THE UNIVERSITY OF NORTH CAROLINA SYSTEM

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November 15, 2019

Joint Legislative Education Oversight
Committee 16 W Jones Street
Raleigh, NC 27601

Dear Committee Members:

I submit the attached report to the Joint Legislative Education Oversight Committee on behalf of the Board Of Governors of the University Of North Carolina System Subcommittee on Laboratory Schools. As required by G.S. 116-239.13, this report includes a review and evaluation of the educational effectiveness of the laboratory schools operated by Appalachian State University, East Carolina University, The University of North Carolina at Greensboro, University of North Carolina Wilmington, and Western Carolina University. The report outlines the following: student enrollment and student demographics; the student admissions process; data on student achievement and student academic progress; information on the student outcomes for students enrolled in educator preparation programs who obtained clinical experience in school leadership and teaching through the laboratory schools; best practices resulting from laboratory school operations; and other information the Subcommittee considers appropriate.

The laboratory schools initiative is a key strategy for furthering the UNC System's strategic plan, which calls on us to enhance the impact of our investments in community engagement and increase the number of UNC System graduates who are prepared to serve in North Carolina's public schools. With five laboratory schools currently operating and additional schools yet to open, this effort will continue to inform the important work of improving educator preparation and offering students and families additional educational options. I look forward to continuing to collaborate with the General Assembly on behalf of the students of North Carolina.

Sincerely,

William L. Roper

William L. Roper
Interim
President
University of North Carolina

System Enclosures (1)

THE UNIVERSITY OF NORTH CAROLINA SYSTEM

REVIEW AND EVALUATION OF THE EDUCATIONAL EFFECTIVENESS OF THE LABORATORY SCHOOLS

(YEAR 3)

November 15, 2019

University of North Carolina System
Chapel Hill, North Carolina

Introduction

In 2016, the North Carolina General Assembly (NCGA) passed legislation requiring the University of North Carolina System, in consultation with UNC System institution Colleges of Education (COEs), to establish laboratory schools. These laboratory schools are K-12 public schools of choice operated by a UNC System institution rather than by a local school district. Since then, five laboratory schools have opened. East Carolina University (ECU) and Western Carolina University (WCU) opened their laboratory schools—the ECU Community School and The Catamount School, respectively—in the 2017-18 academic year. Appalachian State University, The University of North Carolina at Greensboro (UNCG), and the University of North Carolina Wilmington (UNCW) opened their laboratory schools—the Appalachian Academy at Middle Fork, the Moss Street Partnership School, and D.C. Virgo Preparatory Academy, respectively—in the 2018-19 academic year. The University of North Carolina at Charlotte (UNCC) will open a laboratory school in the 2020-21 school year.[1]

While the structure and foci of UNC System laboratory schools vary, these schools are united by a common mission and set of commitments. The mission of UNC System laboratory schools is to improve student performance in local school administrative units with low-performing schools by providing an enhanced education program for students residing in those units and to provide exposure and training for teachers and principals to successfully address challenges that exist in high-needs school settings.[2] To fulfill this mission, UNC System laboratory schools are committed to: (1) delivering high expectations to prepare students for college and life; (2) ensuring that students learn to read and communicate effectively; (3) addressing the academic, social, and emotional needs of all students; and (4) harnessing the benefits of partnerships to strengthen learning, teaching, and school leadership. Laboratory schools serve every part of the University mission—teaching, research, and public service—and represent an innovative extension of the UNC System's presence in K-12 education.

UNC System laboratory schools must serve students in at least three contiguous grades in the K-8 grade range. The enabling legislation originally required the UNC System to establish laboratory schools in local school administrative units in which at least 25 percent of the schools were low-performing. An amendment to the enabling legislation allows the UNC System to exercise three waivers to establish laboratory schools in districts that do not meet this requirement.[3] Students are eligible to attend a laboratory school if they reside in the local school administrative unit in which the laboratory school is located and either previously attended a low-performing school or failed to meet expected growth in the previous academic year.[4]

This report is submitted on behalf of the Board of Governors of the University Of North Carolina System (BOG) Subcommittee on Laboratory Schools. Consistent with the enabling legislation, this report includes the information listed in the eight items below. The content of this report draws largely from findings included in an annual evaluation report commissioned by the UNC System and prepared by the Education Policy Initiative at Carolina (EPIC)/Public Policy at UNC Chapel Hill and Public Impact, a research and

[1] In October 2018, the Board of Governors Subcommittee on Laboratory Schools approved UNCC to open a laboratory school in the 2019-20 school year. However, due to student enrollment concerns, the UNCC laboratory school will open in the 2020-21 school year.

[2] N.C.G.S. 116-239.5(b)

[3] The UNC System has used two of these waivers for the Moss Street Partnership School and for the D.C. Virgo Preparatory Academy.

[4] Failure to meet expected growth can be measured by grades, observations, diagnostic and formative assessments, state assessments, or other factors, including reading on grade level.

management consulting organization based in North Carolina. The annual evaluation report from EPIC and Public Impact is an in-depth review of the laboratory schools—expanding upon the requirements of the enabling legislation—and is attached to this report as Appendix A.

The report below includes:

(1) A brief overview of each laboratory school;
(2) Student enrollment and demographics in each laboratory school;
(3) A summary of laboratory school admissions processes and the number of students enrolled under each enrollment priority;
(4) Public school student achievement data from each laboratory school;
(5) Public school student academic progress at each laboratory school;
(6) Information on pre-service educators in laboratory schools, including outcomes for pre-service educators who obtained clinical experiences in laboratory schools;
(7) Best practices resulting from laboratory school operations; and
(8) Other information the UNC System BOG Subcommittee on Laboratory Schools considers appropriate.

Laboratory School Overviews

Five UNC System institutions are currently operating laboratory schools. Although united by a common mission and commitments, these schools vary across many dimensions, including the characteristics of students enrolled, school design features, and school curricula. As such, this section provides a brief overview of each school.

Appalachian State University operates the Appalachian State University Academy at Middle Fork (Appalachian Academy), a K-5 school located in Walkertown that was previously operated by Winston-Salem Forsyth County Schools. The Academy at Middle Fork opened in August 2018 with a mission to provide a balanced education for children, teachers, principals, and families through the implementation of research-based practices and exemplary classroom instruction and administration. The Academy at Middle Fork is committed to developing the whole child, including addressing social, emotional, cognitive, and developmental needs. The Academy uses a workshop (or small group, project-based) approach for students in all grades and builds literacy skills in all core content areas. Students receive differentiated instruction that engages them in reading, writing, speaking, and listening. Staff at the Academy at Middle Fork includes a principal, a director of curriculum and instruction, a director of student affairs and emergency management, eighteen classroom teachers, two English as a second language teachers, two special education teachers, ten teacher assistants, a school nurse, and a social worker.

The ECU Community School is an elementary school co-located within the South Greenville Elementary School building in Pitt County, NC. The school opened in August 2017 and serves grades K-5 in five classrooms—one per grade except for a combined first and second grade class. The ECU Community School reflects a whole child approach by integrating health, wellness, and learning into instruction to address the physical, social, emotional, and cognitive development of all students. The laboratory school uses an intentional approach to build literacy and numeracy skills through the core subjects of mathematics, science, reading/English language arts, and social studies and is simultaneously focused on engaging children in learning experiences that support their curiosity, creativity, inquiry, and intellectual growth in a school environment that respects their strengths and meets their needs. The laboratory school's staff includes a principal, five lead teachers in kindergarten through 5th grade, a special education director/teacher, a part-time curriculum director, four teacher assistants, and a full-time administrative

assistant. The laboratory school funds a full-time nurse and a full-time social worker; the laboratory school and its host district, Pitt County Schools, jointly fund an art teacher and a music teacher.

UNCG operates the Moss Street Partnership School, a K-5 school located in Rockingham County that was previously operated by Rockingham County Schools (RCS). The Moss Street Partnership School opened in August 2018 and serves students in grades K-5, averaging approximately three classrooms per grade level. Staff and students at the Moss Street Partnership School follow the traditional RCS district calendar. The school uses a "learner-centered, learner-led" approach and emphasizes experiential learning, inclusive education, and a collaborative environment for both students and teachers. As a fully inclusive school, the Moss Street Partnership School is oriented to the whole child, including meeting academic, social, emotional, and developmental needs. STEAM (Science, Technology, Engineering, Arts, and Mathematics) instruction is prominent: the campus features a makerspace and the school employs a full-time instructional technology consultant who assists teachers with the incorporation of technology into their lessons. The Moss Street Partnership School staff includes a principal, a director of curriculum, a social worker, a counselor, twenty-four classroom teachers (including five creative arts and PE teachers), and five special education teachers.

UNCW operates D.C. Virgo Preparatory Academy (DCVPA), the only K-8 school within New Hanover County Schools. Located in downtown Wilmington's Northside community, the school opened in July 2018 and operates on a year-round calendar. DCVPA has one class per grade level in K-5 and two classes per grade level in 6-8. Instruction at DCVPA is guided by the acronym PIER (Personalized, Inquiry-based, Experiential, and Reflective) and emphasizes STEM and literacy content. DCVPA is simultaneously focused on addressing the physical health and social-emotional needs of their students and uses a "kinship model" to facilitate relationship building between staff, families, and students. The DCVPA staff includes a principal, an assistant principal, twelve teachers in core content areas, and two special education teachers. A full-time clinical social worker, funded through a partnership with the College of Health and Human Services, provides student support services. With funding through a partnership with MedNorth, a local community health provider, the laboratory school also has an on-site health clinic staffed by a certified family nurse practitioner.

WCU's laboratory school, The Catamount School, is co-located on the campus of Smoky Mountain High School in Sylva, NC, and serves grades 6-8. It opened in August 2017 and is the only middle school in Jackson County. The Catamount School has adopted the Whole School, Whole Community, Whole Child model as a framework for creating collaborative school-community relationships and improving students' learning and health. The Catamount School fosters student growth and the development of social-emotional skills through a problem-centered, experienced-based learning approach in an inclusive education environment. Special education services are provided in regular classrooms using a co-teaching model in which the special education teacher works collaboratively with the lead classroom teacher to deliver individualized instruction. The Catamount School staff includes a principal, four core subject-area teachers, an enrichment coordinator who coordinates services and extracurricular activities provided by university and community-based partners, a special education teacher, a PowerSchool data manager, and a health services coordinator (i.e. a joint position between the COE and the College of Health and Human Sciences who serves as a nurse at The Catamount School, instructs at WCU's School of Nursing, and supervises undergraduate nursing candidates). Three COE faculty members are also staff members at The Catamount School: a COE faculty member serves as the Instructional Support Liaison, teaches Math I to a

subset of 8th graders, and is currently serving as the full-time mathematics instructor;[5] another COE faculty member serves as the school's special education administrator; and a Health and Physical Education instructor serves as the physical education teacher.

Student Enrollment and Demographics at Laboratory Schools

Table 1 presents enrollment and demographic data for UNC System laboratory schools in the 2018-19 and 2019-20 school years. As of the 20th day of the 2019-20 academic year, the Appalachian Academy has 280 enrolled students, with 40 in kindergarten, 44 in 1st grade, 40 in 2nd grade, 61 in 3rd grade, 52 in 4th grade, and 43 in 5th grade. These enrollment values are similar to the 2018-19 academic year. Of the students enrolled in 2019-20, 50 percent are male, 46 percent are Black, 40 percent are Hispanic, and 14 percent are classified as exceptional children. Title I data from the 2018-19 school year show that 62 percent of Appalachian Academy students are designated as low-income.[6] By comparison, 29 percent of the elementary grades students in Winston-Salem Forsyth County Schools are Black, 28 percent are Hispanic, and 66 percent are designated as low-income.[7]

As of the 20th day of the 2019-20 academic year, the ECU Community School has 117 enrolled students, with 32 in kindergarten, 27 in 1st grade, 16 in 2nd grade, 12 in 3rd grade, 15 in 4th grade, and 15 in 5th grade. Relative to the 2018-19 school year, these data show sharp increases in student enrollment in grades K-2 at the ECU Community School. Of the students enrolled in 2019-20, 56 percent are male, 97 percent are Black, and 18 percent are classified as exceptional children. Title I data from the 2018-19 school year show that 100 percent of ECU Community School students are designated as low-income. By comparison, 48 percent of the elementary grades students in Pitt County Schools are Black and 70 percent are designated as low-income.

As of the 20th day of the 2019-20 academic year, the Moss Street Partnership School (UNCG) has 390 enrolled students, with 67 in kindergarten, 67 in 1st grade, 80 in 2nd grade, 58 in 3rd grade, 46 in 4th grade, and 72 in 5th grade. Of the students enrolled in 2019-20, 56 percent are male, 61 percent are Black, 11 percent are Hispanic, 12 percent are multiracial, and 16 percent are classified as exceptional children. Title I data from the 2018-19 school year show that 94 percent of Moss Street Partnership School students are designated as low-income. By comparison, 20 percent of the K-5 students in Rockingham County Schools are Black, 14 percent are Hispanic, 6 percent are multiracial, and 68 percent are designated as low-income.

As of the 20th day of the 2019-20 academic year, D.C. Virgo Preparatory Academy has 216 enrolled students, with 17 in kindergarten, 22 in 1st grade, 20 in 2nd grade, 20 in 3rd grade, 13 in 4th grade, 20 in 5th grade, 31 in 6th grade, 36 in 7th grade, and 37 in 8th grade. These enrollment values are down compared to enrollment at the 20th day in the 2018-19 school year. Of the students enrolled in 2019-20, 54 percent are male, 88 percent are Black, and 18 percent are classified as exceptional children. Title I data from the 2018-19 school year show that 97 percent of D.C. Virgo Preparatory Academy students are designated as

[5] The Catamount School mathematics teacher resigned just before the start of the 2019-20 school year. WCU is searching for a replacement but in the meantime, a WCU COE faculty member is serving as the mathematics instructor. This COE faculty member was the full-time mathematics instructor at The Catamount School in 2017-18.

[6] When calculating the percentage of low-income students at Appalachian Academy, North Carolina does not use a 1.6 multiplier (as it does for all other schools in Winston-Salem Forsyth Schools). If the 1.6 multiplier was applied to the Appalachian Academy, 99 percent of the students would be designated as low-income.

[7] In the paragraphs below, data on race/ethnicity for other students in the same school district come from the 2017-18 academic year. Data on economic-disadvantage come from Title I reporting for the 2018-19 academic year. These Title I data are at the school rather than the student level.

low-income. By comparison, 20 percent of the K-8 students in New Hanover County Schools are Black, 15 percent are Hispanic, and 52 percent are designated as low-income.

Finally, as of the 20th day of the 2019-20 academic year, The Catamount School has 60 enrolled students, with 17 in 6th grade, 16 in 7th grade, and 27 in 8th grade. Of the students enrolled in 2019-20, 45 percent are male, 73 percent are White, 15 percent are multiracial, and 17 percent are classified as exceptional children. Title I data from the 2018-19 school year show that 54 percent of The Catamount School students are designated as low-income. By comparison, 71 percent of the middle grades students in Jackson County Schools are White, 16 percent are Hispanic, 4 percent are multiracial, and 60 percent are designated as low-income.

Table 1: Student Enrollment in UNC System Laboratory Schools

	Appalachian		ECU		UNCG		UNCW		WCU	
	18-19	19-20	18-19	19-20	18-19	19-20	18-19	19-20	18-19	19-20
Total Enrollment	282	280	85	117	389	390	243	216	56	60
Kindergarten	40	40	14	32	63	67	20	17	---	---
1st Grade	39	44	15	27	79	67	15	22	---	---
2nd Grade	55	40	8	16	65	80	22	20	---	---
3rd Grade	51	61	16	12	47	58	13	20	---	---
4th Grade	47	52	18	15	72	46	25	13	---	---
5th Grade	50	43	14	15	63	72	28	20	---	---
6th Grade	---	---	---	---	---	---	38	31	9	17
7th Grade	---	---	---	---	---	---	47	36	24	16
8th Grade	---	---	---	---	---	---	35	37	23	27
Male	48.9%	50.0%	54.1%	56.4%	56.0%	56.4%	56.0%	54.2%	60.7%	45.0%
White	11.0%	7.1%	2.4%	1.7%	20.3%	15.9%	6.2%	3.7%	76.8%	73.3%
Black	46.8%	46.4%	97.7%	96.6%	58.6%	60.8%	86.4%	87.9%	0.0%	0.0%
Multiracial	2.5%	5.0%	0.0%	0.9%	10.0%	12.3%	2.1%	3.2%	14.3%	15.0%
Hispanic	37.2%	40.0%	0.0%	0.9%	11.0%	10.8%	5.4%	5.1%	3.6%	6.7%
Asian	1.8%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%
American Indian	0.7%	0.4%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	5.4%	3.3%
Pacific Islander	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EC Status	10.7%	13.9%	11.8%	17.9%	16.4%	16.2%	13.2%	18.1%	19.6%	16.7%
Low-Income	62.2%	N/A	100.0%	N/A	93.8%	N/A	97.3%	N/A	53.6%	N/A

*Note: This table displays characteristics of the students enrolled at UNC System laboratory schools in the 2018-19 and 2019-20 school years. Most of the data in this table come from the Principal's Monthly Report from the **20th** day of the school year. The low-income data come from the 2018-19 Title I federal reporting. Please see http://www.dpi.state.nc.us/program-monitoring/titleIA/ for Title I data. These Title I data are not yet available for the 2019-20 school year. N/A=not available.*

Laboratory School Admissions and Enrollment Priorities

As originally enacted in 2016, the enabling laboratory schools legislation directed UNC System institutions (1) to consider eligible for admission any students residing in the local school administrative unit in which the laboratory school is located who were enrolled in a low-performing school at the time of application *and* (2) to give priority enrollment to students who did not meet expected growth in the prior school year. Failure to meet expected growth can be measured by grades, observations, diagnostic and formative assessments, state assessments, or other factors, including reading on grade level. The legislation was amended in 2017, requiring laboratory schools to consider eligible for admission any students residing in the local school administrative unit in which the laboratory school is located who were enrolled in a low-performing school at the time of application *or* who did not meet expected growth in the previous academic year. The amended statute no longer provides for priority enrollment for certain students.

Other important aspects of the admissions policies are as follows: (1) admission to laboratory schools is based on eligibility, timeliness of the application (received during the application period), capacity of the school, and the order in which eligible applications are received; (2) once students are enrolled, they are required to confirm their attendance for the following year but are not required to re-apply; and (3) kindergarten students are eligible to attend a laboratory school if they were zoned to attend a low-performing school in the district. Laboratory schools also admit siblings of currently enrolled students.

Table 2 presents data on how laboratory schools determined whether students were eligible to attend: previously attended/zoned to attend a low-performing school or previously low-performing themselves. Importantly, laboratory schools did not necessarily confirm both of these eligibility criteria. That is, if a student previously attended a low-performing school, the laboratory school may not have assessed whether the student was also low-performing him/herself. As a result, data in Table 2 indicate how the laboratory school confirmed students' eligibility and not necessarily all the eligibility criteria that qualified students to attend a laboratory school.

For the 2019-20 school year, 76 percent of Appalachian Academy students qualified to attend the laboratory school based on their previous attendance or being zoned to attend a low-performing school; 41 percent qualified to attend based on their own prior performance. ECU certified that all students enrolled at its laboratory school in 2019-20 had previously attended or been zoned to attend a low-performing school; likewise, ECU certified that 47 percent qualified to attend based on their own prior performance. Seventy-five percent of the students enrolled at Moss Street Partnership School had previously attended or been zoned to attend a low-performing school; 18 percent of the students at Moss Street Partnership school qualified to attend based on their own prior performance.[8] Ninety-seven percent of the students enrolled at D.C. Virgo Preparatory Academy had previously attended or were zoned to attend a low-performing school; three percent of these students were certified to attend D.C. Virgo Preparatory Academy based on their own prior performance. Finally, 97 percent of students at The Catamount School qualified to attend based on their own prior performance; 10 percent qualified based on their previous attendance at a low-performing school.

[8] The remaining students qualified to attend Moss Street Partnership School because they had a sibling already enrolled at the school.

Table 2: Student Enrollment and Laboratory School Eligibility Requirements (2019-20 Academic Year)

	Appalachian	ECU	UNCG	UNCW	WCU
Total Enrollment	280	117	390	216	60
Previously Attended or Zoned to Attend a Low-Performing School	75.7%	100.0%	74.6%	96.6%	10.0%
Previously Low-Performing Student	41.1%	47.0%	18.0%	2.9%	96.7%

Note: This table displays information on how laboratory schools determined whether students were eligible to attend. Laboratory schools did not necessarily confirm both of these eligibility criteria—i.e. if a student previously attended a low-performing school, the laboratory school may not have assessed whether the student was also low-performing. Data are for the 2019-20 academic year. Status as a low-performing student can be based on grades, observations, diagnostic and formative assessments, state assessments, or other factors, including reading on grade level.

Student Achievement at Laboratory Schools

The legislation enabling laboratory schools requires the reporting of student achievement data, including school performance grades, student achievement scores, and student growth at each laboratory school. These achievement data are based on student proficiency and growth on state assessments (End-of-Grade exams for laboratory schools). Proficiency measures whether students pass state assessments, while growth tracks the gains students make on those assessments. Table 3 displays these achievement data for the *2018-19* academic year. The top panel of Table 3 displays these data overall; the middle and bottom panels of Table 3 report these data for reading and mathematics, separately.[9] Overall, these student achievement data reveal signs of promise[10] and room for improvement.

Overall, the top panel of Table 3 indicates that the Appalachian Academy and The Catamount School earned performance grades of 'D', while the ECU Community School, the Moss Street Partnership School, and D.C. Virgo Preparatory Academy earned performance grades of 'F'. These performance grades are based on the performance score, which is a weighted average of the achievement score (80%) and growth score (20%). Achievement scores, which measure proficiency rates on state assessments, ranged from 6.8 (ECU Community School) to 46.4 (The Catamount School). Two laboratory schools—the Appalachian Academy and the ECU Community School—met expected growth in 2018-19.[11] It is worth noting that their overall growth scores of 84.2 and 84.9 are very close to the growth score threshold (85) for exceeding expected growth. Three laboratory schools—the Moss Street Partnership School, D.C. Virgo Preparatory Academy, and The Catamount School—did not meet expected growth in 2018-19.

The middle panel of Table 3 presents school performance data in reading. Four laboratory schools earned reading performance grades of 'F', while The Catamount School earned a reading performance grade of 'C'. Reading achievement scores (proficiency rates) ranged from 6.8 (ECU Community School) to 60 (The Catamount School). Four of the laboratory schools met expected growth in reading in 2018-19; the Moss Street Partnership School did not meet expected growth in reading.[12]

[9] NCDPI released these data in September 2019. These data can be downloaded at the following: http://www.ncpublicschools.org/accountability/reporting/

[10] The Catamount School encourages its 8th grade students to take up to two high school courses—Math I and Earth and Environmental Science. Of the 23 8th grade students at The Catamount School in 2018-19, eight took Math I and all eight earned high school credit (6 of the 8 scored at a level 4 or 5). 20 of the 23 8th grade students also took Earth and Environmental Science and 15 of these students earned high school course credit.

[11] The ECU Community School earned a letter grade of 'F' and had an overall growth score of 74.6 in 2017-18. The Catamount School earned a letter grade of 'C' and had an overall growth score of 65.2 in 2017-18.

[12] The ECU Community School earned a reading letter grade of 'F' and had a reading growth score of 76.5 in 2017-18. The Catamount School earned a reading letter grade of 'C' and had a reading growth score of 67.0 in 2017-18.

The bottom panel of Table 3 presents school performance data in math. All five laboratory schools earned mathematics performance grades of 'F', with mathematics achievement scores (proficiency rates) ranging from 6.8 (ECU Community School) to 32.7 (The Catamount School). Appalachian Academy and D.C. Virgo Preparatory Academy met expected growth in mathematics, while the Moss Street Partnership School and The Catamount School did not meet expected growth in mathematics.[13] North Carolina did not report an official math growth score or growth status for the ECU Community School in 2018-19. This is because the ECU Community School had too few students for whom a mathematics growth score could be externally reported.[14]

Table 3: Student Achievement at Laboratory Schools in 2018-19

	Overall Performance Grade	Overall Performance Score	Overall Achievement Score	Overall Growth Score	Overall Growth Status
Appalachian Academy	D	40	28.9	84.2	Met
ECU Community School	F	22	6.8	84.9	Met
Moss Street Partnership School	F	21	14.2	50.0	Not Met
D.C. Virgo Preparatory Academy	F	38	30.9	68.7	Not Met
The Catamount School	D	49	46.4	61.2	Not Met
	Reading Performance Grade	Reading Performance Score	Reading Achievement Score	Reading Growth Score	Reading Growth Status
Appalachian Academy	F	39	28.2	84.4	Met
ECU Community School	F	22	6.8	83.4	Met
Moss Street Partnership School	F	23	14.9	55.2	Not Met
D.C. Virgo Preparatory Academy	F	36	27.4	70.4	Met
The Catamount School	C	63	60.0	73.9	Met
	Math Performance Grade	Math Performance Score	Math Achievement Score	Math Growth Score	Math Growth Status
Appalachian Academy	F	34	22.5	81.7	Met
ECU Community School	F	7	6.8	Not Reported	Not Reported
Moss Street Partnership School	F	22	14.4	50.0	Not Met
D.C. Virgo Preparatory Academy	F	35	25.5	72.7	Met
The Catamount School	F	38	32.7	58.6	Not Met

Note: Performance Grades range from A-F and are based on the Performance Score (Performance Scores of 85-100=A; 70-84=B; 55-69=C; 40-54=D; and 0-39=F). Performance Scores are a weighted average of the Achievement Score (80 percent) and the Growth Score (20 percent). For laboratory schools, the Achievement Score is the proficiency rate on End-of-Grade exams. The Growth Status is based, in part, on the Growth Score, and indicates whether there was sufficient statistical evidence to say that the school exceeded, met, or did not meet expected growth. North Carolina calculates these values across subject-areas and for mathematics and reading separately.

Student Academic Progress at Laboratory Schools

The legislation enabling laboratory schools requires the reporting of student academic progress in each laboratory school, as measured against the previous school year and against other schools in the district and statewide. Making these comparisons in a rigorous and comprehensive fashion requires student-level

[13] The ECU Community School earned a mathematics letter grade of 'F' in 2017-18. The Catamount School earned a mathematics letter grade of 'D' and had a mathematics growth score of 71.4 in 2017-18.

[14] The ECU Community School had too few students to externally report a math growth score or status. However, internal reporting between NCDPI and the ECU Community School shows that the school met growth in mathematics in 2018-19.

achievement data from the North Carolina Department of Instruction (NCDPI). Student-level data from 2018-19 are not available until late 2019, and as a result, there is not sufficient time to process, manage, and analyze these data for a November 2019 report. Instead, this report includes analyses of student-level achievement data from the *2017-18* school year—when there were two laboratory schools, the ECU Community School and The Catamount School. The November 2020 report to the Joint Legislative Education Oversight Committee will include rigorous analyses of student achievement data for all five laboratory schools in operation in 2018-19.

Table 4 displays 2017-18 student achievement data for the ECU Community School, all other Pitt County students, and all students statewide. Achievement data in Table 4 show that for each respective comparison—reading and math in grades 3-4—ECU Community School students scored lower and had a smaller percentage of students passing their EOG exams than other Pitt County students and all other students in North Carolina. As context for these scores, it is important to note that 100 percent of the students enrolled at the ECU Community School in 2017-18 were low-performing in the previous year.[15]

Table 4: 2017-18 Test Score Data for the ECU Community School and Other Same-Grade Students

Test	Student Count	Average Test Score	Average Achievement Level (1-5)	Percent Passing (Level 3 or Above)
ECU Community School				
3rd Grade Reading	16	427.19	1.38	0
4th Grade Reading	16	431.94	1.19	0
3rd Grade Math	16	441.13	1.69	6.25
4th Grade Math	15	435.73	1.13	0
All Other Pitt County Students				
3rd Grade Reading	1862	437.70	2.65	48.71
4th Grade Reading	1829	444.20	2.67	50.36
3rd Grade Math	1863	449.52	3.04	58.45
4th Grade Math	1829	449.07	2.91	51.56
All Students Statewide				
3rd Grade Reading	120,103	439.04	2.86	55.13
4th Grade Reading	121,657	445.25	2.85	57.82
3rd Grade Math	120,088	450.75	3.21	65.01
4th Grade Math	121,629	449.88	3.06	57.92

Note: For the 2017-18 academic year, this table displays student achievement data for the ECU Community School, all other Pitt County students (in grades 3-4), and all students in North Carolina (in grades 3-4).

Table 5 presents comparable data from the 2017-18 academic year for The Catamount School, all other Jackson County students, and all students statewide. Achievement data in Table 5 show a mixed pattern of results. In some comparisons—e.g. 6th grade reading, 6th and 7th grade math—students at The Catamount School scored lower than their peers in Jackson County and the rest of North Carolina. Conversely, in other comparisons—e.g. 7th and 8th grade reading, 8th grade science—students at The

[15] For more information on the ECU Community School, please see the November 2018 laboratory schools report: Bastian, K., Kim, J., & Hassel, B. "Appendix A: Evaluation of the UNC System Laboratory Schools Initiative, November 2018 Report." University of North Carolina System. (2018). Review and Evaluation of the Educational Effectiveness of the Laboratory Schools (Year 2). Retrieved from https://www.ncleg.gov/documentsites/committees/JLEOC/Reports%20Received/2018%20Reports%20Received/Laboratory%20Schools%20-%20Review%20&%20Evaluation%20of%20Educational%20Effectiveness.pdf.

Catamount School scored higher than their peers. It is also notable that seven 8th grade students at The Catamount School took Math I in 2017-18. Their average score was 254 and 85.7 percent of these students passed the exam and earned high school course credit.

Table 5: 2017-18 Test Score Data for The Catamount School and Other Same-Grade Students

Test	Student Count	Average Test Score	Average Achievement Level (1-5)	Percent Passing (Level 3 or Above)
The Catamount School				
6th Grade Reading	18	450.67	2.78	55.56
7th Grade Reading	21	456.52	3.10	66.67
8th Grade Reading	12	460.50	3.17	75.00
6th Grade Math	18	444.61	2.00	33.33
7th Grade Math	21	447.90	2.38	42.86
8th Grade Math	5	445.80	2.20	40.00
Math I	7	254.00	3.43	85.71
8th Grade Science	12	253.58	3.92	91.67
All Other Jackson County Students				
6th Grade Reading	239	451.95	3.02	64.85
7th Grade Reading	263	455.68	3.06	60.84
8th Grade Reading	221	456.28	2.65	49.77
6th Grade Math	239	448.10	2.48	41.42
7th Grade Math	263	448.87	2.57	41.06
8th Grade Math	176	444.05	1.80	19.32
Math I	297	250.74	2.82	57.58
8th Grade Science	221	249.87	3.23	67.87
All Students Statewide				
6th Grade Reading	117,965	452.68	3.09	61.25
7th Grade Reading	115,432	455.69	3.06	60.18
8th Grade Reading	108,331	458.08	2.84	54.12
6th Grade Math	117,920	450.72	2.89	52.85
7th Grade Math	115,380	450.79	2.88	51.76
8th Grade Math	77,231	446.29	2.13	29.85
Math I	121,360	251.49	2.89	57.81
8th Grade Science	108,195	252.29	3.55	75.76

Note: For the 2017-18 academic year, this table displays student achievement data for The Catamount School, all other Jackson County students (in grades 6-8), and all students in North Carolina (in grades 6-8).

While useful, the test score data in Tables 4 and 5 do not account for the unique nature of students attending laboratory schools—i.e. previously low-performing and/or attending a low-performing school. To address this concern, Tables 6 and 7 display two additional comparisons: (1) comparing the test scores of laboratory school students in 2017-18 with their own scores in the previous school year (before attending a laboratory school) and (2) comparing the test scores of laboratory school students in 2017-18 with the test scores of similar students.[16]

Table 6 presents laboratory school students' EOG test scores from 2017-18 and their prior scores from the same subject-area in 2016-17. Scores are standardized within subject, grade, and year (across all North

[16] Please see Appendix A to this report for a fuller description of these analyses.

Carolina public school students) to show students' placement in the test score distribution. That is, if a student scores 10 percent of a standard deviation (0.100) below the statewide mean in 2016-17 and 10 percent of a standard deviation below the mean in 2017-18, the student made the average amount of growth for students. If a student's placement in the test score distribution changes, that indicates the student made more or less growth than average. For each displayed comparison, Table 6 shows that laboratory school students' placement in the test score distribution was lower in 2017-18 (when attending the laboratory school) than in 2016-17 (before attending the laboratory school). For example, 4th grade students at the ECU Community School scored 1.272 standard deviations below the statewide mean in reading; in 2016-17, these same students scored 0.983 standard deviations below the mean in reading. Likewise, 7th grade students at The Catamount School scored 0.254 standard deviations below the statewide mean in math; in 2016-17, these same students scored 0.158 standard deviations below the mean in math.[17]

Table 6: Comparing Test Score Data in 2017-18 and 2016-17 for Laboratory School Students

Test	Count of Students with Test Data in BOTH Periods	2017-18 Test Score (Standardized)	Prior Year Test Score in the Same Subject-Area (Standardized)
ECU Community School			
3rd Grade Reading	16	-1.111	-1.056
3rd Grade Math	16	-0.970	---
4th Grade Reading	15	-1.272	-0.983
4th Grade Math	14	-1.399	-1.206
The Catamount School			
6th Grade Reading	14	-0.375	-0.273
6th Grade Math	14	-0.747	-0.548
7th Grade Reading	17	0.114	0.227
7th Grade Math	17	-0.254	-0.158
8th Grade Reading	9	0.214	0.444
8th Grade Math	---	---	---

Note: For the ECU Community School and The Catamount School, this table presents students' EOG test scores (standardized) in 2017-18 and their prior scores (standardized) from the same subject-area in the 2016-17 school year. Not all laboratory school students have test scores in both periods.

Table 7 presents test score data for laboratory school students versus a comparison sample of similar students. All of the test scores in Table 7 come from the 2017-18 school year and are standardized within subject, grade, and year. Data in the middle columns of Table 7 display standardized EOG test scores for laboratory school students and comparison sample students. In all but one comparison—6th grade reading—laboratory school students have standardized test scores that are lower than the comparison sample. The right column of Table 7 presents results from models testing whether there are statistically significant differences in the EOG scores of laboratory school versus comparison sample students. Laboratory school students have test scores that are significantly lower than the comparison sample in two comparisons—4th grade reading and 6th grade math. For example, in the 2017-18 academic year, 4th grade students at the ECU Community School had reading test scores 30 percent of a standard deviation

[17] The prior score for 3rd grade reading is the composite Dibels score (part of mCLASS) from the end of second grade. There is no prior score for 3rd grade math. Data is not reported for 8th grade math (and 7th grade math prior scores) due to changes, in the 2017-18 school year, in the sample of students who take the 8th grade math EOG. Previously, all 8th grade students took the math EOG; now, only students who do not take Math I in 8th grade take the math EOG.

lower than comparison sample students. Likewise, 6th grade students at The Catamount School had math scores 27 percent of a standard deviation lower than comparison sample students. In most other comparisons, the estimates for laboratory schools are negative but statistically insignificant.

Table 7: Comparing Test Score Data in 2017-18 for Laboratory School and Matched Comparison Students

Test in 2017-18	Standardized Test Score for Laboratory School Students	Standardized Test Score for Matched Sample	Analyses Comparing Laboratory Schools to Matched Sample
ECU Community School			
3rd Grade Reading	-1.111	-0.875	-0.126
3rd Grade Math	-0.970	-0.800	-0.044
4th Grade Reading	-1.260	-0.929	**-0.297***
4th Grade Math	-1.398	-1.082	-0.210
The Catamount School			
6th Grade Reading	-0.178	-0.328	-0.044
6th Grade Math	-0.603	-0.466	**-0.270***
7th Grade Reading	0.073	0.230	0.008
7th Grade Math	-0.281	-0.132	-0.165
8th Grade Reading	0.209	0.358	-0.139
8th Grade Math	-0.056	0.539	-0.015
8th Grade Science	0.123	0.420	-0.194

*Note: The middle columns of this table present the average EOG test scores for laboratory school and matched comparison sample students in the 2017-18 school year. The right column of this table presents regression coefficients from models comparing the test scores of laboratory school and matched comparison sample students. * indicates statistically significant differences between laboratory and matched comparison sample students at the 0.05 level.*

Educator Preparation Programs and Laboratory Schools

Laboratory schools offer pre-service teachers and school leaders an opportunity to have more in-depth and practice-based preparation experiences. Likewise, laboratory schools offer COE faculty an opportunity to refine and innovate their preparation practices based on their experiences in laboratory schools. As such, this section briefly details how UNC System institutions are integrating laboratory schools into educator preparation. The enabling laboratory schools legislation also requires the reporting of (1) educator preparation program performance data for each UNC System institution operating a laboratory school and (2) outcomes for educator preparation program students completing clinical experiences in laboratory schools. This section includes educator preparation program performance data for the five UNC System institutions operating laboratory schools. Future reports to the Joint Legislative Education Oversight Committee will provide outcome data for pre-service candidates completing clinical experiences in laboratory schools. These data will be available once a sufficient number of pre-service candidates have had clinical experiences in laboratory schools and these candidates can be connected to administrative data from NCDPI.

Integrating Laboratory Schools into Educator Preparation

All five UNC System institutions operating laboratory schools in 2018-19 used their laboratory schools to provide clinical experiences for pre-service teacher and school leader candidates. Rather than making major programmatic changes in educator preparation, COEs have largely integrated laboratory schools into existing course and clinical structures for pre-service candidates.

Generally, COEs have aligned clinical experiences at laboratory schools with specific courses (or course sequences) that have relevance to laboratory school settings, such as those on culturally competent

instruction, inclusive education, or methods pedagogy. Early field experiences (also known as practicum assignments) are part of an undergraduate course available to pre-service candidates in their sophomore and junior years and involve intermittent interactions with laboratory school students and staff (e.g., a few discrete visits to the laboratory school per semester, one-hour engagements once a week). Internships for students in their final year in the program typically begin with one or two days at the school per week in one semester (Intern I), followed by a full-time, semester-long student teaching experience (Intern II).

Table 8 presents counts of the pre-service teachers and school leaders who had a clinical experience—early field, intern I, intern II—in a laboratory school in 2018-19.[18] Given the distance between the university campus and laboratory school, Appalachian State placed a limited number of teacher candidates at its laboratory school in 2018-19. ECU placed 18 teacher candidates into early field experiences and three candidates into full-time student teaching experiences at the ECU Community School. UNCG placed nine teacher candidates into early field experiences; a different set of nine teacher candidates completed their fall (intern I) and spring (intern II) internships at the Moss Street Partnership School. UNCW placed a large number of teacher candidates into early field and intern I experiences at D.C. Virgo Preparatory Academy. However, because the laboratory school operates on a year-round schedule—that does not align with the university's semester schedule—UNCW did not place any full-time student teachers (intern II) at D.C. Virgo Preparatory Academy. WCU placed 101 teacher candidates into early field experiences at The Catamount School. In addition, 12 WCU teacher candidates completed their intern I experience at The Catamount School; seven completed their intern II experience there. Finally, Table 8 shows counts of school leader candidates at ECU, UNCG, UNCW, and WCU who served internships at their respective laboratory schools in 2018-19. Appalachian State is planning to integrate school leader candidates into its laboratory school in future years.[19]

[18] Many of the UNC System institutions operating laboratory schools also placed other pre-service interns—e.g. school counseling interns, speech pathology/audiology interns, school psychology interns—into laboratory schools.
[19] The distance between Appalachian State and the Appalachian Academy at Middle Fork necessitates the COE placing interns who have family or other living accommodations in or near Forsyth County.

Table 8: Clinical Experiences in Laboratory Schools for Educator Preparation Program Candidates

Program/Licensure Areas	Early Field Experiences	Intern I	Intern II (Full-time internship)
Appalachian State University			
Elementary Education	---	---	1
Graduate Reading Program	3	---	---
East Carolina University			
Elementary Education	18	---	3
Birth-to-Kindergarten	---	1	---
Masters in School Administration	---	---	1
UNC Greensboro			
Elementary Education	3	7	7
Elementary Education (MAT)	6	---	---
Elementary Education/Special Education	---	2	2
Masters in School Administration	---	---	1
UNCW Wilmington			
Elementary Education	24	18	---
Middle Grades Education	8	7	---
Special Education	10	56	---
Masters in School Administration	---	---	2
Western Carolina University			
Elementary Education/Special Education	52	2	2
Middle Grades Education	25	2	2
Health and Physical Education	24	8	3
Masters in School Administration	---	---	1

Note: For each UNC System institution, this table displays counts of the pre-service teachers and school leaders who had clinical experiences in a laboratory school in 2018-19. These data are displayed by institution and program area (e.g. elementary education, special education).

In addition to providing field and clinical experiences for pre-service teacher and principal candidates, laboratory schools provide COE faculty a unique opportunity to operate and manage a public school, gain direct exposure to the practical realities of teaching and leading, and further develop an understanding of the practical challenges of improving outcomes for high-needs students. COE faculty have designed their laboratory school models, assisted in the hiring of laboratory school staff, planned for the integration of pre-service candidates into the school, and conducted laboratory school-based research. COE faculty also have formal roles in laboratory schools; for example:

- Full-time, school-based leadership positions, such as a school administrator, curriculum facilitator, or laboratory school coordinator.
- "Faculty-in-residence" who spend multiple days per week at the laboratory school supporting teachers—through planning, instructional coaching, and professional development—and laboratory school students—through whole group, small group, and individual instruction.
- Faculty and staff supervisors overseeing pre-service candidates in field placements or internships.

Educator Preparation Program Performance Data

For each UNC System institution operating a laboratory school, Table 9 displays the required reporting elements specified in the enabling laboratory schools legislation. These data come from the 2017-18

Educator Preparation Program report cards and are available on the NCDPI website.[20] The data displayed in Table 9 are for undergraduate teacher education programs only.

Table 9: Educator Preparation Program Performance Data (2017-18 Report Cards)

Reporting Elements	Appalachian	ECU	UNCG	UNCW	WCU
Mean SAT of Admitted Students	1195.9	1181.2	1206.0	1178.3	1172.3
Mean ACT of Admitted Students	26.3	25.5	26.2	25.5	25.9
Mean GPA of Admitted Students	3.4	3.3	3.4	3.5	3.5
Percent Passing Professional and Content Area Exams	81.0	79.0	86.0	78.0	88.0
Average Number of Semesters to Graduate	7.8	3.8	4.0	3.9	5.3
Percent Licensed	87.0	80.0	91.0	84.0	81.0
Percent Employed in NC Within One Year of Program Completion	62.0	70.0	68.0	64.0	60.0
Standard 1 (Leadership): % Proficient or Above	95.8	96.9	95.8	94.3	96.9
Standard 2 (Classroom Environment): % Proficient or Above	96.6	97.0	95.1	95.8	96.7
Standard 3 (Content Knowledge): % Proficient or Above	96.2	97.4	95.8	95.2	96.4
Standard 4 (Facilitating Student Learning): % Proficient or Above	95.7	96.7	95.4	94.1	95.4
Standard 5 (Reflecting on Practice): % Proficient or Above	97.0	97.5	96.2	94.3	97.3
EVAAS: % Meets Expected Growth	64.1	68.5	68.9	65.9	61.4
EVAAS: % Exceeds Expected Growth	15.7	15.6	10.9	12.1	17.5
Graduate Survey: % 'Well' or 'Very Well' Prepared	72.8	77.9	76.5	74.0	74.9
Employer Survey: Average Rating (1-5 scale)	3.5	3.4	3.4	3.4	3.5
Retention: % Remaining in Teaching After Four Years	64.7	62.5	70.1	57.0	65.9

Note: This table displays educator preparation program performance data for each UNC System institution operating a laboratory school. These data come from the 2017-18 Educator Preparation Program report cards (available on the NCDPI website) and are for undergraduate teacher education programs only.

Best Practices Resulting from Laboratory School Operations

Interviews with COE faculty, laboratory school staff, and preservice candidates reveal several common practices/guiding principles among laboratory schools that interviewees view as beneficial to students and educators. Whether the practices and principles described below contribute to desired academic and social-emotional outcomes will become clearer over time as laboratory schools accumulate performance and growth data. A fuller account of these practices is included in the evaluation report completed by EPIC and Public Impact and attached as Appendix A.

Physically, Socially, and Emotionally Safe Environments for Students

Laboratory schools serve high concentrations of students with poverty-associated needs—i.e. increased mobility, exposure to adverse childhood experiences and trauma, limited support networks/safety nets, lack of access to transportation, food insecurity, and unstable housing. Laboratory schools employ staff

[20] http://www.dpi.state.nc.us/epp/report-cards/report-transition?year=2017-18

and/or engage institution and community partners to address these needs in several ways: (1) providing health, social work, and counseling services; (2) providing food and clothing to meet basic subsistence needs; (3) educating staff on the effects of trauma and adverse childhood experiences; and (4) using positive behavioral interventions and supports (PBIS) and restorative justice practices to emphasize individual and community relationships.

Balanced Curriculum and Enrichment Activities
Laboratory schools ensure that students are exposed to academic instruction in all content areas—reading/language arts, math, science, and social studies—rather than a primary focus on just reading and math, a distinction some laboratory school teachers highlight when comparing their prior teaching experiences to experiences at the laboratory schools. Furthermore, laboratory schools use community partnerships and university facilities/events to expose students to arts, history, recreation, and other supplemental learning activities that laboratory school students may not otherwise experience.

COE Access to Laboratory Schools
Laboratory schools give COE faculty direct exposure to the challenges that educators in North Carolina public schools face, particularly in teaching high-needs students. This exposure and learning can influence how COE faculty organize their university courses and instruct teacher and school leader candidates. Laboratory schools also facilitate opportunities for in-service teachers to access university resources (e.g., COE faculty, advanced certification and degree programs). This can facilitate the continued growth and development of laboratory school teachers and benefit their students.

Increased Autonomy in the Classroom
Relative to traditional public schools, laboratory school teachers report having more instructional autonomy (i.e. more independence in selecting content/curriculum and pacing instruction). This allows them to prioritize individual students' learning needs rather than complying with prescriptive district requirements and results in laboratory school teachers feeling more energized and less stressed. Pre-service student teachers also described increased responsibility for and autonomy in planning and leading instruction. This may better prepare them to lead their own classrooms.

Other Information the BOG Subcommittee Considers Appropriate
Commensurate with the innovative scope, vision, and commitments of laboratory schools, the UNC System commissioned an evaluation of the laboratory schools intended to facilitate an in-depth assessment of their performance and contributions. Appendix A includes the in-depth evaluation report from EPIC and Public Impact, which addresses statutorily required reporting elements and the following evaluation questions:

(1) How have the UNC System and UNC System institutions set up laboratory schools to succeed?
(2) How do laboratory schools form and harness partnerships to benefit learning, teaching, and school leadership?
(3) Are laboratory schools successfully marketed and managed?
(4) Do laboratory schools improve the academic performance of students?
(5) Do laboratory schools benefit students' social-emotional needs and engagement with school?
(6) Do laboratory schools support and strengthen educator preparation?
(7) How have the UNC System and UNC System institutions set up laboratory schools to grow and sustain?

Summary

Three years after the passage of the enabling laboratory schools legislation, UNC System institutions have opened five laboratory schools that collectively educate nearly 1,000 students. It remains too early to fully assess how effective the UNC System laboratory schools will be and what their operation will mean to the learning and development of low-performing students, pre-service candidates, and in-service educators. These answers will become clearer with time, as laboratory schools have an opportunity to refine their practices and as more administrative data on students and educators can be rigorously assessed. However, evidence to date highlights several areas of success and challenge.

As intended, laboratory schools are enrolling students who are low-performing or previously attended a low-performing school. Relative to schools in their host districts, a higher percentage of laboratory school students are economically-disadvantaged or a racial/ethnic minority. Student achievement data reveal signs of promise and room for improvement. In 2018-19, the Appalachian Academy at Middle Fork and the ECU Community School met expected growth—in fact, these two schools were very close to exceeding growth. The ECU Community School also experienced a 10 point increase in its overall growth score from 2017-18 to 2018-19. The three remaining laboratory schools—Moss Street Partnership School, D.C. Virgo Preparatory Academy, and The Catamount School—did not meet expected growth in 2018-19.

Regarding educator preparation, laboratory schools are offering pre-service teachers and school leaders unique exposure to the practical challenges of teaching and leading in high-need schools. Pre-service candidates with clinical experiences in laboratory schools—particularly full-time student teaching—may be getting more intensive instructional and classroom management practice and exercising more instructional autonomy than they would in other clinical placements. Similarly, COE faculty engaged in laboratory schools are gaining direct exposure to the realities and challenges of operating and managing K-12 public schools while providing coaching and support to pre-service candidates and laboratory school teachers.

Future reports to the Joint Legislative Education Oversight Committee will include rigorous analyses of administrative data and continue to focus on laboratory school practices that contribute to student outcomes or the enhanced preparation of pre-service candidates.

Appendix A

Evaluation of the UNC System Laboratory Schools Initiative

November 2019 Report

Education Policy Initiative at Carolina/UNC Public Policy: Kevin C. Bastian
Public Impact: Juli Kim and Whitaker Brown

UNC
COLLEGE OF ARTS AND SCIENCES
Public Policy

PUBLIC IMPACT

Introduction

In 2016, the North Carolina General Assembly (NCGA) passed legislation requiring the Board of Governors (BOG) of the University of North Carolina (UNC) System, in consultation with UNC System institution Colleges of Education (COEs), to establish laboratory schools.[1] Laboratory schools are K-12 schools operated by a UNC System institution rather than by a local school district. The mission of UNC System laboratory schools is to improve student performance in local school administrative units with low-performing schools by providing an enhanced education program for students residing in those units and to provide exposure and training for teachers and principals to successfully address challenges existing in high-needs school settings.[2] Collectively, laboratory schools are committed to delivering high expectations to prepare students for college and life; ensuring students learn to read and communicate effectively; addressing the academic, social, and emotional needs of all students; and harnessing the benefits of partnerships to strengthen learning, teaching and school leadership.[3] Laboratory schools serve every part of the University mission—teaching, research, and public service—and represent an innovative extension of the UNC System's presence in K-12 education.

Eight UNC System institutions with high-quality educator preparation programs were to design and open a laboratory school by the 2018-19 school year. However, amendments to the enabling legislation now require nine UNC System institutions to open a laboratory school by the 2022-23 school year. East Carolina University (ECU) and Western Carolina University (WCU) opened their laboratory schools in the 2017-18 school year while Appalachian State University, the University of North Carolina at Greensboro (UNCG), and the University of North Carolina at Wilmington (UNCW) opened their laboratory schools in the 2018-19 school year.

UNC System laboratory schools must serve students in at least three contiguous grades in the K-8 grade range. The enabling legislation originally required the UNC System to establish laboratory schools in local school administrative units in which at least 25 percent of the schools were low-performing. An amendment to the enabling legislation allows the UNC System to exercise three waivers to establish laboratory schools in districts that do not meet this requirement. Students are eligible to attend a laboratory school if they reside in the local school administrative unit in which the laboratory school is located and either previously attended a low-performing school or failed to meet expected growth in the previous academic year (based on one or more indicators). Laboratory schools present opportunities to benefit low-performing students, to implement new and research-based instructional strategies, to enhance the preparation experiences of pre-service educators, and to integrate the contributions of the university and community into the philosophy and practices of the school.

In 2018, the UNC System commissioned the Education Policy Initiative at Carolina (EPIC)/Public Policy at UNC Chapel Hill and Public Impact (hereon referred to as the Evaluation Team) to conduct a five-year evaluation of the laboratory school initiative. The intent of the evaluation is to assess whether laboratory schools benefit students and pre-service educators and to understand why laboratory schools succeed or

[1] N.C.G.S. §116-239.5(a).
[2] N.C.G.S. 116-239.5(b).
[3] The University of North Carolina System. (n.d.) "UNC Laboratory Schools." Retrieved from https://www.northcarolina.edu/unc-lab-schools

fall short of expectations. The Evaluation Team submitted its first report in November 2018.[4] The following report reflects the Evaluation Team's second report on laboratory school implementation, operation, successes and shortcomings. In addition, the UNC System BOG will submit its own report focusing on the statutorily required laboratory school reporting elements: student enrollment and demographics, student admissions, student achievement and academic progress, outcomes for pre-service candidates in educator preparation programs, best practices of laboratory schools, and other information the UNC BOG Subcommittee on Laboratory Schools considers appropriate.[5] This in-depth report from the Evaluation Team is attached to the UNC System BOG report as an appendix, to be submitted to the NCGA by November 15, 2019.

This report is organized to address the following evaluation questions:

(1) *How have the UNC System and UNC System institutions set up laboratory schools to succeed?*
(2) *How do laboratory schools form and harness partnerships to benefit learning, teaching, and school leadership?*
(3) *Are laboratory schools successfully marketed and operated?*
(4) *Do laboratory schools improve the academic performance of students?*
(5) *Do laboratory schools benefit students' social-emotional needs and engagement with school?*
(6) *Do the laboratory schools support and strengthen educator preparation?*
(7) *How have the UNC System and UNC System institutions set up laboratory schools to grow and sustain?*

Evaluation Sample

This in-depth evaluation report focuses on the five UNC System laboratory schools in operation during the 2018-19 school year: The ECU Community School, The Catamount School (WCU), the Appalachian State Academy at Middle Fork (Appalachian State), the Moss Street Partnership School (UNCG), and D.C. Virgo Preparatory Academy (UNCW). The ECU Community School is co-located within the South Greenville Elementary School building in Pitt County and serves students in grades K-5. The Catamount School is co-located within the Smoky Mountain High School building in Jackson County and serves students in grades 6-8. The Appalachian State Academy at Middle Fork serves students in grades K-5 in a former elementary school operated by Winston-Salem Forsyth County Schools. The Moss Street Partnership School serves students in grades K-5 in a former elementary school operated by Rockingham County Schools. Finally, D.C. Virgo Preparatory Academy (DCVPA) is a year-round K-8 school in Wilmington that occupies a former New Hanover County Schools (NHCS) middle school that previously served grades 6-8.

[4] Bastian, K., Kim, J., & Hassel, B. "Appendix A: Evaluation of the UNC System Laboratory Schools Initiative, November 2018 Report." University of North Carolina System. (2018). Review and Evaluation of the Educational Effectiveness of the Laboratory Schools (Year 2). Retrieved from https://www.ncleg.gov/documentsites/committees/JLEOC/Reports%20Received/2018%20Reports%20Received/Laboratory%20Schools%20-%20Review%20&%20Evaluation%20of%20Educational%20Effectiveness.pdf. The UNC System submitted an abbreviated report to the Joint Legislative Education Oversight Committee in November 2017.

[5] N.C.G.S. §116-239.13 requires that the UNC BOG Subcommittee on Laboratory Schools review and evaluate the educational effectiveness of the laboratory schools and report to the Joint Legislative Education Oversight Committee on these seven items by November 15 of each year.

Data Sources and Analysis

To complete an in-depth review of the laboratory schools, the Evaluation Team relies on five main data sources: (1) interviews with university and laboratory school leadership, personnel, and partners; (2) laboratory school status reports completed by UNC System COEs; (3) administrative data on students, schools, and school personnel from the North Carolina Department of Public Instruction (NCDPI); (4) survey responses from laboratory school students and families and from beginning teachers and their employers; and (5) administrative data from COEs on educator preparation programs and pre-service candidates.

Much of the data for this evaluation report comes from interviews with university and laboratory school leadership, personnel, and partners. Additional data for this report come from student demographic information, official NCDPI reporting on student/school achievement,[6] surveys of laboratory school students and families, and analyses of administrative data. See Appendix A1 for further detail on the data sources, including their alignment with the evaluation questions and the timing/availability of data.

Analysis Methods

Qualitative data analyses

To assess the UNC System laboratory schools, the Evaluation Team analyzed two types of qualitative data—interview transcripts and laboratory school responses to annual status reports—collected in April 2019.

Using interview protocols organized around the seven laboratory school evaluation questions (detailed above), the Evaluation Team conducted interviews with more than 100 laboratory school stakeholders at the UNC System office, Appalachian State and its laboratory school, UNCG and its laboratory school, and UNCW and its laboratory school. See Appendix A2 for further detail on the interview protocols and analysis of interview inputs. The Evaluation Team used a template reporting form to collect information from laboratory schools in their second year of operation—those run by ECU and WCU. (See Appendix A2 for further detail on the annual status reports.)

Quantitative data analyses

The Evaluation Team used quantitative data from a host of sources—NCDPI, UNC System COEs, and survey responses—to assess whether laboratory schools improve students' academic performance, engagement with school, and social-emotional outcomes; whether laboratory schools are successfully marketed and managed; and whether pre-service experiences in a laboratory school (e.g., student teaching) influence early-career educators. See Appendix A2 for further detail on quantitative data analyses.

[6] Please see http://www.ncpublicschools.org/accountability/reporting/.

Findings

The following discussion addresses each of the evaluation questions recognizing that: (1) the laboratory schools are designed to serve the unique needs of the communities they serve; (2) each laboratory school reflects the uniqueness of the UNC System institution that operates it; and (3) the laboratory schools have been open for a short period of time—one full year for the Appalachian Academy, Moss Street Partnership School, and D.C. Virgo Preparatory Academy and two full years for the ECU Community School and The Catamount School.

This report highlights common laboratory school features and implementation experiences arising from the laboratory school model. As appropriate, this report also highlights the ways that individual laboratory schools have implemented unique practices and includes brief snapshots of each laboratory school in Appendix A3. As related to implementation, this report also distinguishes laboratory schools that opened in 2018-19 from those that opened in 2017-18.

How have the UNC System and UNC System institutions set-up laboratory schools to succeed?

As the Evaluation Team reported in 2018, leadership at the UNC System Office and leadership and personnel at UNC System institutions engaged in three sets of activities to set up the inaugural laboratory schools (ECU and WCU): (1) governance and implementation oversight; (2) laboratory school selection and approval; and (3) laboratory school planning and implementation.

The activities undertaken for the inaugural laboratory schools were equally applicable to the laboratory schools that opened in 2018-19. However, insights gained as the first laboratory schools embarked on a second year of operation and three new laboratory schools opened caused the UNC System to refine its approach to governance and oversight. The establishment of three new laboratory schools also affirmed the implementation challenges that UNC System institutions face to open and operate laboratory schools. The sections below describe the ways time and experience have influenced laboratory school governance and implementation.

Governance and implementation oversight

The legislation enabling laboratory schools directs the UNC Board of Governors Subcommittee on Laboratory Schools to oversee the establishment of laboratory schools.[7] The UNC System Office, which supplies administrative support for the UNC BOG, provides implementation and oversight support for laboratory schools.

The enabling legislation also directs UNC System institution chancellors to oversee laboratory schools.[8] Generally, chancellors have appointed COE deans to lead laboratory school implementation and deans have appointed a faculty or staff member to direct laboratory school planning and implementation activities.[9] Frequently, this faculty or staff member plays a co-director or co-principal role at the laboratory school.

[7] N.C.G.S. §§116-239.5 and 116-239.7

[8] N.C.G.S. §116-239.8

[9] N.C.G.S. §116-239.8(a) allows chancellors to designate governance duties to other university personnel as necessary.

In 2018-19, the UNC BOG Subcommittee on Laboratory Schools, with the support of UNC System Office staff, focused on implementing new practices and protocols to promote accountability for laboratory schools. To do this, the UNC BOG Subcommittee held bi-annual meetings during which COE leaders and faculty who have led laboratory school implementation reported on school operation. Members of the UNC BOG Subcommittee and UNC System Office staff also conducted site visits to laboratory schools.

The UNC System Office also engaged RTI consultants to provide technical assistance to laboratory schools. This technical assistance focused on enhancing operating supports for laboratory schools, including developing common laboratory school governance documents and organizing professional learning communities for COE faculty and UNC System institution staff who serve in similar roles at laboratory schools.

These efforts by the UNC System Office to promote common operations and learning among the institutions operating laboratory schools are emerging and evolving. As such, the full value of these activities remains to be seen. However, it is important to note that UNC System institutions operate independently and have different policies and practices. Likewise, COEs are independent of one another and have different policies and practices. This suggests that partnerships among COEs may have limited value if the UNC System Office and UNC System institutions do not collectively and formally prioritize common practices and mechanisms for learning.

Laboratory school selection and approval

The five laboratory schools operating in 2018-19 were part of the group of UNC System institutions originally identified as well-situated to support a laboratory school. In January 2018, the UNC BOG Subcommittee on Laboratory Schools formally approved Appalachian State University, UNCG, and UNCW to open laboratory schools in the 2018-19 school year.[10]

The UNC BOG Subcommittee exercised legislative waivers, permitted under the laboratory school legislation, for UNCG and UNCW to establish laboratory schools. These waivers were necessary since the UNCG and UNCW laboratory schools opened in districts that did not meet the legislative requirement that laboratory schools be established in districts in which at least 25 percent of schools are low-performing.[11]

Laboratory school planning and implementation

As ECU and WCU began designing and planning their laboratory schools, the UNC System Office identified nearly 250 tasks across school governance, operations, and finance necessary to open a laboratory school. These same tasks applied to Appalachian State, UNCG, and UNCW. Given the requirements under the laboratory school legislation, these institutions experienced many of the same implementation steps and

[10] In October 2018, the Board of Governors Subcommittee on Laboratory Schools approved UNC Charlotte (UNCC) to open a laboratory school in the 2019-20 school year. However, the UNCC laboratory school will open for the 2020-21 school year.

[11] N.C.G.S. §116-239.6 defines a laboratory school as a public school located in a local school administrative unit in which 25 percent or more schools are identified as low-performing under the state's school accountability system. N.C.G.S. §116-239.7 (a2) allows the Board of Governors Subcommittee to exercise waivers for up to three laboratory schools to open in districts that do not meet the 25 percent low-performing threshold. The Subcommittee issued a waiver to UNCC which will open its laboratory school in 2020.

challenges that ECU and WCU faced. The following discussion focuses on *new* implementation issues and challenges that COE laboratory planning teams faced in 2018.

Designing the laboratory school model. The laboratory school legislation contains some specifications regarding the design and strategic foci of laboratory schools.[12] But COEs have latitude to develop their own curriculum, assessments, and instructional practices; school schedule; school staffing models (e.g., determining roles and job descriptions of staff); personnel evaluations; staff professional development; and budget. Those flexibilities help account for different features among laboratory schools related to:

- *Size of school.* The laboratory schools that opened in 2017, the ECU Community School and The Catamount School (WCU), are schools co-located within another district school. The laboratory schools that opened in 2018, Appalachian Academy at Middle Fork, Moss Street Partnership School (UNCG), and D.C. Virgo Preparatory Academy (UNCW), are whole schools operating in facilities that housed district schools the preceding year.

- *Calendar and school schedule*. Most laboratory schools align their school schedules and annual calendars with that of their host district. UNCW's laboratory school is an exception: UNCW continued the year-round schedule that was used by the district school in the preceding year.

- *Curriculum.* All laboratory schools are using the North Carolina Standard Course of Study but have taken different approaches with curriculum. For example, Appalachian State used curriculum from an independent, co-educational nursery through 8th grade school[13] as a model to develop its own curriculum, which combines existing curriculum for math and reading, adapted for use at the laboratory school, with original curriculum that COE faculty created for reading, social studies, and science. UNCG is allowing teachers to develop their own curriculum.

Identifying facilities to house the laboratory school. Appalachian State, UNCG, and UNCW worked with local school districts with whom they had established partnerships to determine how laboratory schools may serve district needs. All three institutions were offered opportunities to take over operation of existing schools, all of which were low-performing schools with declining enrollment.

In 2018-19, the ECU and WCU laboratory schools, which are co-located within district schools, worked with their host districts to increase access to physical space. ECU funded installment fees for an eight-classroom modular added to its host school's campus that helps accommodate the addition of kindergarten and first grade to its laboratory school. The Catamount School (WCU) gained an additional small classroom on its host school campus and access to a large space for the high school exceptional children program which the COE helped fund.

[12] N.C.G.S. §§116-239.6—8 includes provisions specifying that laboratory schools serve students in at least three contiguous grade levels in the range of K-8; establish a standard course of study that sets forth the subjects to be taught and texts and other materials to be used in each grade to meet state student performance standards; conduct student assessments required by the State Board of Education; adopt a school calendar consisting of a minimum of 185 days or 1,025 hours of instruction covering at least nine calendar months; establish policies and standards for academic performance, attendance, and student conduct that comply with state policy requirements; and employ a teaching staff of whom at least 50 percent hold teacher licenses.

[13] Banks Street School for Children in New York City is an independent demonstration school for Bank Street College of Education. Its teachers mentor teacher candidates at the Bank Street Graduate School of Education, conduct educational research, and develop curriculum materials.

Setting up operational supports for the laboratory school. All UNC System institutions that have established laboratory schools have effectively become their own local education agencies (LEA) serving laboratory schools as traditional district offices serve traditional district schools. Though COE teams are directing laboratory school implementation and operation, they have relied on other departments within their institution to help set up school operations. Other LEA functions have been absorbed within the laboratory schools. The tasks and efforts required of non-COE System institution staff from human resources, finance, and legal departments has resulted in unaccounted costs to those other departments. Similarly, laboratory school administrative staff who are taking on new tasks related to school operations are doing more work than they may have in a similar position in a traditional district school.

Generating student enrollment. Generating sufficient enrollment is a common concern and challenge among all five laboratory schools. COE faculty and laboratory school personnel employ techniques designed for broad community marketing (e.g., flyers, billboards, newspaper advertisements, and presentations at youth and family community organizations' meetings) and targeted outreach to neighborhoods surrounding laboratory schools (e.g., going door-to-door to share information) (see "Marketing of laboratory schools"). All five laboratory schools target "returning" students. For the ECU and WCU laboratory schools, now in their third year of operation, returning students include those who attended the school in its first and second years of operation. For the Appalachian State, UNCG, and UNCW laboratory schools, now in their second year of operation, returning students include those who (1) attended the district-operated school and remained at the site for the first year of laboratory school operation (2018-19) and (2) attended the laboratory school in 2018-19 and returned in 2019-20. All laboratory schools also recruit younger siblings of returning students. Laboratory schools serving kindergarten recruit at area preschool programs.

Mid-year attrition is somewhat common in laboratory schools. One potential explanation is the greater student mobility associated with poverty. Transportation has also contributed to enrollment declines at some laboratory schools. Laboratory schools depend on their host districts to coordinate transportation services, but longer bus rides or longer school days, driven, in part, by a host district's capacity to provide transportation, have led some students to un-enroll from laboratory schools. In response, laboratory schools prioritize recruiting students in surrounding neighborhoods to minimize transportation challenges. Despite these enrollment challenges, laboratory schools generally avoid "backfilling" open seats given the disruptions to school culture that frequently occur when new students begin in the middle of the year.

Developing required and relevant school policies. The enabling laboratory school legislation mandates that laboratory schools implement certain policies.[14] Other policies are not statutorily required but are standard practice for K12 schools.[15] COEs and UNC System institutions spend a significant amount of time developing these policies. They develop many of these policies from scratch, as institutions have different rules and processes regarding human resources and finances to which policies must align. This means that the work COEs undertook to open laboratory schools in 2017 (ECU and WCU) had limited benefit to the

[14] The laboratory school legislation specified that UNC System institutions establish policies regarding compulsory attendance, exceptional children, and health and safety (see N.C.G.S. §116-239.8).

[15] The laboratory school legislation encouraged UNC System institutions to coordinate evacuation and lockdown procedures with local and state law enforcement and with emergency management services (see N.C.G.S. §116-239.8(12)). Further, the planning of laboratory schools surfaced other state and federal policies and laws with which laboratory schools need to comply.

COEs opening laboratory schools in 2018. Furthermore, COEs often do not know that a policy is needed until a concern arises. This can create workload challenges when COEs need to quickly respond to an issue.

Hiring staff. Laboratory schools that opened in 2017 experienced leadership turnover from their first to second year of operation. Seeking leaders with skillsets and experiences more directly aligned with the needs of high-need schools and COEs, both ECU and WCU replaced their laboratory school principals between the 2017-18 and 2018-19 school years.

Laboratory schools that opened in 2018 assumed control of whole schools that were district-run in the previous year. This had implications for hiring staff. In spring 2018, Appalachian State, UNCG, and UNCW recruited principal and teacher applicants for their respective laboratory schools and also invited applications from teachers and staff who had worked at the predecessor district school. Ultimately, all three COEs hired school principals who had prior connections to the school site. These decisions reflected the value that COEs saw in laboratory school leaders having a connection to the communities that the predecessor school served.

In staffing classrooms, COEs generally sought licensed and experienced teachers interested in serving high-need students and exercising greater autonomy in instructional decisions. COEs also wanted teachers willing to supervise pre-service candidates. All three COEs ultimately hired a few returning teachers from the predecessor district school but mostly hired teachers without a previous connection to the predecessor school.

Laboratory schools experience challenges in hiring staff stemming from the misalignment between UNC System institution and K-12 processes. For example, the job posting and committee review hiring structure common in university settings does not proceed at a pace that aligns with the typical interview and hiring cycle in the K-12 setting. At the same time, budget constraints meant that laboratory school teachers were hired within weeks before school started. With little time to develop a staff culture or become immersed in their curriculum before students arrived, laboratory school leaders and staff were acclimating at the same time that school was starting.

Determining funding needs and available funds. The UNC System receives $2 million in recurring state funds to support laboratory schools. From these funds, individual laboratory schools receive money to support planning and operation. In the 2019 fiscal year, the five UNC System institutions operating a laboratory school each received approximately $240,000 from the UNC System. UNC Charlotte received nearly $280,000 from the UNC System to support its laboratory school planning.[16] These state-level funds do not account for capital costs and fail to fill gaps between funds allotted according to Average Daily Membership (ADM) and actual laboratory school budgets. COEs that opened laboratory schools in 2018 supplemented start-up costs from their own funds, as did the COEs that opened laboratory schools in 2017. Further, some laboratory schools did not receive their ADM funds from NCDPI until after the end of the school year, forcing COEs to draw from their own budgets to support laboratory school operations.

Community partner engagement. COEs have engaged other departments and divisions within their institution and community organizations to support laboratory school implementation. Most laboratory

[16] The UNC System responds to requests for additional funds to support laboratory school start-up costs on a case-by-case basis. For example, in the 2018 fiscal year, ECU and WCU each received $370,000 to support start-up. The UNC System allocates the remainder of the $2 million in recurring state funds to pay for administrative and planning support for laboratory schools and for the laboratory schools evaluation.

school leadership teams have designated a COE faculty and/or laboratory school staff member to coordinate university and community partners. Laboratory schools vary in the way they systematize identification and collaboration with partners, but all have necessarily committed staff resources to coordinate partner relationships.

Common implementation challenges. COEs operating laboratory schools have encountered common implementation challenges stemming from several critical dynamics related to the laboratory school model.

- *UNC System institutions have not traditionally operated K-12 schools.* Because universities and K-12 schools operate differently, UNC System institutions have had to set up or adapt university systems and policies related to accounting, finance, human resources, and data collection and reporting. UNC System institutions are effectively serving as a school district in the management and operation of laboratory schools. They have devoted significant resources to identify policy differences between higher education and K-12 and are working within university procedures to comply with K-12 public school system requirements. This is an on-going process, particularly in the first year of laboratory school operation, as faculty and staff at UNC System institutions learn how the North Carolina public school system operates and NCDPI adjusts its systems and processes to include laboratory schools. Faculty and staff at UNC System institutions report that the start-up supports provided by the UNC System Office have been helpful. But they also note the limited impact of these supports given differences in policies and administrative operations across UNC System institutions.

- *School design decisions are driven, in part, by sufficiency of funding for laboratory schools.* Laboratory schools may one day be self-sustaining on public funds based on ADM. But in 2018-19, laboratory school budgets exceeded ADM funds and allocations from the UNC System Office did not completely close the gap. In response, COEs supplemented their laboratory school budgets with money from their own university budgets. The availability and timing of funding had implications for laboratory schools opening in 2018-19. For example, laboratory schools: (1) hired teachers only weeks in advance of school opening, despite the implications for onboarding and planning; (2) relied on pre-service candidates to carry certain responsibilities that full-time staff in traditional district schools would have; or (3) allowed practicalities to drive school model decisions (e.g. aligning the school calendar or length of school day to the district's capacity to provide transportation). Though laboratory schools provide the opportunity to break out of traditional school management paradigms, the challenge to determine sufficiency of funding remains. Many laboratory stakeholders perceive a tension between having the opportunity to "do things differently" in education and funding limiting those opportunities.

- *Integration within NCDPI.* As a new NC public school model, laboratory schools have experienced difficulty integrating into NCDPI systems. The UNC System Office has worked to introduce laboratory schools to NCDPI personnel and systems, however, NCDPI does not have a primary point of contact for laboratory schools—similar to the Office of Charter Schools, for example—and the UNC System Office does not have the authority to direct NCDPI to better incorporate laboratory schools into existing processes and practices. As a result, laboratory schools have had to independently navigate specific implementation issues and have met challenges in doing so. For example, laboratory schools opening in 2018-19 experienced significant difficulties working with NCDPI to implement PowerSchool, the web-based platform for NCDPI's student information

system. Two COEs ultimately hired private consulting firms to support PowerSchool implementation to avoid further delays.

School specific implementation challenges. Each of the UNC System institutions that opened laboratory schools in 2018-19 encountered unique implementation challenges.

- Among Appalachian State's school district partners, Winston-Salem Forsyth County Schools met the enabling laboratory school legislation's requirement that at least 25 percent of district schools be low-performing. However, Appalachian State is 100 miles from Forsyth County. This distance creates travel hardships for COE faculty and students and presents particular challenges to integrating pre-service candidates into the laboratory school for field and clinical experiences. In addition, though Appalachian State began discussions with Winston-Salem Forsyth County Schools regarding a potential school site in 2016, the district rescinded the original school site it offered and selected the current laboratory school site after February 2018. Appalachian State began recruiting students in November 2017 and teachers in February 2018, but a memorandum of understanding with Winston-Salem Forsyth County Schools was not finalized until June 2018. This created uncertainty about whether the laboratory school would open in August.

- Faculty at the UNCG COE invest a significant portion of their time in pre-committed, grant-funded research outside of the laboratory school. As a result, it is challenging for COE faculty to meaningfully engage in the day-to-day operation of the Moss Street Partnership School.

- UNCW's district partner (New Hanover County Schools) offered a district facility that previously served grades 6-8 and had experienced declining enrollment. To increase enrollment and generate sufficient ADM, UNCW expanded to serve grades K-8. Adding elementary grades required facility renovations and since UNCW maintained the year-round schedule of the predecessor school site, time for renovations was limited to about a month between the end of the 2017-18 school year in June and the start of the 2018-19 school year in July. Furthermore, the laboratory school closed for five weeks due to damage and recovery from Hurricane Florence.[17]

How do laboratory schools form and harness partnerships to benefit learning, teaching, and school leadership?

The enabling laboratory school legislation specifies that laboratory schools shall use resources available to the constituent institution to expand opportunities for student success.[18] In practice, laboratory schools have availed themselves of additional resources through four types of partnerships: (1) host school districts; (2) other divisions of the university; (3) COE faculty; and (4) community partners. Though partnerships have become a fundamental feature of laboratory schools, successful partnerships require that laboratory school leaders have the capacity to develop and manage them.

[17] Hurricane Florence, a large and slow-moving category one hurricane, made landfall on the North Carolina coast near Wilmington, NC on September 14, 2018. Wilmington received 23 inches of rain in a 48-hour period and experienced significant flooding. National Weather Service. (27 November 2018). "Hurricane Florence: September 14, 2018." Retrieved from https://www.weather.gov/ilm/HurricaneFlorence. National Weather Service. (3 December 2018). "Wilmington's Race to 100 inches." Retrieved from https://www.weather.gov/ilm/Raceto100

[18] N.C.G.S. §116-239.5(c)

Host school districts

Following the direction set by ECU, WCU, and UNC System Office leadership in the opening of laboratory schools in 2017, Appalachian State, UNCG, and UNCW assessed school districts where they were conducting research and/or placing pre-service candidates for clinical experiences against the legislative requirements for establishing laboratory schools. Viewed as natural partners for laboratory schools, school districts provide critical supports such as: access to K-12 school facilities (which the enabling laboratory school legislation did not provide), transportation and meal services, and operational supports ranging from IT and maintenance to guidance on NCDPI reporting processes. In turn, laboratory schools generally align staff salary schedules, daily school schedules, and annual school calendars to the schedules/calendars of the host district. This alignment helps neutralize competitive dynamics that often arise with charter schools.

COEs have largely relied on districts to identify communities where students may benefit most from attending a laboratory school. In 2018-19, ECU and WCU continued to operate their laboratory schools as co-located schools within a district site. The ECU Community School is located in a K-5 school that serves one of Pitt County Schools' poorest communities. WCU's Catamount School, located in Jackson County Public School's only traditional district high school, is the district's only traditional middle school serving grades 6-8. The three laboratory schools that opened in 2018 are whole schools. Winston-Salem Forsyth County Schools, Rockingham County Schools, and New Hanover County Schools offered their respective UNC System partners (Appalachian State, UNCG, and UNCW) a low-performing school with declining enrollments to operate as a laboratory school.

Laboratory schools and their host districts report mutual benefits. In addition to facilities and operational supports, host districts provide COEs an opportunity to influence practice in other district schools where their pre-service candidates have clinical experiences. Ideally, host districts will disseminate learning from laboratory schools as they see new instructional practices positively impacting student outcomes. Host districts see the potential for laboratory schools to have longer-term benefits in three other ways: (1) opening talent pipelines from educator preparation programs to high-need schools that struggle to attract qualified educators; (2) laboratory schools helping K-12 students be more likely to academically succeed when they return to district-run schools; and (3) UNC System institutions bringing additional financial, social, and human capital resources into high-need schools.

District personnel report that these benefits outweigh or mitigate the loss of students who enroll in laboratory schools and the loss of teachers and staff who leave district schools to teach and work in laboratory schools.

Colleges of Education

COE leaders and faculty are fundamental to laboratory schools. Chancellors have largely delegated responsibility for laboratory school planning and implementation to COE deans. In turn, COE deans have formed teams consisting of department chairs; elementary, middle, and special education experts; and clinical educators to design and implement laboratory school models. These teams plan curriculum and professional development for laboratory school staff, identify and hire laboratory school staff, coordinate operational logistics, market laboratory schools to prospective students and families, and manage institutional and community-based partnerships. COE faculty and staff also supervise pre-service candidates in clinical experiences at the laboratory school.

COE faculty recognize the mutual benefits of their laboratory school partnership. The laboratory school model provides COE faculty direct access to NC public school classrooms and exposure to the challenges educators face, particularly in teaching high-need students. Moreover, COE faculty have many research opportunities at laboratory schools, from accessing student data to conducting studies in partnership with laboratory school staff.

However, the partnership also presents certain challenges to COE faculty. Since operating a laboratory school and an LEA is completely new to UNC System institutions, COE faculty have had to work with other staff at their institutions and personnel at the UNC System Office to quickly learn what it takes to operate both a school district and a school for high-need students. COE faculty have also undertaken laboratory school planning, implementation, and oversight as an additional responsibility. Some COEs have created mechanisms for reducing faculty members' pre-existing workloads when they assume significant ongoing responsibilities at the laboratory school. For example, some COEs provide course offloads to faculty who are significantly engaged in laboratory school management and operation. Others allow faculty-in-residence at the laboratory school to conduct university classes—frequently teaching methods classes—at the laboratory school. These offsets can have ripple effects. For example, other COE faculty have to take on new or extra teaching responsibilities or pre-service candidates must budget time and resources to participate in classes at laboratory schools.

Other divisions of the university

Chancellors have led UNC System institutions in taking ownership of laboratory schools. University-wide ownership makes other divisions of the institution accessible to the COE laboratory school planning teams, gives laboratory schools access to university resources, and exposes laboratory school students to higher education. Given their proximity to and relationships with institution partners, COE faculty in charge of laboratory school implementation are generally responsible for engaging and managing institution partners.

Partnerships within UNC System institutions have helped laboratory schools address non-academic student needs while mutually benefitting other schools and departments. For example, through internal partnerships, pre-service candidates in counseling, social work, nursing, speech therapy, and other disciplines provide primary or secondary supports to address student needs and lead enrichment activities at the laboratory school. At the same time, access to the laboratory schools provides a valuable opportunity for other schools/departments within the UNC System institution to place their professional students in a high-need clinical setting. Laboratory schools have also leveraged intra-institution partners to provide professional development to laboratory school educators on social-emotional needs and challenges of high-need students and their families.

As previously discussed, institution partners also provide the administrative and business supports related to human resources, finance and accounting, legal, and data reporting that UNC System Institutions need to operate as LEAs for laboratory schools. The significant challenge to UNC System institutions is the novelty of laboratory school or LEA operation and the effort and resources required to engage in the NC public school system. Institution divisions supporting the administrative functions of laboratory schools have largely done so as an additional responsibility without additional supports. UNC System institutions hope that these unaccounted costs will diminish over time as administrative functions and supports become more predictable.

Community partners

Community-based organization partners also help address student needs (health and well-being) and provide extracurricular supports. For example, a local health provider supports a clinical nurse onsite at D.C. Virgo Preparatory Academy (UNCW) and a historical site in Winston-Salem provides free admission to all Appalachian Academy at Middle Fork students. Laboratory school leaders have enlisted new community partners or community partners have offered services to schools. Laboratory schools that opened in 2018 also continued some partnerships established between community-based organizations and the schools that previously occupied the laboratory school facility.

As with institution partnerships, engaging community partners requires that laboratory schools have management capacity. Some laboratory schools designate a staff member (e.g., enrichment coordinator at The Catamount School (WCU), principal at Appalachian Academy at Middle Fork) to coordinate community partners. Some laboratory schools coordinate community partners through a COE faculty member who is also a laboratory school leader (e.g., Moss Street Partnership School (UNCG) co-director). Though laboratory schools have different approaches, their leaders recognize the need for a systematic and efficient way to coordinate community partnerships.

Are laboratory schools successfully marketed and managed?

Marketing of laboratory schools

Unlike traditional district schools serving neighborhoods or other attendance zones, laboratory schools must recruit students to enroll. By law, laboratory schools must enroll students who previously attended (or would have attended) a low-performing school or those who did not meet expected growth in the prior school year.[19]

Laboratory schools leverage their university affiliation in student recruitment efforts. Marketing messages focus on the involvement of university faculty in leading laboratory schools and ensuring high-quality instruction for students. Laboratory schools use social, print, and broadcast media and distribute flyers at community events and popular university activities (e.g., sport events) to advertise to the general public. They host information meetings at laboratory schools, attend meetings of nearby community organizations (e.g., community centers, churches), and canvas neighborhoods surrounding laboratory schools to directly reach parents and families of prospective students within the schools' transportation zones. They also target younger siblings of current students and students attending area preschool programs.

Parents with children enrolled at laboratory schools report that word-of-mouth from friends, recruitment meetings, and laboratory school websites were some of the most frequent ways in which they found out about the laboratory school. Parents also report hearing about the laboratory schools opening in 2018-19 because their child attended the predecessor school operated by the school district. For children and families new to a laboratory school in 2018-19, parents reported several common reasons for wanting their child to attend a laboratory school: (1) stability—their child had attended the school in the previous year when it was operated by the host school district; (2) concerns with their child's previous school experiences and a need for a change in schools; and (3) excitement about the academic offerings and

[19] N.C.G.S. §116-239.6

smaller class sizes at laboratory schools. Over 90 percent of respondents to a parent survey felt that the laboratory school did a good/very good job in explaining the application and enrollment process and in making that process an easy one.[20]

Laboratory School Admissions and Enrollment Priorities

As originally enacted in 2016, the enabling laboratory schools legislation directed UNC System institutions to consider eligible for admission any students residing in the local school administrative unit in which the laboratory school is located who were enrolled in a low-performing school at the time of application *and* to give priority enrollment to students who did not meet expected growth in the prior school year. Failure to meet expected growth can be measured by grades, observations, diagnostic and formative assessments, state assessments, or other factors, including reading on grade level. The legislation was amended in 2017, requiring laboratory schools to consider eligible for admission any students residing in the local school administrative unit in which the laboratory school is located who were enrolled in a low-performing school at the time of application *or* who did not meet expected growth in the previous academic year. The amended statute no longer provides for priority enrollment for certain students.

Other important aspects of the admissions policies are as follows: (1) admission to laboratory schools is based on eligibility, timeliness of the application (received during the application period), capacity of the school, and the order in which eligible applications are received; (2) once students are enrolled, they are required to confirm their attendance for the following year but are not required to re-apply; and (3) kindergarten students are eligible to attend a laboratory school if they were zoned to attend a low-performing school in the district. Laboratory schools also admit siblings of currently enrolled students.

Table 1 presents data on how laboratory schools determined whether students were eligible to attend: previously attended/zoned to attend a low-performing school or previously low-performing themselves. Importantly, laboratory schools did not necessarily confirm both of these eligibility criteria. That is, if a student previously attended a low-performing school, the laboratory school may not have assessed whether the student was also low-performing him/herself. As a result, data in Table 1 indicate how the laboratory school confirmed students' eligibility and not necessarily all the eligibility criteria that qualified students to attend a laboratory school.

For the 2019-20 school year, 76 percent of Appalachian Academy students qualified to attend the laboratory school based on their previous attendance or being zoned to attend a low-performing school; 41 percent qualified to attend based on their own prior performance. ECU certified that all students enrolled at its laboratory school in 2019-20 had previously attended or been zoned to attend a low-performing school; likewise, ECU certified that 47 percent qualified to attend based on their own prior performance. Seventy-five percent of the students enrolled at Moss Street Partnership School had previously attended or been zoned to attend a low-performing school; 18 percent of the students at Moss Street Partnership school qualified to attend based on their own prior performance.[21] Ninety-seven percent of the students enrolled at D.C. Virgo Preparatory Academy had previously attended or were zoned to attend a low-performing school; three percent of these students were certified to attend D.C. Virgo Preparatory Academy based on their own prior performance. Finally, 97 percent of students at The

[20] The data in this paragraph come from a laboratory school parent survey administered in spring 2019. More details about this survey and responses from this survey are in the 'Parent Perceptions of the Laboratory Schools' section.
[21] The remaining students qualified to attend Moss Street Partnership School because they had a sibling already enrolled at the school.

Catamount School qualified to attend based on their own prior performance; 10 percent qualified based on their previous attendance at a low-performing school.

Table 1: Student Enrollment and Laboratory School Eligibility Requirements

	ASU	ECU	UNCG	UNCW	WCU
Total Enrollment	280	117	390	216	60
Previously Attended or Zoned to Attend a Low-Performing School	75.7%	100.0%	74.6%	96.6%	10.0%
Previously Low-Performing Student	41.1%	47.0%	18.0%	2.9%	96.7%

Note: This table displays information on how laboratory schools determined whether students were eligible to attend. Laboratory schools did not necessarily confirm both of these eligibility criteria—i.e. if a student previously attended a low-performing school, the laboratory school may not have assessed whether the student was also low-performing. Data are for the 2019-20 academic year. Status as a low-performing student can be based on grades, observations, diagnostic and formative assessments, state assessments, or other factors, including reading on grade level.

Characteristics of students enrolled in laboratory schools

Table 2 presents enrollment and demographic data for UNC System laboratory schools in the 2018-19 and 2019-20 school years. As of the 20th day of the 2019-20 academic year, the Appalachian Academy has 280 enrolled students, with 40 in kindergarten, 44 in 1st grade, 40 in 2nd grade, 61 in 3rd grade, 52 in 4th grade, and 43 in 5th grade. These enrollment values are similar to the 2018-19 academic year. Of the students enrolled in 2019-20, 50 percent are male, 46 percent are black, 40 percent are Hispanic, and 14 percent are classified as exceptional children. Title I data from the 2018-19 school year show that 62 percent of Appalachian Academy students are designated as low-income.[22] By comparison, 29 percent of the elementary grades students in Winston-Salem Forsyth County Schools are black, 28 percent are Hispanic, and 66 percent are designated as low-income.[23]

As of the 20th day of the 2019-20 academic year, the ECU Community School has 117 enrolled students, with 32 in kindergarten, 27 in 1st grade, 16 in 2nd grade, 12 in 3rd grade, 15 in 4th grade, and 15 in 5th grade. Relative to the 2018-19 school year, these data show sharp increases in student enrollment in grades K-2 at the ECU Community School. Of the students enrolled in 2019-20, 56 percent are male, 97 percent are black, and 18 percent are classified as exceptional children. Title I data from the 2018-19 school year show that 100 percent of ECU Community School students are designated as low-income. By comparison, 48 percent of the elementary grades students in Pitt County Schools are black and 70 percent are designated as low-income.

As of the 20th day of the 2019-20 academic year, the Moss Street Partnership School (UNCG) has 390 enrolled students, with 67 in kindergarten, 67 in 1st grade, 80 in 2nd grade, 58 in 3rd grade, 46 in 4th grade, and 72 in 5th grade. Of the students enrolled in 2019-20, 56 percent are male, 61 percent are black, 11 percent are Hispanic, 12 percent are multiracial, and 16 percent are classified as exceptional children. Title I data from the 2018-19 school year show that 94 percent of Moss Street Partnership School students

[22] When calculating the percentage of low-income students at Appalachian Academy, North Carolina does not use a 1.6 multiplier (as it does for all other schools in Winston-Salem Forsyth Schools). If the 1.6 multiplier was applied to the Appalachian Academy, 99 percent of the students would be designated as low-income.

[23] In the paragraphs below, data on race/ethnicity for other students in the same school district come from the 2017-18 academic year. Data on economic-disadvantage come from Title I reporting for the 2018-19 academic year. These Title I data are at the school rather than the student level.

are designated as low-income. By comparison, 20 percent of the K-5 students in Rockingham County Schools are black, 14 percent are Hispanic, 6 percent are multiracial, and 68 percent are designated as low-income.

As of the 20th day of the 2019-20 academic year, D.C. Virgo Preparatory Academy has 216 enrolled students, with 17 in kindergarten, 22 in 1st grade, 20 in 2nd grade, 20 in 3rd grade, 13 in 4th grade, 20 in 5th grade, 31 in 6th grade, 36 in 7th grade, and 37 in 8th grade. These enrollment values are down compared to enrollment at the 20th day in the 2018-19 school year. Of the students enrolled in 2019-20, 54 percent are male, 88 percent are black, and 18 percent are classified as exceptional children. Title I data from the 2018-19 school year show that 97 percent of D.C. Virgo Preparatory Academy students are designated as low-income. By comparison, 20 percent of the K-8 students in New Hanover County Schools are black, 15 percent are Hispanic, and 52 percent are designated as low-income.

Finally, as of the 20th day of the 2019-20 academic year, The Catamount School has 60 enrolled students, with 17 in 6th grade, 16 in 7th grade, and 27 in 8th grade. Of the students enrolled in 2019-20, 45 percent are male, 73 percent are white, 15 percent are multiracial, and 17 percent are classified as exceptional children. Title I data from the 2018-19 school year show that 54 percent of The Catamount School students are designated as low-income. By comparison, 71 percent of the middle grades students in Jackson County Schools are white, 16 percent are Hispanic, 4 percent are multiracial, and 60 percent are designated as low-income.

Table 2: Student Enrollment in UNC System Laboratory Schools

	ASU		ECU		UNCG		UNCW		WCU	
	18-19	19-20	18-19	19-20	18-19	19-20	18-19	19-20	18-19	19-20
Total Enrollment	282	280	85	117	389	390	243	216	56	60
Kindergarten	40	40	14	32	63	67	20	17	---	---
1st Grade	39	44	15	27	79	67	15	22	---	---
2nd Grade	55	40	8	16	65	80	22	20	---	---
3rd Grade	51	61	16	12	47	58	13	20	---	---
4th Grade	47	52	18	15	72	46	25	13	---	---
5th Grade	50	43	14	15	63	72	28	20	---	---
6th Grade	---	---	---	---	---	---	38	31	9	17
7th Grade	---	---	---	---	---	---	47	36	24	16
8th Grade	---	---	---	---	---	---	35	37	23	27
Male	48.9%	50.0%	54.1%	56.4%	56.0%	56.4%	56.0%	54.2%	60.7%	45.0%
White	11.0%	7.1%	2.4%	1.7%	20.3%	15.9%	6.2%	3.7%	76.8%	73.3%
Black	46.8%	46.4%	97.7%	96.6%	58.6%	60.8%	86.4%	87.9%	0.0%	0.0%
Multiracial	2.5%	5.0%	0.0%	0.9%	10.0%	12.3%	2.1%	3.2%	14.3%	15.0%
Hispanic	37.2%	40.0%	0.0%	0.9%	11.0%	10.8%	5.4%	5.1%	3.6%	6.7%
Asian	1.8%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%
American Indian	0.7%	0.4%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	5.4%	3.3%
Pacific Islander	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EC Status	10.7%	13.9%	11.8%	17.9%	16.4%	16.2%	13.2%	18.1%	19.6%	16.7%
Low-Income	62.2%	N/A	100.0%	N/A	93.8%	N/A	97.3%	N/A	53.6%	N/A

Note: This table displays characteristics of the students enrolled at UNC System laboratory schools in the 2018-19 and 2019-20 school years. Most of the data in this table comes from the Principal's Monthly Report from the 20th day of the school year. The low-income data come from the 2018-19 Title I federal reporting. Please see http://www.dpi.state.nc.us/program-monitoring/titleIA/ for those data. These Title I data are not yet available for the 2019-20 school year. N/A=not available.

School design

The laboratory school enabling legislation sets out defining characteristics of laboratory schools that distinguish them from other North Carolina public schools. Specifically, laboratory schools are set up to serve students who are low-performing or attended a low-performing school (rated D or F under the state school rating system), transform and improve teacher and school leader preparation, and operate under the governance of the UNC System. Laboratory schools present an opportunity for COE faculty at UNC System institutions to lead the development and piloting of innovative instructional and school operation practices. These innovative practices may improve the learning outcomes for students and enhance educator preparation.

Established, governed, and operated independently of each other, laboratory schools provide an opportunity for COEs to design distinctly different schools reflecting the needs of the communities they serve and the strengths and capacities of their respective UNC System institutions. However, the legislative design of laboratory schools has resulted in several common, defining characteristics. Laboratory schools serve high concentrations of high-need students and are generally located in low-resource communities. For example, the laboratory schools that opened in 2018-19 are former district schools serving low-income neighborhoods and experiencing declining populations. Funding amounts allocated to laboratory schools also challenge COE faculty and laboratory school administrators to think creatively about the operation of a K-12 public school.

These common defining characteristics of laboratory schools drive common goals, including (1) ensuring that students attending laboratory schools are well-served; (2) contributing to the field of education by improving approaches to instruct students and prepare future educators; and (3) improving K-12 student outcomes by identifying and modeling best practices that other North Carolina schools can adopt, particularly for high-need students. Common defining characteristics and goals drive, in turn, some common features among laboratory schools.

Physically, socially, and emotionally safe environments for students. The concentration of high-need students in laboratory schools means that school staff face an intensified demand to meet student needs associated with poverty. These needs include high mobility, exposure to adverse childhood experiences and other trauma, limited support networks/safety nets, lack of access to transportation, food insecurity, and unstable housing. Laboratory school models recognize the out-of-school challenges that impede learning and in response, aim to address many of these issues with a focus on the "whole child." Laboratory schools employ staff and/or engage institution and community partners to provide health, social work, and counseling services, and address basic subsistence needs of students and families (e.g., provide food on weekends and winter clothing). They educate staff on the effects of trauma and adverse childhood experiences and they emphasize community and relationship building among students and staff through positive behavioral interventions and supports (PBIS) and restorative justice practices.

Balanced curriculum and enrichment activities. Laboratory schools ensure that students are exposed to academic instruction in all content areas—reading/language arts, math, science, and social studies—rather than a primary focus on just reading and math. Furthermore, laboratory schools prioritize enrichment activities that supplement learning and offer students alternative educational opportunities that they may not otherwise be able to access. Leveraging community partnerships and university facilities/events, laboratory schools have infused arts, history, and recreation into daily schedules and have exposed students to new experiences, ideas, and places.

Focus on literacy. Laboratory schools are particularly focused on improving teaching and learning related to literacy. In 2018-19, laboratory schools in their second year of implementation (ECU and WCU) honed practices to differentiate instruction based on the five essential components of literacy (phonics, phonemic awareness, vocabulary, comprehension and fluency) and used evidence-based reading assessments to identify individual student needs and interventions to address them. Laboratory schools that opened in 2018 are using various strategies to embed literacy in their curriculum, adopt literacy assessments, and guide laboratory school teachers in connecting literacy instructional strategies and materials to teaching practice and outcomes.

Licensed and experienced teachers. Laboratory schools emphasize the selection of experienced and licensed teachers who desire to teach in a different environment with high-need students and who are

also qualified and willing to supervise pre-service teaching candidates. Oversight of laboratory schools gives COEs access to the laboratory school teaching staff and COEs have implemented strategies that allow COE faculty to work directly with laboratory school teachers to enhance their instructional practices. Examples of these strategies include installing faculty-in-residence at the laboratory school or establishing instructional/curriculum directors who can directly connect laboratory school staff to COE faculty, as appropriate. COE faculty are available to laboratory school teachers to observe their teaching practices, model recommended practices, and provide guidance on curricular issues.

COEs are also implementing practices intended to support effective teaching, including the use of interim assessments, standards-based report cards, differentiated instruction strategies, and inclusive education.

School management

Laboratory school management reflects the university context in which they operate. Relative to traditional district settings, laboratory school leadership is less hierarchical and teachers exercise more autonomy. Laboratory schools are managed as an extension of the COEs that have designed and overseen their implementation.

Laboratory school leadership. The unique nature of laboratory schools requires bridging COE and K-12 systems. As such, laboratory schools generally have a leadership team consisting of both COE and school site leaders. All laboratory schools have a site-based principal and he/she works with COE deans and their designees, who directly supervise the principal and serve in a co-leadership role. All laboratory schools also have an instructional or curriculum director who serves as a liaison between COE faculty and school staff on instructional matters. Generally, the COE leader manages COE and university relationships and administrative issues, while the laboratory school principal manages school staff, student and family matters, and relationships with community partners and the host district. The instructional or curriculum director coordinates COE faculty work with laboratory school teachers. These shared leadership models require clear lines of communication among leadership team members and understanding among leaders and teachers of the leaders' individual roles and responsibilities.

Laboratory school staff. Laboratory schools generally have one full-time teacher per classroom. Except for the ECU Community School's combined first and second grade class, the ECU and WCU laboratory schools have one class per grade. Appalachian State has two to three classes per grade. UNCW has one class per grade in grades K-5 and two classes per grade in grades 6-8. UNCG has multiple classrooms per grade, which includes some multi-age classrooms in the lower grades (e.g., combined first and second grade). Three laboratory schools use departmentalized instruction: UNCG has core content teachers for grade five and UNCW for grades 6-8. WCU, the only laboratory school serving only middle grades, has core content teachers for grades 6-8.

All laboratory schools provide student supports including administrative, counseling, student health, social work, exceptional children, and behavior management services. Laboratory schools also provide extracurricular and enrichment activities, including arts, music, and physical education. The smallest laboratory schools, ECU and WCU, have the fewest number of full-time support staff employees and rely heavily on institution partners to provide supports. The laboratory schools operating whole schools (Appalachian State, UNCG, and UNCW) employ more support and extracurricular staff, such as school nurses, social workers, media specialists, and arts, music, physical education, and special education teachers. Appalachian State also employs teaching assistants for lower grade classrooms since it cannot rely on pre-service candidates to provide classroom support given the physical distance between the

university campus and the laboratory school. Appalachian State and UNCW both employed assistant principals; UNCG's assistant principal in 2018-19 was a pre-service principal leader candidate. ECU and WCU did not have assistant principals.

All five laboratory schools hired their teachers and staff within weeks of the start of their first school year—2017-18 for ECU and WCU and 2018-19 for Appalachian State, UNCG, and UNCW. Consequently, in the first year of operation, teachers had little time to develop staff culture or become immersed in the curriculum.

Laboratory school funding. Laboratory schools rely on four primary sources of school funding: ADM dollars, allocations from the UNC System Office; support from their UNC System institution (typically, COE budgets or foundations); and Title I funds. Each source is precarious: student enrollment, which drives ADM, has been lower than school targets; UNC System allocations come from fixed, recurring funds to support laboratory school implementation; UNC System Institutions have supported start-up costs from funding sources not intended to support laboratory school operation; and laboratory schools require capacity to access Title I and other federal K-12 funds.

As previously noted, the level of ADM and state financial support for laboratory schools has required COEs and UNC System institutions to close budget gaps. In addition, laboratory schools have made other trade-offs to contain operating costs (e.g., prioritizing supports provided in the first year of implementation; operating co-located schools; scheduling school start and end times around availability of district transportation). It remains to be seen whether UNC System institutions will have the ongoing capacity to provide their own funds or access the other funds needed to serve high-need students successfully.

Parent Perceptions of the Laboratory Schools

To assess parent perceptions of the UNC System laboratory schools, the Evaluation Team contracted with Tripod Education Partners to administer a parent survey in the spring of 2019.[24] To encourage parent responses, laboratory schools placed links to the anonymous survey on their school websites, invited parents to complete the survey during school events, and used other established channels of communication with families. Overall, 195 parent survey responses were received: 21 responses from parents with a child at the Appalachian Academy, 55 responses from parents with a child at the ECU Community School, 66 responses from parents with a child at the Moss Street Partnership School (UNCG), and 53 responses from parents with a child at The Catamount School (WCU).[25] The Evaluation Team distributed the parent survey to UNCW/D.C. Virgo Preparatory Academy and provided regular survey response updates (as was done with all other laboratory schools). However, the Evaluation Team did not receive any survey responses from parents with a child enrolled at D.C. Virgo Preparatory Academy. Consequently, D.C. Virgo Preparatory Academy is not part of the parent survey analyses.

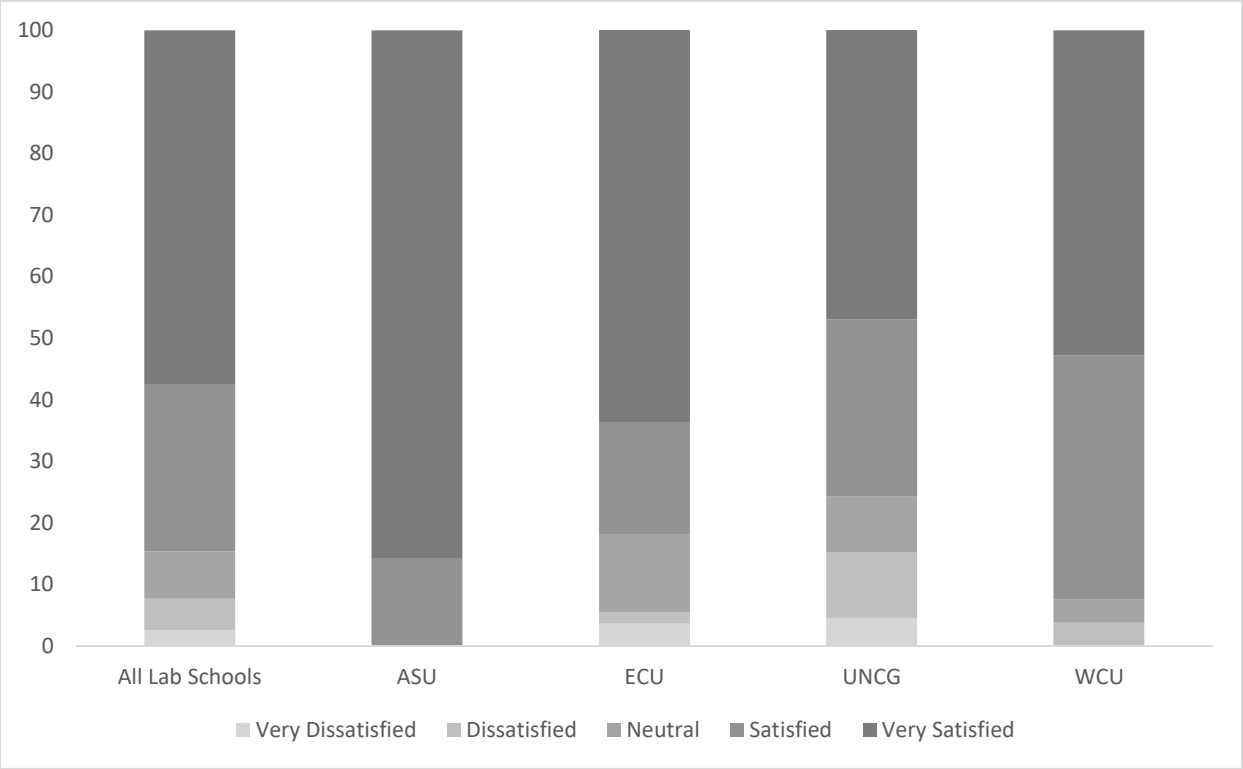
Items on the parent survey asked respondents to assess how satisfied they were with the laboratory school, overall, and with various aspects of laboratory school operations (e.g., academic instruction, classroom management, communication with families). For the laboratory schools, combined, and for

[24] The same survey was administered to parents with children at the ECU Community School and The Catamount School in spring 2018.

[25] The number of responses from parents with a child attending the ECU Community School and The Catamount School (WCU) represent a large majority of students enrolled at those schools. The response rates are much lower for the Appalachian Academy and the Moss Street Partnership School.

each laboratory school, separately, Figure 1 displays parents' overall satisfaction with their laboratory school. Across all laboratory schools—excluding UNCW—approximately 85 percent of parent respondents reported being satisfied or very satisfied with their laboratory school. These percentages varied across laboratory schools, from 100 percent satisfied or very satisfied at the Appalachian Academy to 76 percent satisfied or very satisfied at the Moss Street Partnership School (UNCG). (Please see Appendix Table A4.1 for data from each of the parent satisfaction items.) Pooling data across laboratory schools, these responses indicate that parents were most satisfied with their child's academic growth and their own opportunities to partner with the laboratory school and were least satisfied with the order and discipline at the school.[26]

Figure 1: Parent Satisfaction with UNC System Laboratory Schools



Note: This figure displays parent responses to the survey item "How satisfied are you with your child's school?". There are 195 survey responses across the four participating UNC System laboratory schools.

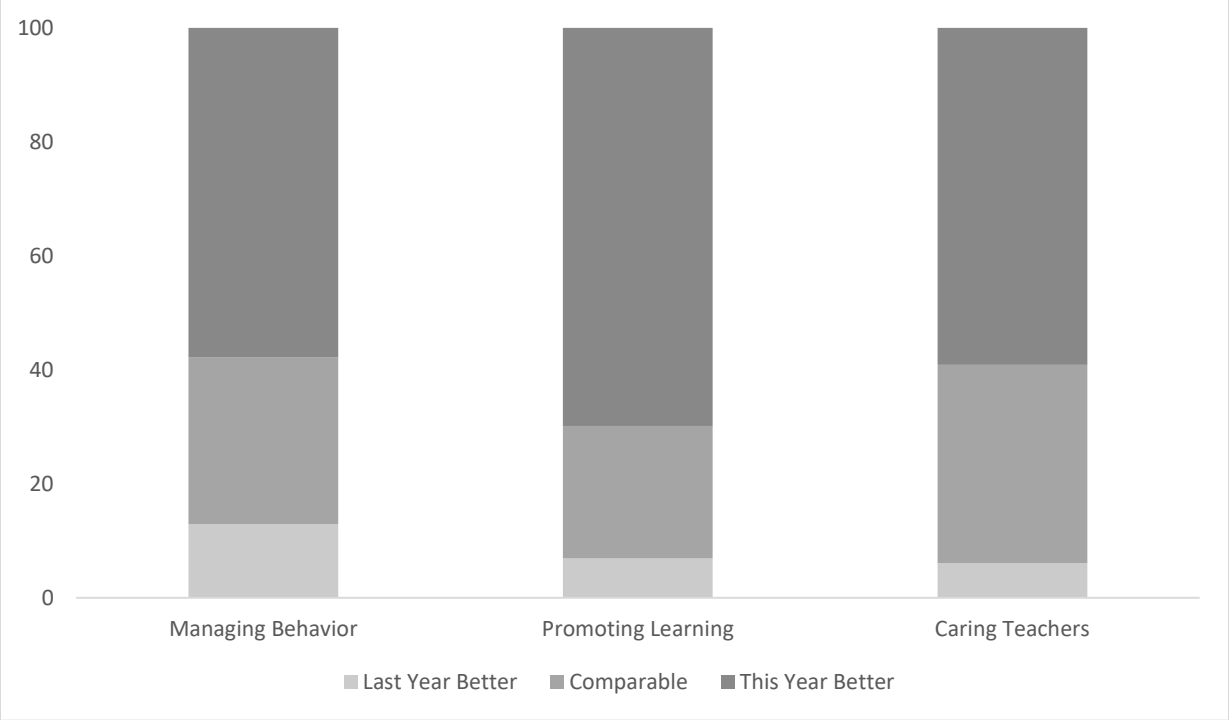
An additional set of survey items asked parents to compare their child's educational experiences in the 2018-19 school year with their educational experiences in the previous school year (2017-18). For families new to laboratory schools, this compares the laboratory school to a non-laboratory school setting; for returning laboratory school families, this compares the laboratory school in its second year of operation to the laboratory school in its initial year of operation.

Figure 2 displays parent responses for families new to laboratory schools in 2018-19. Nearly 60 percent of these parent respondents indicated that their laboratory school was better at managing student behavior and having caring teachers than the school their child previously attended. Seventy percent of these parent respondents expressed that their laboratory school was better at helping their child learn. Figure

[26] As shown in Appendix Table A4.1, parent concern with order and discipline was concentrated at Moss Street Partnership School (UNCG).

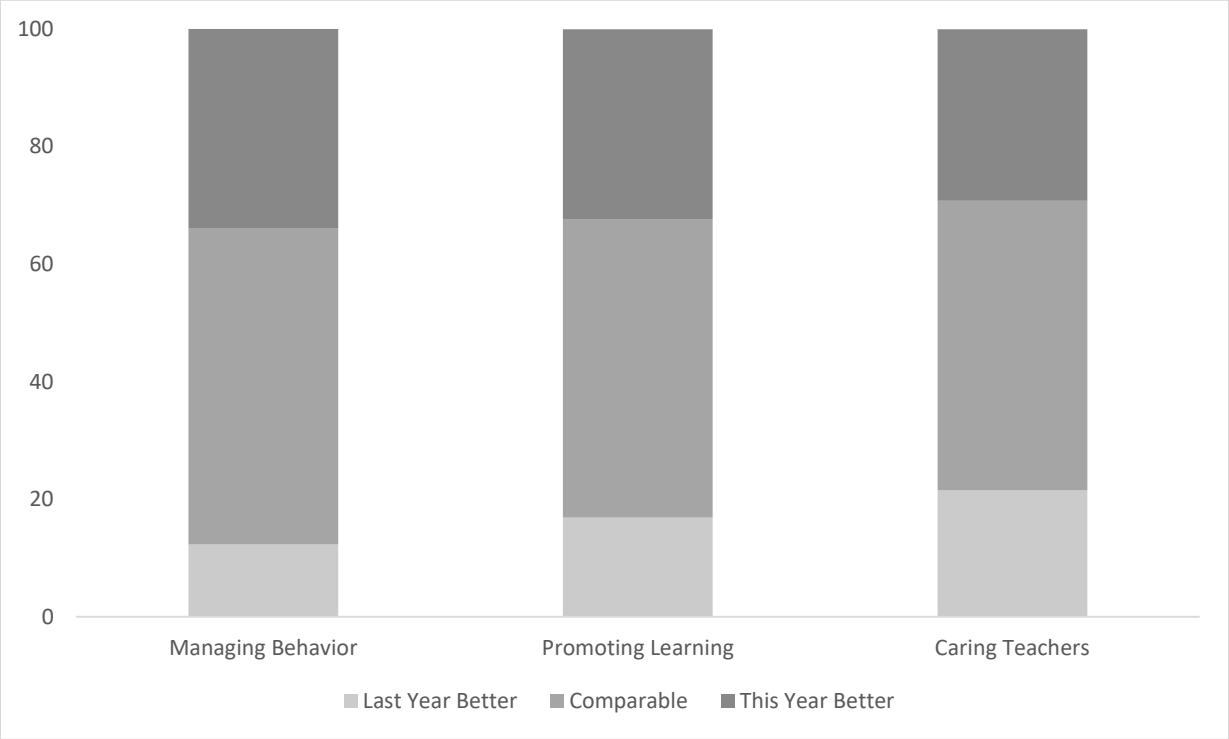
3 displays comparable data for families returning to a laboratory school in 2018-19 (at the ECU Community School and The Catamount School (WCU)). In the areas of managing student behavior, promoting learning, and having caring teachers, approximately 50 percent of returning parent respondents felt that their laboratory school in 2018-19 was comparable to their laboratory school in 2017-18. Across these three areas, nearly 33 percent of parent respondents indicated that their laboratory school was better in 2018-19 than it had been in 2017-18. (Please see Appendix Table A4.2 for parent survey responses disaggregated for each UNC System laboratory school. For example, relative to previous schooling experiences, data in Appendix Table A4.2 show that first-time parents at the ECU Community School were most positive about student behavior and learning; first-time parents at The Catamount School (WCU) were most positive about having caring teachers.)

Figure 2: Comparing School Experiences for Families New to Laboratory Schools



Note: For families new to laboratory schools in 2018-19, this figure displays parent responses to survey items asking parents to compare their child's educational experiences in 2018-19 to their educational experiences in 2017-18.

Figure 3: Comparing School Experiences for Families Returning to a Laboratory School



Note: For families returning to a laboratory school in 2018-19, this figure displays parent responses to survey items asking parents to compare their child's educational experiences in 2018-19 to their educational experiences in 2017-18.

Do laboratory schools improve the academic performance of students?

To examine whether laboratory schools improve the academic performance of students, the Evaluation Team provides two types of administrative data in this report. First, the Evaluation Team presents detailed and rigorous analyses of *student-level* achievement data from the 2017-18 school year. These data and analyses represent a more in-depth supplement to the descriptive, *school-level* achievement data included in the November 2018 report. Second, for the 2018-19 school year, the Evaluation Team provides descriptive, school-level achievement data for the five laboratory schools in operation in 2018-19. The November 2020 report will feature more rigorous analyses of these 2018-19 achievement data.

In-depth analyses of 2017-18 student academic performance

The laboratory schools operating in 2017-18—the ECU Community School and The Catamount School (WCU)—were co-located within a district school and enrolled a relatively small number of students. Furthermore, per legislative design, these laboratory schools enrolled students who previously attended a low-performing school and/or who failed to meet expected growth in the previous academic year (based on one or more indicators). These factors complicate efforts to isolate the impact of laboratory schools on student achievement. Specifically, the number of students enrolled in laboratory schools in 2017-18 warrants caution when interpreting results. There is little statistical power to detect statistically significant effects and with only one year of data, the Evaluation Team cannot examine trends in student achievement at laboratory schools. The nature of students attending laboratory schools—previously low-performing, attending low-performing schools—also means that comparison groups must be carefully identified. Even with rigorous methods, adjustments for unobserved characteristics associated with student enrollment at laboratory schools may not be possible.

With these cautions, the Evaluation Team makes the following comparisons: (1) comparing the test scores of laboratory school students in 2017-18 with their own scores in the previous school year; and (2) comparing the test scores of laboratory school students in 2017-18 with the test scores of a matched comparison sample from 2017-18. (See Appendix Tables A5.1 and A5.2 for 2017-18 test score data for laboratory school students versus all other students in the laboratory schools' host LEAs, Pitt and Jackson County Public Schools, respectively. Notably, as Appendix Table A5.2 shows, seven 8th grade students at The Catamount School took Math I in 2017-18. Their average Math I score was 254—relative to 250.7 in Jackson County—and 85.71 percent of those students passed the exam and earned high school course credit).

Table 3: Comparing Test Score Data in 2017-18 and 2016-17 for Laboratory School Students

Test	Count of Students with Test Data in **Both** Periods	2017-18 Test Score (Standardized)	Prior Year (2016-17) Test Score in the Same Subject-Area (Standardized)
ECU Community School			
3rd Grade Reading	16	-1.111	-1.056
3rd Grade Math	16	-0.970	---
4th Grade Reading	15	-1.272	-0.983
4th Grade Math	14	-1.399	-1.206
The Catamount School			
6th Grade Reading	14	-0.375	-0.273
6th Grade Math	14	-0.747	-0.548
7th Grade Reading	17	0.114	0.227
7th Grade Math	17	-0.254	-0.158
8th Grade Reading	9	0.214	0.444
8th Grade Math	---	---	---

Note: For the ECU Community School and The Catamount School, this table presents students' EOG test scores (standardized) in 2017-18 and their prior scores (standardized) from the same subject-area (reading or math) in the 2016-17 school year. Not all laboratory school students have test scores in both periods.

Table 3 presents laboratory school students' EOG test scores from 2017-18 and their prior scores from the same subject-area in 2016-17. Scores are standardized within subject, grade, and year (across *all* North Carolina public school students) to show students' placement in the test score distribution.[27] That is, if a student scores 10 percent of a standard deviation (0.100) below the mean in 2016-17 and 10 percent of a standard deviation below the mean in 2017-18, the student made the average amount of growth for students. If a student's placement in the test score distribution changes, that indicates the student made more or less growth than average. For each displayed comparison, Table 2 shows that laboratory school students' placement in the test score distribution was lower in 2017-18 (when attending the laboratory school) than in 2016-17 (before enrolling at the laboratory school). For example, 4th grade students at the

[27] The prior score for 3rd grade reading is the composite Dibels score (part of mCLASS) from the end of second grade. There is no prior score for 3rd grade math. The Evaluation Team is not reporting data for 8th grade math (and 7th grade math prior scores) due to changes, in the 2017-18 school year, in the sample of students who take the 8th grade math EOG. Previously, all 8th grade students took the math EOG; now, only students who do not take Math I in 8th grade take the math EOG.

ECU Community School scored 1.272 standard deviations below the statewide mean in reading; in 2016-17, these same students scored 0.983 standard deviations below the mean in reading. Likewise, 7th grade students at The Catamount School scored 0.254 standard deviations below the statewide mean in math; in 2016-17, these same students scored 0.158 standard deviations below the mean in math.

To complement these within-student comparisons, Table 4 presents test score data for laboratory school students versus a matched comparison sample.[28] All of the test scores in Table 4 come from the 2017-18 school year and are standardized within subject, grade, and year. Data in the middle columns of Table 4 display standardized EOG test scores in reading, math, and 8th grade science for laboratory school and matched comparison sample students. In all but one comparison—6th grade reading—laboratory school students have standardized test scores that are lower than the matched comparison sample. The right column of Table 4 presents results from regression models testing whether there are statistically significant differences in the EOG scores of laboratory school versus matched comparison sample students.[29] In most comparisons the estimates for laboratory schools are negative but statistically insignificant. Laboratory school students have adjusted-average test scores that are significantly lower than the matched comparison sample in two comparisons—4th grade reading and 6th grade math. For example, 4th grade students at the ECU Community School have adjusted-average reading test scores 30 percent of a standard deviation lower than matched comparison sample students. Likewise, 6th grade students at The Catamount School have adjusted-average math scores 27 percent of a standard deviation lower than the matched comparison sample.

Collectively, the test score data in Tables 3 and 4 suggest that laboratory schools struggled to promote student achievement growth in 2017-18. One year of operation is not a sufficient amount of time, however, to meaningfully assess the academic performance of laboratory schools. A more complete picture of academic performance will emerge in future evaluation reports.

[28] Please see Appendix Table A5.3 for characteristics of the laboratory school sample and the matched comparison sample. The Evaluation Team used propensity score analyses to match laboratory school students to comparison sample students within the same grade. Variables in the propensity score model included student demographics (economically-disadvantaged, gender, exceptional children status, and overage for grade), measures of prior year student engagement and achievement (number of days absent, suspended, EOG scores in reading and math), and characteristics of the school attended in 2016-17 (performance composite, EVAAS growth status, percent minority, percent economically-disadvantaged, and short-term suspension rate).

[29] In these analyses standardized test scores from 2017-18 are the outcome, the focal measure is a 1/0 variable for laboratory schools (with matched students as the reference group), and additional controls include prior year test scores, absences, and suspensions. These models also control for the propensity score and weight observations more heavily as they more closely resemble the laboratory school sample.

Table 4: Comparing Test Score Data in 2017-18 for Laboratory School and Matched Comparison Students

Test in 2017-18	Standardized Test Score for Laboratory School Students *N=student count*	Standardized Test Score for Matched Sample *N=student count*	Regression Estimate for Laboratory Schools *N=student count*
ECU Community School			
3rd Grade Reading	-1.111 N=16	-0.875 N=47	-0.126 (0.155) N=63
3rd Grade Math	-0.970 N=16	-0.800 N=47	-0.044 (0.186) N=63
4th Grade Reading	-1.260 N=16	-0.929 N=55	**-0.297*** (0.123) N=70
4th Grade Math	-1.398 N=15	-1.082 N=55	-0.210 (0.140) N=69
The Catamount School			
6th Grade Reading	-0.178 N=18	-0.328 N=70	-0.044 (0.169) N=84
6th Grade Math	-0.603 N=18	-0.466 N=69	**-0.270*** (0.124) N=83
7th Grade Reading	0.073 N=21	0.230 N=79	0.008 (0.145) N=95
7th Grade Math	-0.281 N=21	-0.132 N=79	-0.165 (0.117) N=95
8th Grade Reading	0.209 N=12	0.358 N=45	-0.139 (0.125) N=54
8th Grade Math	-0.056 N=5	0.539 N=31	-0.015 (0.175) N=34
8th Grade Science	0.123 N=12	0.420 N=45	-0.194 (0.157) N=54

*Note: The middle columns of this table present the average EOG test scores for laboratory school and matched comparison sample students in the 2017-18 school year. The right column of this table presents regression coefficients and standard errors (in parentheses) from models comparing the test scores of laboratory school and matched comparison sample students. +, *, and ** indicate statistically significant differences between laboratory school and matched comparison sample students at the 0.10, 0.05, and 0.01 levels.*

Descriptive reporting of 2018-19 school performance data

Overall, the top panel of Table 5 indicates that in the 2018-19 academic year the Appalachian Academy and The Catamount School earned performance grades of 'D', while the ECU Community School, the Moss Street Partnership School, and D.C. Virgo Preparatory Academy earned performance grades of 'F'. These performance grades are based on the performance score, which is a weighted average of the achievement score (80%) and growth score (20%). Achievement scores, which measure proficiency rates on state assessments, ranged from 6.8 (ECU Community School) to 46.4 (The Catamount School). Two laboratory schools—the Appalachian Academy and the ECU Community School—met expected growth in 2018-19.[30] It is worth noting that their overall growth scores of 84.2 and 84.9 are very close to the growth score threshold (85) for exceeding expected growth. Three laboratory schools—the Moss Street Partnership School, D.C. Virgo Preparatory Academy, and The Catamount School—did not meet expected growth in 2018-19.[31]

The middle panel of Table 5 presents school performance data in reading. Four laboratory schools earned reading performance grades of 'F', while The Catamount School earned a reading performance grade of 'C'. Reading achievement scores (proficiency rates) ranged from 6.8 (ECU Community School) to 60 (The Catamount School). Four of the laboratory schools met expected growth in reading in 2018-19; the Moss Street Partnership School did not meet expected growth in reading.[32]

The bottom panel of Table 5 presents school performance data in math. All five laboratory schools earned mathematics performance grades of 'F', with mathematics achievement scores (proficiency rates) ranging from 6.8 (ECU Community School) to 32.7 (The Catamount School). Appalachian Academy and D.C. Virgo Preparatory Academy met expected growth in mathematics, while the Moss Street Partnership School and The Catamount School did not meet expected growth in mathematics.[33] North Carolina did not report an official math growth score or status for the ECU Community School in 2018-19. This is because the ECU Community School had too few students for whom a mathematics growth score could be externally reported.[34]

[30] The ECU Community School earned a letter grade of 'F' and had an overall growth score of 74.6 in 2017-18. The Catamount School earned a letter grade of 'C' and had an overall growth score of 65.2 in 2017-18.

[31] The Catamount School encourages its 8th grade students to take up to two high school courses—Math I and Earth and Environmental Science. Of the 23 8th grade students at The Catamount School in 2018-19, eight took Math I and all eight earned high school credit (6 of the 8 scored at a level 4 or 5). 20 of the 23 8th grade students also took Earth and Environmental Science and 15 of these students earned high school course credit.

[32] The ECU Community School earned a reading letter grade of 'F' and had a reading growth score of 76.5 in 2017-18. The Catamount School earned a reading letter grade of 'C' and had a reading growth score of 67.0 in 2017-18.

[33] The ECU Community School earned a mathematics letter grade of 'F' in 2017-18. The Catamount School earned a mathematics letter grade of 'D' and had a mathematics growth score of 71.4 in 2017-18.

[34] The ECU Community School had too few students to externally report a math growth score or status. However, internal reporting between NCDPI and the ECU Community School shows that the school met growth in mathematics in 2018-19.

Table 5: Student Achievement at Laboratory Schools in 2018-19

	Overall Performance Grade	Overall Performance Score	Overall Achievement Score	Overall Growth Score	Overall Growth Status
Appalachian Academy	D	40	28.9	84.2	Met
ECU Community School	F	22	6.8	84.9	Met
Moss Street Partnership School	F	21	14.2	50.0	Not Met
D.C. Virgo Preparatory Academy	F	38	30.9	68.7	Not Met
The Catamount School	D	49	46.4	61.2	Not Met
	Reading Performance Grade	Reading Performance Score	Reading Achievement Score	Reading Growth Score	Reading Growth Status
Appalachian Academy	F	39	28.2	84.4	Met
ECU Community School	F	22	6.8	83.4	Met
Moss Street Partnership School	F	23	14.9	55.2	Not Met
D.C. Virgo Preparatory Academy	F	36	27.4	70.4	Met
The Catamount School	C	63	60.0	73.9	Met
	Math Performance Grade	Math Performance Score	Math Achievement Score	Math Growth Score	Math Growth Status
Appalachian Academy	F	34	22.5	81.7	Met
ECU Community School	F	7	6.8	Not Reported	Not Reported
Moss Street Partnership School	F	22	14.4	50.0	Not Met
D.C. Virgo Preparatory Academy	F	35	25.5	72.7	Met
The Catamount School	F	38	32.7	58.6	Not Met

Note: Performance Grades range from A-F and are based on the Performance Score (Performance Scores of 85-100=A; 70-84=B; 55-69=C; 40-54=D; and 0-39=F). Performance Scores are a weighted average of the Achievement Score (80 percent) and the Growth Score (20 percent). For laboratory schools, the Achievement Score is the proficiency rate on End-of-Grade exams. The Growth Status is based, in part, on the Growth Score, and indicates whether there was sufficient statistical evidence to say that the school exceeded, met, or did not meet expected growth. North Carolina calculates these values across subject-areas and for mathematics and reading separately.

Do laboratory schools benefit students' social-emotional needs and engagement with school?

To assess how laboratory schools influence students' social-emotional and school engagement outcomes, the Evaluation Team used two sources of data: responses from the Tripod student survey and administrative data on student attendance. Collectively, these data capture students' motivation for learning, engagement with school, and perceptions of school/classroom climate. These constructs—motivation, engagement, and academic climate—are important to measure, as they may be necessary precursors to student learning.

Student perceptions of laboratory schools

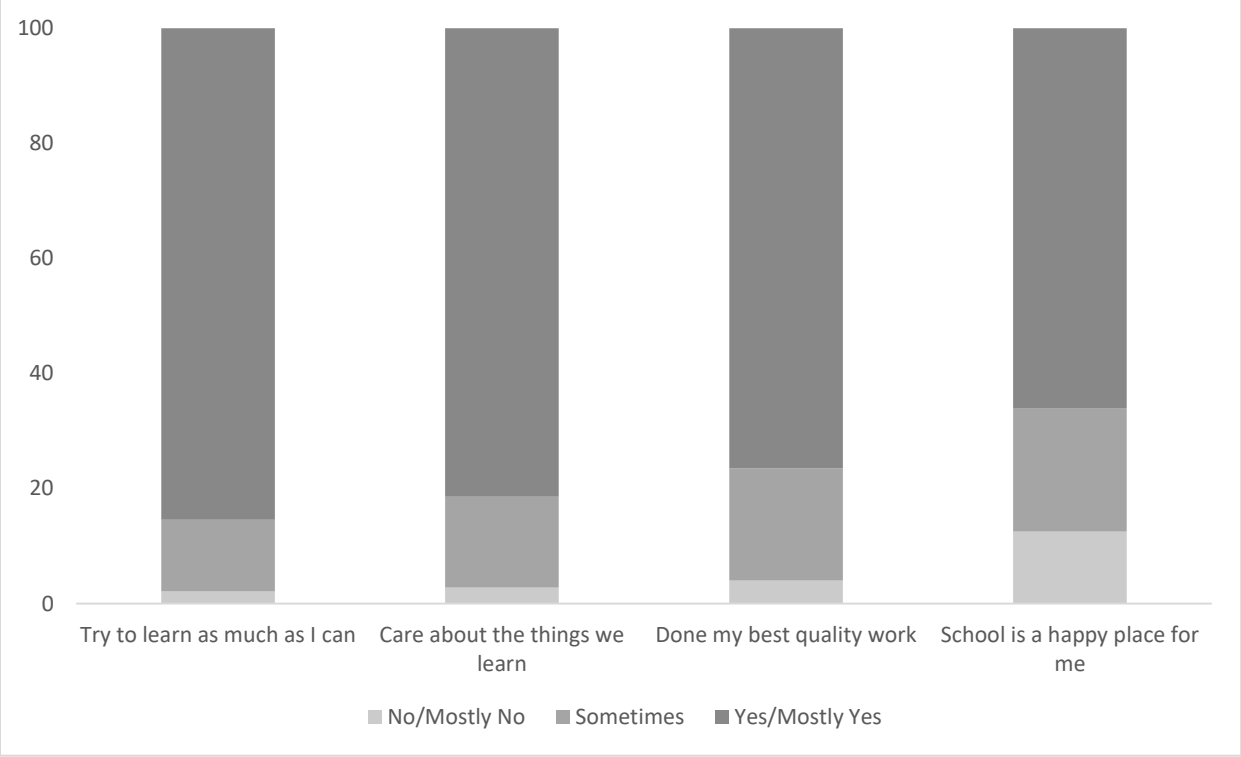
The Evaluation Team contracted with Tripod Education Partners to administer an online survey to laboratory school students in the spring of 2019. Two survey versions were used: (1) an early elementary survey taken by students in grades K-2 at the laboratory schools and (2) an upper elementary survey taken by students in grades 3-8 at the laboratory schools.[35] Overall, the Evaluation Team received 873 survey

[35] The upper elementary survey has additional items that are not on the early elementary survey. Both surveys include many of the same items. The key distinction between surveys is that response values range from 1-3 on the

responses from laboratory school students: 270 responses from Appalachian Academy, 79 responses from the ECU Community School, 315 responses from the Moss Street Partnership School (UNCG), 154 responses from D.C. Virgo Preparatory Academy (UNCW), and 55 responses from The Catamount School (WCU). Data presented in this section focus on student responses across laboratory schools; data in Appendix A6 are presented for each respective laboratory school. Given differences in student grade levels and prior educational experiences, caution is warranted when comparing survey data across laboratory schools.

For all laboratory school student respondents, Figure 4 displays responses to a set of items on their motivation for learning and engagement with school. Approximately 75-85 percent of respondents indicated that they mostly or always tried to learn as much as they could, cared about things they learned, and did their best quality work in the laboratory school. Sixty-six percent of laboratory school student respondents indicated that school was mostly or always a happy place for them. (Please see Appendix Table A6.1 for data on student motivation and engagement for each respective laboratory school.)

Figure 4: Laboratory School Students Motivation and Engagement with School

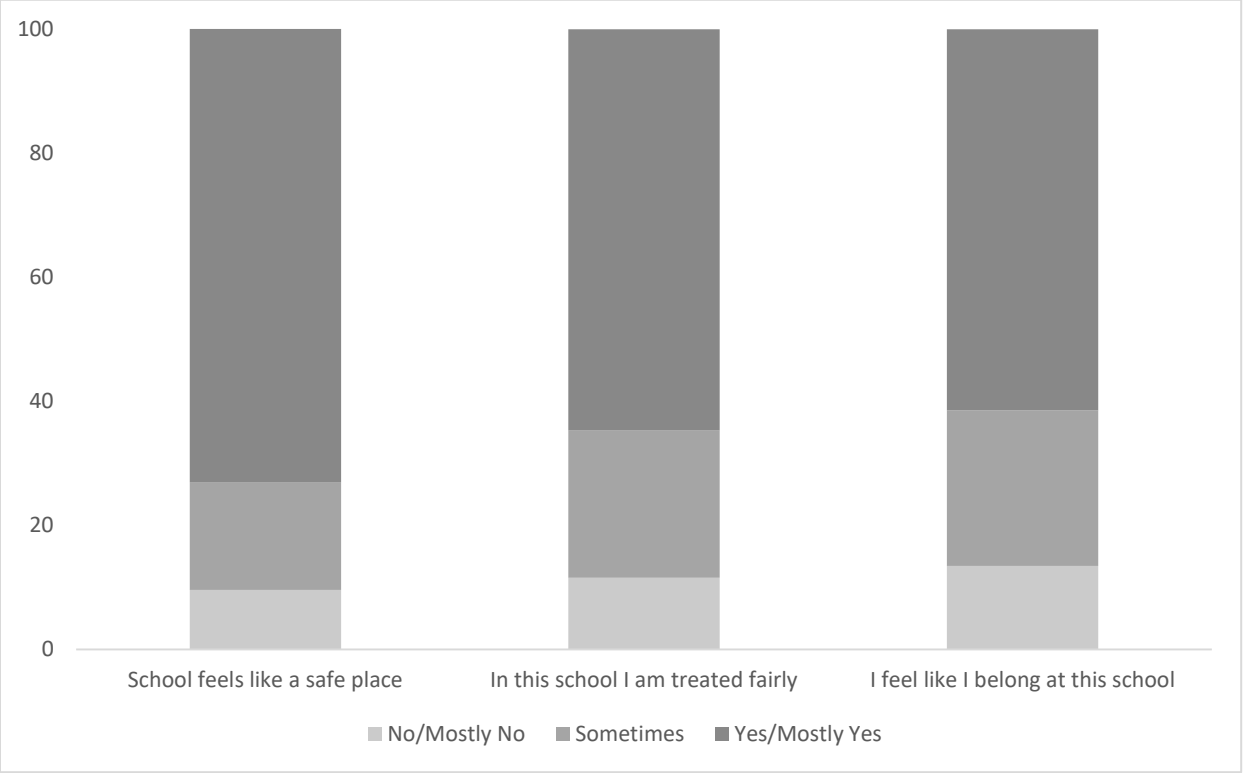


Note: This figure displays laboratory school students' responses to a set of items on their motivation for learning and their engagement with school. Students completing the early elementary grades survey answered two of these items—'try to learn as much as I can' and 'school is a happy place for me'. Students completing the upper elementary grades survey answered all four items.

Similarly, Figure 5 displays laboratory school student responses to a set of items on school climate. Nearly 75 percent of respondents reported that school is mostly or always a safe place for them. Approximately 60-65 percent of respondents answered similarly that they are treated fairly in school and that they feel like they belong at their laboratory school. (Please see Appendix Table A6.2 for student perceptions of school climate for each respective laboratory school.)

early elementary survey (no, maybe, yes) and from 1-5 on the upper elementary survey (no, mostly not, sometimes, mostly yes, yes). For common reporting, the Evaluation Team converted all responses to a 1-3 scale.

Figure 5: Laboratory School Students Perceptions of School Climate

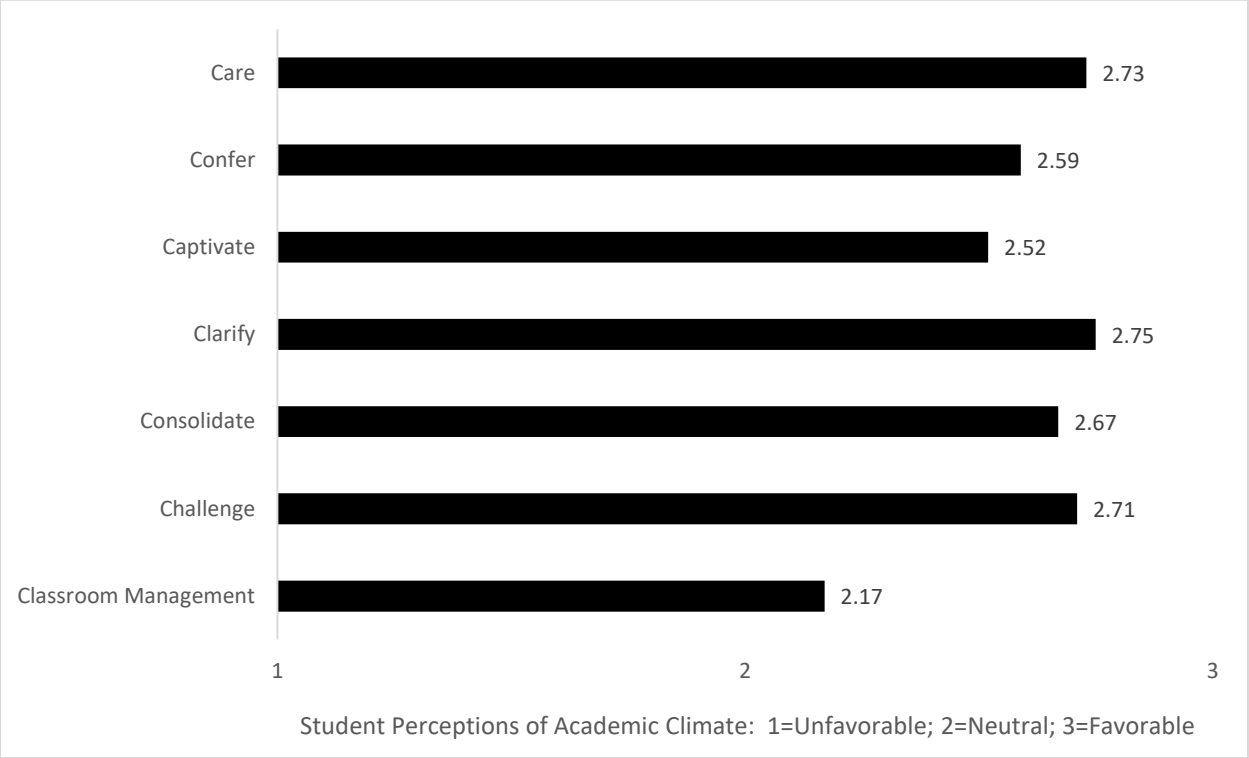


Note: This figure displays laboratory school students' responses to a set of items on their perceptions of school climate. Students completing the early elementary grades survey answered two of these items—'school feels like a safe place to me' and 'in this school I am treated fairly'. Students completing the upper elementary grades survey answered all three items.

The Tripod student survey is best known for assessing the academic climate of classrooms and schools through survey items on the 7Cs—Care, Confer, Captivate, Clarify, Consolidate, Challenge, and Classroom Management.[36] Essentially, these survey items allow students to rate the academic climate in their classroom/school along seven distinct dimensions. Figure 6 displays summative 7Cs data for the laboratory schools, where values equal to '1' are unfavorable responses, values equal to '2' are neutral responses, and values equal to '3' are favorable responses. Overall, laboratory school students were most favorable regarding their teachers' ability to clarify student understanding, challenge students to think and work hard, and care for students. For example, on a 1-3 scale, the average rating for Care was 2.73. Laboratory school students reported that their teachers struggled most with classroom management—with an average rating of 2.17. (Please see Appendix Table A6.3 for 7Cs data for each laboratory school.)

[36] Please see Appendix A7 for a complete list of the Tripod 7Cs survey items.

Figure 6: Student Perceptions of Laboratory School Academic Climate (Tripod 7Cs)



Note: This figure displays laboratory school students' responses to a set of survey items on their perceptions of academic climate. Specifically, this figure displays aggregate 7Cs data for laboratory school students. Each construct—e.g. Care, Confer, etc.—includes multiple survey items.

To contextualize these 7Cs survey responses, the Evaluation Team requested that Tripod Education Partners provide 7Cs data for a sample of non-laboratory school students. In response, Tripod examined its supply of 7Cs survey responses and identified a set of comparison classrooms—59 unique classrooms and 1178 students—that were observationally-similar to the laboratory school sample.[37] Table 6 presents results from regression models assessing whether laboratory schools have higher 7Cs values than this comparison sample.[38] The analysis shows no statistically significant differences between laboratory schools and the comparison sample for four 7Cs constructs—Care, Confer, Clarify, and Consolidate. Laboratory schools have significantly higher values—by 0.044 points—for the Challenge construct. Conversely, laboratory schools have significantly lower values for the Captivate and Classroom Management constructs. This suggests that laboratory schools may have the most room for improvement in investing students in school work/learning and successfully managing classrooms.

[37] Tripod administers student surveys in school districts and states across the United States. When identifying a comparison sample, Tripod considered student background characteristics such as race/ethnicity, gender, home language, computers in the home, and adults in the home and classroom characteristics such as class size.

[38] These models adjust for survey level (early elementary versus upper elementary) and cluster standard errors at the classroom level.

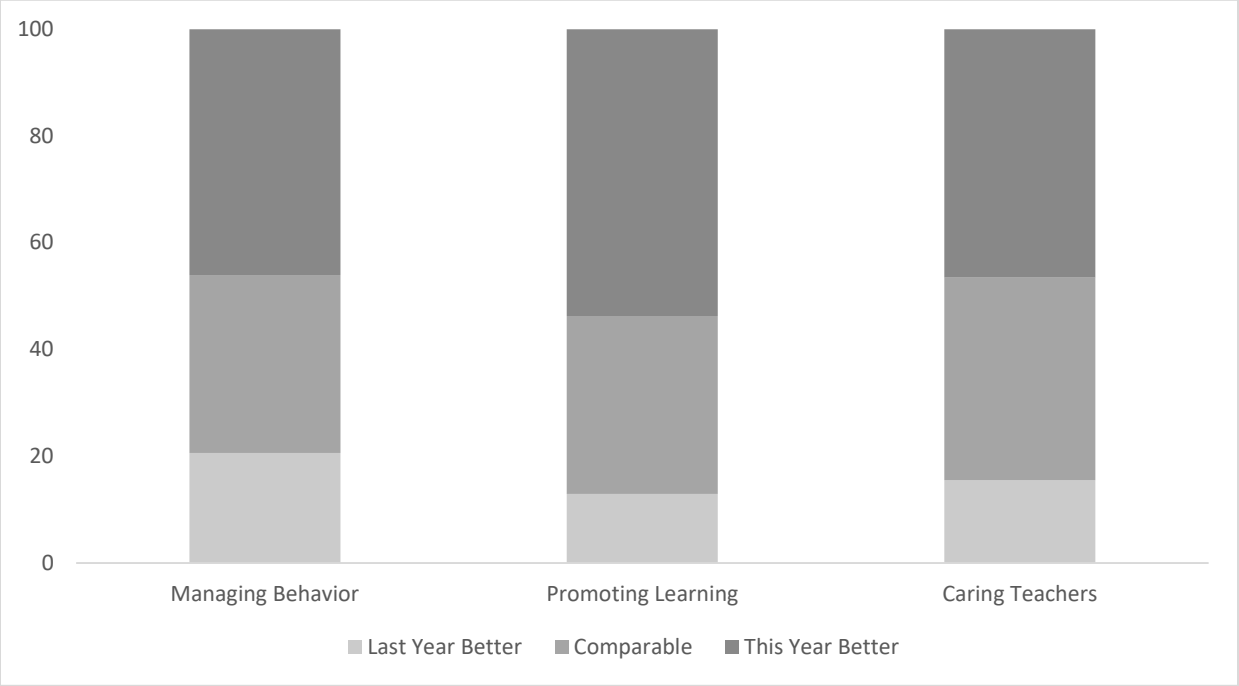
Table 6: Student Perceptions of Academic Climate—Laboratory Schools vs. Comparison Sample

Tripod 7Cs	# of Survey Responses	Laboratory Schools vs. Comparison Sample
Care	2055	-0.021 (0.041)
Confer	2031	0.050 (0.039)
Captivate	2046	**-0.104*** (0.041)
Clarify	2057	-0.002 (0.034)
Consolidate	2054	0.020 (0.032)
Challenge	2055	**0.044**$^{+}$ (0.026)
Classroom Management	2056	**-0.174**** (0.049)

Note: This table presents regression coefficients and cluster-adjusted standard errors (in parentheses) from models assessing whether laboratory schools have higher 7Cs values that comparison sample classrooms. +, *, and ** indicate statistical significance at the 0.10, 0.05, and 0.01 levels, respectively.

Finally, as with the Tripod parent survey, an additional set of survey items asked laboratory school students to compare their educational experiences in 2018-19 with their educational experiences in 2017-18. Figure 7 displays responses for students *new* to laboratory schools in 2018-19. More than 50 percent of student respondents indicated that their laboratory school was better at promoting student learning than their school in 2017-18. Approximately 46 percent of students reported that their laboratory school was better at managing student behavior and having caring teachers. (Please see Appendix Table A6.4 for these responses disaggregated for each UNC System laboratory school.)

Figure 7: Comparing School Experiences for Students New to Laboratory Schools



Note: For students new to laboratory schools in 2018-19, this figure displays responses to survey items asking students to compare their educational experiences in 2018-19 to their educational experiences in 2017-18.

Student Attendance at laboratory schools in 2017-18

Student attendance is a measure of engagement with school that predicts student achievement. Furthermore, research shows that teachers and schools can meaningfully influence student attendance. Thus, the Evaluation Team assessed whether laboratory schools impact attendance. Laboratory schools may encourage attendance if they create supportive and caring environments and build strong relationships with students and families. Conversely, attendance at laboratory schools may be lower given transportation challenges or if the laboratory school is unable to build strong relationships.

The same factors which warrant caution in student achievement analyses—the small number of laboratory school students, having only one year of data (2017-18), and the unique nature of laboratory school students—also present challenges for attendance analyses. In response, the Evaluation Team provides descriptive data regarding student attendance at the ECU Community School, The Catamount School, and other Pitt and Jackson County Schools in 2017-18. In more rigorous analyses, the Evaluation Team assesses whether attendance differs for laboratory school students versus a matched comparison sample.[39] Given changes, beginning in 2017-18, in how NCDPI reports attendance, the Evaluation Team does not directly compare student attendance in 2016-17 with student attendance in 2017-18.

Table 7 displays student attendance rates for the 2017-18 school year—that is, the percentage of days present at a school divided by the days enrolled. The top panel of Table 7 displays attendance rates for any student enrolled at a laboratory school in 2017-18, including students who exited the school before

[39] This is the same matched comparison sample (with the inclusion of 2nd grade students) that was part of the student achievement analyses.

the completion of the year.[40] The second panel in Table 7 presents comparable data for students enrolled at a laboratory school for the entire year. Overall, the attendance rate for laboratory schools was 92.95 percent—ranging from 91.97 percent at the ECU Community School to 94.23 percent at The Catamount School. Data in the second panel show that attendance rates were higher for ECU Community School students enrolled at the laboratory school for the entire year. Data show that other Pitt County students in grades 2-4 had higher attendance rates than ECU Community School students. This holds for all students in grades 2-4 and those enrolled at South Greenville Elementary. Attendance rates are slightly higher for The Catamount School than for other middle grades (6-8) students in Jackson County Schools.

Table 7: Attendance Rates at Laboratory Schools and Other District Schools (2017-18)

Student Groups	Student Count	Attendance Rates
All Enrolled Laboratory School Students		
Laboratory Schools 2017-18	132	92.95
ECU Community School	75	91.97
The Catamount School	57	94.23
Laboratory School Students Enrolled for the Entire Year		
Laboratory Schools 2017-18	101	93.90
ECU Community School	50	93.59
The Catamount School	51	94.20
Pitt County Students in Grades 2-4 (Enrolled for the Entire Year in Pitt County)		
All Students Grades 2-4	5246	95.98
Students in Grades 2-4 at South Greenville Elementary	154	94.78
Jackson County Students in Grades 6-8 (Enrolled for the Entire Year in Jackson County)		
All Students Grades 6-8	698	93.59

Note: This table displays attendance rates for laboratory school students and other, same-grade students in Pitt and Jackson County Schools.

The middle columns of Table 8 present attendance rates for laboratory school (those enrolled at the laboratory school for the entire year) and matched comparison sample students. Attendance rates are lower at the ECU Community School than for the matched sample; rates are similar at The Catamount School and for the matched sample. The right column of Table 8 presents results from regression models testing whether there are statistically significant differences in the attendance rates of laboratory school versus matched comparison sample students.[41] These estimates indicate that there are no significant differences in attendance rates between laboratory school and matched sample students.

[40] The reported attendance rates for students who exit laboratory schools only consider their attendance at a laboratory school and not any other school in which they subsequently enrolled.

[41] In these analyses attendance rates from 2017-18 are the outcome, the focal measure is a 1/0 variable for laboratory schools (with matched students as the reference group), and additional controls include prior year test scores, absences, and suspensions. These models also control for the propensity score and weight observations more heavily as they more closely resemble the laboratory school sample.

Table 8: Comparing Attendance Rates for Laboratory School and Matched Comparison Students (2017-18)

	2017-18 Attendance Rates for Laboratory School Students *N=Student Count*	2017-18 Attendance Rates for Matched Comparison Sample *N=Student Count*	Regression Estimate for Laboratory Schools *N=Student Count*
Laboratory Schools	93.90 N=101	94.51 N=362	-0.511 (0.460) N=449
ECU Community School	93.59 N=50	94.75 N=168	-0.912 (0.649) N=216
The Catamount School	94.20 N=51	94.30 N=194	-0.067 (0.648) N=233

Note: The middle columns of this table present the average attendance rates for laboratory school and matched comparison sample students in the 2017-18 school year. The right column of this table presents regression coefficients and standard errors (in parentheses) from models comparing the attendance rates of laboratory school and matched comparison sample students.

Do the laboratory schools support and strengthen educator preparation?

The laboratory school model offers COEs opportunities to improve educator preparation programs but it remains too early to assess the full impact of laboratory schools on educator preparation. To date, COEs have largely integrated laboratory schools into existing course and clinical structures for pre-service candidates without making major programmatic changes in educator preparation programs. For example, COEs have aligned clinical experiences at laboratory schools with specific courses based on instructional support needs at the laboratory school or with sequences of courses to progressively expose pre-service candidates to laboratory schools. However, they have not created new courses or clinical experiences related to the laboratory school. Rather, the opportunity for transformation in educator preparation appears to hinge on the impact that laboratory schools have on the ways in which COE faculty and pre-service candidates approach and experience educator preparation.

Pre-service candidates

Pre-service candidates who have meaningful exposure and experiences in laboratory schools have a unique opportunity to experience a depth of practice that they may not otherwise have in traditional district schools. Insights and perspectives gleaned from COE faculty, laboratory school teachers, and pre-service candidates suggest that clinical experiences at the laboratory schools are exposing pre-service candidates to more intense instructional and classroom management challenges concomitant to serving high-need student populations. For example, laboratory schools facilitate opportunities for pre-service candidates to have more one-to-one or small group interaction with students. In these settings, pre-service teacher candidates have gained more practice implementing differentiated instructional strategies.

Additionally, the laboratory school environment appears to create opportunities for deeper practice experiences than pre-service candidates may have in other field placements. Some laboratory schools are using pre-service candidates to provide supports for students that those students may not have received in other school settings (e.g., more frequent interim assessments). Others are using pre-service candidates to address gaps arising from having fewer support staff (e.g., teaching assistants) than other district school settings.

Laboratory schools are allowing some of their pre-service candidates to exercise enhanced autonomy. For example, Appalachian State pre-service candidates in a program that results in an advanced degree in reading education noted a marked difference between their internship experience at the Appalachian Academy and that at other placement sites. At the laboratory school, these reading graduate interns worked one-on-one with students as if they were school staff rather than student interns closely supervised by in-service teachers. Larger class sizes at the ECU Community School dictated that pre-service candidates lead small groups in which they applied differentiation strategies with students. UNCW principal pre-service candidates described having responsibilities akin to those of an assistant principal, managing teams of adults and tasks related to the operation of the laboratory school. Given the freedom and flexibility that laboratory schools provide to classroom teachers to make professional decisions around curriculum and instruction, student teachers also described increased responsibility for and autonomy in planning and leading instruction.

While autonomy to make curricular and instruction decisions may benefit the development of pre-service candidates, it may also offer challenges for candidates who secure employment in a traditional school setting. Some laboratory school student teachers expressed concern that they may struggle to adapt to employment in traditional school settings with prescriptive curriculum and/or required pedagogical practices. Some pre-service candidates also expressed concern that placing student teachers in high-responsibility roles—as a substitute teacher or teacher assistant—may not ultimately meet the learning needs of either the pre-service candidates or laboratory school students.

All five COEs operating laboratory schools placed pre-service candidates in the laboratory schools during the 2018-19 school year. Pre-service teacher candidates placed at laboratory schools include a mix of candidates in elementary, middle, and special education (and health/physical education at WCU). Pre-service leader candidates are pursuing a Master's of School Administration (MSA) degree. Pre-service candidates' depth of engagement at the laboratory schools included occasional field experiences, internships (which consist of one or two days at the school per week), and full-time, semester-long student teaching experiences (five days at the school every week).

Table 9 presents counts of the pre-service teachers and school leaders who had a clinical experience—early field, intern I, intern II—in a laboratory school in 2018-19.[42] Given the distance between the university campus and laboratory school, Appalachian State placed a limited number of teacher candidates at its laboratory school in 2018-19. ECU placed 18 teacher candidates into early field experiences and three candidates into full-time student teaching experiences at the ECU Community School. UNCG placed nine teacher candidates into early field experiences; a different set of nine teacher candidates completed their fall (intern I) and spring (intern II) internships at the Moss Street Partnership School. UNCW placed a large number of teacher candidates into early field and intern I experiences at D.C. Virgo Preparatory Academy. However, because the laboratory school operates on a year-round schedule—that does not align with the university's semester schedule—UNCW did not place any full-time student teachers (intern II) at D.C. Virgo Preparatory Academy. WCU placed 101 teacher candidates into early field experiences at The Catamount School. In addition, 12 WCU teacher candidates completed their intern I experience at The Catamount School; seven completed their intern II experience there. Finally, Table 9 shows counts of school leader candidates at ECU, UNCG, UNCW, and WCU who served internships at their respective laboratory schools in 2018-19. Appalachian State is planning to integrate school leader candidates into its laboratory school in future years.

[42] Many of the UNC System institutions operating laboratory schools also placed other pre-service interns—e.g. school counseling interns, speech pathology/audiology interns, school psychology interns—into laboratory schools.

Table 9: Clinical Experiences in Laboratory Schools for Educator Preparation Program Candidates

Program/Licensure Areas	Early Field Experiences	Intern I	Intern II (Full-time student teaching)
Appalachian State University			
Elementary Education	---	---	1
Graduate Reading Program	3	---	---
East Carolina University			
Elementary Education	18	---	3
Birth-to-Kindergarten	---	1	---
Masters in School Administration	---	---	1
UNC Greensboro			
Elementary Education	3	7	7
Elementary Education (MAT)	6	---	---
Elementary Education/Special Education	---	2	2
Masters in School Administration	---	---	1
UNCW Wilmington			
Elementary Education	24	18	---
Middle Grades Education	8	7	---
Special Education	10	56	---
Masters in School Administration	---	---	2
Western Carolina University			
Elementary Education/Special Education	52	2	2
Middle Grades Education	25	2	2
Health and Physical Education	24	8	3
Masters in School Administration	---	---	1

Note: For each UNC System institution, this table displays counts of the pre-service teachers and school leaders who had clinical experiences in a laboratory school in 2018-19. These data are displayed by institution and program area (e.g. elementary education, special education).

Field experiences. Field experiences (also known as practicum assignments) at laboratory schools occur as part of an undergraduate level course available to pre-service candidates in elementary, middle grades, and special education programs in their sophomore and junior years. WCU also offers field experiences at The Catamount School for candidates in health/physical education. These experiences generally serve as an introductory exposure to classroom teaching settings and a first opportunity for undergraduate students to interact with students at laboratory schools. Generally, COEs are aligning field experiences with courses that have relevance to laboratory school settings, such as those on culturally competent instruction, inclusive education, or methods pedagogy. The frequency and duration of field experiences range from a few hours once or twice a semester to one-hour engagements every week. As part of a field experience, participating students may conduct observations of laboratory school teachers, supervise field trips or support other extracurricular events, assist in planning or delivering small pieces of a lesson, or lead individual or small group activities with students.

Student teaching experiences. Pre-service candidates generally have two types of formal teaching experiences at laboratory schools: internships and student teaching. Students completing internships travel to the laboratory school one to two times per week, often shadowing, observing, or supporting an in-service teacher or working with students under the direction of the supervising teacher. During student teaching, pre-service candidates spend every day at the laboratory school over the course of a semester, working with the clinical teacher (in-service teacher) to plan and lead classroom instruction, supporting

students one-on-one or in small groups, and participating in staff meetings, professional development for laboratory school faculty, or other activities for school-based staff and students.

COEs used a range of criteria to select pre-service candidates for student teaching at laboratory schools, including alignment with program areas, a candidates' expressed interest in a laboratory school placement, and individual candidate characteristics (e.g., flexibility, potential to build relationships, demonstration of classroom management skills). For example, UNCG used a combination of candidate interest (indicated by a survey), alignment of program areas (elementary education), and demonstration of certain characteristics to place undergraduate student teachers for internships in the fall and full-time student teaching in the spring. For three laboratory schools, internship placements reflected school design issues. WCU's placement of more than 30 undergraduate health and physical education candidates at The Catamount School in 2018-19 reflects its continuing curricular emphasis on physical education. The distance between Appalachian State and the Appalachian Academy at Middle Fork necessitates the COE placing interns who have family or other living accommodations in or near Forsyth County. As such, only one Appalachian State pre-service candidate had a student teaching internship at the laboratory school in 2018-19. D.C. Virgo Preparatory Academy's year-round schedule does not align with UNCW's semester schedule so no pre-service teaching candidates served in student teaching internships in 2018-19.

Principal interns. Laboratory schools present opportunities for pre-service leadership candidates to deeply engage in school leadership activities due in part to the "new-ness" of the school and/or streamlined staffing at the school. Pre-service leader candidates interviewed for the evaluation described their experiences as more engaging and intensive than simply shadowing and observing school leaders. A pre-service principal leader candidate served as the assistant principal at the Moss Street Partnership School (UNCG). Other principal interns described feeling that they were essentially serving as an assistant principal with numerous and meaningful first-hand opportunities to be exposed to and responsible for day-to-day school operations and decision making. Some contrasted their laboratory school internship with their experiences in traditional schools, describing laboratory schools as "chaotic" environments for school leaders and teachers still working to establish functioning systems and procedures.

ECU, UNCW, UNCG, and WCU placed principal interns at laboratory schools during the 2018-19 school year. ECU's pre-service leader was an MSA candidate with the COE and concurrently employed as a teacher at the ECU Community School. UNCW placed two MSA candidates at D.C. Virgo Preparatory Academy, with each serving as a full-time principal intern for a semester. UNCG's pre-service leader candidate served as the laboratory school's assistant principal while completing required coursework at the COE. WCU also placed an MSA candidate at The Catamount School in the 2018-19 school year. Appalachian State is developing a pre-service leader candidate plan that overcomes the physical distance between the university and the Appalachian Academy at Middle Fork.

College of education faculty engagement with laboratory schools

Laboratory schools provide COE faculty a unique opportunity to operate and manage a public school, gain direct exposure to the practical realities of teaching and leading in North Carolina K-12 public schools, and further develop an understanding of the practical challenges of improving outcomes for high-need students. Access to laboratory schools also provides COE faculty an opportunity to provide real-time instruction and coaching (e.g., observation, modeling, feedback) on the instructional and classroom management methods they teach to pre-service candidates. These experiences subsequently inform their university-based instruction and research practice. For example, COE faculty reported making changes to their instruction on differentiation, classroom management skills, and the effects of trauma and adverse

childhood experiences on learning. Several COE professors noted that their regular involvement with students and teachers in laboratory schools informs their instruction in university classrooms and gives them practical experience and credibility with their own undergraduate and graduate students.

Laboratory schools also give COEs opportunities, unfettered by district IRB processes, to pursue research that enhances teaching and learning in high-need schools. For example, pre-service candidates at The Catamount School are investigating questions of practice and offering solutions/strategies to the teaching team. A COE faculty member in-residence at D.C. Virgo Preparatory Academy (UNCW) developed a research study based on her experience with family engagement at the laboratory school. ECU and UNCG are taking steps to pursue comprehensive research activities—ECU created a teacher education team to implement a research framework and UNCG formed a task force charged with developing a protocol for research at the laboratory school.

COE faculty play various roles in laboratory schools. COE faculty designed their respective laboratory school models, assisted in the hiring of laboratory school staff, and planned for the integration of pre-service candidates into the school. Faculty also help ensure high-quality instruction, plan research, and directly engage with both pre-service candidates and laboratory school students. Formal roles include:

- Full-time, school-based leadership positions, such as a school administrator, curriculum facilitator, or laboratory school coordinator.
- "Faculty-in-residence" who spend multiple days per week at the laboratory school supporting teachers—through planning, instructional coaching, and professional development—and laboratory school students—through whole group, small group, and individual instruction.
- Faculty and staff supervisors overseeing pre-service candidates in field placements or internships.

Supervisors for pre-service candidates operate in laboratory schools as they would in any other school where pre-service candidates are assigned. But the laboratory school leadership roles are uniquely available to COE faculty as a function of university oversight. For some COE faculty, laboratory school engagements are an additional responsibility to their usual workload. Some COEs fund faculty engagements in laboratory schools by offering course offsets or "release time" from instructional responsibilities at the university.

To date, the engagement of COE faculty with laboratory schools appears to be more voluntary than systematic, posing challenges for the sustainability and consistency of faculty involvement from year-to-year. Without (1) course offloads or workload exchanges that allow time for COE faculty to be in or otherwise involved with laboratory schools and (2) other systematized processes for identifying and engaging faculty to serve in laboratory schools, it remains unclear whether COEs can maintain the level of faculty engagement of the initial implementation years. As more faculty rotate in and out of engagement with laboratory schools, it also becomes more difficult for these faculty to build lasting relationships with staff and students.

In-service teachers

COEs are leveraging the laboratory school model to create opportunities for in-service teachers to grow and develop in their profession. Interviews with in-service teachers suggest that several key differences

between laboratory schools and traditional district school settings may foster their development and learning.

First, the laboratory school model facilitates increased school-level autonomy. Compared to their previous experiences in traditional district settings, laboratory school teachers report having more autonomy and leadership opportunities in school decision making processes. Interviewees generally describe being able to prioritize individual students' learning needs rather than complying with prescriptive district curriculum pacing requirements and performance benchmarking. In some cases, teachers expressed feeling more autonomy than they were prepared to exercise—given their past professional experiences—and thus, would have benefitted from having more time to transition to the laboratory school culture and environment. At the same time, COE faculty and laboratory school teachers report that being allowed to focus on assessing and meeting individual student learning needs is leading teachers to feel more energized and less stressed.

Second, laboratory school teachers have access to COE resources. Faculty engagement in laboratory schools allows laboratory school teachers access to experts who provide structured and individualized professional development and coaching. Laboratory school teachers also have access to COE professional development opportunities. In-service teachers at the Moss Street Partnership School (UNCG) and the Appalachian Academy at Middle Fork are eligible to participate in professional development and coursework offered through their COEs, while in-service teachers at The Catamount School (WCU) have taught or co-taught COE classes.

In a unique situation at the Appalachian Academy at Middle Fork, laboratory school teachers are invited to apply for COE degree and certification programs. As COE faculty work on a plan to overcome challenges in placing pre-service candidates at their laboratory school—given the geographic distance—they have focused on improving educator preparation through supports to in-service teachers. Laboratory school teachers enrolled in COE advanced degree/certification programs are able to apply their learning at the laboratory school under the supervision of their COE instructors.

How have the UNC System and its constituent institutions set up laboratory schools to grow and sustain?

Three key concerns emerged when laboratory school stakeholders were asked to consider the longer-term growth and sustainability of laboratory schools.

First, laboratory school stakeholders are unsure about the longevity of their schools. As noted in the 2018 evaluation report, the laboratory schools enabling legislation sets up a process whereby the UNC BOG Subcommittee on Laboratory Schools may extend or dissolve operation of a laboratory school every five years.[43] Interviews with laboratory school leaders and staff indicate that the meaning of this five-year

[43] N.C.G.S. §116-239.7(b)(3) provides that a laboratory school term of operation is five years at the end of which the laboratory school may be dissolved if either the district in which a laboratory school is located has fewer than 25 percent low-performing schools or the purposes of a waiver have been met. At the end of five years, a laboratory school may dissolve if the circumstances qualifying its establishment no longer exist. If dissolved, the Subcommittee must designate "additional constituent institutions with educator preparation programs to establish a laboratory school." See N.C.G.S. §116-239.7(b). Proposed amendments to the enabling laboratory school legislation would allow the UNC BOG Subcommittee on Laboratory Schools to renew a laboratory school term of operation for additional five-year periods if the Subcommittee finds that the school is successfully meeting its mission to improve student performance and provide valuable exposure and training for teachers and principals in the constituent institution's educator preparation program.

review process is not consistently interpreted. If the laboratory school is successful at the end of five years, some laboratory school stakeholders talk of remaining in partnership with the school and district but returning the laboratory school to district governance. If unsuccessful, laboratory school leaders acknowledge their commitment to continue working with laboratory schools but recognize that underperformance may require changes in governance (perhaps returning the school to the district or another operator) or additional funding. COEs describe current state funding for laboratory schools as helpful but time-limited and insufficient to close gaps in operating budgets or address administrative costs that UNC System institutions have borne to serve as school districts to laboratory schools.

Second, the longer-term engagement of COE faculty is unclear. Many COE faculty and staff are deeply immersed in the operation and support of laboratory schools, but COEs have generally engaged their faculty to lead and support laboratory school staff on a voluntary basis. Though some COEs have offered workload exchanges to faculty teaching in or working with laboratory school personnel, they have not established systematized methods of engaging faculty year-to-year or ensuring that faculty commitments to laboratory schools are valued within the promotion and tenure process of universities.

Finally, oversight authority over the laboratory schools is limited, and that, in turn, may limit the ability of the UNC System Office and the UNC BOG Subcommittee on Laboratory Schools to promote accountability and improvement.[44] Though the laboratory school legislation provides that the UNC BOG Subcommittee on Laboratory Schools shall "oversee the operations" of laboratory schools,[45] the enabling legislation does not provide for specific accountability mechanisms. With chancellors of individual UNC System institutions legislatively designated as laboratory schools' leaders, laboratory schools are as independent of one another as the UNC System institutions that lead them. This independence may serve as a catalyst for innovation but it also complicates efforts to hold laboratory schools accountable and to achieve consistency/coherence in laboratory school policies. Towards this end, the UNC System Office and UNC BOG Subcommittee on Laboratory Schools is instituting a comprehensive compliance monitoring program to help laboratory schools identify and address compliance concerns.

Summary

In 2016 the North Carolina General Assembly passed legislation requiring the UNC System BOG and UNC System institutions to establish laboratory schools. The mission of UNC System laboratory schools is two-fold: to provide an enhanced education program for students who are low-performing or attended a low-performing school and to provide exposure and training for teachers and school leaders to successfully address challenges existing in high-needs school settings. Three years later, UNC System institutions have opened five laboratory schools that collectively serve nearly 1,000 students. It remains too early to fully assess whether laboratory schools are meeting their stated mission. However, evidence to date highlights areas of success and challenge.

Interviews with COE leadership and faculty, laboratory school personnel, and K-12 district partners reveal common implementation and operational challenges for laboratory schools. These include sufficiency of funding (especially given the concentration of high-needs students at laboratory schools), the need for UNC System institutions to acquire a wealth of new knowledge and adapt university procedures to operate a K-12 school *and* district, fully integrating laboratory schools into NCDPI systems for reporting,

[44] Laboratory schools are subject to all accountability provisions for student achievement set forth by the NCDPI and the State Board of Education.
[45] N.C.G.S. §116-239.5(a).

managing relationships with their host school districts, and meeting the "hidden costs" associated with the start-up and operation of laboratory schools (e.g. additional responsibilities for COE faculty/personnel and administrative and finance staff at each institution).

Regarding student outcomes, the Evaluation Team finds that the UNC System laboratory schools are, as intended, enrolling students who are low-performing or previously attended a low-performing school. Many of these students are economically-disadvantaged and are a racial/ethnic minority. Student achievement data reveal signs of promise and areas for improvement. In 2018-19, the Appalachian Academy at Middle Fork and the ECU Community School met expected growth—in fact, these two schools were very close to exceeding growth. The ECU Community School also experienced a 10 point increase in its overall growth score from 2017-18 to 2018-19. The three remaining laboratory schools—Moss Street Partnership School, D.C. Virgo Preparatory Academy, and The Catamount School—did not meet expected growth in 2018-19.

Students and families were generally positive about their laboratory school experiences in 2018-19. In particular, survey data indicate that parents were satisfied with many aspects of school operations—i.e. academics, promoting social and emotional growth, communication. Students were most positive about how their teachers/schools promoted learning through challenging content and by clarifying material during instruction. Survey data revealed more concerns around student behavior and classroom management.

Regarding educator preparation, the Evaluation Team finds that laboratory schools are offering pre-service educators (teachers and school leaders) and COE faculty unique exposure to the practical challenges of teaching and leading in North Carolina public schools and improving outcomes for high-need students. Pre-service candidates with clinical experiences in laboratory schools—particularly full-time student teaching—may be getting more intensive instructional and classroom management practice and exercising more instructional autonomy than they would in other clinical placements. Similarly, COE faculty engaged in laboratory schools are gaining direct exposure to the realities and challenges of operating and managing K-12 public schools while providing real-time instruction and coaching to pre-service candidates and laboratory school teachers.

Moving forward, the UNC System and the UNC System institutions operating laboratory schools will need to identify measures of school operations and success (beyond student achievement and proficiency scores) that provide COEs and laboratory schools more granular feedback. Furthermore, the UNC System needs to identify and implement accountability strategies that will facilitate continual improvement and help laboratory schools sustain any successes they achieve. UNC System COEs need to systematize and incentivize the engagement of COE faculty in laboratory schools.

In the coming year, the Evaluation Team will conduct rigorous analyses of student outcomes in laboratory schools and continue to focus on laboratory school practices that contribute to student outcomes or the enhanced preparation of pre-service teachers and school leaders.

Appendix A1: Data Sources

To complete an in-depth review of the laboratory schools, the Evaluation Team will rely on five main data sources: (1) interviews with university and laboratory school leadership, personnel, and partners; (2) laboratory school status reports completed by UNC System COE; (3) administrative data on students, schools, and school personnel from the NCDPI; (4) survey responses from laboratory school students and families and from beginning teachers and their employers; and (5) administrative data from COE on educator preparation programs and pre-service candidates.

Much of the data for this evaluation report comes from interviews with university and laboratory school leadership, personnel, and partners. Additional data for this report come from student demographic information, official NCDPI reporting on student/school achievement,[46] surveys of laboratory school students and families, and analyses of administrative data from NCDPI and educator preparation programs.

Laboratory School Interviews

For each UNC system laboratory school, the Evaluation Team will conduct interviews at two time points during the evaluation. First, during the spring of a laboratory school's first-year of operation, the Evaluation Team will interview COE leadership and faculty, laboratory school personnel (e.g., teachers, principals, pre-service teachers), and laboratory school partners (within the local community and from across the university). These interviews will assist the Evaluation Team in understanding how the laboratory schools have been set up, with whom the laboratory schools are partnering, how the laboratory schools are operated, and the relationships between educator preparation and the laboratory schools. The Evaluation Team conducted these interviews with Appalachian State, UNCG, and UNCW in April 2019.

Second, during the last year of the laboratory school evaluation (2022), the Evaluation Team will conduct interviews at each laboratory school. These interviews will be scheduled with many of the same personnel as during the first phase of interviews and will allow the Evaluation Team to assess the development and growth of the laboratory schools.

In addition to interviews at each laboratory school site, the Evaluation Team conducted interviews in the spring/summer of 2019 with leadership at the UNC System office. These interviews focused on the planning, set up, and governance of laboratory schools that opened in 2018-19.

Laboratory School Status Reports

To complement the interviews with university and laboratory school stakeholders, the Evaluation Team will collect status reports from the UNC System COE that are operating laboratory schools. These status reports include a set of pre-specified questions, to be completed by the COE Dean or his/her designee, that allow UNC System institutions to describe: (1) the design of their laboratory school; (2) the marketing and management of their laboratory school; (3) key laboratory school partners and the services they provide; (4) the relationship between educator preparation and the laboratory school; and (5) challenges and successes in setting up and developing the laboratory school.

[46] Please see http://www.ncpublicschools.org/accountability/reporting/.

UNC System institutions will complete a status report in their last planning year prior to opening,[47] and with two exceptions, during each year of operation. Those exceptions are the two instances when the Evaluation Team will conduct on-site interviews—the first year of laboratory school operation and the last year of the laboratory school evaluation.

Administrative Data from the NCDPI

The laboratory schools evaluation will use student, school, and school personnel data provided by the NCDPI. Student level data include demographics, absences, disciplinary incidents, and test scores on the state's EOG exams (in mathematics, reading, and science). With these data the Evaluation Team will assess the demographics and prior achievement of students attending laboratory schools, whether laboratory schools improve the test scores of students, and whether laboratory schools benefit students' engagement with school (as measured by attendance and behavior).

School level data come from the North Carolina School Report Cards and from school expenditures files. These data provide aggregate, school level information on student demographics, achievement, and behavior; teacher credentials (e.g., experience, advanced degrees); and school spending. With these data the Evaluation Team will assess school level academic performance (e.g., performance composite, growth status) and laboratory school per-pupil expenditures, overall, and broken down by spending categories.

School personnel data for teachers and administrators include their demographics, preparation/licensure, experience, credentials (e.g., advanced degrees or National Board Certification), and when available, measures of performance (e.g., Education Value-Added Assessment System (EVAAS) estimates). With these data the Evaluation Team will assess the characteristics of the educators working in UNC System laboratory schools. Additionally, the Evaluation Team will link these school personnel files to data provided by UNC System institutions to follow pre-service candidates (teacher and school leader) into the public school workforce. This will allow the Evaluation Team to report on the workforce outcomes (e.g., employment in North Carolina public schools, teacher effectiveness, teacher retention) of UNC System graduates and to specifically assess the outcomes of early-career educators who had significant pre-service experiences in a laboratory school.

These NCDPI data are not available to the Evaluation Team for analysis until several months after the close of a school year (typically November). As a result, evaluation reports submitted in November will not include rigorous analyses and results from the most recently completed school year. Instead, these data will be included in subsequent reports.

Survey Responses

To evaluate the UNC System laboratory schools, the Evaluation Team will collect survey data from multiple sources. First, the Evaluation Team has contracted with Tripod Education Partners to administer a survey to laboratory school students. The Evaluation Team chose the Tripod student survey because of its established validity and reliability, the alignment between survey items and aims of the laboratory school evaluation, and its flexibility in allowing the Evaluation Team to customize questions. This survey assesses students' motivation for learning, engagement with school, and perceptions of academic climate. The

[47] ECU and WCU opened their laboratory schools before the Evaluation Team began the evaluation, and thus, they did not complete a planning year status report. Appalachian State, UNCG, and UNCW completed this status report as will all other UNC System laboratory schools.

Evaluation Team administered this survey to students at the ECU Community School, The Catamount School (WCU), Appalachian Academy at Middle Fork, Moss Street Partnership School (UNCG), and D.C. Virgo Preparatory Academy (UNCW) in the spring of 2019 and will administer the survey to laboratory school students each spring.

Second, the Evaluation Team has contracted with Tripod Education Partners to administer a survey to parents of laboratory school students. This survey focuses on parents' satisfaction with the laboratory school, their perceptions of the laboratory school application process and set up, and their perceptions of school climate, services, and safety. The Evaluation Team administered this survey in the spring of 2019 to the parents of students attending the ECU Community School, The Catamount School (WCU), Appalachian Academy at Middle Fork, Moss Street Partnership School (UNCG), and D.C. Virgo Preparatory Academy (UNCW). The Evaluation Team will administer this survey to laboratory school families each spring.

Finally, EPIC will continue to partner with NCDPI and the UNC System to administer two statewide surveys focused on the perceptions and practices of beginning teachers. In the spring of each school year, EPIC sends the *Recent Graduate Survey* to all first-year teachers in North Carolina public schools. This survey asks beginning teachers to reflect on the quality of their preparation and their opportunities to learn key teaching practices. At the same time, EPIC also sends the *Employer Survey* to all principals with a first-year teacher at their school. This survey asks the school principal to rate the performance of the first-year teacher. With data from these surveys, the Evaluation Team will assess whether first-year teachers who had significant learning experiences in a laboratory school perceive their preparation to be of a higher quality and whether their school principals rate them as more effective. The Evaluation Team will incorporate these data into evaluation reports once enough pre-service candidates with laboratory school experiences are in the state's teaching workforce.

Administrative Data from Colleges of Education

To examine outcomes for pre-service teachers and school leaders who obtained clinical experience in laboratory schools, the Evaluation Team will use administrative data on pre-service candidates provided by UNC System COE. These candidate data will include demographics, measures of academic ability (e.g. grade point averages, SAT/ACT scores), licensure areas and licensure exam scores, time to graduation, edTPA scores, and indicators for having a clinical experience in a laboratory school. With these data the Evaluation Team will examine the characteristics of candidates with significant clinical experiences in laboratory schools (compared to peers with more traditional preparation experiences) and link administrative data from COE and NCDPI to track these candidates into the state's public schools. The Evaluation Team will begin to incorporate these administrative data from COE into subsequent reports as it becomes available.

Appendix A2: Analysis Methods

Qualitative data analyses

To assess the UNC System laboratory schools, the Evaluation Team analyzed two types of qualitative data—interview transcripts and laboratory school responses to annual status reports.

The Evaluation Team designed interview protocols for use with various stakeholders involved in the design and implementation of laboratory schools (e.g., UNC System officials, College of Education faculty, laboratory school teachers). These interview protocols are organized around the seven laboratory school evaluation questions. In April 2019, the Evaluation Team conducted and analyzed interviews with more than 100 laboratory school stakeholders at the UNC System office, Appalachian State and its laboratory school, UNCG and its laboratory school, and UNCW and its laboratory school. With the consent of participants, the Evaluation Team recorded these interviews and transcribed the dialogue.

To analyze the interview responses, the Evaluation Team conducted an initial review of the transcripts to identify key concepts and themes (e.g., school governance, partnerships, educator preparation) related to each of the evaluation questions. Using these key concepts and themes, the Evaluation Team developed a categorization scheme, aligned with the evaluation questions, to organize specific portions of the transcribed interview text. With this scheme the Evaluation Team reviewed all of the interview transcripts and coded responses based on the pre-identified concepts and themes. A final review and synthesis of the interview responses, based on the developed coding scheme, revealed the critical observations and findings that are included in this report.

The Evaluation Team designed a report template to be submitted annually by schools in their second and subsequent years of operation excluding the last year of the evaluation. The "subsequent operating year" status report template is organized around the seven laboratory school evaluation questions. The Evaluation Team made the report questions available to ECU and WCU in November 2018. ECU and WCU submitted completed reports in April 2019.

Quantitative data analyses

The evaluation of the UNC System laboratory schools will use quantitative data from a host of sources: NCDPI, UNC System COE, and survey responses. With these data the Evaluation Team will assess whether laboratory schools improve students' academic performance, engagement with school, and social-emotional outcomes; whether laboratory schools are successfully marketed and managed; and whether pre-service experiences in a laboratory school (e.g., student teaching) influence early-career educators. Below, the Evaluation Team describes several guiding principles for how it will analyze and report quantitative data on laboratory schools. These principles are designed to help the Evaluation Team perform rigorous analyses and report data in meaningful ways.

First, the Evaluation Team will start the analysis process by reporting student and school outcomes without making any statistical adjustments. For example, the Evaluation Team may report the average End-of-Grade mathematics scores of laboratory school students and other students in the host school district. While there are limitations to this approach and its ability to isolate the impacts of laboratory schools, it does have the advantage of presenting information in a transparent and understandable manner.

Second, when analyzing administrative data for laboratory schools, the Evaluation Team will present pooled results across all laboratory schools and separate results for each laboratory school. Pooling the data will provide a larger sample and return a summative measure of laboratory school effects. Separate, school-by-school analyses, acknowledge the potential for variation in laboratory school impacts due to differences in set up, student demographics, partnerships, and goals across the schools. As a complement to these approaches, the Evaluation Team will also report pooled and school-specific results by the number of years the laboratory school has been open.

Third, given the unique sample of students attending laboratory schools—those who were previously low-performing and/or those coming from a low-performing school—reporting of raw, unadjusted student outcomes will not isolate the impact of laboratory schools. As such, the Evaluation Team will also use administrative data from NCDPI to identify comparison samples of students and schools that more closely resemble the laboratory school population. It is likely that the Evaluation Team will use propensity score matching to create these comparison samples; other statistical approaches may also be feasible and will be examined by the Evaluation Team.[48] Findings from these matched analyses will be the preferred results.

Fourth, when examining the characteristics of pre-service candidates and tracking them into the public school workforce, the Evaluation Team will compare pre-service candidates who had significant learning experiences in laboratory schools (e.g., student teaching, principal intern) with pre-service candidates from the same university and licensure area that did not have laboratory school experiences. For example, comparing middle grades candidates who student taught at The Catamount School versus WCU middle grades candidates who student taught elsewhere. These analyses will not be causal but may suggest whether laboratory school experiences benefit early-career teachers.

Lastly, when analyzing administrative data from NCDPI, the Evaluation Team will estimate regression models that control for a rich set of individual and contextual characteristics. For example, when assessing student achievement, the Evaluation Team will use propensity score matching to identify an appropriate comparison sample and then control for individual student and school characteristics to more rigorously isolate the impact of laboratory schools on student performance. Likewise, when assessing outcomes for early career teachers who did versus did not have significant laboratory school experiences, the Evaluation Team will estimate a regression model controlling for teacher and school characteristics.

[48] Other approaches include comparing laboratory school students to (1) students attending other low-performing schools; (2) students who applied to laboratory schools but were unable to attend due to over-subscription (this does not currently exist); and (3) themselves in previous years before they attended the laboratory school.

Appendix A3: Laboratory School Snapshots

Appalachian Academy at Middle Fork

Appalachian State's laboratory school, the Appalachian Academy at Middle Fork, is an elementary school located on the campus of the former Middle Fork Elementary School in Walkertown, NC. The campus building is leased from Winston-Salem Forsyth County Schools (WSFCS) and houses grades K-5. The Academy at Middle Fork operates on the WSFCS school calendar.

In its inaugural year, the Academy at Middle Fork staff included a principal, an assistant principal, a director of curriculum and instruction, a behavior support coach, eighteen classroom teachers, two ESL teachers, two EC teachers, ten teacher assistants, a school nurse and a social worker. In addition, COE faculty spend one to three days per week working with Academy teachers in each of the following disciplines: reading, social studies, science, math, special education, and English as a second language. These faculty supported teachers in meeting their curricular goals and modeled teaching practices.

The Academy at Middle Fork's mission is to provide a balanced education for children, teachers, principals, and families through the implementation of research-based practices and exemplary classroom instruction and administration. The Academy at Middle Fork is committed to developing the whole child, including social, emotional, cognitive, and developmental needs. The Academy uses a workshop approach for students in all grades and builds literacy skills in all core content areas. Students receive differentiated instruction that engages them in reading, writing, speaking, and listening.

The Academy incorporates several distinctive practices in its laboratory school model, including the use of *In-Curriculum,* which facilitates an inclusive, integrated, and interdisciplinary curricular approach through 4-6 week, school-wide curricular strands. The *In-Curriculum* integrates arts, fitness, and media studies and includes materials and resources for implementation and professional development. The Academy also uses PBIS and restorative justice behavior management systems.

The Academy's physical distance from Appalachian State currently precludes engagement of pre-service candidates in the laboratory school on a daily/regular basis. Only one Appalachian State pre-service candidate had a student teaching internship at the laboratory school in 2018-19. In addition, pre-service candidates in social studies and science methods classes have had field experiences at the laboratory school. In spring 2019, three graduate students in a combined bachelor/master program that results in an advanced degree in reading education served internships at the laboratory school through an independent study course tailored for them.

The COE will begin offering undergraduate teacher education programs in Winston-Salem in fall 2020. This will facilitate the placement of more pre-service candidates at the laboratory school.[49] In the meantime, the COE has increased its focus on leveraging the laboratory school to provide professional development opportunities for in-service teachers and administrators, including participation in COE degree and certification programs. Laboratory school faculty are invited to apply to COE advanced education programs and those who are accepted and enroll are able to apply their learning at the laboratory school under the supervision of their COE faculty instructors.

[49] Appalachian State does not currently have approval from the Commission on Colleges of the Southern Association of Colleges and Schools (SACSCOC) or the UNC System to offer undergraduate programs in Elementary Education or Special Education in Winston-Salem. Appalachian State is in the process of acquiring these approvals.

The ECU Community School

The ECU Community School is an elementary school co-located on the campus of South Greenville Elementary in Greenville, NC. The ECU Community School served grades K-5 in five classrooms in the 2018-19 school year (K, 1st/2nd combination, 3rd, 4th, and 5th grade classrooms).

In its second year of operation, the laboratory school's staff included a principal, five lead teachers in kindergarten through 5th grade, a special education director/teacher, a part-time curriculum director, four teacher assistants, and a full-time administrative assistant. The laboratory school employed a full-time nurse and a full-time social worker. The laboratory school and its host district, Pitt County Schools, jointly funded an art teacher and a music teacher.

The ECU Community School acknowledges and supports the integration of health, wellness, and learning to develop the whole child. The laboratory school uses an intentional approach to build literacy and numeracy skills through the core subjects of mathematics, science, reading/English language arts, and social studies. Its long-term literacy focus includes working with the leadership team, laboratory school teachers, and other stakeholders to facilitate the development of a multi-year plan to bring evidence-based reading instruction and the use of a complementary comprehensive assessment system to scale in the laboratory school. The ECU Community School is simultaneously focused on engaging children in learning experiences that support their curiosity, creativity, inquiry, and intellectual growth in a school environment that respects their strengths and meets their needs.

A majority of the schools and colleges on the ECU campus are engaged with the laboratory school to support its whole child approach. Pre-service candidates from the Allied Health, Health and Human Performance, Medical, Dental, Arts and Sciences, and Fine Arts and Communication colleges had clinical experiences at the ECU Community School in the 2018-19 school year. They supported implementation of enrichment activities focused on inquisitive and experiential learning (e.g. recreational therapy, music, and gardening) and family engagement activities, including home visits to determine physical and social-emotional needs and provision of supports and referrals.

Nearly two dozen pre-service candidates in the elementary grades program at the ECU COE had clinical experiences (early field, intern I, or intern II) at the laboratory school in the 2018-19 school year. A teacher at the ECU Community School, who is completing his MSA degree, also served his principal internship at the laboratory school in the 2018-19 school year.

Some distinct practices that the ECU Community School is implementing include a standards-based report card to assess individual progression to content mastery; an integrated health collaborative (IHC) approach to identify physical health and social-emotional needs and provide appropriate medical and counseling supports/referrals; a modified version of the edTPA to coach in-service teachers, inform their professional development, and create a common language for teachers to use with pre-service candidates; and a two-way, live-streamed video feed between university and laboratory school classrooms that allows pre-service candidates to observe instructional practices, classroom management techniques, and student behaviors in real-time.

Moss Street Partnership School

The Moss Street Partnership School (UNCG) is an elementary school located north of Greensboro, in Reidsville, NC, that occupies a former Rockingham County Schools (RCS) elementary school. The laboratory school serves students in grades K-5, averaging approximately three classrooms per grade level. Staff and students at the Partnership School follow the traditional RCS district calendar.

In its inaugural year, the Moss Street Partnership School employed a principal, a director of curriculum, twenty-one classroom teachers (five of which were creative arts and PE teachers), and five special education teachers. In addition, two COE faculty supported teachers and students in the school on a regular basis, one focusing on literacy instruction and the other supporting special education teachers and students.

The Moss Street Partnership School uses a "learner-centered, learner-led" approach and emphasizes experiential learning, inclusive education, and a collaborative environment for both students and teachers. STEAM instruction is prominent at the Moss Street Partnership School. The campus features a makerspace and the school employs a full-time instructional technology consultant who assists teachers with the incorporation of technology into their lessons. As a fully inclusive school, the Moss Street Partnership School is oriented to the whole child, including meeting academic, social, emotional, and developmental needs. Faculty from other UNCG programs including kinesiology and psychology are supporting planning for and professional development on issues such as adverse childhood experiences, trauma-sensitive interventions, restorative practices, and incorporating physical education and social learning into the curriculum. In support of its dual focus on academic and whole child development, the school uses some distinctive practices including a standards-based report card to assess individual progression towards content mastery.

In 2018-19, UNCG placed nine elementary education, special education, and elementary and special education dual major pre-service candidates in student teaching internships (intern I and II) at the laboratory school. Beginning in fall 2019, UNCG plans to place junior year pre-service candidates at the laboratory school as part of a cohort that will serve internships at the laboratory school through their elementary methods and seminar classes over the course of four semesters. These candidates will have a ten hour a week internship for three semesters (i.e. junior year and the first semester of senior year) and then do their full-time student teaching in the spring of the senior year. UNCG also placed a pre-service principal leader candidate for an internship at the laboratory school. This pre-service school leader served as the laboratory school's assistant principal. The Moss Street Partnership School also hosted interns from other UNCG colleges, including a full-time administrative intern and two graduate level counseling interns.

In addition, twelve classroom teachers applied for and were admitted to UNCG's M.Ed. K-12 Literacy program, the instruction for which was delivered on-site at the Partnership School.

D.C. Virgo Preparatory Academy

D.C. Virgo Preparatory Academy (DCVPA) is a K-8 school in Wilmington that occupies a former New Hanover County Schools (NHCS) middle school that previously served grades 6-8. It is currently the only K-8 school within the district and includes one class per grade level in K-5 and two classes per grade level in 6-8. The laboratory school follows a year-round calendar, which was previously implemented at the predecessor school. The school day runs from 7:30am to 4:30pm, driven in part by transportation services the district provides for the laboratory school. The school uses the 7:30-9:00am timeframe to provide student services before instruction begins at 9:30am.

In its inaugural year, the D.C. Virgo Preparatory Academy staff included a principal, an assistant principal, twelve teachers in core content areas, and two exceptional children educators. Two COE students in their final year of the MSA program at UNCW served as semester-long principal interns. A full-time clinical social worker, funded through a partnership with the College of Health and Human Services, provides student support services and supervises six year-long clinical social worker interns. Each semester, a UNCW professor served as a faculty-in-residence at the laboratory school, one assisting with early childhood education and family engagement in the fall, while the other supported special education teachers and students in the spring. Multiple faculty from the COE also regularly supported the professional learning of teachers at DCVPA.

Learning at DCVPA is guided by the acronym PIER, which stands for Personalized, Inquiry-based, Experiential, and Reflective. Teachers at DCVPA use the Rigor-Relevance framework to implement inquiry-based instruction and an experiential learning approach to help students transition from knowledge to application of content. Literacy instruction is based on a framework incorporating evidence-based reading instructional practices—phonics, phonemic awareness, vocabulary, comprehension, and fluency. The school's model also includes a heavy emphasis on STEM instruction. D.C. Virgo Preparatory Academy is simultaneously focused on addressing the physical health and social-emotional needs of their students. It uses a "kinship model", whereby everyone in the school community models caring behavior, through teachers mentoring students, older students mentoring younger students, school staff engaging whole families, and the school/community providing essentials to students and families (e.g. food).

D.C. Virgo Preparatory Academy incorporates several distinct practices into its laboratory school model, including the use of a working lab in the COE's Center for Education in Science, Technology, Engineering, and Mathematics (CESTEM), where teachers can take laboratory school students to engage in hands-on, standards-aligned learning experiences. With funding through a partnership with MedNorth, a local community health provider, the laboratory school also has an on-site health clinic staffed by a certified family nurse practitioner. Finally, the laboratory school has an on-site "Parent Room" which includes a kitchen, washer/dryer, and meeting space for families.

In its inaugural year, D.C. Virgo Preparatory Academy hosted over 100 pre-service candidates ranging from freshmen to first semester seniors and MAT graduate students in field placements. These interns were students in one of six classes designated to have field experiences at the laboratory school. Because the laboratory school's year-round schedule does not align with the university schedule, no student teachers were placed at the laboratory school in 2018-19. However, two MSA candidates served leadership internships at the laboratory school. Pre-service candidates in social work also served internships at the laboratory school.

The Catamount School

WCU's laboratory school, The Catamount School, is co-located on the campus of Smoky Mountain High School in Sylva, NC. The laboratory school occupies one wing of the main high school building. Stemming from its prior work with Jackson County Public Schools (JCPS) to establish freshman academies, WCU opened The Catamount School as a mechanism to support students' transition to high school. The Catamount School has one classroom, per grade, for grades 6-8. It operates on the JCPS calendar and contracts with the district for certain services. The Catamount School is the only middle school in JCPS, which otherwise includes grades 6-8 in K-8 schools.

In its second year, The Catamount School staff included a principal, four core subject-area teachers, an enrichment coordinator who coordinates services and extracurricular activities provided by university and community-based partners, an exceptional children (EC) teacher, a PowerSchool data manager, and a health services coordinator who serves as the school nurse and supervises School of Nursing candidates in practicum experiences. A COE faculty member serves as the Instructional Support Liaison and teaches one math class. A WCU Health and Physical Education (HPE) instructor serves as the physical education teacher and coordinates and supervises HPE pre-service candidates. A WCU College of Education faculty member serves as the school's EC Administrator, but does not carry a teaching load at The Catamount School.

The Catamount School fosters student growth and development of social-emotional skills (particularly resilience) through a problem-centered, experienced-based learning approach in an inclusive education environment. Special education services for EC students are provided in their regular classroom using a co-teaching model in which the EC teacher works collaboratively with the lead classroom teacher to deliver individualized content area instruction. Literacy instruction also uses the co-teaching model between the inclusion instructor and lead classroom teacher and is supported by twice weekly one-on-one and small group reading intervention groups with pre-service candidates.

More than 100 pre-service teacher candidates had formal clinical experiences at The Catamount School in the 2018-19 school year, including pre-service candidates in middle grades, health and physical education, and inclusive education programs (dual program in elementary and special education). In addition, pre-service candidates from other WCU programs had clinical experiences at The Catamount School, including students in art education, school counseling, school psychology, clinical psychology, and speech-language pathology. WCU placed one MSA candidate at The Catamount School in 2018-19.

Some distinct practices The Catamount School incorporates into its laboratory school model include the Community of Care team—COE faculty, laboratory school staff, and university partners who monitor the provision of services that support students' well-being; the use of PBIS to create and hold students and teachers accountable to behavioral expectations; a multi-tiered system of support model to comprehensively address student academic and social-emotional growth goals; and the use of standards-based grading, which allows teachers, students, and parents to assess individual progression to content mastery.

Appendix A4: Additional Data from the Parent Survey

Appendix Table A4.1: Parent Satisfaction with Laboratory Schools

How satisfied are you with…	Responses	Mean	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
All Laboratory Schools							
Discipline at the lab school	194	4.12	5.15	5.15	9.28	33.51	46.91
Lab school interacts with you	194	4.27	1.55	5.67	12.89	23.71	56.19
Partnership with the lab school	193	4.37	2.07	3.11	9.84	25.91	59.07
Child's social and emotional growth	191	4.28	1.57	4.71	11.52	28.27	53.93
Child's academic growth	191	4.34	0.52	6.28	8.90	26.70	57.59
Child's physical development	190	4.33	1.05	2.63	10.53	33.68	52.11
Lab school communicates with you	190	4.30	2.63	3.16	8.95	31.58	53.68
Appalachian State Academy at Middle Fork							
Discipline at the lab school	21	4.71	0	0	4.76	19.05	76.19
Lab school interacts with you	21	4.76	0	0	0	23.81	76.19
Partnership with the lab school	21	4.86	0	0	0	14.29	85.71
Child's social and emotional growth	21	4.71	0	0	0	28.57	71.43
Child's academic growth	21	4.90	0	0	0	9.52	90.48
Child's physical development	21	4.71	0	0	0	28.57	71.43
Lab school communicates with you	21	4.71	0	0	4.76	19.05	76.19
ECU Community School							
Discipline at the lab school	55	4.38	3.64	182	5.45	30.91	58.18
Lab school interacts with you	55	4.40	3.64	1.82	9.09	21.82	63.64
Partnership with the lab school	55	4.43	1.82	3.64	5.45	27.27	61.82
Child's social and emotional growth	55	4.33	1.82	3.64	12.73	23.64	58.18
Child's academic growth	55	4.42	1.82	5.45	3.64	27.27	61.82
Child's physical development	55	4.40	1.82	1.82	7.27	32.73	56.36
Lab school communicates with you	55	4.40	3.64	0	10.91	23.64	61.82
Moss Street Partnership School (UNCG)							
Discipline at the lab school	66	3.59	10.61	12.12	18.18	25.76	33.33
Lab school interacts with you	66	4.17	1.52	9.09	15.15	19.70	54.55
Partnership with the lab school	65	4.18	4.62	4.62	15.38	18.46	56.92
Child's social and emotional growth	63	4.19	3.17	4.76	14.29	25.40	52.38
Child's academic growth	63	4.22	0	9.52	14.29	20.63	55.56
Child's physical development	62	4.29	0	3.23	14.52	32.26	50.00
Lab school communicates with you	62	4.06	4.84	8.06	9.68	30.65	46.77
The Catamount School (WCU)							
Discipline at the lab school	52	4.27	1.92	1.92	3.85	51.92	40.38
Lab school interacts with you	52	4.08	0	7.69	19.23	30.77	42.31
Partnership with the lab school	52	4.33	0	1.92	11.54	38.46	48.08
Child's social and emotional growth	52	4.17	0	7.69	11.54	36.54	44.23
Child's academic growth	52	4.19	0	5.77	11.54	40.38	42.31
Child's physical development	52	4.15	1.92	3.85	13.46	38.46	42.31
Lab school communicates with you	52	4.33	0	1.92	7.69	46.15	44.23

Note: This table displays parent responses to a set of survey items about their satisfaction with their child's laboratory school

Appendix Table A4.2: Comparing School Experiences

When you think about your child's school experiences this year compared to his/her school experiences last year, in which year was the school better at…	Responses	Last Year Was Better	Comparable	This Year is Better
Appalachian Academy at Middle Fork				
Helping students behave	21	4.76	28.57	66.67
Helping your child learn	21	14.29	14.29	71.43
Having teachers that really care about your child	21	9.52	38.10	52.38
ECU Community School—First Time Families				
Helping students behave	22	4.55	18.18	77.27
Helping your child learn	22	0	18.18	81.82
Having teachers that really care about your child	22	0	31.82	68.18
ECU Community School—Returning Families				
Helping students behave	32	9.38	43.75	46.88
Helping your child learn	32	15.63	37.50	4.88
Having teachers that really care about your child	32	9.38	43.75	46.88
Moss Street Partnership School (UNCG)				
Helping students behave	56	21.43	35.71	42.86
Helping your child learn	56	8.93	26.79	64.29
Having teachers that really care about your child	55	9.09	38.18	52.73
The Catamount School—First Time Families				
Helping students behave	17	5.88	23.53	70.59
Helping your child learn	17	0	29.41	70.59
Having teachers that really care about your child	17	0	23.53	76.47
The Catamount School—Returning Families				
Helping students behave	33	15.15	63.64	21.21
Helping your child learn	33	18.18	63.64	18.18
Having teachers that really care about your child	33	33.33	54.55	12.12

Note: This table displays parent responses to survey items asking parents to compare their child's educational experiences in 2018-19 to their educational experiences in 2017-18.

Appendix A5: Additional Student Achievement Data (2017-18 School Year)

Appendix Table A5.1: 2017-18 Test Score Data for the ECU Community School and Other, Same-Grade Students in Pitt County Public Schools

Test	Student Count	Average Test Score	Average Achievement Level (1-5)	Percent Passing (Level 3 or Above)
ECU Community School				
3rd Grade Reading	16	427.19	1.38	0
4th Grade Reading	16	431.94	1.19	0
3rd Grade Math	16	441.13	1.69	6.25
4th Grade Math	15	435.73	1.13	0
All Other Pitt County Students				
3rd Grade Reading	1862	437.70	2.65	48.71
4th Grade Reading	1829	444.20	2.67	50.36
3rd Grade Math	1863	449.52	3.04	58.45
4th Grade Math	1829	449.07	2.91	51.56
South Greenville Elementary School				
3rd Grade Reading	70	431.04	1.77	21.43
4th Grade Reading	56	437.39	1.82	21.43
3rd Grade Math	70	442.71	2.18	30.00
4th Grade Math	56	439.25	1.61	14.29

Note: For the 2017-18 academic year, this table displays descriptive student achievement data for the ECU Community School, for all other Pitt County students (in grades 3-4), and for students at South Greenville Elementary School (the host school for the ECU Community School).

Appendix Table A5.2: 2017-18 Test Score Data for The Catamount School and Other, Same-Grade Students in Jackson County Public Schools

Test	Student Count	Average Test Score	Average Achievement Level (1-5)	Percent Passing (Level 3 or Above)
The Catamount School (WCU)				
6th Grade Reading	18	450.67	2.78	55.56
7th Grade Reading	21	456.52	3.10	66.67
8th Grade Reading	12	460.50	3.17	75.00
6th Grade Math	18	444.61	2.00	33.33
7th Grade Math	21	447.90	2.38	42.86
8th Grade Math	5	445.80	2.20	40.00
Math I	7	254.00	3.43	85.71
8th Grade Science	12	253.58	3.92	91.67
All Other Jackson County Students				
6th Grade Reading	239	451.95	3.02	64.85
7th Grade Reading	263	455.68	3.06	60.84
8th Grade Reading	221	456.28	2.65	49.77
6th Grade Math	239	448.10	2.48	41.42
7th Grade Math	263	448.87	2.57	41.06
8th Grade Math	176	444.05	1.80	19.32
Math I	297	250.74	2.82	57.58
Math I (Smoky Mountain High School)	190	250.67	2.77	54.74
8th Grade Science	221	249.87	3.23	67.87

Note: For the 2017-18 academic year, this table displays descriptive student achievement data for The Catamount School and for students in Jackson County Public Schools. Unlike previous years, in 2017-18 students taking Math I in 8th grade did not take the 8th grade math EOG.

Appendix Table A5.3: Characteristics of Laboratory School and Matched Comparison Sample Students

Groups	Student Count	Minority	Econ. Disadvantaged	Prior Years Days Absent	Suspended in the Prior Year	Prior Year Reading Score (Std)	Prior Year Math Score (Std)
All 3rd Graders	120142	53.78	47.50	6.44	4.99	0.018	---
ECU CS 3rd Graders	16	100.00	81.25	6.38	50.00	-1.056	---
Matched 3rd Graders	47	95.75	74.47	5.36	51.06	-0.885	---
All 4th Graders	121697	53.42	46.74	6.17	5.81	0.015	0.018
ECU CS 4th Graders	16	100.00	75.00	5.25	50.00	-0.983	-1.232
Matched 4th Graders	55	92.72	83.64	5.33	50.91	-1.013	-1.117
All 6th Graders	118065	52.49	46.43	6.28	9.09	0.004	0.008
TCS 6th Graders	18	0.00	38.89	6.00	28.57	-0.273	-0.549
Matched 6th Graders	70	32.85	41.42	5.57	35.71	-0.217	-0.519
All 7th Graders	115529	51.23	44.31	6.79	17.07	0.011	0.015
TCS 7th Graders	21	28.57	52.37	9.06	29.41	0.227	-0.158
Matched 7th Graders	79	41.76	53.15	9.37	31.65	0.375	-0.227
All 8th Graders	108516	50.23	42.62	7.32	19.21	0.015	0.018
TCS 8th Graders	12	25.00	8.33	6.44	0.00	0.444	0.230
Matched 8th Graders	45	24.43	4.44	7.69	0.00	0.447	0.277

Note: This table displays student demographics, prior year absence and suspension, and prior year EOG test scores for all students, students in tested grades at the ECU Community School (3-4) and The Catamount School (6-8), and matched comparison sample students. The Evaluation Team used propensity score analyses to match laboratory school students to more comparable students. Not all laboratory school students, particularly those at The Catamount School, have prior-year data—14/18 6th graders, 17/21 7th graders, and 9/12 8th graders at The Catamount School have prior year absences, suspensions, and test score data.

Appendix A6: Additional Data from the Student Survey

Appendix Table A6.1: Laboratory School Students Motivation and Engagement with School

	Responses	No/Mostly No	Sometimes	Yes/Mostly Yes
Appalachian Academy at Middle Fork				
In this school I try to learn as much as I can	269	1.86	11.52	86.62
I care about the things we learn in school	142	1.41	7.75	90.85
I have done my best quality work in this school	141	2.84	9.22	87.94
This school is a happy place for me to be	269	4.09	19.33	76.58
ECU Community School				
In this school I try to learn as much as I can	79	3.80	10.13	86.08
I care about the things we learn in school	45	0	11.11	88.89
I have done my best quality work in this school	45	6.67	11.11	82.22
This school is a happy place for me to be	79	8.86	8.86	82.28
Moss Street Partnership School (UNCG)				
In this school I try to learn as much as I can	313	0.96	11.18	87.86
I care about the things we learn in school	141	2.13	14.89	82.98
I have done my best quality work in this school	140	2.14	23.57	74.29
This school is a happy place for me to be	315	9.52	22.54	67.94
D.C. Virgo Preparatory Academy (UNCW)				
In this school I try to learn as much as I can	145	3.45	17.24	79.31
I care about the things we learn in school	119	4.20	23.53	72.27
I have done my best quality work in this school	118	5.93	29.66	64.41
This school is a happy place for me to be	145	31.03	27.59	41.38
The Catamount School (WCU)				
In this school I try to learn as much as I can	53	3.77	15.09	81.13
I care about the things we learn in school	54	7.41	25.93	66.67
I have done my best quality work in this school	54	5.56	20.37	74.07
This school is a happy place for me to be	54	27.78	27.78	44.44

Note: This table displays laboratory school students' responses to a set of items on their motivation for learning and their engagement with school. Students completing the early elementary grades survey answered two of these items—'try to learn as much as I can' and 'school is a happy place for me'. Students completing the upper elementary grades survey answered all four items.

Appendix Table A6.2: Laboratory School Students Perceptions of School Climate

	Responses	No/Mostly No	Sometimes	Yes/Mostly Yes
Appalachian Academy at Middle Fork				
This school feels like a safe place to me	270	2.59	12.96	84.44
In this school I am treated fairly	266	6.39	21.80	71.80
I feel like I belong at this school	141	3.55	15.60	80.85
ECU Community School				
This school feels like a safe place to me	78	6.41	6.41	87.18
In this school I am treated fairly	78	5.13	19.23	75.64
I feel like I belong at this school	44	11.36	18.18	70.45
Moss Street Partnership School (UNCG)				
This school feels like a safe place to me	310	8.39	16.77	74.84
In this school I am treated fairly	305	12.13	25.57	62.30
I feel like I belong at this school	142	12.68	25.35	61.97
D.C. Virgo Preparatory Academy (UNCW)				
This school feels like a safe place to me	145	22.76	28.28	48.97
In this school I am treated fairly	139	23.02	28.06	48.92
I feel like I belong at this school	118	22.88	40.68	36.44
The Catamount School (WCU)				
This school feels like a safe place to me	54	20.37	29.63	50.00
In this school I am treated fairly	54	12.96	18.52	68.52
I feel like I belong at this school	53	22.64	20.75	56.60

Note: This table displays laboratory school students' responses to a set of items on their perceptions of school climate. Students completing the early elementary grades survey answered two of these items—'school feels like a safe place to me' and 'in this school I am treated fairly'. Students completing the upper elementary grades survey answered all three items.

Appendix Table A6.3: Student Perceptions of Laboratory School Academic Climate (Tripod 7Cs)

	Appalachian Academy	ECU Community School	Moss Street Partnership School (UNCG)	D.C. Virgo Preparatory Academy (UNCW)	The Catamount School (WCU)
Care	2.86	2.75	2.80	2.51	2.35
Confer	2.69	2.56	2.65	2.31	2.53
Captivate	2.67	2.66	2.59	2.21	2.08
Clarify	2.82	2.79	2.79	2.61	2.45
Consolidate	2.77	2.80	2.67	2.52	2.39
Challenge	2.75	2.78	2.71	2.61	2.65
Classroom Management	2.25	2.29	2.22	1.95	1.90
Student Responses	271	79	321	156	55

Note: This table presents laboratory school students' responses to a set of survey items on their perceptions of academic climate. Specifically, this table shows aggregate data for each 7C construct. Ratings range from 1-3, where 1 is unfavorable, 2 is neutral, and 3 is favorable.

Appendix Table A6.4: Comparing School Experiences

When you think about this school year compared to last school year, in which year was your school better at…	Responses	Last Year Was Better	Comparable	This Year is Better
Appalachian Academy at Middle Fork				
Helping students behave	228	14.04	27.63	58.33
Helping you learn more	228	5.70	31.14	63.16
Having teachers that really care about you	229	11.35	34.50	54.14
ECU Community School—Students New to the Laboratory School in 2018-19				
Helping students behave	43	16.28	30.23	53.49
Helping you learn more	42	23.81	23.81	52.38
Having teachers that really care about you	43	18.60	32.56	48.84
ECU Community School—Students Returning to the Laboratory School in 2018-19				
Helping students behave	22	13.64	50.00	36.36
Helping you learn more	22	4.55	50.00	45.45
Having teachers that really care about you	22	22.73	59.09	18.18
Moss Street Partnership School (UNCG)				
Helping students behave	255	19.22	35.29	45.49
Helping you learn more	245	11.43	34.29	54.29
Having teachers that really care about you	251	13.94	37.45	48.61
D.C. Virgo Preparatory Academy (UNCW)				
Helping students behave	139	37.41	38.85	23.74
Helping you learn more	140	23.57	40.00	36.43
Having teachers that really care about you	141	25.53	47.52	26.95
The Catamount School—Students New to the Laboratory School in 2018-19				
Helping students behave	19	5.26	42.11	52.63
Helping you learn more	19	15.79	21.05	63.16
Having teachers that really care about you	19	5.26	26.32	68.42
The Catamount School—Students Returning to the Laboratory School in 2018-19				
Helping students behave	34	29.41	47.06	23.53
Helping you learn more	34	29.41	50.00	20.59
Having teachers that really care about you	34	29.41	44.12	26.47

Note: This table displays student responses to survey items asking students to compare their educational experiences in 2018-19 to their educational experiences in 2017-18.

Appendix A7: Tripod 7 Cs Survey Items

Care

- My teacher is nice to me when I ask questions.
- My teacher in this class makes me feel that he/she really cares about me. [UE]
- I like the way my teacher treats me when I need help.

Confer

- My teacher wants us to share our thoughts. [UE]
- Students speak up and share their idea about class work. [UE]
- My teacher is a very good listener when kids talk to her/him. [EE]

Captivate

- In this class, learning is slow, boring, and not much fun. Do you agree?* [UE]
- School work is interesting. [UE]
- I like the ways that we learn things in this class. [UE]
- I like the things that we are learning in this class. [EE]

Clarify

- My teacher checks to make sure we understand what he/she is teaching us. [UE]
- When he/she is teaching us, my teacher asks us whether we understand.
- My teacher knows when the class understands and when we do not. [UE]
- In this class we learn to correct our mistakes.
- My teacher is very good at explaining things.

Consolidate

- My teacher takes time to help us remember what we learn.
- To help us remember, my teacher talks about things we already learned.
- My teacher takes the time to summarize what we learn each day. [UE]
- In this class we learn a lot almost every day.

Challenge

- In our class it is okay to stop trying.* [UE]
- When something is hard for someone, my teacher still makes them try.
- My teacher makes everybody work hard. [UE]
- My teacher makes us think hard about things we read. [UE]
- My teacher makes us explain our answers—why we think what we think.
- My teacher makes sure that I try to do my best. [EE]

Classroom Management

- Our class stays busy and does not waste time.
- My classmates behave the way my teacher wants them to.
- Students behave so badly in this class that it slows down our learning.* [UE]
- Everybody knows what they should be doing in this class. [UE]

Survey items with a * are negatively worded items; the Evaluation Team reverse coded them for analyses
[UE] indicates that the item is only on the upper elementary survey
[EE] indicates that the item is only on the early elementary survey