20 minutes/day	60 minutes/day	3-5 minutes
K	30 minutes/ day	90 minutes/day	3-5 minutes
1-2	45 minutes/day	90 minutes/day	5-10 minutes
3-5	60 minutes/day	120 minutes/day	10-15 minutes
6-8	Class: 15 minutes/day Total: 90 minutes/day	Class: 30 minutes/day Total: 180 minutes/day	1 subject area or class
9-12	Class: 20 minutes/day Total: 120 minutes/day	Class: 45 minutes/day Total: 270 minutes/day	1 subject area or class

During the period that became known as "emergency remote learning" in South Carolina, students began receiving instruction at home through prepared packets of work, online lessons, or a blended dose of both. At the beginning of school closures, South Carolina school districts were required to submit a remote learning plan of services to the SCDE for review. Based on a review of these submitted plans, SCDE

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[9] South Carolina Department of Education. (2020, April 13) Emergency Distance Learning Guidance Revisions Memorandum. Retrieved from https://ed.sc.gov/newsroom/school-district-memoranda-archive/emergency-distance-learning-guidance-revisions/emergency-distance-learning-guidance-revisions-memo/

categorized 19 school districts as providing instruction virtually through the use of technology, 43 districts as providing instruction through a blended model of virtual and instructional printed packets, and 17 districts that were providing printed instructional packets to students and families.

Despite the efforts of educators at all levels, there seemed to be consensus that something was missing in remote learning. Parents, students, and educators expressed concern during the spring of 2020 about learning loss and where students would be academically when they were able to return to school. Many seemed to long for a return to school buildings and a more traditional setting.

Before the April 2020 EOC meeting, Senator Greg Hembree, Chair of the South Carolina Senate Education Committee, sent a letter to EOC Chair Ellen Weaver and state leaders. In the letter, he recognized the "unprecedented upheaval to the education of students in every corner of the state" and clearly articulated the need for a data driven approach to the state's response. Accordingly, he requested from the EOC staff a thorough review of the opportunities for innovation, lessons learned for future planning, and barriers to the success of this necessary endeavor.

Specifically, he directed the EOC staff to produce a report to include the perspective of a variety of stakeholders to consider the following questions:

1) **What were obstacles and innovations that impacted student learning?**

2) **What was the impact on school finances, to include expenses related to the pandemic as well as potential costs to prepare for future disruptions?**

3) **What are anticipated plans to mitigate lost instructional time?**

4) **What best practices can be gleaned from our state and other states?**

To address these questions and determine the impact of emergency remote learning on the students of South Carolina, EOC staff conducted interviews with staff members in 15 districts across South Carolina, reviewed the literature and remote learning guidance from state departments of education (SDEs), analyzed the Academic Recovery Camp and fall formative student assessments, and conducted surveys of parents and teachers in South Carolina.

EXECUTIVE SUMMARY

Key Findings

Impact on Student Learning

1. South Carolina students declined in projected proficiency and in median percentile rank in both mathematics and reading. The decline was most dramatic in elementary and mathematics.
2. Significant achievement gaps among historically underachieving students and their higher achieving peers continue to exist but do not appear to have widened during emergency remote learning. However, vulnerable student populations may be missing from the sample.
3. For South Carolina students in a sample of 14 districts, there was no statistically significant difference observed in the COVID slide of student with respect to instructional method (eLearning, blended learning, and instructional packets) during emergency remote learning.

Obstacles

1. Unequal distribution of internet access and 1:1 devices.
2. Lack of a digital ecosystem to support long-term virtual instruction.
3. Lack of clearly defined instructional strategies for forward progress in remote learning.

Impact on School Finance

1. COVID expenses will be recurring.
2. With additional CARES funding, minimal impact on district general fund during spring 2020.

Plans to Mitigate Loss

1. Students made gains in both reading and mathematics in Academic Recovery Camps, but low overall student enrollment despite many students identified as in need of intervention.
2. No clearly articulated district plans to mitigate loss shared during interviews.

Best Practices

1. Focused professional development for staff to support students and families during remote learning.
2. Prioritized face-to-face instruction for students as soon as safely possible.
3. Provided access to high quality virtual curriculum, resources, and courses.

Recommendations

Impact on Student Learning

1. Strategically design and implement curriculum focused on student learning gaps and priority standards.
2. Better coordinate efforts to accurately track student attendance, completion of assignments, and mastery of grade level standards.
3. Require coordinated efforts and deploy strategies to establish communication with students who are not attending school or disengaging from instruction.
4. Continue regular assessment of all students, allowing for individual and system academic performance to be monitored, guiding instruction and policy decisions.
5. Conduct further research to determine the most effective instructional delivery method for remote learning.

Obstacles

1. Continue to address disparities in learning opportunities by ensuring that supports, such as access to the internet and a device, are in place for students.
2. Provide access to a robust virtual curriculum for students in remote learning.

Impact on School Finance

1. Continue to review and monitor district expenses related to COVID.
2. Continue to review and monitor student enrollment.

Plans to Mitigate Loss

1. Provide tutoring services and extra interventions for students identified at-risk.
2. Create a process to allow districts to develop and create innovative programs and/or community partnerships to provide after-school, summer, or Saturday ARCs in mathematics and reading.

Best Practices

1. Provide meaningful and responsive professional development to staff to address needs in remote learning.
2. Prioritize the return to face-to-face classrooms as soon as safely possible.

District Interviews for Remote Learning

KEY FINDINGS OF DISTRICT INTERVIEWS:

Primary obstacles

1. Unequal distribution of internet access and 1:1 devices.

2. Lack of a digital ecosystem to support long-term virtual instruction.

3. Lack of clearly defined instructional strategies for forward progress in remote learning.

4. Challenge to navigate relationships in a virtual environment.

Impact on student learning

1. Lack of instruction in new material during spring 2020 emergency remote learning will have negative impact on student achievement.

2. Vulnerable student populations expected to be more negatively impacted.

3. No clearly articulated district plan to mitigate instructional loss.

Impact on school finances

1. Some COVID expenses will be recurring.

2. With additional CARES funding, minimal impact on district general fund during spring 2020.

Opportunities

1. Accelerated student access to technology across South Carolina.

2. Investment in instructional technology resources by districts and SCDE.

3. Increased learning opportunities for students, flattening the classroom and providing a global perspective.

4. District virtual school offerings will remain, but state level guidance needed.

Emerging Issues

1. Many vulnerable students are opting for virtual instruction while more resourced students are opting for brick-and-mortar schooling.

2. Concerns with integrity of results from assessments delivered remotely.

3. Recognition that end-of-year state assessments should be given in spring 2021.

Observed Best Practices in South Carolina and Nation

1. Focused professional development for staff to support students and families during remote learning.

2. Prioritized face-to-face instruction for students, particularly for elementary and vulnerable student populations, as soon as safely possible.

3. Provided access to high quality virtual curriculum, resources, and courses.

The EOC staff selected 15 public school districts from across South Carolina to participate in interviews as a part of the Review of Remote Learning's Impact on Students in South Carolina. Though these districts and their individual responses were guaranteed anonymity, the districts were purposefully selected to be representative of all South Carolina school districts. The selected school districts include representation from large and small districts, rural and suburban districts, and school districts from across the geographic regions of South Carolina, to include the Upstate, Midlands, Pee Dee, Low Country and Coastal districts. Those districts interviewed also provided diversity in the instructional approach applied during emergency remote learning, to include eLearning districts, printed instructional packets only districts, and districts providing a blend of both virtual and printed instructional packets.

Interviews were conducted by EOC staff from July 2020 to November 2020 using a standardized protocol (see Appendix A). During our visits to the district partners, EOC staff requested interviews with the superintendent, District Curriculum and Instruction staff, District IT staff, District Finance staff, principals, and teachers. In some instances, because of district COVID restrictions, not all of these parties were available to participate in the interviews. During these conversations, EOC staff sought to gather information about obstacles and opportunities encountered during emergency remote learning, collect district policies put in place as a result of school closures, determine district and school plans for fall reopening, and gather incurred and anticipated financial costs of the pandemic. Summer Academic Recovery Camps were also visited, if applicable and available during the scheduled visit.

Fifteen (15) public school districts participated in the study. Over 75 individuals were interviewed as a part of the district visits. Each of these individuals portrayed competence and had the unenviable responsibility of making difficult decisions. They were tirelessly working the front lines to make a difference for South Carolina students during uncharted circumstances. The following are themes identified from the district interviews. Where appropriate, comparisons are provided to relevant research and national trends in state guidance provided by state departments of education (SDEs) during the beginning of the pandemic last spring.

Primary obstacles to student learning during emergency remote learning

1. **Unequal distribution of internet access and 1:1 devices.** Many students and teachers lacked access to the internet in their homes. Lack of access to the internet was experienced by students in poverty as well as by students and teachers who live in rural areas without the infrastructure for high-speed internet access. This reality caused disparity in student access to instruction during emergency remote learning. Moreover, as of December 2020, school districts reported to SCDE that 25,257 student devices and 990 teacher devices are still needed. Of these, 19,490 student devices and 907 teacher devices had been ordered but had not yet been received.

   Through funds authorized by the SC General Assembly from the Coronavirus Aid, Relief, and Economic Security (CARES) Act, cellular hotspots were

provided by the S.C. Office of Regulatory Services (ORS) as outlined in a memo from the SCDE. These hotspot devices closed the access gap for some students, particularly those students of poverty who live in areas where a strong cellular signal is available. However, many students remain without reliable access to the internet, even with hotspots. This is particularly true in rural areas that have neither access to wired internet connectivity nor cellular signals strong enough to support the bandwidth demands of remote learning. Some district superintendents also reported that there were students in need of internet access who failed to meet the program's income requirements to receive hotspots.

This experience follows national trends where many families with school-aged children lack access to computing devices and high-speed internet. A survey of high school students taking the ACT found that one in seven lived in homes with only one computing device for the whole family.[10] Pew Research (2019) shows that only 56% of adults living in households earning less than $30,000 per year have access to broadband internet. The National Center for Education Statistics (2017) reported that for 5 to 17 year old students living in remote rural areas, there were additional gaps among students of different poverty levels and racial/ethnic groups: 41% of black students and 35% of students living in poverty lacked access to high-speed internet compared to 13% of White students living in the same areas.[11] Existing research is limited and only partially characterizes these obstacles. We do not know, for example, what fraction of households with school-aged children have broadband access and a device for each child. By all indications, however, many school-aged children and their families, especially in rural and urban areas, face serious limits to accessing online learning.

In June 2020, it was estimated that "nearly 435,000 people in 192,000 households in South Carolina either have no internet service provider available or have internet service that isn't capable for a student to stream a video for a lesson."[12] Though there are few short-term solutions to remedy access to wired internet across South Carolina, the state has positioned itself to address this issue. Below is a map developed by Jim Stritzinger, Founder and CEO of Revolution D, Inc., identifying the areas of broadband need across South Carolina. When speaking to Mr. Stritzinger, he indicated a desire to expand

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[10] Moore, R., Vitale, D., & Stawinoga, N. (2018, August). *The Digital Divide and Educational Equity* (Rep.). Retrieved December, 2020, from ACT: Center for Equity in Learning website: https://www.act.org/content/dam/act/unsecured/documents/R1698-digital-divide-2018-08.pdf

[11] National Center for Education Statistics. (n.d.). The NCES Fast Facts Tool provides quick answers to many education questions (National Center for Education Statistics). Retrieved December, 2020, from https://nces.ed.gov/fastfacts/display.asp?id=46

[12] Bustos, J. (n.d.). Broadband for all SC? It could cost more than $800M, expert says. Retrieved December, 2020, from https://www.thestate.com/news/politics-government/article243762917.html

and update this work to include the mapping of cellular availability and signal strength across the state. [13]

Figure A1. Map of Areas of Broadband need in South Carolina
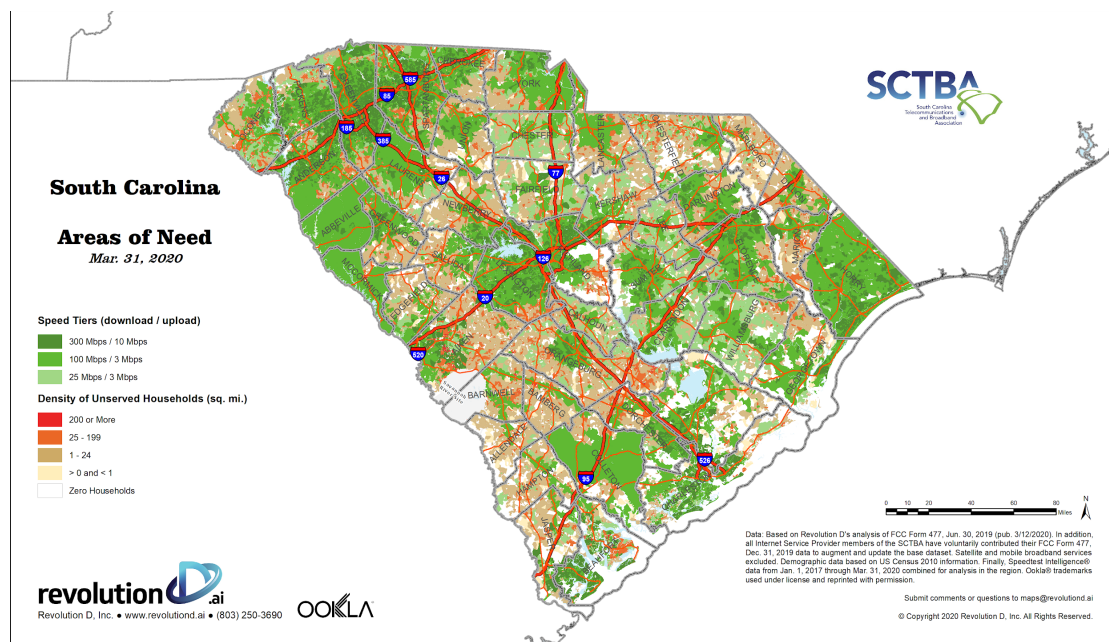
As authorized in Act 142, part of South Carolina's Coronavirus Relief Fund was allocated for broadband mapping. The Office of Regulatory Services (ORS) engaged CostQuest Associates, Inc. to help update and complete the South Carolina Broadband Map. The completed map will allow policymakers at both the state and federal level determine how to strategically allocate resources to help make the internet available across South Carolina. An updated South Carolina Broadband Map was made public at the end of December 2020.

The South Carolina Broadband Map shows the availability of broadband service to every home and business in the state. Based on broadband data provided, the map shows the locations of homes and businesses, the availability of broadband, and the providers offering service at each location. Broadband data is provided by the majority of broadband providers serving South Carolina. The map does not reveal which provider, if any, serves a particular location.

2. **Lack of a digital ecosystem to support virtual long-term instruction.** Some districts felt prepared to deliver instruction virtually and remotely for short periods of time, such as an inclement weather event of a few days. Many of the districts who felt most prepared for short term closures had participated in the EOC's eLearning pilot. However, all districts interviewed emphasized the

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[13] Stritzinger, J. (2020, August 11). Status of Internet Access for Emergency Remote Learning [Online interview].

difference in delivering instruction to students for short periods of time versus the ongoing delivery of remote, virtual instruction over the long-term. The long-term delivery of remote, virtual learning was a reality for which most felt ill-prepared.

There were several adjustments or considerations noted by districts as necessary to pivot from short term to long term preparedness. These considerations for the district's digital ecosystem included device requirements (e.g., webcams became necessary), single sign-on platforms (e.g. QR code capability for PreK / early childhood students), video-conferencing tools, learning management systems, digital instructional resources, and professional development and capacity building for all stakeholders, to include teachers, administrators, students, and parents.

In addition to the technical resources needed for a pivot to long-term virtual instruction, there is much insight that public schools pivoting to remote learning can glean from the operations of virtual schools.[14] Most full-time virtual schools use "coached homeschooling" models. Teachers provide students and families with a largely asynchronous curriculum in which learning can occur in different times and spaces particular to each learner, and then students proceed through that curriculum at their own pace. For young learners, a full-time parent or caregiver is expected to provide guidance and support. As students get older, perhaps in high school, they are more capable of working independently. This typically does not take all day. Research and guidance on homeschooling suggests that most homeschool families spend 2-4 hours per day on these schooling tasks (Collom, 2005[15]; Gregory, 2005[16]; Toto, 1994[17]). Virtual schoolteachers spend limited time, six or fewer hours per week, in synchronous instruction (instruction that occurs at the same time and place with groups of learners and their instructor).[18] Instead, the best virtual schoolteachers spend most of their days individually reaching out to students and families to provide coaching, tutorials, and support, making extra efforts to connect with struggling or disengaged students.

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[14] Molnar, A., Miron, G., Elgeberi, N., Barbour, M. K., Huerta, L., Shafer, S. R., & Rice, J. K. (2019). Virtual Schools in the U.S. 2019. National Education Policy Center. https://nepc.colorado.edu/publication/virtual-schools-annual-2019

[15] Collom, E. (2005). The Ins and Outs of Homeschooling: The Determinants of Parental Motivations and Student Achievement. Education and Urban Society, 37(3). 307-335. https://doi.org/10.1177/0013124504274190

[16] Gregory, E. R. (2005). "Curriculum and the status of physical education in homeschooling". Teaching and Leadership - Dissertations. 36. https://surface.syr.edu/tl_etd/3

[17] Toto, J. (1994). How to Homeschool (Yes, You!) (1st ed.). Vital Issues Pr.

[18] IBID at footnote 14

These typical virtual school models suggest four important implications for remote learning in a pandemic. First, schools and state departments of education should assume that young students will require direct supervision to participate in remote schooling—supervision that may not be available from working parents. Second, the typical approaches from virtual schools emphasize asynchronous learning. Third, the teacher plays two major roles: curating asynchronous curriculum and providing regular feedback, coaching, and support. This might be a major shift for teachers who see their primary role as providing whole-class, oral, and/or direct instruction. Finally, given the many barriers to online access, the difficulties of life in a pandemic, and the research on virtual schooling and homeschooling, students, especially the youngest students, will not be able to participate in school activities for lengths of time equivalent to a typical school day.[19]

3. **Lack of clearly defined instructional strategies for forward progress in remote learning.** Districts described having to transform over a weekend in the spring. This turn on a dime pivot resulted in responses that were more often than not reactionary and sometimes fragmented. Districts described chaotic scenes of trying to create and disseminate instructional packets, secure devices for students, and deploy virtual instruction with new or rarely used learning management systems while providing professional development to staff on the new tools and structures. One state official described emergency remote learning in the spring as the system being in "survival mode."

   As districts were able to get beyond triage and stabilize, they have attempted to institute more systemic approaches to the reopening plan in the fall. Many interviewees mentioned attempts to (re)establish a predictable structure for both students and staff as a primary need. These structures enabled both students and staff to feel less anxious as they faced the unknown of a pandemic. The unknown was mentioned by many as exacerbating the stress of the situation.

4. **Challenge to navigate relationships in a virtual environment.** A variety of those interviewed described the need to focus on building and sustaining relationships with stakeholders, even, and perhaps particularly, in a virtual environment. This included administrators seeking to maintain relationships with teachers and staff that recognized the tireless efforts and shifting personal needs, such as the need for teachers to care for their own children while teaching or living in homes with immunocompromised family members. It extended to administrators and teachers working to engage and provide support to parents as partners in the education of their children, and all striving to support students academically as well as socio-emotionally during this stressful time.

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[19] Justin Reich, et. al. (2020) Remote Learning Guidance from State Education Agencies during the COVID-19 Pandemic: A First Look. Retrieved from osf.io/k6zxy/

The following is a word cloud of the notes taken from interviews around the obstacles and barriers to learning during remote learning. An increase in size represents an increase in frequency of that word or term in the interview notes regarding obstacles and barriers during emergency remote learning.

Figure A2. Word Cloud of Interview Notes of Obstacles / Barriers
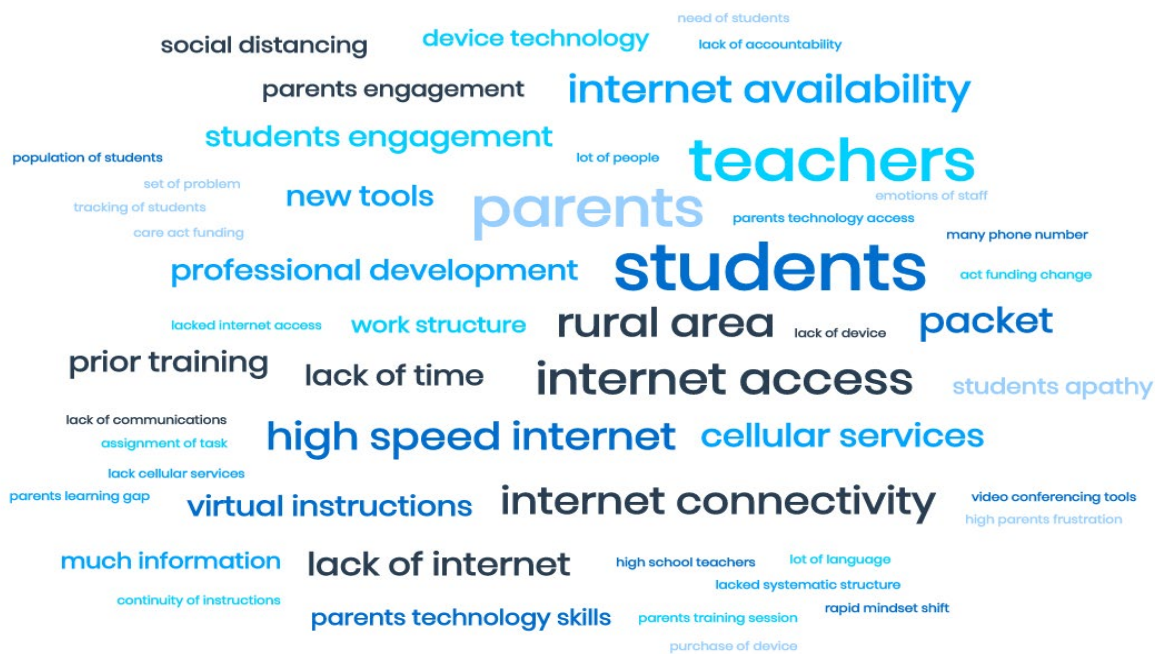
Overall impact on student learning and plans to mitigate instructional loss

1. **Lack of instruction in new material during spring 2020 emergency remote learning will have negative impact on student achievement.** Almost all of those interviewed indicated that the instruction provided to South Carolina students during the spring was primarily a review of content already delivered prior to the close of schools. This effectively means that students missed a full quarter of new material. At the high school level, students on block schedule missed half of their course or in instances of half credit courses, such as Government/Economics, the entire course may have been delivered exclusively in a remote environment.

   Principals and teachers, particularly, mentioned the decline in student engagement after the SCDE and district announcements of 'grace over grades.' Many mentioned that the grading policy in their district was adjusted so that students could not receive a final grade for the period of emergency remote learning (4th quarter) that was below the student's average for the first

three quarters of the year. When there was no longer any accountability for student grades, these principals and teachers indicated students and families became apathetic about completing assignments and disengaged from school.

Recognizing that students, at best, potentially lost a quarter of their instructional year due to school closure in the spring, there was a pervasive expectation that students would begin the 2020 school year behind where they otherwise would have been.

Interestingly, there seemed to be one exception to this rule mentioned during the interviews: Advanced Placement (AP) courses. Many in South Carolina have indicated that AP teachers continued to make forward progress through new instructional materials during emergency remote learning. One reason mentioned as a potential cause was that AP assessments were among the few that were administered after COVID school closures, albeit in an altered testing format. The College Board had also already developed a central repository of high quality, online resources for teachers and students in the AP Classroom. South Carolina's 2020 AP results demonstrate very similar results (-0.5 change) to previous test administrations despite the pandemic and subsequent school closures.

Table A2. 2020 AP Participation and Performance in South Carolina and National Public Schools

	Exams Taken	% Change	Exams with score of 3,4,5	% Change
South Carolina	49,727	-6.4%	30,945	-0.05%
National	4,751,957	-7.0%	3,057,148	4.70%

In the research of guidance from departments of education across the nation (SDEs), a primary area of divergence relates to the goals of remote learning during school closures. Some state agencies hoped to continue forward progress through new material from standards-aligned curriculum. Texas, for instance, describes their efforts as helping "districts launch 'at-home schools' that maximize the amount of instructional time for students this school year and support student mastery of grade level standards."[20] Alabama offered a set of essential standards for K-8 teachers to use in concentrating instruction during school closures.[21] By contrast, other states argued for an emphasis on skills review, projects, and similar activities categorized as "enrichment." SDEs also made clear that the stakes of learning efforts during closures should be low:

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[20] Texas Education Agency. (2020). District Instructional Continuity Planning Overview https://tea.texas.gov/sites/default/files/district_instructional_continuity_planning_intro_march_20_2020.pdf

[21] Alabama State Department of Education. (2020). K-8 Critical Standards. https://drive.google.com/file/d/1ZufRLahwj884iLKjpOEp5l6EX-L1zNjP/view

"The school division's plan to address missing content should not prevent student promotion to the next grade level or next sequential course."[22]

An emerging consensus among state guidance was that schools should make accommodations to help seniors graduate. Georgia offered this strong statement: "GaDOE has issued guidance to school districts to ensure no senior will be held back from graduating on time due to the COVID-19 school closures."[23] Several states, such as New York and Alabama, recommend giving full credit to students who were passing courses as of the spring mid-term, and Alabama and others also promote the use of online credit recovery programs.

In South Carolina, SCDE communicated revised final grade calculation guidance to districts on March 30, 2020, in a memorandum titled COVID-19 Grade Reporting Guidance. The revised grading structure allowed for one final semester grade. The revised semester grade would reflect work completed in the third quarter, as well as those grades "deemed appropriate by the district to assure competency or provide remediation." [24] This was the policy to institute 'grace over grades' during emergency remote learning in South Carolina.

SCDE also communicated in a memorandum titled Emergency Distance Learning Guidance Revisions dated April 13, 2020 that due to the extended period of remote learning, teachers may introduce new material to students, but careful consideration should be given to the instructional material, the delivery of content and concepts, and the information that facilitates successful transition into the next academic year. [25] Priority should be given to the essential standards that serve as an introduction to the next level of coursework.

In both above mentioned SCDE memorandums, districts are instructed to make sure "every effort is being made to ensure that high school seniors have the opportunity and adequate period of time to earn the necessary credits for on-time graduation."

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[22] Virginia Department of Education (2020). Guidance on Graduation Requirements, Awarding of Credits, and Continuity of Learning.

http://www.doe.virginia.gov/support/health_medical/office/covid-19-grad-credits.shtml

[23] Georgia Department of Education. (2020). Graduating Seniors.
https://www.georgiainsights.com/graduating.html

[24] South Carolina Department of Education. (2020, March 30) COVID-19 Grade Reporting Guidance Memorandum. Retrieved from https://ed.sc.gov/newsroom/school-district-memoranda-archive/covid-19-grade-reporting-guidance/covid-19-grade-reporting-guidance-memo/

[25] South Carolina Department of Education. (2020, April 13) Emergency Distance Learning Guidance Revisions Memorandum. Retrieved from https://ed.sc.gov/newsroom/school-district-memoranda-archive/emergency-distance-learning-guidance-revisions/emergency-distance-learning-guidance-revisions-memo/

South Carolina's overall graduation rate increased a percentage point during the pandemic with a state graduation rate of 82.1% in 2020 compared to 81.1% in 2019. Forty – eight (48) school districts in South Carolina had a higher graduation rate in 2020 compared to 2019. Six school districts increased their on-time graduation rate by at least 9% in 2020 compared to 2019. [26]

2. **Vulnerable student populations expected to be more negatively impacted.** Several student groups were consistently identified as being of specific concern to those working in districts and schools: 1) PK-2 students, 2) special education students, 3) English Learners (EL), and 4) pupils in poverty (PIP).

    1) PK-2 students were identified as needing significant additional support. One superintendent referred to this group as a potential "lost generation" since the type of instruction required to support early literacy and math skills translates poorly to the virtual environment. Districts reported prioritizing PK-2 students in their reopening plans and worked to bring PK-2 students back into a brick-and-mortar classroom for face-to-face instruction as soon as safely possible.

    2) Special education students were repeatedly mentioned as an area of focus for districts. Many reported making home visits during the spring, offering services virtually, and bringing small groups of students back into school buildings as soon as safely possible in the spring as outlined in a memo by SCDE. Some of the districts interviewed mentioned prioritizing special education students in their reopening plans.[27] Much work is still needed to provide equity of special education services in the virtual environment. There are also privacy considerations that must be addressed, such as Family Educational Rights and Privacy Act (FERPA), the Children's Online Privacy Protection Act (COPPA), and other relevant laws and regulations. It was shared in a district interview, for example, that there are additional security features that must be enabled in video conferencing tools before therapists should offer services virtually.

    3) English Learners (ELs) presented a unique challenge to districts. Though many districts celebrated their communication plans during the pandemic, many simultaneously reported struggling to communicate effectively and quickly with ELs and their families. Many EL students and

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[26] South Carolina Department of Education. (2020). 2020 Graduation Rate. Retrieved December, 2020, from https://screportcards.ed.sc.gov/overview/academics/graduation-rate/?q=eT0yMDIwJnQ9UyZzaWQ9MDAwMA

[27] South Carolina Department of Education. (2020, May 4) Face-to-Face Services and Supports to Students and Families: Memorandum. Retrieved from https://ed.sc.gov/newsroom/school-district-memoranda-archive/face-to-face-services-and-support-to-students-and-families/face-to-face-services-and-support-to-students-and-families-memo/

families were effectively left out of the information loop in an environment that changed rapidly. Where there were successes noted, the personal relationships and outreach by EL teachers to EL families were recognized as key. One superintendent remarked that the pandemic certainly pointed to outreach to EL families as an area where much work still needed to be done by the district.

4) Pupils in Poverty (PIP) were consistently singled out in interviews as a vulnerable population of students who struggled to access resources and instruction during emergency remote learning. Districts reported partnering with community centers to provide WIFI access points, opening school parking lots for internet access as well as positioning WIFI enabled, state buses within communities in attempts to provide PIP students access to the internet and therefore instructional materials. Instructional packets were also delivered to students at meal drop off locations. ProPublica provides a sobering profile of a student in poverty's experience during remote learning. [28] There were several South Carolina examples shared during district interviews where students/families reported having trouble accessing internet access points, missing assignments because devices or technical skills were lacking, and struggling to navigate communications and instructional materials provided during emergency remote learning. Compounding this issue is the report that the families of PIP are also opting for virtual options during the fall restart while more resourced students are opting for brick-and-mortar schooling. This has the potential to exacerbate already significant achievement gaps.

Nearly all states have published guidance encouraging schools to do their best to provide all students with a free and appropriate public education. Perhaps unsurprisingly, very few states offered any detailed guidance or particularly promising models of how this might be done. States primarily suggested technology tools that could be used to make curriculum materials more accessible. For instance, North Dakota highlights the translations in Khan Academy, the potential applications of Google Translate, and the use of synchronous video for small group instruction. Some states have suggested that in limited cases, school buildings might be used to provide instruction to small groups of socially distanced students with the highest need. Many states promised forthcoming guidance on teletherapy and other approaches addressing students with disabilities, and they offered webinars and other venues to share new practices.

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[28] MacGillis, A. (2020, September 28). The Students Left Behind by Remote Learning. Retrieved December, 2020, from https://www.propublica.org/article/the-students-left-behind-by-remote-learning

Only 21 states specifically reference ELs in their policy guidance, and only 9 modeled sample lessons and translations. Schools' legal obligation to English learners is no less than their obligation to students with other special needs.

In addition to students with disabilities and ELs, state education agencies should continue to generate new guidance for supporting a variety of vulnerable populations. Minnesota offers an excellent first effort at providing guidance for students experiencing housing insecurity and recommending coordination with local and regional tribal leaders.[29] Mississippi offers brief initial guidance for youth in foster settings and in detention.[30]

3. **No clearly articulated district plan to mitigate instructional loss.** Though districts expected and recognized the instructional loss of students, there were no operational, long-term plans shared during the interviews to make-up for lost instruction or add additional instructional time beyond the 180 school days. Districts mentioned future work to develop priority standards and adjust curriculum guides. In some cases, districts on hybrid schedules in fall 2020 (AA/C/BB) discussed bringing in students who were identified as below grade level for an additional face-to-face intervention day on "C" days or scheduling additional virtual intervention meetings on the "C" day. There were no plans shared to extend the instructional day, instructional week, or instructional year. Absent a remarkable alignment of resources and interventions, students who were already at an educational disadvantage will lag even further behind their peers.[31]

Impact on school finances

1. **Some COVID expenses will be recurring.** Superintendents reported using CARES ESSER funding to purchase additional student devices to move towards 1:1 technology and digital curricular resources. They also reported additional expenses related to cleaning supplies, cleaning frequency, and plexiglass dividers. Many superintendents mentioned the ongoing, recurring costs for Personal Protective Equipment (PPE) for staff and students. One superintendent provided his own, expanded definition of PPE: People, Programs, Equipment. In response to COVID-19, this superintendent suggested that these areas will remain big ticket budget items for the foreseeable future. Expenses related to COVID-19 safety measures (e.g. deep

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[29] Minnesota Department of Education. (2020). School Closure Guidance for Public School Districts and Charter Schools.https://education.mn.gov/mdeprod/idcplg?IdcService=GET_FILE&dDocName=MDE032114&RevisionSelectionMethod=latestReleased&Rendition=primary

[30] Mississippi Department of Education. (2020). Updates and Information in Response to COVID-19 (Coronavirus) https://www.mdek12.org/COVID19

[31] Korman, H. T., O'Keefe, B., & M. R. (2020, October 22). Missing in the Margins: Estimating the Scale of the COVID-19 Attendance Crisis. Retrieved December, 2020, from https://bellwethereducation.org/publication/missing-margins-estimating-scale-covid-19-attendance-crisis

cleaning of building and cleaning supplies, the addition of bus aides to check student temperatures, additional nurses to provide one per school) are not one-time costs, and if schools are to continue to safely operate during a pandemic, there will be significant recurring costs associated.

Estimates from The American Association of School Administrators (AASA) released in May 2020 projected it would cost an average district approximately $194,045 for personal protective equipment, $1.23 million to hire additional staff such as custodians and nurses, and $116,950 for health and disinfecting equipment.[32] For this illustrative estimate, an average school district was defined as having 3,659 students, 8 school buildings, 183 classrooms, 329 staff members, and 40 buses transporting at 25% capacity.

South Carolina Act 135 of 2020 - Continuing Resolution requires state boards, commissions, agencies, departments, and institutions of higher learning to provide monthly reports on funds directly provided by the federal government in response to the 2019 Novel Coronavirus (COVID-19). These are available from the Executive Budget Office. A total of $216,311,158 was made available to the SCDE and school districts. As of November 30, 2020, $60,040,618 had been expended.

With additional CARES funding, districts reported minimal impact on the general fund during spring 2020. During the district interviews, no superintendent or district finance officer shared concerns with the general fund budget during the spring of 2020. Many shared creative ways that they repurposed funding to address district needs during the pandemic. One district, for instance, mentioned repurposing the substitute teacher fund to purchase devices for students. Since school was not in session, these funds were readily available for reallocation. However, no districts shared that there was any savings of significance made available because of school closures. Many shared during the interviews that the vast majority of a district's general fund, as much as 85%, is used for personnel costs. In the interviews, no districts reported any full-time staff not receiving salary during the spring or any positions being eliminated during the period of emergency remote learning.

Many of the superintendents and district finance staff members interviewed expressed budget concerns regarding the fiscal unknowns of the future. Though they did not report experiencing any budget issues this year, they indicated that any budget shortfalls would likely occur in subsequent budget years. These individuals worried particularly about the impact of reduced student enrollments caused by the pandemic and continued school closures.

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[32] Modan, N. (2020, August 19). 5 financial issues schools will face due to the coronavirus-induced recession. From https://www.k12dive.com/news/5-financial-issues-schools-will-face-due-to-the-coronavirus-induced-recessi/583054/

An analysis by the Learning Policy Institute projected state budget cuts nationally could result in an 8.4% reduction in America's public-school teaching force, which amounts to over 300,000 teachers.[33] The Education Commission of the States reports that reductions in teacher job positions also indicates that job prospects for new teachers and those laid off are limited. Some states, including New York, have considered legislation to incentivize early retirement for teachers more vulnerable to COVID-19 to cut costs, avoid layoffs and protect teachers.[34].

Fortunately, unlike many other states, South Carolina has not reduced the K-12 education budget to date. Furthermore, no South Carolina district interviewed as a part of this study reported that a reduction in force was necessary; instead, these districts reported actively working to adjust their teacher recruitment efforts to a virtual environment.

Furthermore, the federal government approved an additional $54.3 billion on December 21, 2020 to go directly to state education agencies. South Carolina's share of this will be approximately $900 million. Of this amount, SCDE has the authority to keep 10% for programs benefiting schools statewide with the remainder allotted to public school districts, based on their population and poverty rating. Local school boards will have wide discretion in deciding how to spend their share of the funding from a list of possibilities aimed at reopening, and keeping open, schools for in-person learning. [35]

Opportunities for the future

1. **Accelerated student access to technology across South Carolina.** The change in student access to 1:1 devices represents a dramatic, and potentially promising, shift from the status of 1:1 districts prior to the pandemic. All districts interviewed acknowledged that the pandemic and the remote learning experience accelerated student access to 1:1 technology. Most districts reported that they plan to be 1:1 by the spring of 2021. Of those districts who are not currently 1:1, many were postponed only because they were still waiting for the delivery of devices. Because of the pandemic and the increase in

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[33] Griffith, M. (2020, April 30). The Impact of the COVID-19 Recession on Teaching Positions [Web log post]. Retrieved from https://learningpolicyinstitute.org/blog/impact-covid-19-recession-teaching-positions

[34] Erwin, B. (2020, October 02). Layoff Projections and Shortages Create Teacher Workforce Challenges. Retrieved December, 2020, from https://ednote.ecs.org/layoff-projections-and-shortages-create-teacher-workforce-challenges/

[35] Adox, S. (Jan 2, 2021). $900 million to flow directly to SC schools from latest federal aid package. Retrieved January, 2021 from https://www.postandcourier.com/politics/900-million-to-flow-directly-to-sc-schools-from-latest-federal-aid-package/article_2567c070-4b6e-11eb-9ac6-b37cbabbcda1.html

demand, the shipment and delivery of equipment has been delayed. Some districts are not expecting to receive devices until January 2021 at the earliest.

Ongoing, recurring costs need to be carefully considered and purposefully planned by districts to maintain access and leverage this shift for full effect. First, there will be an ongoing, recurring cost to refresh devices. Computer equipment must be eventually replaced; when devices are placed in the hands of children, they tend to have to be replaced more frequently. Districts should begin planning for device replacement now so as not to be caught without devices in the future. Second, to get the most benefit from this acceleration in access to devices, a significant investment of time and resources is required in providing high quality professional development for teachers and administrators. To be truly transformative, this effort should focus not only on the virtual environment but also on how to use the digital tools effectively in the brick-and-mortar classroom. Strategies for building capacity of state, district and school leaders to support a digital environment and the proper blend of instructional strategies in the classroom as well as virtually should also be considered.

2. **Investment in instructional technology resources by districts and South Carolina.** Many districts reported significant investment in instructional technology resources. These include the purchase of curriculum for the district virtual school options during the fall restart as well as technological tools (e.g., Zoom or WebEx) to assist during remote learning. Additionally, the SCDE was systemic in its approach to addressing access to technological resources and instructional materials at the state level.

However, teachers, especially those teaching virtually, expressed a desire for access to a robust, virtual curriculum. This represented a seeming disconnect, perhaps because of a delay in implementation and training, between the reported purchase of a virtual school curriculum by districts and classroom implementation. Teachers recounted the frustration of having to translate their district curriculum to a virtual space or create a virtual curriculum from scratch.

SCDE provides districts access to VirtualSC, its platform for online courses. Many districts mentioned the benefits of being a VirtualSC franchise district. The VirtualSC franchise program allows districts access to the technology, curriculum and training to support an online curriculum with the district's own teachers. [36] Currently, VirtualSC's course offerings are limited to grades 9-12 with a middle school course pilot planned for spring and fall 2021. Florida Virtual School has K-12 course offerings.

Texas, Michigan, Florida, Utah and Louisiana have been making great strides to provide broader student access to a comprehensive course catalog for all students through their Course Access policies. Louisiana, through its Supplemental Course Catalog, offered over 15,000 courses in 2018-2019, a

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[36] South Carolina Department of Education VirtualSC. (2019). Franchise Program. Retrieved December, 2020, from https://virtualsc.org/franchise-program/

700% increase over just a few years before. Richard W. Riley, former U.S. Secretary of Education and former governor of South Carolina, has said, "By supplementing traditional school course offerings with options from partnering providers, Course Access programs can increase dramatically the learning opportunities available to students."

Acknowledging one of the findings of the EOC's eLearning pilot, the importance of a deeply embedded Learning Management System (LMS), SCDE worked to procure state level contracts for LMS vendors, giving districts the option of a platform and not forcing districts who were deeply invested in a particular platform to change mid-COVID. A LMS serves as an electronic central clearinghouse for dissemination of information and virtual learning materials to students. As a result of this work by SCDE, all districts in South Carolina have three years of access to an LMS and to professional development resources for teachers and staff to support the implementation of an LMS. Many districts reported that the adoption of an LMS was cost prohibitive before this work by SCDE.

In addition, South Carolina was one of 11 recipients of the Rethink K-12 Education Models Grant from the U.S. Department of Education. South Carolina was awarded $15,000,000 to 1) increase availability of remote learning resources to students and teachers in areas of South Carolina that lack broadband access; 2) improve education resources for specific, identified gaps by developing and curating engaging, high quality content; 3) increase teacher experience, confidence, and proficiency with remote learning technology and resources; and 4) improve communication between families, teachers, and schools to support remote learning. The SCDE is partnering with the South Carolina EOC, South Carolina Educational Television, and private industry to carry out the grant activities. [37]

One aspect of South Carolina's grant initiative that is particularly innovative is the potential use of "datacasting" to address the internet access gap for students. Datacasting is when a TV or radio tower is modified to allow the tower to broadcast encrypted data, which can be downloaded by computers and smart devices, according to South Carolina Educational Television.[38] Though the technology for datacasting is not new, its application in an educational setting is unique.

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[37] South Carolina Department of Education. (2020). South Carolina Announced as Recipient of $15,000,000 Rethink K-12 Education Models Grant from U.S. Department of Education. Retrieved December, 2020, from https://ed.sc.gov/newsroom/news-releases/south-carolina-announced-as-recipient-of-15-000-000-rethink-k-12-education-models-grant-from-u-s-department-of-education/

[38] South Carolina Educational Television. (2020, August 20). What is Datacasting? Retrieved December, 2020, from https://www.scetv.org/datacasting

Moreover, SCDE announced in November 2020 via memo its work to develop and make available to all districts a state Learning Object Repository (LOR).[39] This project has been described as providing more resources for lesson planning and student learning, exemplary teaching strategies and professional opportunities across South Carolina. SCDE remarks that there will be several phases for development and the LOR will be an ongoing organic tool, continually updated with new resources.

Nationally, states have not provided a state level approach to this work. Instead, other states are encouraging districts to set up a learning management system as a central clearinghouse for dissemination of information and learning materials to families. Many states are publishing lists of resources, websites, and subscription services that address learning needs across grade levels and content areas.

Instructional resources were made available in South Carolina during the spring and summer. SCDE developed a webpage dedicated to providing digital teaching and learning resources.[40] South Carolina Educational Television, the EOC, South Carolina State Library system, as well as many others also provided links to additional resources for families and educators to support learning during remote learning.

3. **Increased learning opportunities for students, flattening the classroom and providing a global perspective.** The requirement to use video-conferencing platforms have opened schools to global leaders and enabled access to resources far outside of the schools and local communities, even when students return to school buildings for face-to-face instruction. A principal remarked, "Before, we would not have felt comfortable bringing in a guest for a virtual event, so we would have been limited to those who could physically come into our schools or classrooms. Now, school personnel, like most professionals, are becoming experts at the virtual meeting, and even those guests who are across town now join virtually. This newfound comfort will allow us to be more creative and allow schools to expose our students to others going forward who would not have been an option previously."

This opportunity has the potential to address the Profile of the South Carolina Graduate's emphasis on global perspective. However, additional professional development will be needed to systematize any efforts. District IT staff will need resources on configuring and securing these new tools; school administrators will require additional development to provide adequate supervision; and teachers will require additional support in appropriate uses.

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[39] South Carolina Department of Education. (2020, November 11). Learning Object Repository: Memorandum. Retrieved from https://ed.sc.gov/newsroom/school-district-memoranda-archive/learning-object-repository/learning-object-repository-memo/

[40] South Carolina Department of Education. (2020). Digital Teaching and Learning Resources. Retrieved December 06, 2020, from https://scremotelearning.com/

4. **District virtual school offerings will remain, but state level guidance needed.** All of those interviewed thought that virtual school options would remain after the pandemic in the local public-school districts, albeit at a smaller scale. However, there was a lack of consistency noted in what constituted virtual education among the various districts. There was inconsistency in language and terms, instructional approach, and overall structure of virtual offerings. Many of those interviewed remarked that they needed clearer guidance from the state level on virtual instruction. They recognized that there were gaps and inconsistencies across the state that were causing confusion. These inconsistencies made it difficult for even education leaders to communicate effectively with each other about the benefits and limitations of virtual programs. Similarly, families from different communities across the state were also at a disadvantage because comparisons of virtual programs were being made that were not apples to apples. Additional research is needed to provide best practices for the virtual environment, and state guidance is needed to set the minimal requirements of virtual programs, and beyond that, create a robust ecosystem of course offerings that are available to every child in the state.

Emerging issues

1. **Many vulnerable students are opting for virtual options while more resourced students are opting for brick-and-mortar schooling.** Many of those interviewed expressed surprise and concern about the profile of students opting into virtual-only education. They expected more resourced students to choose virtual, but instead, they are finding that more at-risk, less resourced students are opting into virtual school while their more resourced peers are selecting brick-and-mortar options. This has the potential to exacerbate already significant achievement gaps. Some districts reported that after recognizing this, they were proactively reaching out to parents to suggest a change of program placement.

   Recent research from full-time K-12 virtual schools (J. Ahn & McEachin, 2017[41]; Fitzpatrick et al., 2020[42]) suggests that many students earn lower grades and fail more often in online learning settings compared to on-campus learning experiences. Research from Florida, with a well-established statewide virtual school, shows more mixed outcomes, with positive effects for online modalities on course grades but negative effects on longer term outcomes like

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[41] Ahn, J., & McEachin, A. (2017). Student Enrollment Patterns and Achievement in Ohio's Online Charter Schools. Educational Researcher, 46(1). 44-57. https://doi.org/10.3102/0013189X17692999

[42] Fitzpatrick, B. R., Berends, M., Ferrare, J. J., & Waddington, R. J. (2020). Virtual Illusion: Comparing Student Achievement and Teacher and Classroom Characteristics in Online and Brick-and-Mortar Charter Schools. Educational Researcher. https://doi.org/10.3102/0013189X20909814

follow-up course grades and graduation readiness. [43] High-achieving learners tend to be minimally affected by online schooling; students who do fine anywhere tend to do fine online. But the online penalty is more severe for vulnerable and struggling students. There are good reasons to believe that a pivot to online learning could most negatively affect PK-2 students, students experiencing food and housing insecurity, and students with limited access to healthcare.

2. **Concerns with integrity of results from assessments delivered remotely.** Districts reported concern regarding the integrity of results of students who tested remotely for their formative benchmarks. There were instances reported of students testing much higher in the fall of 2020 than they have ever tested previously. This was particularly noted in kindergarten to second grade. For instance, it was shared that schools while monitoring remote administration of the tests, had to remind parents not to help students during the tests. There were also examples shared of students who historically scored in the bottom quintile who were suddenly scoring in the top quintile. When these students were called in to retest at the school building, the students tested more in line with their historical trend. Some teachers expressed that they had been working through the Response to Intervention (RtI) process for a student and thought that these abnormal testing measures would frustrate their work.

   NWEA's analysis of remote testing experience found consistency with in-school testing for students in grades 3-8, but the researchers concluded that it may qualitatively differ for the youngest students. For example, a disproportionate percentage of K-2 students jumped two or more quintiles in remote testing.[44] As a result, K-2 student testing was excluded from NWEA's main conclusions brief analyzing learning during COVID-19.

3. **Recognition that end-of-year state assessments should be given in spring 2021.** During interviews, the need for quality student data to drive the decision-making process was often repeated. Operating without state summative tests from spring 2020, district and school leaders seemed to understand *what* was being missed in the absence of student testing data. No one interviewed expressed a desire to forgo state summative assessments in spring 2021. Many did express concern about having any results count towards school accountability ratings.

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[43] Hart, C. M. D., Berger, D., Jacob, B., Loeb, S., & Hill, M. (2019). Online Learning, Offline Outcomes: Online Course Taking and High School Student Performance. AERA Open. https://doi.org/10.1177/2332858419832852

[44] Kuhfeld, M. (2020, December 2). EdNext Podcast: Projections of Pandemic Learning Loss Were Too Pessimistic, a New Study Suggests [Interview]. Retrieved 2020, from https://www.educationnext.org/ednext-podcast-projections-of-pandemic-learning-loss-were-too-pessimistic-a-new-study-suggests/

Observed Best Practices in South Carolina and Nation

1. **Focused professional development for staff to support students during remote learning.** Two of the school districts visited stood out in their approach to providing professional development that was focused and responsive to staff and student needs during emergency remote learning.

   The first district implemented a "Lunch and Learn" series during spring 2020. These sessions were voluntary for staff but highly publicized and attended. Staff members registered for the hour-long webinars facilitated by the district's instructional technology and content coordinators. Recordings of the sessions were later made available on the district's staff resource page. The professional development session topics grew from the feedback of teachers, parents, and students during remote learning. Once a topic was decided, the issue was introduced through a functional how-to session for a particular tool or tools and then developed within the context of a particular grade level or content so that teachers could see the instructional applications. For example, providing students with academic feedback during emergency remote learning was identified as a need. There were introductory level how-to sessions on technology tools (e.g. SeeSaw and GoogleDocs) that support virtual academic feedback. These how-to sessions were followed in the week by content and/or grade level modeling of the tool (e.g. Digital Feedback in SeeSaw: 4K-2, Academic Feedback in Mathematics: 6-12). These curriculum sessions went deeper into the instructional implications of the technology tool being used to deliver content. Feedback from teachers and administrators was positive.

   Another district that had a robust and well-implemented technology infrastructure worked during the spring and summer to develop model lessons on identified priority standards. These videos and lessons were curated and added to the district's learning object repository. The developed resources could then be used across the district by teachers as a support for students needing a refresher of a key skill from a prior year or as a resource for new learning in the fall. Instead of each teacher creating their own digital curriculum or translating their resources into the virtual environment, the district supported a crowd source model for quality resources within the district.

2. **Prioritized face-to-face instruction for students, particularly for elementary and vulnerable student populations, as soon as safely possible.** Recognizing that students were best served by a teacher in a face-to-face classroom, many of the districts interviewed emphasized the importance of safely returning students to brick-and-mortar classrooms as soon as safely possible. When it was not possible to safely return all students to the buildings, districts prioritized the return of elementary students (the grade band most negatively impacted by the COVID slide) and vulnerable student populations, such as special education students and English Learners.

3. **Provided access to high quality virtual curriculum, resources, and courses.** VirtualSC's franchise program allows districts to use VirtualSC developed course content, Learning Management System, and Student Information System while using the district's own instructors. Currently, VirtualSC's course content is limited to high school courses with a pilot of middle school courses planned for the spring and fall of 2021. There were 21 districts in VirtualSC's franchise program in 2019-20. Districts interviewed who were part of the franchise program mentioned this as a strong resource for teachers and students.

Texas, Michigan, Florida, Utah and Louisiana have been making great strides to provide broader student access to a comprehensive course catalog for all students through their Course Access policies. Louisiana, through its Supplemental Course Catalog, offered over 15,000 courses in 2018-2019, a 700% increase over just a few years before. Such policies should be considered in South Carolina to broaden student access to a comprehensive course catalog.

Summer 2020 Academic Recovery Camps (ARCs)

KEY FINDINGS FROM ACADEMIC RECOVERY CAMP (ARC):

1. Students began ARCs with significant learning deficits in reading and mathematics.

2. Students made statistically significant gains in both reading and math during ARCs.

3. Despite ARCs gains, students remained significantly behind expectations for grade level proficiency in reading and math after ARC.

4. There was overall low student enrollment in ARCs despite many students identified as in need of intervention.

Recommendations

1. Provide reimbursement funding to districts only for students with a valid pre- and post- ARC assessment.

2. Consider lengthening the instructional day minimums during ARC.

3. Create a process to allow districts to develop and create innovative programs and/or community partnerships to provide after-school, summer, or Saturday ARCs in mathematics and reading/writing. Pre- and post-assessments should be required to measure and produce results in student performance.

Financial and Enrollment Information

ARC Funding Allocated:
$50.7 million

ARC Funding Expended:
$2.34 million

Expected ARC Enrollment:
21,000 students in May
9,406 students in July

Actual ARC Enrollment:
3,740 students

Districts with ARC: 37

Act 142 included authorization of reimbursable funding for districts to hold Academic Recovery Camps (ARC). Section 5 of Act 142 requires districts to administer student assessments in reading and mathematics to students who participate in Academic Recovery Camps and directs the EOC to evaluate the camp's impact on student learning:

B)   The Department of Education is authorized to reimburse public school districts up to $210,700,000 for the cost of providing unbudgeted instructional support beyond the number of days and hours required by state law. The additional support is to focus on face-to-face instruction for (1) any at-risk students in kindergarten through third grade residing in the school district for Academic Recovery Camps in reading and mathematics during the summer and (2) students in 4K through eighth grade for five additional instructional days at the start of the school year.

> *(C)   School districts utilizing Academic Recovery Camps will assess students at the beginning and end of the camp. The results of the pre- and post-assessments must be submitted to the Department of Education which, in turn, must provide the information to the Education Oversight Committee for evaluation of the impact the recovery camps had on student learning and the impact of the interventions on student learning.*

ARCs were intended to provide instructional opportunities in reading and math for at-risk students in kindergarten through third grade by providing instruction for 120 minutes a day in literacy and 50 minutes a day in math for four weeks.[45] Students participating in ARC should have been given both a reading and math pre- and post-assessment. Only face-to-face (F2F) ARC students were eligible to receive funding.

In May 2020, 21,000 students were identified by districts as in need of ARC services. In July 2020, 9,406 students were invited to attend district ARCs. A total of 3,740 students were identified as attending an ARC. More than half of South Carolina's public-school districts opted not to hold face-to-face ARCs during the summer of 2020. It has also been reported by districts that did hold ARCs that some families had health concerns during the summer and chose not to have their students attend face-to-face ARC instruction.

Pre-test and post-test results were obtained from 1,613 students in Reading (43% of those attending), and 1,455 students in Mathematics (39% of those attending). Post-test only results were available for an additional 695 students in Reading and 902 students in Mathematics, but only those students with both a pre- and post-assessment are considered in this analysis. Statistical significance was determined based on a dependent t-test of the difference between the pre-test and post-test scores for individual students.

The most common assessment used for reporting NWEA MAP Growth. Results were also obtained using the i-Ready and STAR assessments. Grade level results are presented when results from 25 or more students were obtained, otherwise results were combined across grades.

NWEA released a linking study using the most recent 2020 MAP Norms to derive projected proficiency on the SC READY assessment. NWEA's linking study provides Fall, Winter, and Spring estimated RIT scores for grades 2-8. These projections provide MAP users with data that can be used to predict whether students are on track to meet SC READY proficiency marks.[46]

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[45] South Carolina Department of Education. (2020, June 8). Academic Recovery Camp Funding: Memorandum. Retrieved from https://ed.sc.gov/newsroom/school-district-memoranda-archive/academic-recovery-camp-funding/academic-recovery-camp-funding-memo/

[46] NWEA. (2020). Linking study report: Predicting performance on the South Carolina College-and Career-Ready Assessments (SC READY) based on NWEA MAP Growth scores. Portland, OR: Author. https://www.nwea.org/content/uploads/2020/07/SC-MAP-Growth-Linking-Study-Report-2020-07-23.pdf
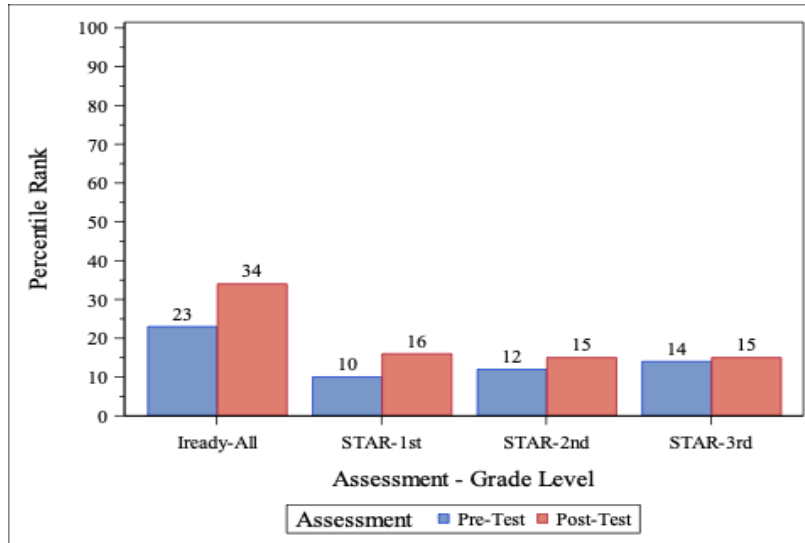
Students who participated in Academic Recovery Camps (ARC) were significantly behind expectations for grade level proficiency in ELA/reading. Students began ARCs with an average deficit of 37.9 RIT points in ELA/reading compared to the expectation for grade level ELA/reading proficiency. Students exited ARCs with an average deficit of 35.8 RIT points in ELA/reading compared to the expectation for grade level ELA/reading proficiency. Thus, students who participated in Academic Recovery Camp demonstrated statistically significant gains in reading, but these gains were not enough for the student to begin the year on track for proficiency (met or above) on SC READY ELA at the end of the 2020-21 academic year.

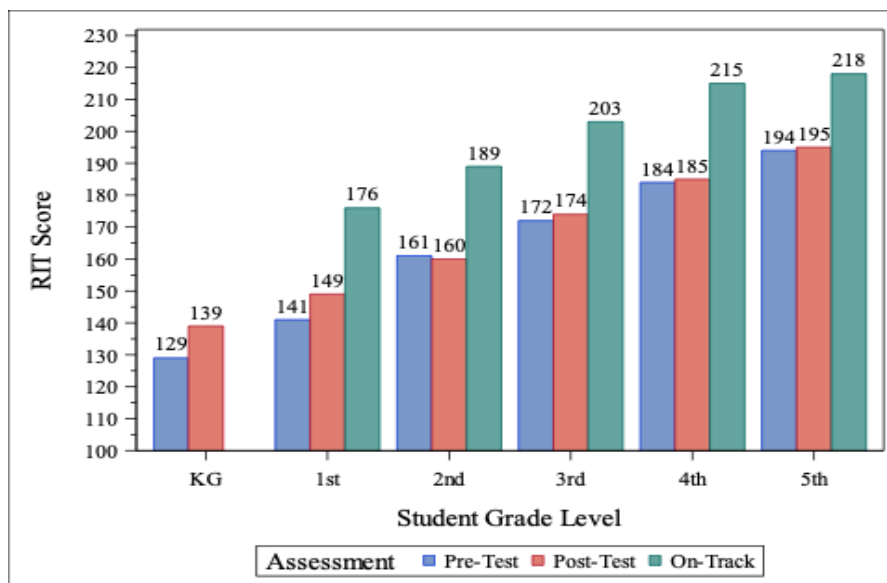*Figure B1*. Median ARC RIT Scores and On-Track RIT Scores for NWEA MAP Reading
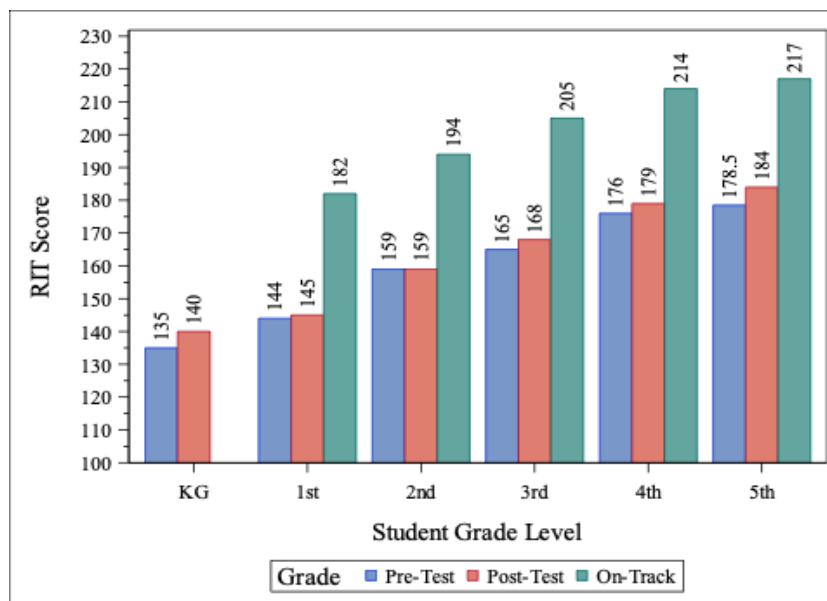
Similarly, students who were tested using i-Ready and STAR assessments were significantly behind expectations for grade level proficiency in reading. Students assessed using i-Ready had a median percentile rank of 23 at the beginning of ARC and a median percentile rank of 34 at the end of ARC in reading. Students assessed using STAR had a median percentile rank of 12 at the beginning of ARC and a median percentile rank of 15 at the end of ARC in reading. A percentile rank between 67 and 74, depending on the grade level, is required in ELA/reading to indicate grade level proficiency (meets or above) at the end of the school year on SC READY ELA. Thus, although students who participated in ARC demonstrated statistically significant gains in ELA/reading, the gains achieved were not enough for the students to begin the year on track to be met on SC READY ELA at the end of their academic year in any grade assessed.

Figure B2. Median ARC Percentile Rank Scores for i-Ready and STAR Reading Assessments
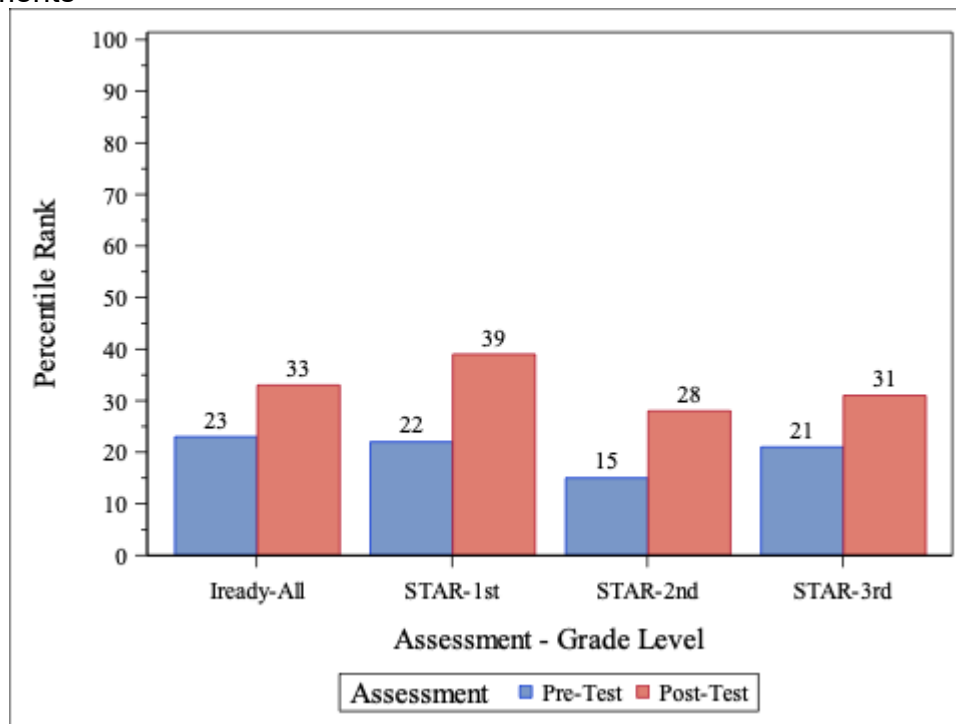

Likewise, students who participated in Academic Recovery Camps (ARC) were significantly behind expectations for grade level proficiency in mathematics. Students began ARCs with an average deficit of 29.8 RIT points in mathematics compared to the expectation for grade level proficiency. Students exited ARCs with an average deficit of 28.9 RIT points in mathematics compared to the expectation for grade level proficiency. Thus, students who participated in ARC demonstrated statistically significant gains in mathematics during ARC, but these gains were not enough for the student to begin the year on track to be met on SC READY Math at the end of the 2020-21 academic year in any grade assessed.

Figure B3. Median ARC RIT Scores and On-Track RIT Scores for NWEA MAP Mathematics

Similarly, students who were tested using i-Ready and STAR assessments were significantly behind expectations for grade level proficiency in mathematics. Students assessed using i-Ready had a median percentile rank of 23 at the beginning of ARC and a median percentile rank of 33 at the end of ARC in mathematics. Students assessed using STAR had a median percentile rank of 21 at the beginning of ARC and a median percentile rank of 28 at the end of ARC in mathematics. A percentile rank of 52 to 65 depending on the grade level is required to indicate grade level proficiency (meets or above) at the end of the school year on SC READY Math. Thus, students who participated in ARC demonstrated statistically significant gains, but these gains were not enough for the student to begin the year on track to be met on SC READY Math at the end of the year in any of the grades assessed.

Figure B4. Median ARC Percentile Rank Scores for i-Ready and STAR Math Assessments

In summary, the following conclusions are supported by a review of Academic Recovery Camp student assessment data:

1) Students began ARCs with significant learning deficits in reading and mathematics.

2) Students made statistically significant gains in both reading and mathematics during ARCs.

3) Despite ARC gains, students remained significantly behind expectations for grade level proficiency in reading and math after ARC in all grade levels.

4) There was overall low student enrollment in ARCs despite many students identified as in need of intervention.

Academic Recovery Camp Recommendations

1. Provide reimbursement funding to districts only for students with a valid pre- and post- ARC assessment.

2. Consider lengthening the instructional day minimums during ARC.

3. Create a process to allow districts to develop and create innovative programs and/or community partnerships to provide after-school, summer, or Saturday ARCs in mathematics and reading/writing. Pre- and post-assessments should be required to measure and produce results in student performance.

Analysis of South Carolina's Fall 2020 NWEA MAP Data: Evaluation of Remote Learning's Impact on Student Learning in South Carolina

KEY FINDINGS FROM SOUTH CAROLINA'S FALL 2020 DATA ANALYSIS

1. On average, 7 out of 10 South Carolina students in grades 3 through 8 are projected not to meet grade level proficiency standards in mathematics and English Language Arts in spring 2021.

2. Comparing fall 2019 to fall 2020 in mathematics achievement, the COVID slide was most dramatic in grades 2 through 5, with between 10% and 16% fewer South Carolina students expected to meet grade level proficiency. In grades 6 through 8, approximately 5% fewer students are projected to be proficient on grade level standards in mathematics: only 1 out of 4 South Carolina students is projected to be proficient in mathematics in grades 7 and 8.

3. Comparing fall 2019 to fall 2020 reading achievement, South Carolina students demonstrated smaller declines than mathematics, with between 4% and 6% fewer students expected to meet grade level proficiency in grades 2 through 5 in spring 2021. In grades 6 and 7 there was no change in projected proficiency and only a 1% decrease in grade 8. However, despite scoring nearly the same as students last year, nearly 7 out of 10 South Carolina students are projected not to be proficient in reading.

4. South Carolina students declined in median percentile rank in all grades other than Kindergarten in mathematics compared to South Carolina students in the same grade in fall 2019.

5. South Carolina students declined in median percentile rank in grades 1 through 5 for reading compared to South Carolina students in the same grade in fall 2019.

6. The 2019-2020 South Carolina Cohort declined in median percentiles in all grades in mathematics.

7. The 2019-2020 South Carolina Cohort declined in median percentiles for reading in all grades other than the grade 2 cohort. The largest percentile declines were in mathematics.

8. Substantially larger percentages of South Carolina students decreased in their achievement quartile standing from 2019 to 2020, both for reading and for mathematics, though more so for mathematics.

9. Significant achievement gaps among historically underachieving students and their higher achieving peers continue to exist but do not appear to have widened during emergency remote learning. However, vulnerable student populations may be missing from the sample.

10. South Carolina students decreased less in median percentile in mathematics than their national peers in grades 4 through 7 during emergency remote learning.

11. South Carolina students decreased more in median percentile rank in reading than their national peers in grades 3 and 4 but decreased less than their national peers in grades 5 through 7 during emergency remote learning.

12. For South Carolina students in a sample of 14 districts, there was no statistically significant difference observed in the COVID slide of students with respect to instructional method (eLearning, blended learning, and instructional packets) during emergency remote learning.

In the summer of 2020, the South Carolina General Assembly passed Act 142. The Act's purpose was to authorize the expenditure of federal funds disbursed to the state in the Coronavirus Aid, Relief, and Economic Security (CARES) Act, and to specify the manner in which funds may be expended. Section 5 of Act 142 requires districts to administer student assessments in reading and mathematics and directs the EOC to evaluate the pandemic's impact on student learning:

> *(D)   School districts are required to utilize the additional instructional days and to assess each student enrolled in 4K through eighth grade in reading and mathematics. The assessment shall utilize a pre- and post-formative assessment from the state-approved list.*

> *(E)   All students will be assessed during the first two weeks of school to identify students needing additional support and the support to be provided. All students will be assessed again prior to the end of the 2020 Calendar Year to measure the impact of the intervention provided. The results of the pre- and post-assessments must be submitted to the Department of Education which, in turn, must provide the information to the Education Oversight Committee for evaluation of the pandemic's impact on student learning and the impact of the interventions on student learning.*

COVID-19 Slide Projections
Since the COVID-19 pandemic necessitated the closure of schools across the nation in March 2020, education systems have been scrambling to meet the needs of schools, families and students. The effects of student achievement were projected to be far-reaching and exacerbate long-standing opportunity gaps.

In April 2020, NWEA, an Oregon non-profit organization that provides MAP Growth assessment services to districts nationally, published "The COVID-19 slide: What summer learning loss can tell us about the potential impact of school closures on student academic achievement." According to this research report, "preliminary COVID slide estimates suggest students will return in fall 2020 with roughly 70% of the learning gains in reading relative to a typical school year. However, in mathematics, students are likely to show much smaller learning gains, returning with less than 50% of the learning gains and in some grades, nearly a full year behind what we would observe in normal conditions." [47] Historical data would also suggest that low-income students, students of color, and other underserved populations would experience more dramatic losses. Figures C1 and C2 below are illustrative charts of NWEA's estimated national COVID slides. In these charts, the COVID slowdown models student progress if students lose two or three weeks of instruction due to COVID, and the COVID slide models student progress if students lose two or three months of instruction due to COVID.

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[47] Kuhfeld, M., & Tarasawa, B. (2020, April). *The COVID-19 slide: What summer learning loss can tell us about the potential impact of school closures on student academic achievement* (Rep.). Retrieved https://www.nwea.org/content/uploads/2020/05/Collaborative-Brief_Covid19-Slide-APR20.pdf

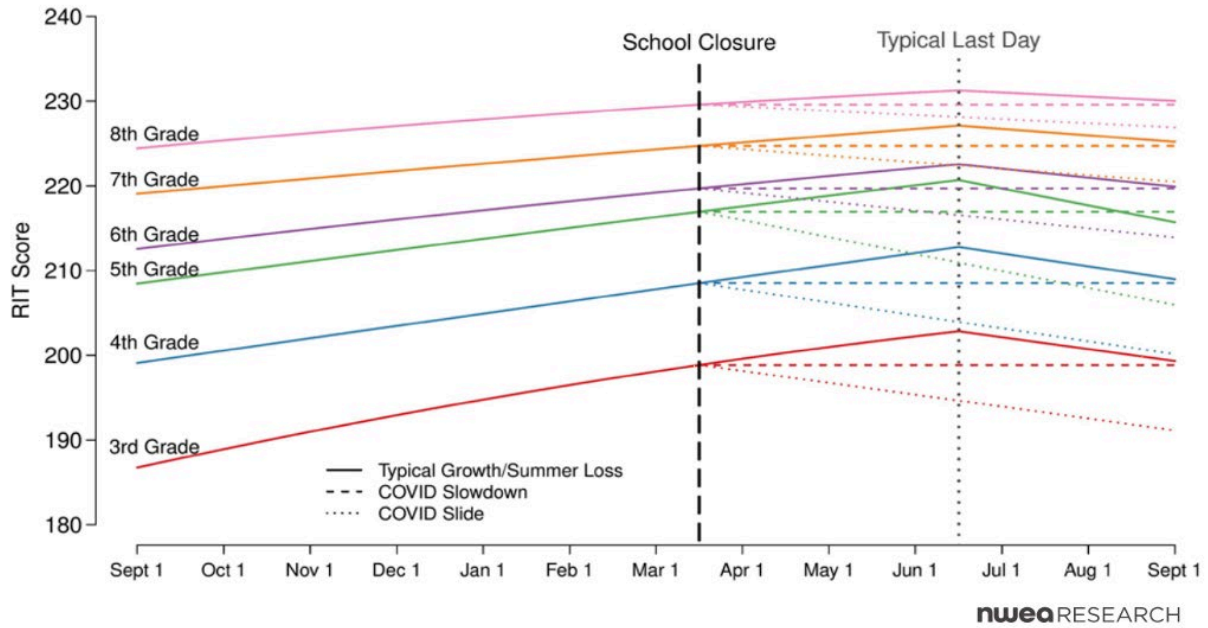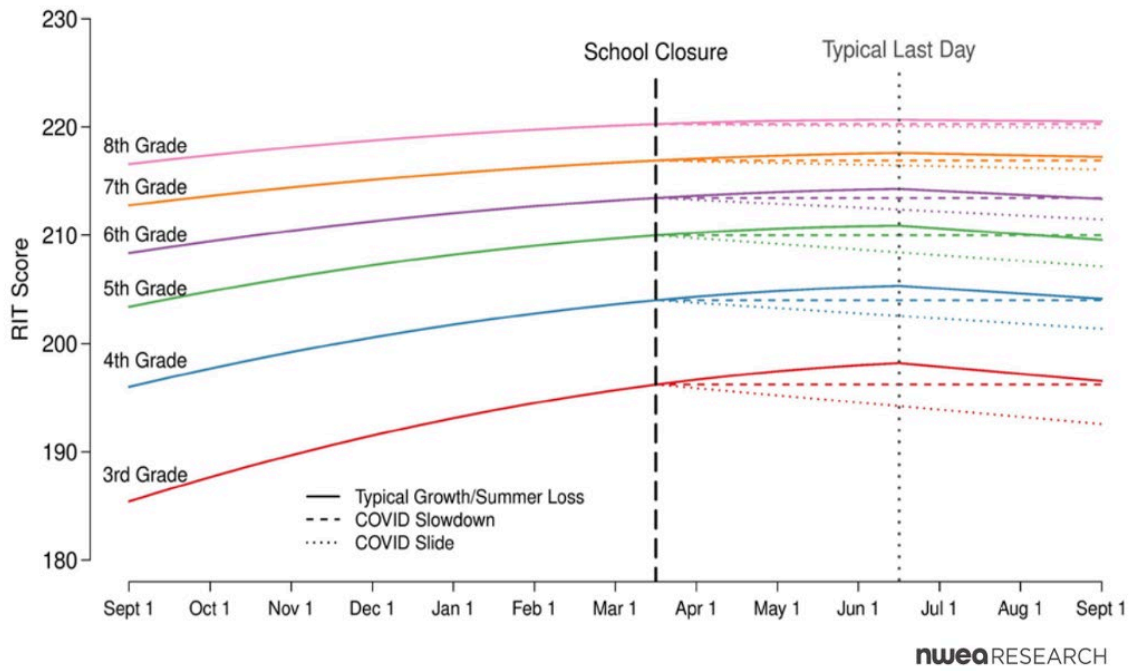*Figure C1*. NWEA Math Forecast

Figure C2. NWEA Reading Forecast

The consulting company McKinsey also projected that students would fall behind several months.[48] CREDO, an education research organization, warned that students would lose hundreds of days of learning.[49] These stark projections of estimated student loss were startling and widely cited. The estimates were admittedly based on worst case assumptions that students would not learn anything new and would lose past learning — treating remote learning as an extension of the summer. Some have argued that these projections of a significant COVID-19 slide spurred many education leaders to consider increased and innovative efforts to support students during school closures. [50]

National Data Analysis of Fall 2020 Formative Assessments

When NWEA researchers looked at the actual national data from 4.4 million students in grades 3 through 8 who took MAP Growth assessments at the beginning of the 2020 school year, the results were not as grim as originally estimated, but loss was observed. In math, the researchers found nationally that the average student this year was 5 to 10 percentile points below the average student at the same school last year, depending on their grade. In reading nationally, this year's students and last year's students scored about the same.[51]

Figures C3 and C4 below show the total percentage of students nationally within each grade who moved up one quintile or more ("Gainers," green), stayed in the same achievement quintile from one school year to the next ("Maintainers," blue), or moved down one quintile or more ("Sliders," red). In reading (Figure C3), the percentage of students who were Gainers, Maintainers, or Sliders was similar in 2019 and 2020. In contrast, nearly twice as many students moved down a quintile in math this year as compared to the previous year, as shown in Figure C4.[52] NWEA researchers excluded K-2 student results from the COVID-19 slide brief analysis due to lack of comparability of remote vs. in-person test results. [53] Figures C3 and C4 below are based on national, actual student data from winter to fall 2019 and winter to fall 2020.

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[48] Goldstein, D. (2020, June 05). Research Shows Students Falling Months Behind During Virus Disruptions. Retrieved December, 2020, from https://www.nytimes.com/2020/06/05/us/coronavirus-education-lost-learning.html

[49] Center for Research on Education Outcomes. (2020, October). *Estimates of learning loss in the 2019–2020 school year*. Stanford University.

[50] Barnum, M. (2020, December 01). Students fell behind this spring, but not as much as feared. Retrieved December, 2020, from https://www.chalkbeat.org/2020/12/1/21754406/learning-loss-data-spring-nwea-schools-covid

[51] Kuhfeld, M., Tarasawa, B., Johnson, A., Ruzek, E., & Lewis, K. (2020, November). Learning during COVID-19: Initial findings on students' reading and math achievement and growth. Retrieved December, 2020, from https://www.nwea.org/research/publication/learning-during-covid-19-initial-findings-on-students-reading-and-math-achievement-and-growth/

[52] IBID

[53] Kuhfeld, M., Lewis, K., Meyer, P. & Tarasawa B. (2020, November). Comparability analysis of remote and in-person MAP Growth testing in fall 2020. Retrieved December 2020, from

Figure C3. Percentage of national NWEA students who shifted their relative positing in the reading test percentile distribution comparing winter 2019 – fall2019 vs. winter 2020 – fall 2020
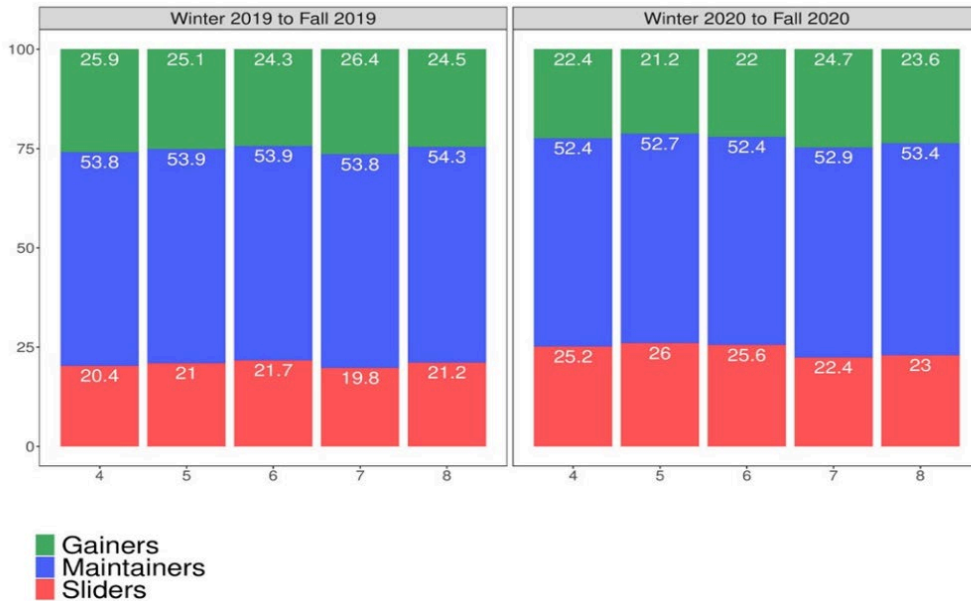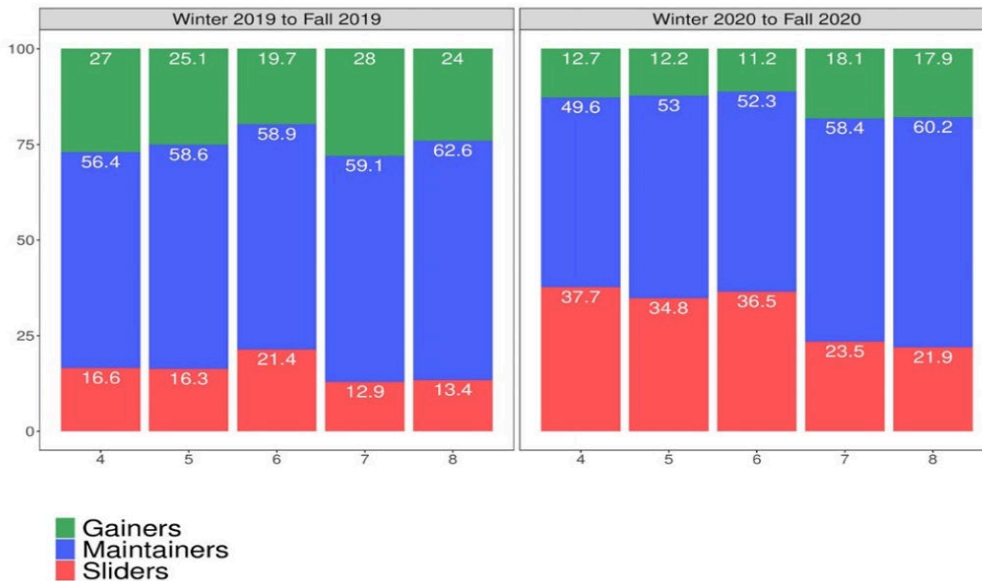

Figure C4. Percentage of national NWEA students who shifted their relative positing in the math test percentile distribution comparing winter 2019 – fall2019 vs. winter 2020 – fall 2020

https://www.nwea.org/content/uploads/2020/11/Technical-brief-Comparability-analysis-of-remote-and-inperson-MAP-Growth-testing-in-fall-2020-NOV2020.pdf

The NWEA researchers cautioned that the students missing from the national sample could cause the actual effect of the COVID-19 slide to be underestimated. "Missingness" matters. "Across subjects and grades, the same pattern was observed: a larger fraction of attriters were ethnic/ racial minority students, students with lower achievement in fall 2019, and students in schools with higher concentrations of socioeconomically-disadvantaged students. **The findings from our attrition analyses suggest that considerable caution is warranted when interpreting fall 2020 assessment results. Students tested in fall 2020 had higher average baseline achievement and were demographically different (e.g., racially less diverse and attend higher socioeconomic schools) from students who were not tested. Thus, a sizable population of the most vulnerable students were not assessed in fall 2020, and their achievement is not reflected in the data as a result. These systematic differences between attriters and students who tested mean that the impacts of COVID-19 on student achievement are likely underestimated."** [54]

Similarly, Bellweather estimates that between 10% and 25% of students in the most marginalized groups are likely to have minimal or no educational access since schools shut down in March 2020.[55]

Renaissance, another formative assessment company, also released in November 2020 an analysis based on a national sample of students in grades 1-8 who tested in fall 2019 and 2020. This research concluded students of all grades were performing below expectations in math at the beginning of the 2020 school year, with some grades 12 or more weeks behind. The average elementary and middle school student fell 7 percentile points in math and 1 percentile point in reading. [56]

Renaissance found only modest differences in learning loss across different groups of students. Students in high-poverty schools lost 9 points in math and 2 in reading, according to the Renaissance data. Black, Hispanic, American Indian and students in schools serving largely low-income families fared worse, but according to their analysis, the pandemic so far has not widened existing achievement gaps.[57]

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[54] Kuhfeld, M., Tarasawa, B., Johnson, A., Ruzek, E., & Lewis, K. (2020, November). Learning during COVID-19: Initial findings on students' reading and math achievement and growth. Retrieved December, 2020, from https://www.nwea.org/research/publication/learning-during-covid-19-initial-findings-on-students-reading-and-math-achievement-and-growth/

[55] Korman, H. T., O'Keefe, B., & M. R. (2020, October 22). Missing in the Margins: Estimating the Scale of the COVID-19 Attendance Crisis. Retrieved December, 2020, from https://bellwethereducation.org/publication/missing-margins-estimating-scale-covid-19-attendance-crisis

[56] Renaissance Learning. (2020, Fall). How Kids Are Performing: Tracking the Impact of COVID-19 on Reading and Mathematics Achievement. Retrieved December, 2020, from https://renaissance.widen.net/s/wmjtlxkhbm

[57] Thompson, C. (2020, December 01). Study: Students falling behind in math during pandemic. Retrieved December, 2020, from https://apnews.com/article/pandemics-race-and-ethnicity-standardized-testing-coronavirus-pandemic-6f8d16bb0c1bf0625d4b12099d6ae15d

SOUTH CAROLINA'S FALL 2020 FORMATIVE ASSESSMENT DATA

To produce the South Carolina data specific report, the EOC worked closely with NWEA, an Oregon non-profit organization that provides MAP Growth assessment services to school districts in South Carolina and nationally. The MAP Growth assessment was not the only formative assessment used by school districts in South Carolina to meet the assessment requirements of Act 142. South Carolina school districts also used i-Ready (4 districts), STAR (4 of districts), Scholastic (2 districts) and TE-21 CASE (2 districts) assessments.

MAP Growth was the most widely used formative assessment by South Carolina's public-school districts in testing for fall 2020. The following analysis includes NWEA Map Growth student results from 67 of South Carolina's 81 public-school districts.

The NWEA MAP Growth Assessment

Summary: NWEA MAP is an adaptive assessment that allows for student comparison against national normative results as well as projections of proficiency on South Carolina assessments.

NWEA MAP Growth (NWEA MAP) is a computerized adaptive test: As an examinee takes the test, the next item the examinee is presented depends on whether the previous item was correctly or incorrectly answered. When examinees correctly answer items, the testing algorithm selects more difficult items to present; similarly, when examinees incorrectly answer items, the testing algorithm selects less difficult items to present. The test ends when students have responded to a sufficient number of items to provide reliable estimates of student achievement overall and across instructional areas.

Under normal (non-COVID-19) conditions, schools and districts determine how frequently students are assessed with NWEA MAP. There are, however, four testing seasons defined by NWEA: Fall, Winter, Spring, and Summer. Normative information is provided for Fall, Winter, and Spring testing by selecting a norm group to be nationally representative from tested students. These national norms allow for South Carolina student results to be compared to similar students tested nationally. No normative information is provided for Summer testing because students tested at this time are not representative of students nationally.

In addition to the normative information, NWEA has conducted a linking study using spring 2019 data to derive RIT cut scores on the MAP Growth assessments that correspond to the SC READY performance levels. The linking study was recently updated to incorporate the new 2020 NWEA MAP growth norms. This information allows educators to identify students at risk of failing to meet state proficiency standards early in the year.[58]

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[58] NWEA. (2020). Linking study report: Predicting performance on the South Carolina College-and Career-Ready Assessments (SC READY) based on NWEA MAP Growth scores. Portland, OR: Author. https://www.nwea.org/content/uploads/2020/07/SC-MAP-Growth-Linking-Study-Report-2020-07-23.pdf

A relatively new feature of NWEA MAP is the ability to administer remote testing rather than in-person, onsite administration at the school. Given the circumstances of schooling during a pandemic, this feature was more widely used in the fall of 2020. Not being under the direct supervision of the school, remote testing has caused concerns with the reliability of student test results. Remote administrations could have been conducted under a variety of test administration conditions that might compromise the score obtained by a student. Typically, when a test is identified as a standardized test, it means that the conditions of administration are the same for all examinees.

To address these concerns, NWEA conducted a comparability analysis of remote and in-person MAP Growth testing in the fall of 2020. This analysis revealed that test engagement and test duration between fall 2019 and fall 2020 were similar between remote and in-person test takers. Students' test engagement remained high both for students who tested remotely and in-person in fall 2020 across grades and subjects. In grades 3 through 8, achievement percentiles stayed the same or dropped from fall 2019 to fall 2020, with trends similar for remote and in-person testers and larger percentile score drops in math than in reading. Students who tested remotely in grades 1 and 2 in fall 2020 showed large improvements in their percentile rank since fall 2019; while in-person testers in grades 1 and 2 showed patterns more consistent with older students (percentiles stayed the same or dropped). The report concluded that taken together, these findings increase confidence in the quality of data gathered from remotely administered MAP Growth assessments in grades 3 and up.[59]

South Carolina's Students Tested in NWEA MAP

Based on an analysis by EOC staff, South Carolina students who tested with NWEA MAP in fall 2020 are similar to students enrolled in South Carolina public schools in fall 2020 (see Appendix B). Thus, when interpreted with caution, summary statistics obtained from NWEA results can suggest trends to students in South Carolina.

As in the national COVID analysis, students missing from the sample could cause the actual effect of the COVID-19 slide to be underestimated. Preliminary analysis of the South Carolina sample does indicate that fewer students were tested in schools with higher percentages of pupils in poverty and with higher percentages of minority students. Continued monitoring of student data is necessary to determine the impact on vulnerable student populations across South Carolina. [60]

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[59] Kuhfeld, M., Lewis, K., Meyer, P., & Tarasawa, B. (n.d.). Comparability analysis of remote and in-person MAP Growth testing in fall 2020. Retrieved December, 2020, from https://www.nwea.org/research/publication/comparability-analysis-of-remote-and-in-person-map-growth-testing-in-fall-2020/page/16/

[60] King, G., NWEA, personal communication, December 2020.

Comparability of Remote Testing Results

The instances of testing coded as remote compared to in-school was small. There is a concern with whether remote testing was correctly identified by schools and districts. The coding of remote tests was a process new to remote administration this year.

Of those tests that were coded as remote, South Carolina student results were higher during remote testing than for in-school testing on NWEA MAP, particularly in Kindergarten through grade 2. The results tend to be more similar in grades 3 through 8. If instances of remote testing are removed from the analysis, the percent of students projected to be proficient decreases slightly but not significantly (see Appendix C).

Analyses

Analyses to demonstrate changes in achievement in the fall of 2020 were conducted using two different measures: 1) the projected percentage of South Carolina students that will be proficient (achieve the level of meets or exceeds) in English/Language Arts (ELA) and Mathematics as measured by the SC READY assessments; 2) the median percentile rank of South Carolina students with respect to norms for the NWEA-MAP reading and mathematics assessments.

The predicted percentages of South Carolina students who meet state standards were obtained for students in grades 2 through 8 using the NWEA linking study.[61] Because SC READY is administered to students in grades 3 through 8, predictions were able to be made for grade 2 students using the history of grade 2 student testing and how close in time grade 2 assessments are to grade 3 SC READY achievement.

Median percentile ranks are obtained with respect to NWEA MAP national norms and are available for all grades for fall, winter, and spring testing.

Fall 2020 Projected Student Proficiency on South Carolina Grade Level Standards

Key Finding: On average, 7 out of 10 South Carolina students in grades 3 through 8 are projected <u>not</u> to meet grade level proficiency standards in mathematics and English Language Arts in spring 2021.

Key Finding: Comparing fall 2019 to fall 2020 in mathematics achievement, the COVID slide was most dramatic in grades 2 through 5, with between 10% and 16% fewer South Carolina students expected to meet grade level proficiency. In grades 6 through 8, approximately 5% fewer students are projected to be proficient on grade level standards in mathematics: only 1 out of 4 South Carolina students is projected to be proficient in mathematics in grades 7 and 8.

Key Finding: Comparing fall 2019 to fall 2020 reading achievement, South Carolina students demonstrated smaller declines than mathematics, with between 4% and 6% fewer students expected to meet grade level proficiency in grades 2 through 5

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[61] NWEA. (2020). Linking study report: Predicting performance on the South Carolina College-and Career-Ready Assessments (SC READY) based on NWEA MAP Growth scores. Portland, OR: Author. https://www.nwea.org/content/uploads/2020/07/SC-MAP-Growth-Linking-Study-Report-2020-07-23.pdf

in spring 2021. In grades 6 and 7 there was no change in projected proficiency and only a 1% decrease in grade 8. However, despite scoring nearly the same as students last year, nearly 7 out of 10 South Carolina students are projected not to be proficient in reading.

Figure C5 presents the percentages of South Carolina students projected to be proficient in reading using NWEA MAP data from fall of 2018, 2019, and 2020. One caution in interpreting these data is that there are differences in the definitions of proficiency by grade level on SC READY. In ELA/reading, the estimated achievement level associated with student proficiency ranges from achievement at the 66th to the 72nd percentile, depending on the grade level. In mathematics, the estimated achievement level associated with student proficiency ranges from achievement at the 52nd to the 72nd percentile.

Figure C5. Percentage of South Carolina Students Projected to be Proficient based on Fall Testing – 2018, 2019, and 2020
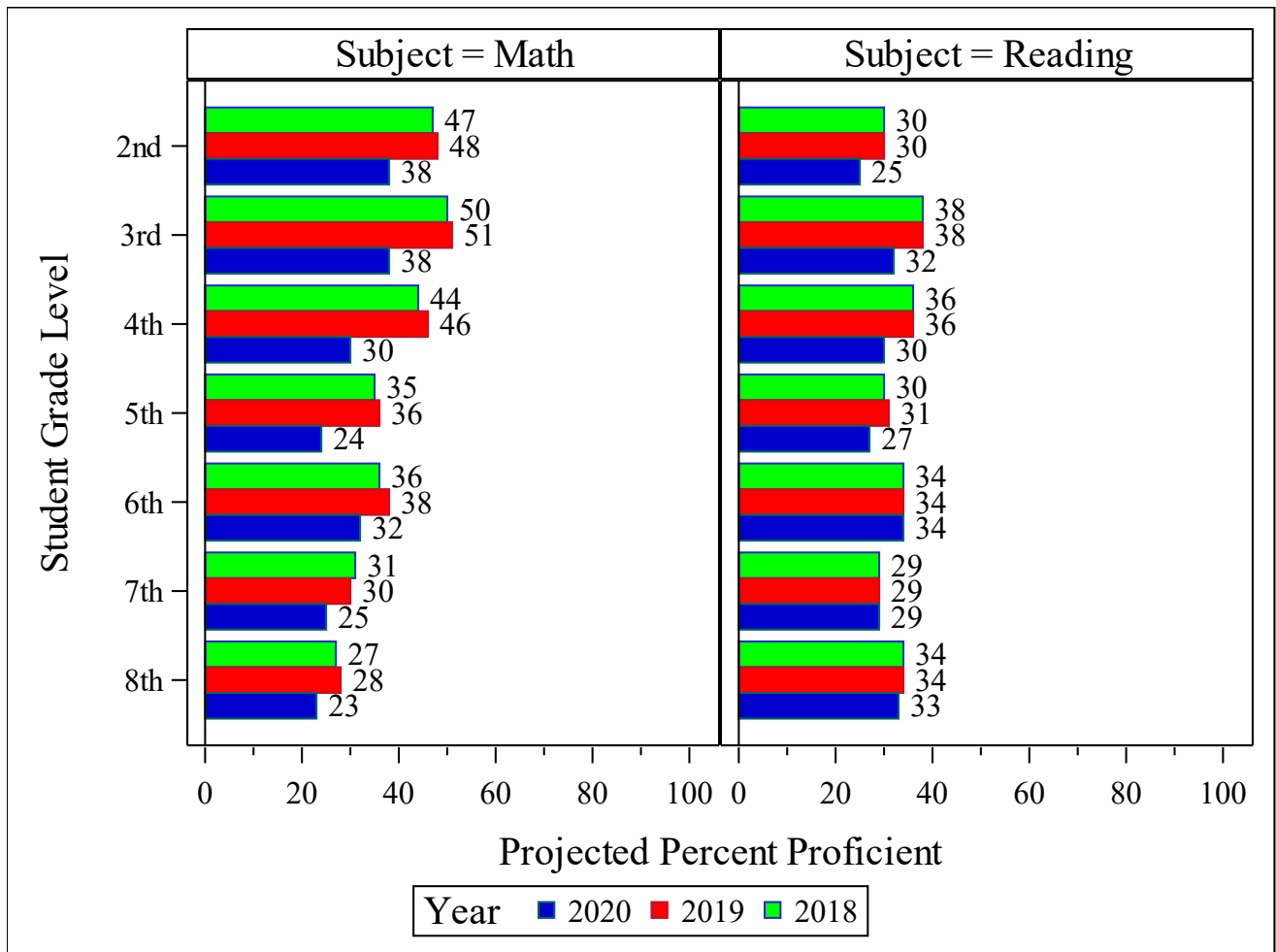
For Mathematics, in each of grades 2 through 5 there is a marked decrease in the percentage of South Carolina students projected to be proficient based on scores from the fall of 2020 compared to the fall of 2018 and the fall of 2019. In Reading, a decrease in the percentage of South Carolina students projected to be proficient occurs for grades 2 through 5. The decline is larger for Mathematics than for Reading. For example, in grade 3 the decrease in projected percent proficient from 2019 to 2020 is 6 percent for reading, but is 13 percent for mathematics, while in grade 5 the decrease is 4 percent for reading and 12 percent for mathematics. These differences are consistent in trend, though not identical in number, by grade level.

**Fall 2020 Median Percentile Rank for South Carolina Students**

Key Finding: South Carolina students declined in median percentile rank in all grades other than Kindergarten in mathematics compared to South Carolina students in the same grade in fall 2019.

Key Finding: South Carolina students declined in median percentile rank in grades 1 through 5 for reading compared to South Carolina students in the same grade in fall 2019.

Similar results are presented in Figure C6 where the measure of student achievement is the median percentile rank of students. Because normative data is available for Kindergarten and grade 1 students, they are included in this presentation.

In grades 1 through 5 for reading, and all grades other than Kindergarten for mathematics, there is a decline in the median percentile rank for South Carolina students in the fall of 2020 compared to the fall of 2018 or the fall of 2019. Also, the magnitude of the decline is much larger for mathematics than for reading.

Figure C6. Median South Carolina Percentile Ranks based on Fall Testing – 2018, 2019, and 2020
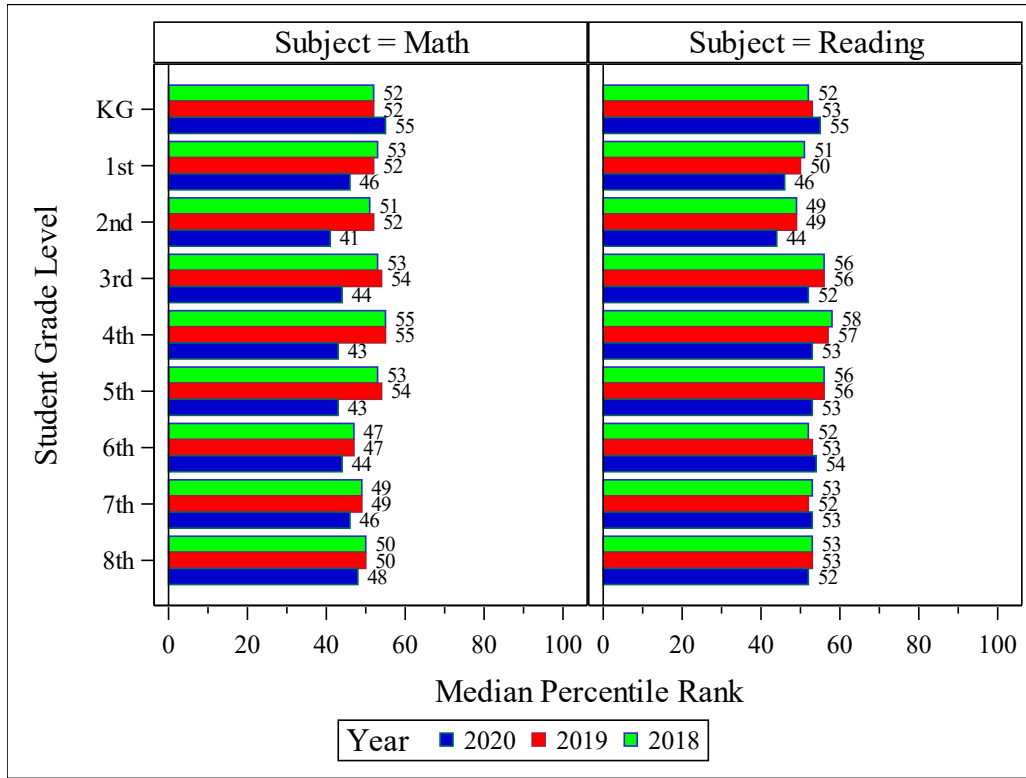
South Carolina 2019-2020 Cohort Analyses

Analyses were conducted using only those South Carolina students who were tested in all administrations from fall 2019 through fall 2020, not including spring 2019 at which time many students did not test due to COVID-19. Cohorts are identified by the grade level of the student on the date of the first of these three assessments. For example, to be in the Kindergarten cohort, a student would have tested as a Kindergarten student in the fall of 2019, and again in both the winter of 2019 and the fall of 2020 as a grade 1 student. Note that there is no grade 8 cohort because a student who tested in the fall of 2019 and winter of 2019 as a grade 8 student would have been in high school for fall 2020. Scores for grades higher than 8 were not considered for these analyses.

Based on an analysis by EOC staff, South Carolina 2019-2020 Cohort students are similar to students enrolled in South Carolina public schools (see Appendix D). Thus, when interpreted with caution, summary statistics obtained from South Carolina 2019-2020 Cohort results can suggest trends to students in South Carolina.

Caution should be taken against overinterpreting these results. Students missing from the sample could cause the actual effect of the COVID-19 slide to be underestimated. Continued monitoring is necessary to determine the impact on student populations.[62]

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[62] King, G., NWEA, personal communication, December 2020.

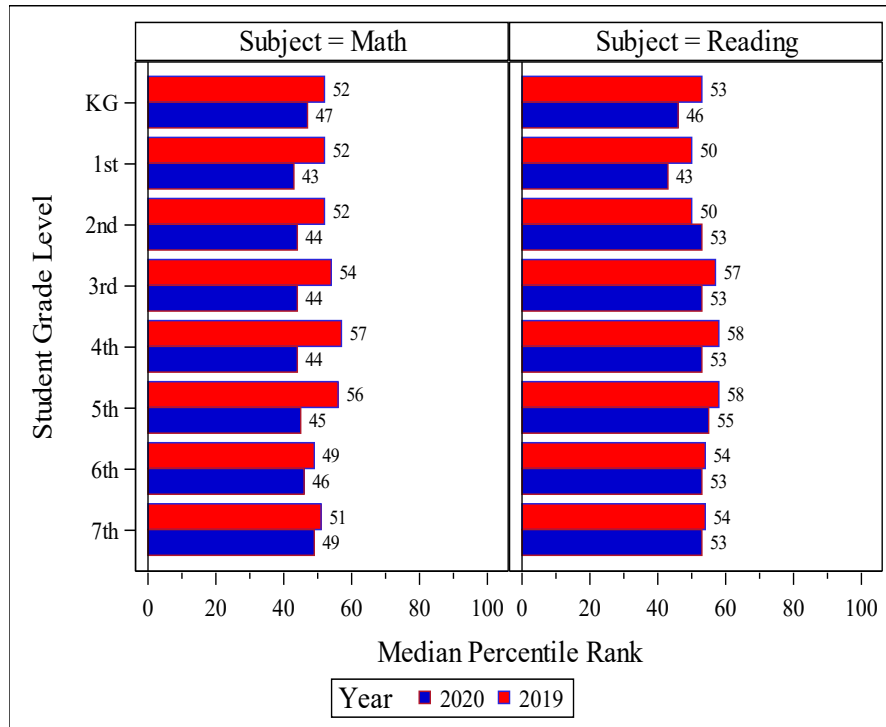**2019-2020 South Carolina Cohort Median Percentile Rank Analysis**

Key Finding: The 2019-2020 South Carolina Cohort declined in median percentile in all grades in mathematics.

Key Finding: The 2019-2020 South Carolina Cohort declined in median percentiles for reading in all grades other than the grade 2 cohort, but the largest percentile declines were in mathematics.

In Figure C7, the median percentile ranks are provided for South Carolina students in the 2019-20 Cohort by grade level in both 2019 and 2020. In Mathematics, for grades 1 through 5 the differences between the 2019 and 2020 median percentile ranks range from an 8 percentile decrease to a 13 percentile decrease for mathematics. The percentile differences are 3 and 2 percent, respectively, for grades 6 and 7. For Reading, the largest differences are in Kindergarten and grade 1, with a 7 percentile difference. The difference decreases as grade level increases to 1 point in grades 6 and 7, with grade 2 as an anomaly where the median percentile is higher in 2020 than in 2019.

For grades 3 through 8, the differences are similar to the differences obtained from the full samples of South Carolina students in 2019 and 2020 without matching. The differences in kindergarten and grade 1 do not match the differences for the full sample of students as closely. However, the general pattern, with a few exceptions, is consistent by subject area and regardless of student sample. South Carolina student achievement declined from fall 2019 to fall 2020.

Figure C7. Median South Carolina Percentile Ranks in 2019 and 2020 for the 2019-2020 Cohort

The median percentile for each grade level for mathematics is presented in Figure C8. For all grade level South Carolina cohorts, mathematics achievement appears to be stable from fall 2018 to fall 2019 but declines in fall 2020. The amount of decline varies by grade, but the trend appears to occur in all grade levels.

Figure C8. Median Achievement Percentile Rank Over Time for Cohorts of South Carolina Students
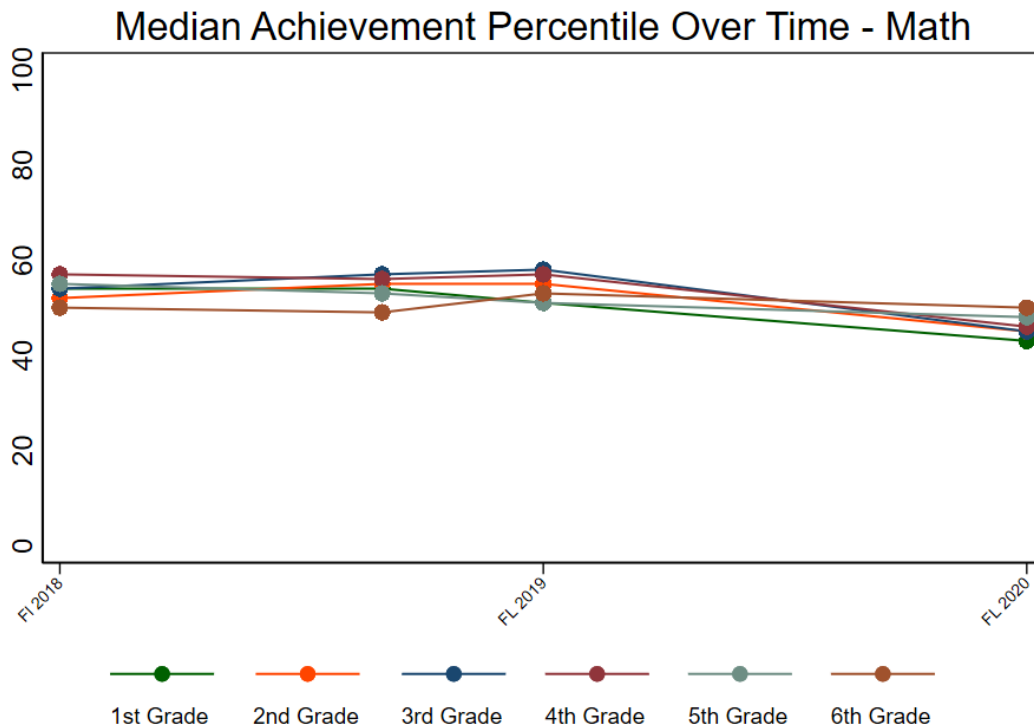
2019-2020 Cohort Achievement Analysis

Key Finding: Substantially larger percentages of South Carolina students decreased in their achievement quartile standing from 2019 to 2020, both for reading and for mathematics, though more so for mathematics.

In Figure C9, one summary of South Carolina student changes in achievement from 2019 to 2020 is presented. This analysis is based on four levels (quartiles) of student achievement defined by each student's percentile rank scores. Students with percentile rank scores from 1 to 25 are in the 1st quartile, students with percentile rank scores from 26 to 50 are in the 2nd quartile, students with percentile rank scores from 51 to 75 are in the 3rd quartile, and students with percentile rank scores from 76 to 99 are in the 4th quartile.

From fall of 2019 to fall of 2020, students may remain in the same quartile, or may increase or decrease up to 3 quartiles (a student in the 1st quartile can only increase 3 quartiles to the 4th quartile). From Figure C9, substantially larger percentages of South Carolina students decreased in their achievement quartile standing from 2019 to 2020,

both for reading and for mathematics, though more so for mathematics. For mathematics, the changes are larger for grades Kindergarten through grade 5, with the percentages of students increasing in their quartile standing declining with grade level.

For reading the largest changes occur for Kindergarten and grade 1, though for all grades the overall trend is that larger percentages of students decrease in quartile standing than increase in quartile standing.

To obtain a national reference for these changes, refer to Figure C3 and C4 on page 34 of this report. Two trends are evident from national data. First, for both reading and mathematics the percentage of students declining in quartile standing was substantially larger in 2020 than in 2019, and second, the percentage of students declining in quartile standing was larger for mathematics than for reading. This second trend is observed in South Carolina data presented in Figure C9.

Figure C9. Analysis of Quartile Changes for South Carolina Students from Fall 2019 to Fall 2020
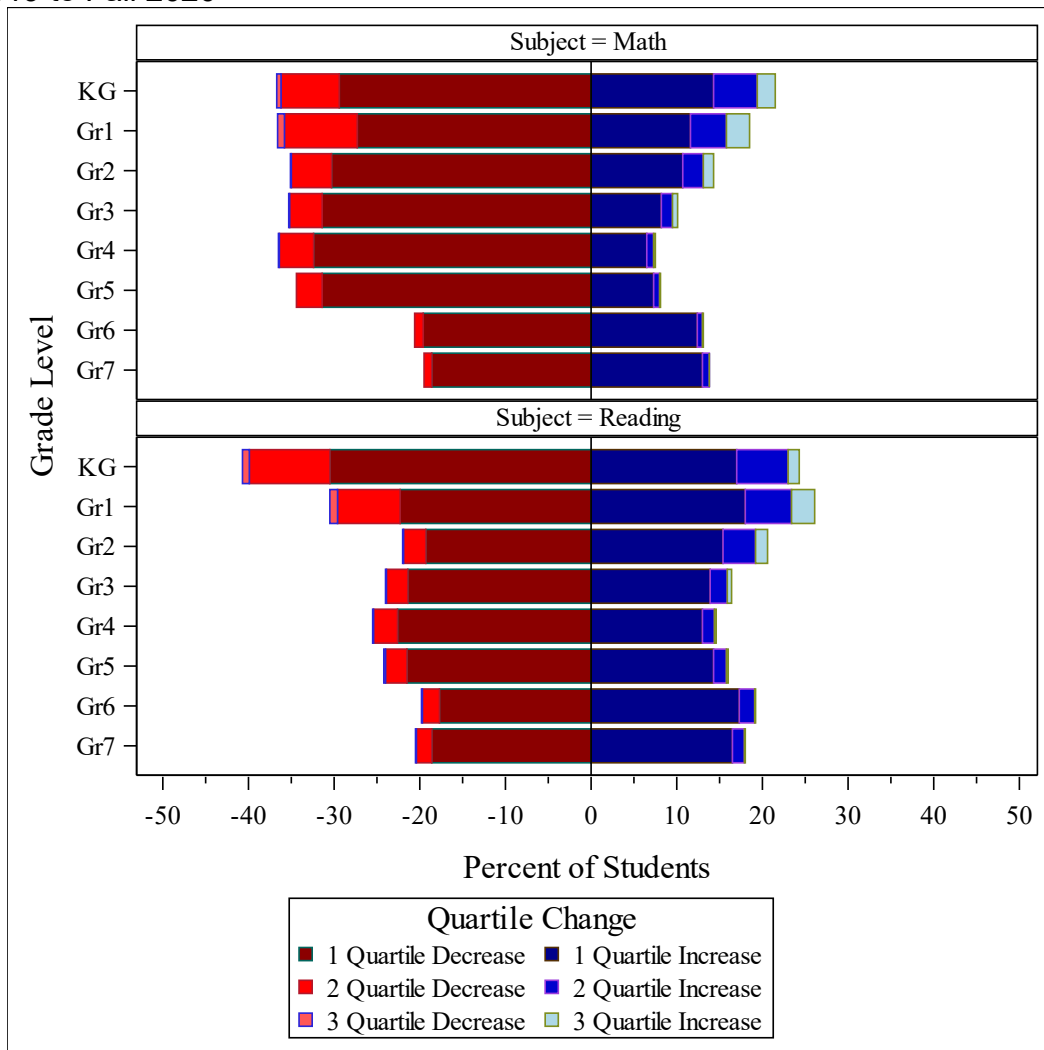
Student Achievement by Subgroups in 2019-2020 South Carolina Cohort

Key Finding: Significant achievement gaps among historically underachieving students and their higher achieving peers continue to exist but do not appear to have widened during emergency remote learning. However, vulnerable student populations may be missing from the sample.

Figure C10 presents the median percentile rank in mathematics for four student subgroups of the 2019-2020 Cohort: African American, Hispanic, Pupils in Poverty, and White. For all grade levels, White students have the highest median percentile ranks for both 2019 and 2020. In grades kindergarten and grade 1, African American students have the second highest median percentile rank among the groups but the lowest median percentile rank in grades 2 through 7 in mathematics. Hispanic students in the 2019-2020 cohort have the lowest median percentile ranks in kindergarten through grade 2, but the second highest median percentile ranks in grades 4 through 7.

Figure C10. Median Math Percentile Rank by Student Subgroup For South Carolina 2019-2020 Cohort
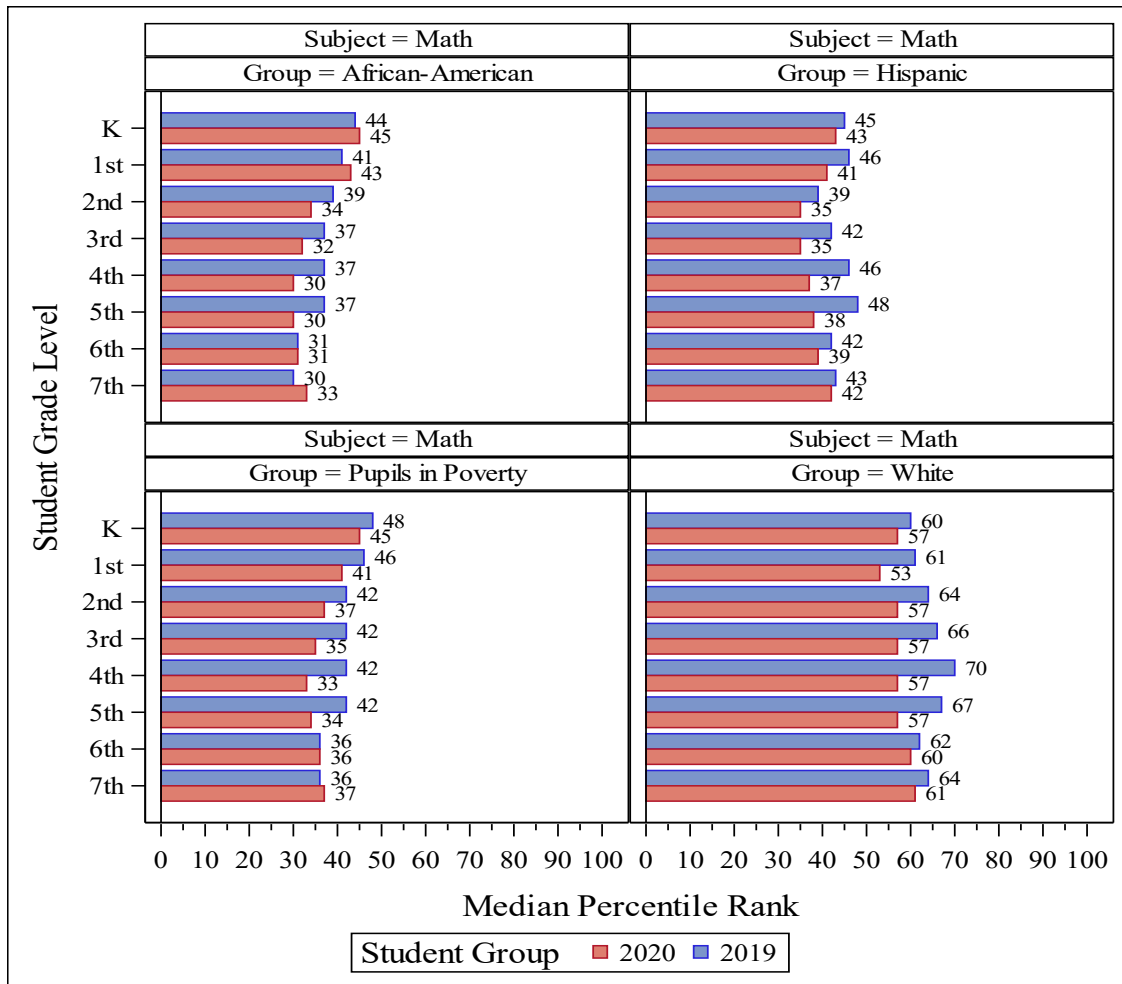
Figure C11 presents the median percentile rank in reading for the same four student subgroups of the 2019-2020 Cohort: African American, Hispanic, Pupils in Poverty, and White. For all grade levels, White students have the highest percentile rank. In grades kindergarten and grade 1, African American students have the second highest median percentile rank among the groups but the lowest median percentile rank in grades 4 through 7 in reading. Hispanic students in the 2019-2020 cohort have the lowest median percentile ranks in kindergarten through grade 3, but the second highest median percentile ranks in grades 6 and 7.

Figure C11. 2019-2020 South Carolina Cohort Median Reading Percentile by Subgroup
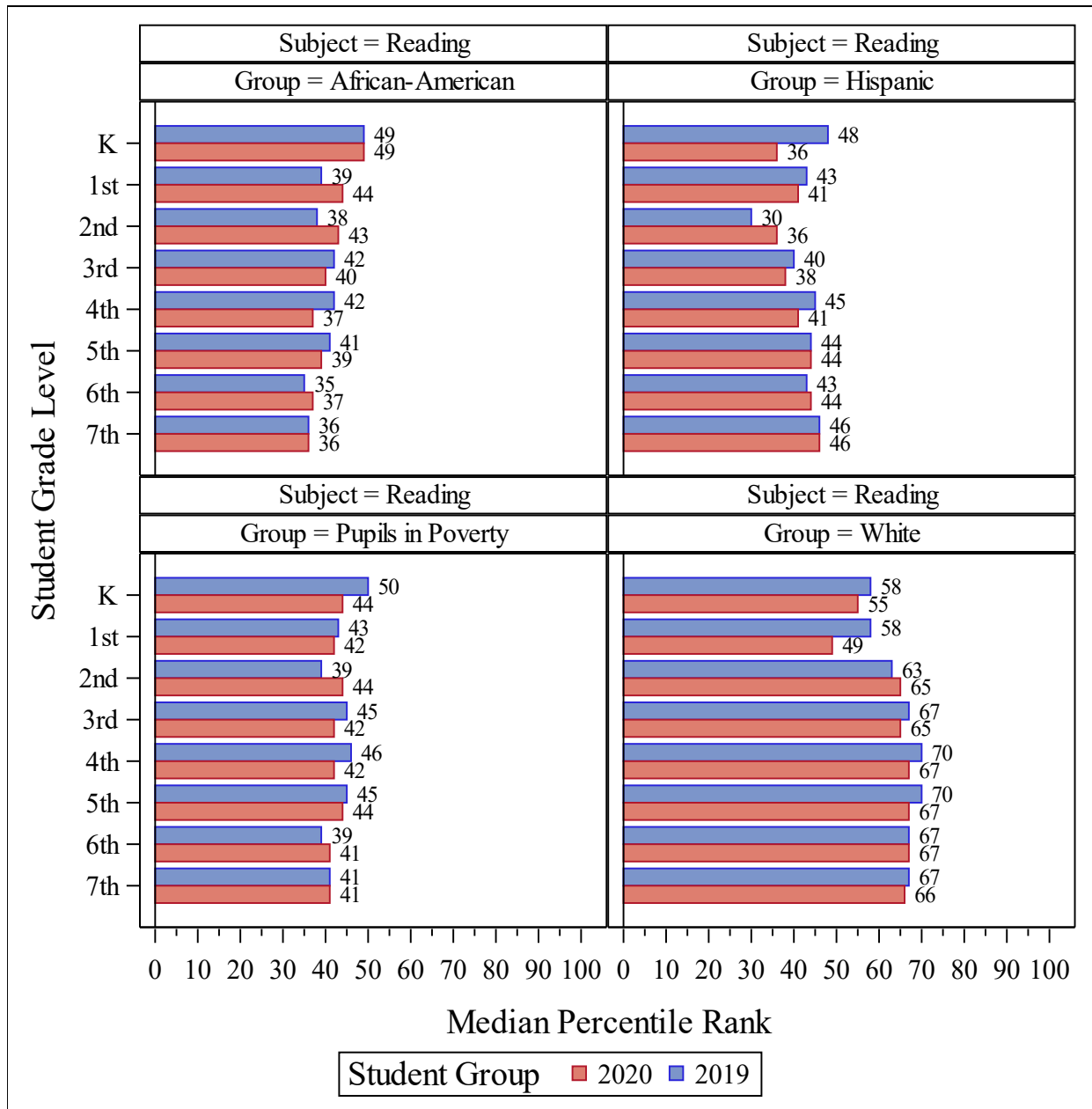
Though there are significant achievement gaps, the gaps do not seem to have widened during emergency remote learning. For example, see grade 3 mathematics. The decline for White students was 9 percentile points, 7 for Hispanic students, 7 for Pupils in Poverty and 5 for African American students. In third grade ELA/reading, the decline was 2 percentile points for each student group except Pupils in Poverty, which declined 3 percentile points. In grade 5 mathematics, the decline for White students was 10 percentile points, 10 for Hispanic students, 8 for Pupils in Poverty, and 7 for African American students. In grade 7 ELA/reading, White students decline 1 percentile point while no change in median percentile for the other student subgroups. Generally, for mathematics, the differences between 2019 and 2020 are largest for White students, then Hispanics, with African American students having the smallest changes from 2019 to 2020, yet African American students also score the lowest overall. For reading, African American students and Pupils in Poverty show slightly larger declines from 2019 to 2020. See Appendix E for a more detailed table of declines by grade level and subgroup.

Caution should be taken against overinterpreting these results. As in the national COVID analysis, students missing from the sample could cause the actual effect of the COVID-19 slide to be underestimated. Preliminary analysis of the South Carolina sample does indicate that fewer students were tested in schools with higher percentages of pupils in poverty and with higher percentages of minority students. Continued monitoring of student data is necessary to determine the impact on vulnerable student populations across South Carolina.

South Carolina's COVID Slide Compared to National COVID Slide

Key Finding: South Carolina students decreased in median percentile rank less in mathematics than their national peers in grades 4 through 7 during emergency remote learning.

Key Finding: South Carolina students decreased in median percentile rank more in reading than their national peers in grades 3 and 4 but decreased less than their national peers in grades 5 through 7 during emergency remote learning.

The COVID slide in mathematics was the most dramatic both nationally and in South Carolina. South Carolina's students experienced a slightly less dramatic COVID slide in mathematics than that observed in NWEA's national student sample in grades 4 and 5 with half the national slide observed in grades 6 and 7. The decline among South Carolina students in grade 3 mathematics, however, was more significant than the observed COVID slide in grade 3 nationally. Students in mathematics declined 8.5 points in grade 3, 11.3 points in grade 4, 11.1 points in grade 5, and 4.1 and 3.8 points in grades 6 and 7 respectively. A negative number on Figure C12 means that overall students in SC experienced a steeper drop in mathematics achievement between fall 2019 and fall 2020. A positive number means that overall students in South Carolina did not experience as drastic a drop in mathematics achievement as the national sample.

Figure C12. Comparison of Math COVID Slide in South Carolina to National Sample

Comparions of Change in Math Scores By Grade Over Time
Mathematics Achievement Change between Fall 2019 & Fall 2020

Legend:
- SC Change
- National Sample Change
- Difference between SC and National Sample
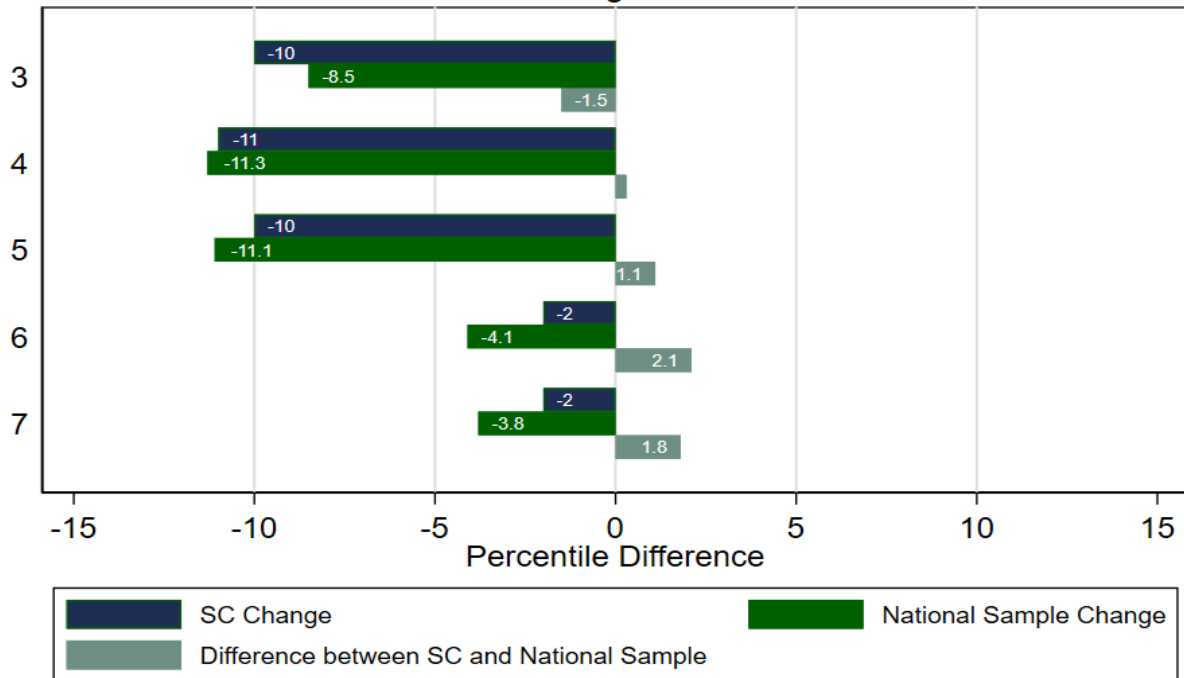
COVID slide declines in reading were less significant than losses in mathematics in the national sample and South Carolina. The decline in South Carolina grade 3 reading was more than the national decline. Grade 4 reading in South Carolina also declined more than the national sample. The COVID slide in South Carolina was nearly the same as the decline at grade 5 nationally, and South Carolina experienced less decline than the national sample in reading in grades 6 and 7. A negative number on Figure C12 means that overall students in SC experienced a steeper drop in reading achievement between fall 2019 and fall 2020. A positive number means that overall students in South Carolina did not experience as drastic a drop in reading achievement as the national sample.

Figure C13. Comparison of Reading COVID SLIDE in South Carolina to National Sample

Comparions of Change in Read Scores By Grade Over Time
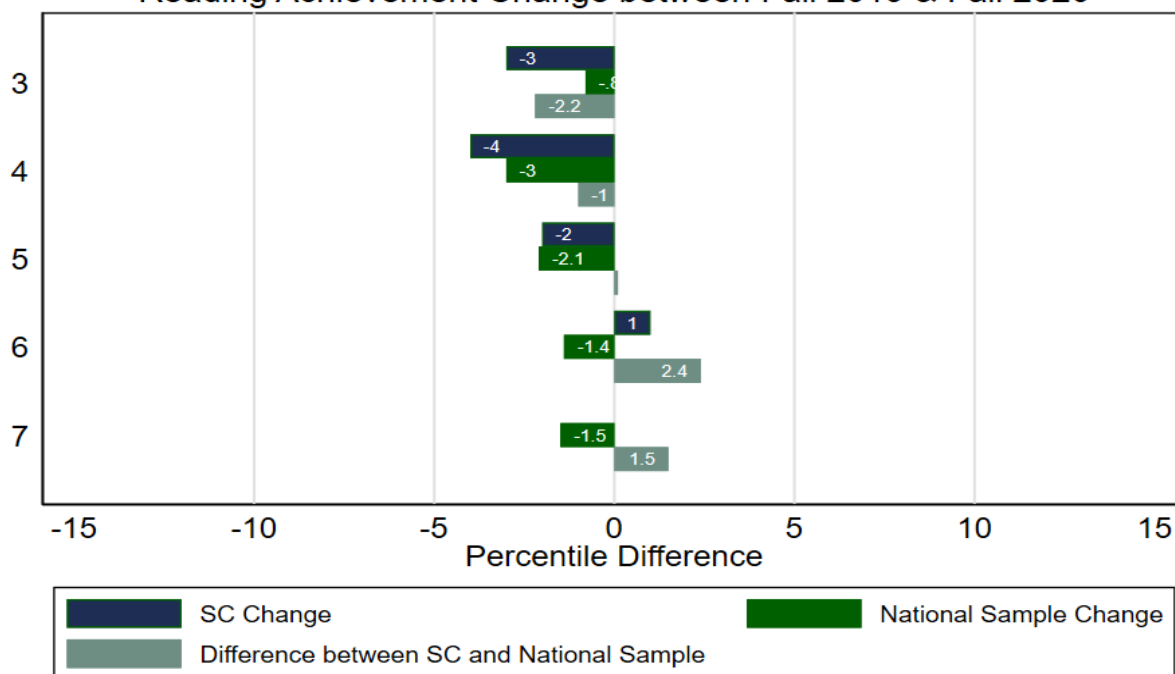### Reading Achievement Change between Fall 2019 & Fall 2020

Legend:
- SC Change
- National Sample Change
- Difference between SC and National Sample

Analysis of the COVID Slide by Instructional Approach in 14 South Carolina School Districts During Emergency Remote Learning

Key Finding: For South Carolina students in a sample of 14 districts, there was no statistically significant difference observed in the COVID slide of students with respect to instructional method (eLearning, blended learning, and instructional packets) during emergency remote learning.

The COVID slide of students from a sample of South Carolina school districts was compared to see if there was a statistically significant difference in the decline depending on the instructional approach taken by districts during emergency remote learning. This sample consisted of 104,801 students in 14 school districts that employed three different instructional approaches during emergency remote learning: eLearning, Blended and Packets. The categorizations of instructional approach were based upon the plans for emergency remote learning submitted by districts to SCDE in the spring of 2020. Five districts included in the sample are eLearning district. eLearning districts indicated that they were delivering instruction virtually and had participated in the EOC's eLearning pilot. Blended districts indicated in their plans that they would deliver instruction to students through a mix of virtual instruction and printed instructional packets. There were 5 blended school districts in the sample of districts analyzed. The final 4 districts were packet districts: these districts indicated that instruction would be delivered during emergency remote learning via printed, instructional packets only.

Figure C14 compares the median achievement percentile of 100,408 students in the South Carolina 14 district sample during emergency remote learning. According to this analysis, eLearning districts had higher student achievement results prior to emergency remote learning and after emergency remote learning than blended and packet districts. This result may indicate a difference in the composition of eLearning districts; these districts were selected to be a part of the eLearning pilot based on specific criteria related to technological resources and infrastructure as well as district vision for instructional technology leadership.

Figure C14. Comparison of Median Achievement Percentile by Instructional Approach of South Carolina Sample Districts

Median Achievement Percentile Over Time Math

Blended   eLearning   Packets
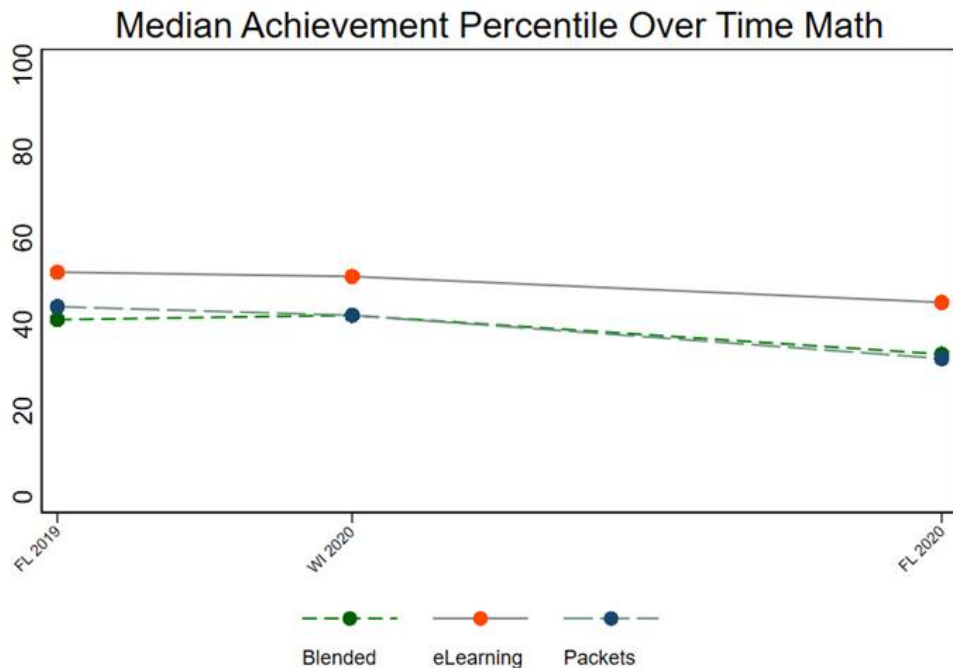
However, when student declines during emergency remote learning are compared, results show that there is no statistically significant impact by method of instructional delivery employed by the districts within the sample. Two analysis were conducted to verify this conclusion. The first was an analysis of covariance (ANCOVA). Results show there is a significant different within groups, but it is not practically significant. It is only significant because of the number of observations in the data. The effects size of the differences is under or equal to .005 in both Math and Reading. The next analysis was a mixed HLM model, nesting scores within districts. The results of this analysis showed that instructional delivery method does not have a significant impact on the drop students experience between terms. This result confirms a limitation of the eLearning pilot: the project was designed to address instructional delivery for students for short periods of time versus the ongoing delivery of remote, virtual instruction over the long-term.

Recommendations

Further work is needed to provide support, increased instructional time, and targeted interventions, especially in mathematics, to students while school is disrupted and beyond. There is also a need to collect and transparently report student data around opportunities to learn as well as academic achievement in order to guide curriculum and instruction and support students. The following recommendations are made in response to the findings of this report related to the impacts of COVID-19 school closures on student achievement but are applicable to other long-term school closures.

Impact on Student Learning

1. Strategically design and implement curriculum focused on student learning gaps and priority standards.

2. Require coordinated efforts and deploy strategies to establish communication with students who are not attending school or disengaging from instruction.

3. Better coordinate efforts to accurately track student attendance, completion of assignments, and mastery of grade level standards.

4. Continue regular assessment of all students, allowing for individual and system academic performance to be monitored, guiding instruction and policy decisions.

5. Conduct further research to determine the most effective instructional delivery method for remote learning.

Obstacles

1. Continue to address disparities in learning opportunities by ensuring that supports, such as access to the internet and devices, are in place for students.

2. Provide access to a robust virtual curriculum for students in remote learning.

Impact on School Finance

1. Continue to review and monitor district expenses related to COVID.

2. Continue to review and monitor student enrollment.

Plans to Mitigate Loss

1. Provide tutoring services and extra interventions for students identified at-risk.

2. Create a process to allow districts to develop and create innovative programs and/or community partnerships to provide after-school, summer of Saturday ARCs in mathematics and reading.

Best Practices

1. Provide meaningful and responsive professional development to staff to address needs in remote learning.

2. Prioritize the return to face-to-face classrooms as soon as safely possible.

Next Steps

1. Conduct survey and focus groups on the experiences of families and teachers during emergency remote learning and the fall 2020 restart. Anticipated completion in February 2021.

2. Analyze student pre- and post- assessment data from fall and winter 2020. Anticipated completion in April 2021.

Appendix A

List of Questions for District Interviews

Superintendent:
- How would you describe the district's instructional delivery (virtual, packets, blended) during emergency remote learning?
- What were the expectations for teachers during emergency remote learning (office hours / online teaching, etc.)?
- What were the primary obstacles to student learning during emergency remote learning?
- What has been the overall impact on student learning during emergency remote learning?
  - Have certain student groups (IEP, ELL, PIP) been impacted more dramatically than others?
- What lessons/innovations were learned from remote learning in Spring 2020 that can be applied in the future?
- How have your summer / fall plans adjusted to mitigate for the lost instructional time?
  - What were your summer offerings for Academic Recovery Camps?
  - Are you planning a virtual and/or hybrid option in the fall?
  - Are you planning an early start / extended day / Saturday school program?
- What financial impact do you anticipate for the district due to COVID-19?
  - How are you planning to use the CARES funds?
- What are the district's plans related to 1:1 technology?
- Would you say that the need in your district is internet availability (coverage) or access to the internet (connectivity)?
- How was student attendance taken during emergency remote learning?
- How many students were "unaccounted" for during emergency remote learning?
  - Did you track student completion of assignments? What did you notice?
- Are there any "unsung hero" stories of staff that went above/beyond during emergency remote learning?
- What questions / issues are we not raising that we should?

District Curriculum & Instruction Staff:
- How would you describe the district's instructional delivery (virtual, packets, blended) during emergency remote learning?
- What were the primary obstacles to student learning during emergency remote learning?
  - Have certain student groups (IEP, ELL, PIP) been impacted more dramatically?
  - How did the district adjust to provide services during emergency remote learning?

- o What were the expectation for teachers during emergency remote learning (office hours / online teaching, etc.)?
  - o What were the district's expectations for content / related arts minimums (hours per day/week)?
    - How was this communicated? Did it change during emergency remote learning?
  - o What were the district's expectations for grading during emergency remote learning?
    - How does 2020 retention data compare to 2019 retention data?
  - o What (if any) professional development was provided to teachers because of emergency remote learning?
- o What lessons/innovations were learned from emergency remote learning in Spring 2020 that can be applied in the future?
- o How have your summer / fall places adjusted to mitigate for the lost instructional time?
- o How will instruction be adjusted because of emergency remote learning?
- o How do you plan to use fall formative assessment data?
- o How many students were "unaccounted" for during emergency remote learning?
- o What impact has this experience had on the district's plans to integrate curriculum and technology?
- o Are there any "unsung hero" stories of staff that went above/beyond during emergency remote learning?
- o What questions / issues are we missing?

District Technology Staff:
- o What were the primary obstacles to student learning during emergency learning?
- o How was student attendance taken during emergency remote learning?
  - o Do you have student LMS login data?
  - o Do you have student assignment completion data?
- o What impact has this experience had on the district's plans to integrate curriculum and technology?
- o What lessons/innovations were learned from emergency remote learning in Spring 2020 that can be applied in the future?
  - o Were there any tools / products that proved especially useful? In what context?
- o Are there any "unsung hero" stories of staff that went above/beyond during emergency remote learning?
- o What questions / issues are we missing?

District Finance Staff:
- o What financial impact do you anticipate for the district due to COVID-19 closures?
- o How do you plan to use CARES funding?
- o What budget lines do you anticipate taking the biggest cut to make up for this impact?

- o What lessons were learned from this experience that can be applied in the future?

Principals:
- o How would you describe the district's instructional delivery (virtual, packets, blended) during emergency remote learning?
- o What were the primary obstacles to student learning during emergency remote learning?
- o What has been the overall impact on student learning during emergency remote learning?
  - ▪ Have certain student groups (IEP, ELL, PIP) been impacted more dramatically than others?
  - ▪ How did the district adjust to provide services during emergency remote learning?
- o What were the expectations for teachers during emergency remote learning?
  - o What were the district's expectations for content / related arts minimums (hours per day/week)?
    - ▪ How was this communicated? Did it change during emergency remote learning?
  - o What were the district's expectations for grading during emergency remote learning?
    - ▪ How does 2020 retention data compare to 2019 retention data?
  - o What (if any) professional development was provided to teachers because of emergency remote learning?
- o What lessons/innovations were learned from remote learning in Spring 2020 that can be applied in the future?
- o How have your summer / fall plans adjusted to mitigate for the lost instructional time?
- o How will instruction be adjusted because of emergency remote learning?
- o How do you plan to use fall formative assessment data?
- o How many students were "unaccounted" for during emergency remote learning?
- o Are there any "unsung hero" stories of staff that went above/beyond during emergency remote learning?
- o What questions / issues are we missing?

Teachers:
- o How would you describe the district's instructional delivery (virtual, packets, blended) during emergency remote learning?
- o What were the primary obstacles to student learning during emergency remote learning?
- o What has been the overall impact on student learning during emergency remote learning?

- Have certain student groups (IEP, ELL, PIP) been impacted more dramatically than others?
- How did the district adjust to provide services during emergency remote learning?
  - What were the expectations for teachers during emergency remote learning?
    - What were the district's expectations for content / related arts minimums (hours per day/week)?
      - How was this communicated? Did it change during emergency remote learning?
    - What were the district's expectations for grading during emergency remote learning?
      - How does 2020 retention data compare to 2019 retention data?
    - What (if any) professional development was provided to teachers because of emergency remote learning?
  - What lessons/innovations were learned from remote learning in Spring 2020 that can be applied in the future?
  - How have your summer / fall plans adjusted to mitigate for the lost instructional time?
  - How will instruction be adjusted because of emergency remote learning?
  - How do you plan to use fall formative assessment data?
  - How many students were "unaccounted" for during emergency remote learning?
  - Are there any "unsung hero" stories of staff that went above/beyond during emergency remote learning?
  - What questions / issues are we missing?

Appendix B

Analysis of Comparability of South Carolina NWEA Tested Sample to Overall South Carolina Student Enrollment

Based on an analysis by EOC staff, South Carolina students who tested with NWEA MAP in fall 2020 are similar to students enrolled in South Carolina public schools in fall 2020 (see Appendix B). Thus, when interpreted with caution, summary statistics obtained from NWEA results can suggest trends to students in South Carolina.

As in the national COVID analysis, students missing from the sample could cause the actual effect of the COVID-19 slide to be underestimated. Preliminary analysis of the South Carolina sample does indicate that fewer students were tested in schools with higher percentages of pupils in poverty and with higher percentages of minority students. Continued monitoring of student data is necessary to determine the impact on vulnerable student populations across South Carolina (King, G., NWEA, personal communication, December 2020).

Table C1 presents the numbers of South Carolina students tested for both reading and mathematics with NWEA MAP for the fall and spring administrations from fall 2018 through fall 2020. The marked decline in test administrations in the spring of 2019 is a result of schools not being in session due to COVID-19. For Grades 3 through 8 the numbers of students are similar. The number of students tested in grade 2 is the highest, perhaps because the assessment can be used in the South Carolina student identification process for gifted and talented services.

Table C1. Number of Fall and Spring Tests from Fall 2018 through Fall 2020

Grade	Fall 2018	Spring 2019	Fall 2019	Spring 2019	Fall 2020
	Reading				
K	19,067	21,255	13,630	855	10,358
1	25,436	29,486	19,808	1,653	23,014
2	34,782	35,095	30,729	5,139	30,870
3	34,160	34,608	32,498	5,654	27,775
4	35,452	35,588	32,113	5,423	27,910
5	35,927	35,981	33,890	5,146	28,100
6	34,373	32,401	34,374	4,468	28,172
7	31,174	29,899	34,283	4,972	28,651
8	29,681	27,738	31,501	4,941	29,003
	Mathematics				
K	19,243	21,635	13,555	702	14,328
1	25,729	30,100	20,037	1,270	27,082
2	35,076	35,295	31,494	3,292	31,046
3	34,196	34,245	32,440	3,912	27,909
4	35,833	35,797	32,126	4,150	28,074
5	35,625	35,280	33,847	4,179	28,305
6	33,862	31,693	34,460	2,528	28,559
7	31,433	29,859	34,292	3,347	28,935
8	29,917	28,040	31,264	3,813	29,004

There seems to be an overall decline in NWEA MAP test usage over time in South Carolina. Considering the numbers of students tested in reading, the total number of students tested in the fall of 2019 is 93% of the total number of students tested in the fall of 2018 and the total number of students tested in the fall of 2020 is 89% of the total number of students tested in the Fall of 2019. The total number of students tested in the fall of 2020 is 84% of the total number of students tested in the fall of 2018. This decline may be attributed to the addition of other formative assessment options for South Carolina public schools.

One measure of the total number of South Carolina students enrolled in each grade level is the Average Daily Membership (ADM). Using these enrollment numbers, the percentages of each grade tested using NWEA MAP Growth Reading in the fall of 2020 are: 18% of K, 40% of grade 1, 54% of grade 2, and between 46% and 48% of each of grades 3 through 8.

As an indication of how generalizable the results of this investigation are to all students in South Carolina, consider how similar the students tested in fall 2020 using NWEA MAP

are to students enrolled in South Carolina in the fall of 2020. Table 2 presents a summary of demographic characteristics of these two student groups for comparison.

Table C2. Student Demographics for Fall 2020 NWEA Tested South Carolina Students and South Carolina Students Enrolled in Fall 2020

Student Group	Percentages of Students	
	Fall 2020 NWEA Tested	Fall 2020 Student Enrollment KG through Grade 8
IEP Status:		
Non-IEP	90	91
IEP	9	9
Race/Ethnicity		
Asian	1	2
Black/African American	33	33
Hispanic/Latino	12	12
Amer. Indian/Alaskan Native	<1	<1
Multi-Racial	5	5
Nat. Hawaiian/Pac. Islander	<1	<1
White	48	48
Gender		
Female	49	
Male	51	
English Learners Status		
Non-ESL	92	93
ESL	8	7
Pupils in Poverty		
No	36	36
Yes	64	64

A second way to demonstrate that students tested in fall 2020 with NWEA MAP are similar to all students in South Carolina was by comparing the distributions of these two groups of students on the SC READY assessments of English/Language Arts and Mathematics. Figure C15 presents these results for grades 3 and 4. From this analysis, South Carolina students tested with NWEA MAP have SC READY scores that are not markedly different from the distributions for all South Carolina students. Thus, when interpreted with caution, summary statistics obtained based on NWEA MAP students can suggest trends for all students in South Carolina.

Figure C15. Distributions of SC READY Scores for South Carolina Students Tested with NWEA-MAP in Fall 2020 and All Students in South Carolina for Grades 3 and 4.
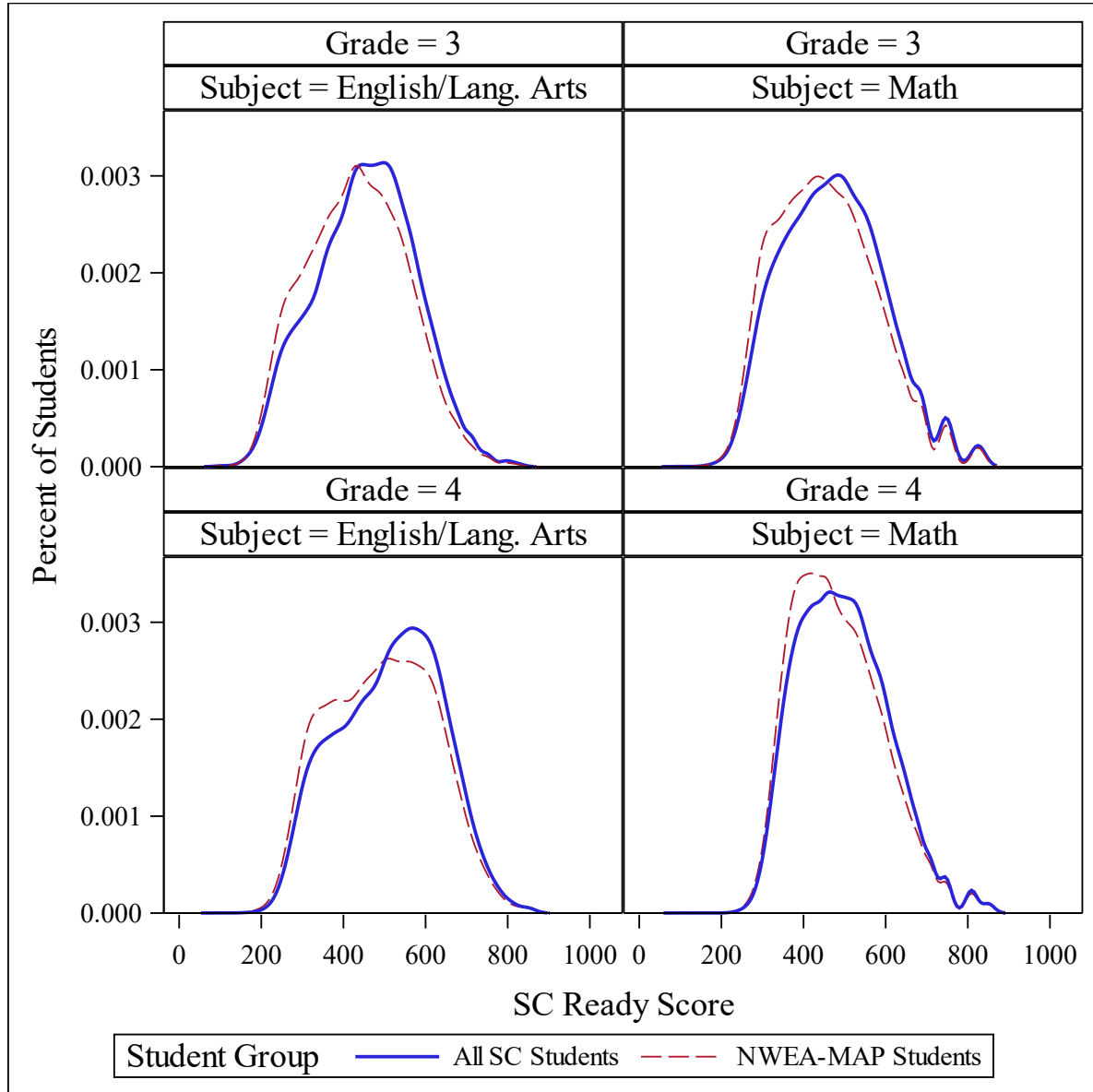
Appendix C

Analysis of Comparability of South Carolina In-School to Remote Student Testing

South Carolina students who tested remotely in Kindergarten through grade 2 in fall 2020 showed large improvements in their percentile rank compared to scores in fall 2019; while in-person testers in Kindergarten through grade 2 showed patterns more consistent with older students (percentiles stayed the same or dropped). In grades 3 through 8, achievement percentiles were similar or dropped from fall 2019 to fall 2020, with trends similar for remote and in-person testers and larger percentile score drops in math than in reading. Test durations were similar between remote and in-person test takers.

Table C3. Results for South Carolina Students Testing In-Person and Remotely

Grade		In School	Remote	In School	Remote	In School	Remote	In School	Remote
	FL' 19	FL '20	FL'20	FL'20	FL'20	FL '20	FL'20	FL '20	FL'20
Reading	MD %tile	MD %tile	MD %tile	MN SEM	MN SEM	MN TestDuration	MN TestDuration	N Count	N Count
K	53	49	96	3.21	3.34	25.81	44.35	11284	1926
1st	50	43	79	3.23	3.35	29.98	47.96	23320	2461
2nd	49	38	69	3.07	3.15	37.63	51.39	26383	3250
3rd	56	42	55	3	3.03	47.11	54.35	22484	4105
4th	57	42	51	2.99	3	54.91	61.26	22444	4285
5th	56	43	47	2.99	3	60.5	67.1	22318	4680
6th	53	42	51	2.99	2.99	68.45	75.79	21412	5502
7th	52	44	51	2.99	3	71.27	78.73	21689	5777
8th	53	46	55	3	3.02	74.11	82.06	22067	5699
Growth Reading Test Events From Public School Districts in South Carolina									
Grade		In School	Remote	In School	Remote	In School	Remote	In School	Remote
	FL' 19	FL '20	FL'20	FL '20	FL'20	FL'20	FL'20	FL '20	FL'20
Math	MD %tile	MD %tile	MD %tile	MN SEM	MN SEM	MN TestDuration	MN TestDuration	N Count	N Count
K	52	49	96	3.21	3.34	25.81	44.35	11284	1926
1st	52	43	79	3.23	3.35	29.98	47.96	23320	2461
2nd	52	38	69	3.07	3.15	37.63	51.39	26383	3250
3rd	54	42	55	3	3.03	47.11	54.35	22484	4105
4th	56	42	51	2.99	3	54.91	61.26	22444	4285
5th	54	43	47	2.99	3	60.5	67.1	22318	4680
6th	47	42	51	2.99	2.99	68.45	75.79	21412	5502
7th	49	44	51	2.99	3	71.27	78.73	21689	5777
8th	50	46	55	3	3.02	74.11	82.06	22067	5699
Growth Math Test Events From Public School Districts in South Carolina									

*MN SEM = Mean Standard Error of Measure

Another preliminary analysis conducted was to examine the time South Carolina students spent testing in the fall of 2020 to the time spent testing in the fall of 2019. If changes in online test administration procedures impact assessment results, time spent testing may provide insights into possible causes. Figure C16 presents the results of this analysis for reading and mathematics.

These results show that for both reading and mathematics in Kindergarten and grade 1, students spent more time testing in the fall of 2020 than in the fall of 2019. For mathematics in grades 2 through 8, students spent less time testing. For reading, students in grades 2 through 5 spent less time testing with slight differences for grades 6 through 8. Also, the differences in time spent testing are larger for mathematics than for reading.

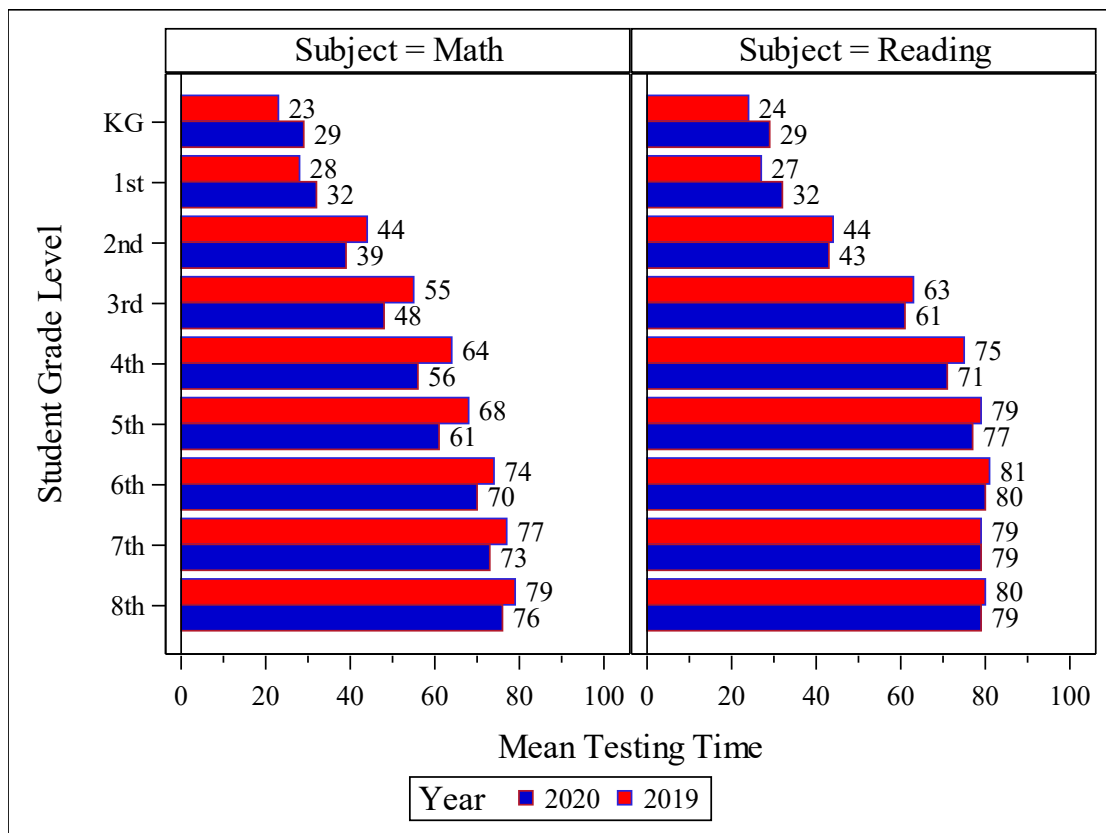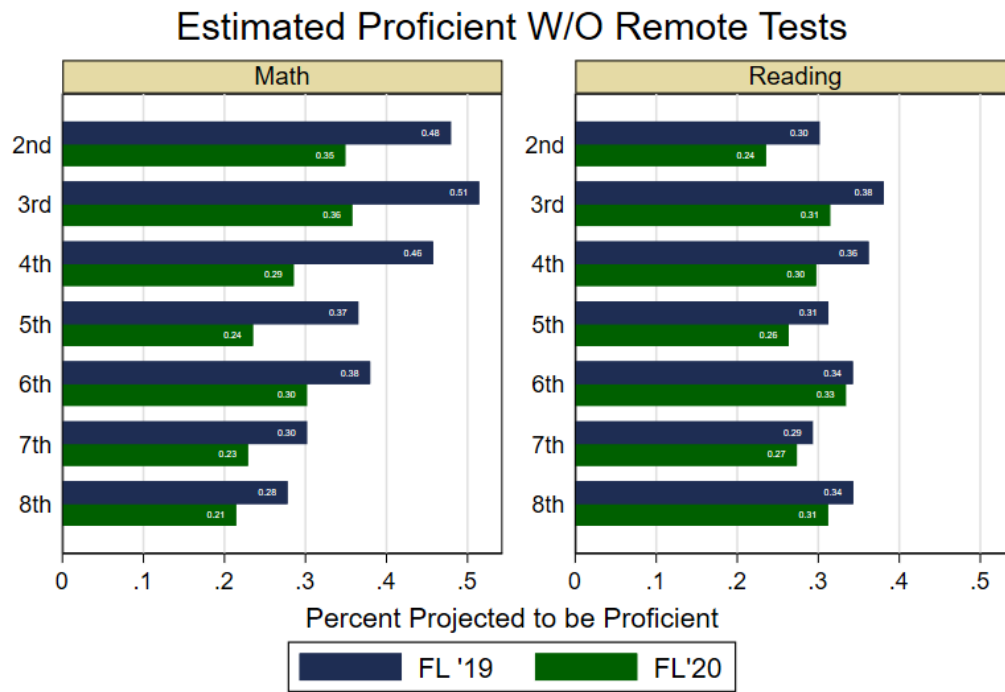*Figure C16.* South Carolina Testing Time – Fall 2019 and Fall 2020

*Figure C17.* South Carolina Estimated Proficiency without Remote Testing

Appendix D

Analysis of Comparability of South Carolina 2019-2020 Cohort Sample to Overall South Carolina Student Enrollment

To ensure that the results from the South Carolina NWEA MAP cohort are similar to all students in South Carolina, the distributions of these two groups of students on SC READY English/Language Arts and Mathematics were compared by EOC staff. The comparisons are presented in Figure C18. From this analysis, the cohort students have SC READY scores that are not markedly different from the distributions for all South Carolina students. Thus, when interpreted with caution, summary statistics obtained from South Carolina 2019-2020 Cohort results can suggest trends to students in South Carolina.

Caution should be taken against overinterpreting these results. Students missing from the sample could cause the actual effect of the COVID-19 slide to be underestimated. Continued monitoring of student data is necessary to determine the impact on vulnerable student populations across South Carolina (King, G., NWEA, personal communication, December 2020).

Figure C18. Distributions of SC READY Scores for the Fall 2019, Winter 2019, Fall 2020 South Carolina NWEA-MAP Cohort and All Students in SC for Grade 3 and 4
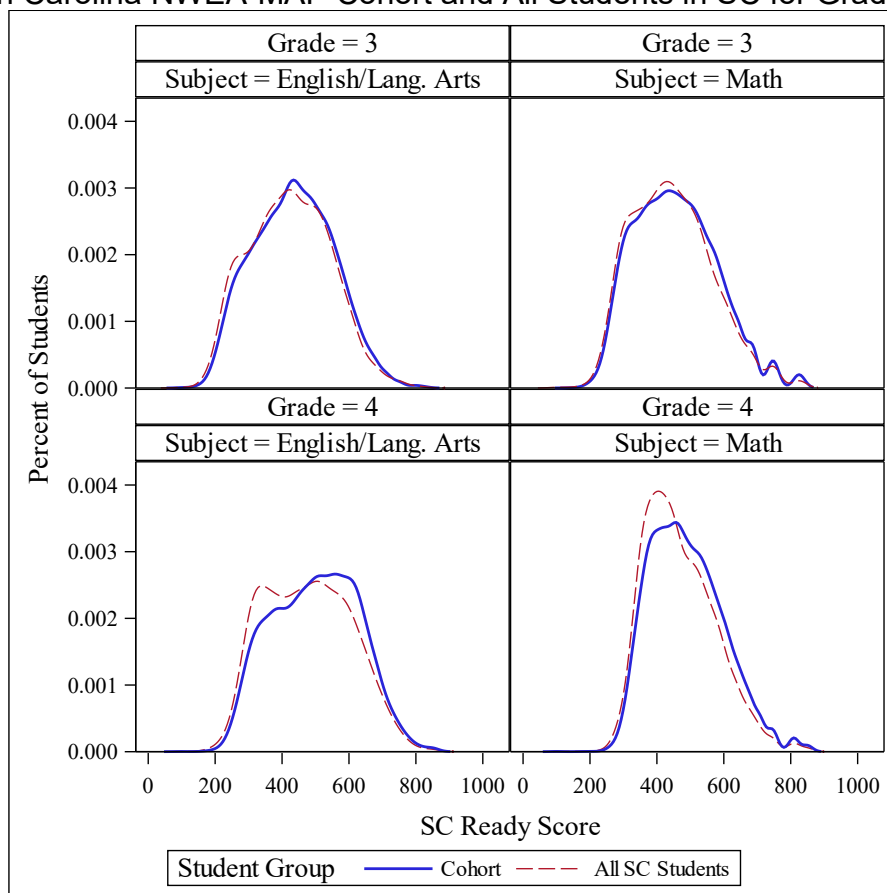
This cohort analysis provides a pattern of achievement over time for a specific group of South Carolina students, students who tested in all three administrations: fall 2019, winter 2019, and fall 2020. This contrasts with results provided in Figures C1 through C4 that provide summary information over three years for different groups of students.   The number of students in each cohort are presented in Table C4. Requiring that students tested in all three administrations decreases the number of students in the cohort substantially.

From Table C1, approximately 28,000 students were assessed in grades 3 through 8 in the fall of 2020, while from Table C4, the number of students in these grades was approximately 17,000. The cohort sample is approximately 60 percent of the fall 2020 student tested population. Exact percentages differ by grade level and subject area. Figure C18 provides a visual comparison of the distributions of SC READY scores for all students who could be matched to NWEA records, and for the South Carolina 2019-20 Cohort students who could be matched to SC READY.

Table C4. Number of South Carolina Students in Cohort Analysis by Grade Level

Grade Level	Number of Students	
	Reading	Math
K	7,440	7,404
1st	11,610	11,675
2nd	16,550	16,832
3rd	18,589	17,070
4th	17,138	17,092
5th	16,642	16,539
6th	15,128	15,347
7th	15,108	15,158

Appendix E

COVID Slide Median Percentile Change Among to South Carolina Subgroups in South Carolina 2019-2020 Cohort

Table C5. Comparison of Median Percentile Change by Subgroup in the South Carolina 2019-2020 Cohort

Demographic	Median Percentile Rank - Reading			Median Percentile Rank - Math		
	Fall 2019	Fall 2020	Change	Fall 2019	Fall 2020	Change
Grade: K						
African-American	44	45	1	49	49	0
Hispanic	45	43	-2	48	36	-12
Pupils in Poverty	48	45	-3	50	44	-6
White	60	57	-3	58	55	-3
Grade: 1st						
African-American	41	43	2	39	44	5
Hispanic	46	41	-5	43	41	-1
Pupils in Poverty	46	41	-5	43	42	-1
White	61	53	-8	58	49	-9
Grade: 2nd						
African-American	39	34	-5	38	43	5
Hispanic	39	35	-4	30	36	6
Pupils in Poverty	42	37	-5	39	44	5
White	64	57	-7	63	65	2
Grade: 3rd						
African-American	37	32	-5	42	40	-2
Hispanic	42	35	-7	40	38	-2
Pupils in Poverty	42	35	-7	45	42	-3
White	66	57	-9	67	65	-2
Grade: 4th						
African-American	37	30	-7	42	37	-5
Hispanic	46	37	-9	45	41	-4
Pupils in Poverty	42	33	-9	46	42	-4
White	70	57	-13	70	67	-3
Grade: 5th						
African-American	37	30	-7	41	39	-2
Hispanic	48	38	-10	44	44	0
Pupils in Poverty	42	34	-8	45	44	-1
White	67	57	-10	70	67	-3
Grade: 6th						
African-American	31	31	0	35	37	-2
Hispanic	42	39	-2	43	44	1
Pupils in Poverty	36	36	0	39	41	2
White	62	60	-2	67	67	0
Grade: 7th						
African-American	30	33	3	36	36	0
Hispanic	43	42	-1	46	46	0
Pupils in Poverty	36	37	1	41	41	0
White	64	61	-3	67	66	-1

REVIEW OF REMOTE LEARNING, Pt 1: IN BRIEF

District Interviews

Primary obstacles

1. Unequal distribution of internet access and 1:1 devices.
2. Lack of a digital ecosystem to support long-term virtual instruction.
3. Lack of clearly defined instructional strategies for forward progress in remote learning.
4. Challenge to navigate relationships in a virtual environment.

Impact on student learning

1. Lack of instruction in new material during Spring 2020 emergency remote learning will have negative impact on student achievement.
2. Vulnerable student populations expected to be more negatively impacted.
3. No clearly articulated district plan to mitigate instructional loss.

Impact on school finances

1. Some COVID expenses will be recurring.
2. With additional CARES funding, minimal impact on district general fund during spring 2020.

Opportunities

1. Accelerated student access to technology across South Carolina.
2. Investment in instructional technology resources by districts and SCDE.
3. Increased learning opportunities for students, flattening the classroom and providing a global perspective.
4. District virtual school offerings will remain, but state level guidance needed.

Emerging Issues

1. Many vulnerable students are opting for virtual instruction while more resourced students are opting for brick-and-mortar schooling.
2. Concerns with integrity of results from assessments delivered remotely.
3. Recognition that end-of-year state assessments should be given in Spring 2021.

Observed Best Practices

1. Focused professional development for staff to support students and families during remote learning.
2. Prioritized face-to-face instruction for students, particularly for elementary and vulnerable student populations, as soon as safely possible.
3. Provided access to high quality virtual curriculum, resources, and courses.

Summer 2020 Academic Recovery Camps (ARCs)

1. Students made statistically significant gains in both reading and math during ARCs.
2. Despite ARCs gains, students remained significantly behind expectations for grade level proficiency in reading and math after ARC.
3. There was overall low student enrollment in ARCs despite many students identified as in need of intervention.

ARC Recommendations

1. Provide reimbursement funding to districts only for students with a valid pre- and post- ARC assessment.
2. Consider lengthening the instructional day minimums during ARC.
3. Create a process to allow districts to develop and create innovative programs and/or community partnerships to provide after-school, summer of Saturday ARCs in mathematics and reading/writing. Pre- and post-assessments should be required to measure and produce results in student performance.

Fall 2020 Data Analysis

1. On average, 7 out of 10 South Carolina students in grades 3 through 8 are projected not to meet grade level proficiency standards in mathematics and English Language Arts in spring 2021.
2. Comparing fall 2019 to fall 2020 in mathematics achievement, the COVID slide was most dramatic in grades 2 through 5, with between 10% and 16% fewer South Carolina students expected to meet grade level proficiency. In grades 6 through 8, approximately 5% fewer students are projected to be proficient on grade level standards in mathematics: only 1 out of 4 South Carolina students is projected to be proficient in mathematics in grades 7 and 8.
3. Comparing fall 2019 to fall 2020 reading achievement, South Carolina students demonstrated smaller declines than mathematics, with between 4% and 6% fewer students expected to meet grade level proficiency in grades 2 through 5 in spring 2021. In grades 6 and 7 there was no change in projected proficiency and only a 1% decrease in grade 8. However, despite scoring nearly the

same as students last year, nearly 7 out of 10 South Carolina students are projected <u>not</u> to be proficient in reading.

4. South Carolina students declined in median percentile rank in all grades other than Kindergarten in mathematics compared to South Carolina students in the same grade in fall 2019. The largest percentile declines were in mathematics.

5. South Carolina students declined in median percentile rank in grades 1 through 5 for reading compared to South Carolina students in the same grade in fall 2019.

6. The 2019-2020 South Carolina Cohort declined in median percentiles in all grades in mathematics.

7. The 2019-2020 South Carolina Cohort declined in median percentiles for reading in all grades other than the grade 2 cohort. The largest percentile declines were in mathematics.

8. Substantially larger percentages of South Carolina students decreased in their achievement quartile standing from 2019 to 2020, both for reading and for mathematics, though more so for mathematics.

9. Significant achievement gaps among historically underachieving students and their higher achieving peers continue to exist but do not appear to have widened during emergency remote learning. However, vulnerable student populations may be missing from the sample.

10. South Carolina students decreased less in median percentile in mathematics than their national peers in grades 4 through 7 during emergency remote learning.

11. South Carolina students decreased more in median percentile rank in reading than their national peers in grades 3 and 4 but decreased less than their national peers in grades 5 through 7 during emergency remote learning.

12. For South Carolina students in a sample of 14 districts, there was no statistically significant difference observed in the COVID slide of students with respect to instructional method (eLearning, blended learning, and instructional packets) during emergency remote learning.

Recommendations
Impact on Student Learning

1. Strategically design and implement curriculum focused on student learning gaps and priority standards.

2. Require coordinated efforts and deploy strategies to establish communication with students who are not attending school or disengaging from instruction.

3. Better coordinate efforts to accurately track student attendance, completion of assignments, and mastery of grade level standards.

4. Continue regular assessment of all students, allowing for individual and system academic performance to be monitored, guiding instruction and policy decisions.

5. Conduct further research to determine the most effective instructional delivery method for remote learning.

Obstacles

1. Continue to address disparities in learning opportunities by ensuring that supports, such as access to the internet and device, are in place for students who need them.

2. Provide access to a robust virtual curriculum for students in remote learning.

Impact on School Finance

1. Continue to review and monitor district expenses related to COVID.

2. Continue to review and monitor student enrollment.

Plans to Mitigate Loss

1. Provide tutoring services and extra interventions for students identified at-risk.

2. Create a process to allow districts to develop and create innovative programs and/or community partnerships to provide after-school, summer of Saturday ARCs in mathematics and reading.

Best Practices

1. Provide meaningful and responsive professional development to staff to address needs in remote learning.

2. Prioritize the return to face-to-face classrooms as soon as safely possible.