



Teacher Workforce Profile in South Carolina for 2020-2021

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EDUCATOR WORKFORCE PROFILE



RESEARCH TEAM

Angela Starrett, Ph.D.

Steve Barth

Jungsun Go

University of South Carolina

In partnership with the Yvonne & Schuyler Moore
Child Development Research Center

SC TEACHER provides comprehensive research about South Carolina's educator workforce. We are expanding a robust statewide data network to report results that will inform policy and practice.

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Educator Workforce Profile

+ HIGHLIGHTS

The South Carolina Teacher Education Advancement Consortium through Higher Education Research (SC TEACHER) Center of Excellence was commissioned in 2018 to examine the broad landscape of teacher preparation, recruitment, and retention in South Carolina. The first teacher workforce profile report was published in September 2020, drawing upon statewide education data from the 2018-2019 academic year to examine key demographics of the teachers across our state, with consideration of extant factors such as the geographic context of the districts (urban or rural) and average poverty level (lower or higher poverty) within the school. This report utilized statewide educational data from the 2020-2021 academic year to draw comparisons with the United States and the 2020 workforce profile report. This work explored how teacher demographics vary across the school's location (city, suburb, town, rural) and the school's percentage of students in poverty. This report also examined variations in the teacher workforce by combinations of location and schools with the highest percentage of students in poverty.

Comparisons showed that South Carolina has more teachers that are Black, female, and have advanced degrees but fewer Hispanic teachers than the national U.S. teacher workforce. The 2020-2021 data demonstrated that South Carolina schools in towns have the highest percentage of teachers that are Black and have international certification and the fewest percentage of teachers that are White and National Board Certified, and the fewest numbers of teachers scoring "Exemplary" on the Student Learning Objective (SLO) portion of the teaching evaluation compared to schools in other areas. Suburban schools exhibited opposite trends, with the lowest percentage of teachers that are Black and have alternative or international certification and the highest percentage of teachers that are White and National Board Certified.

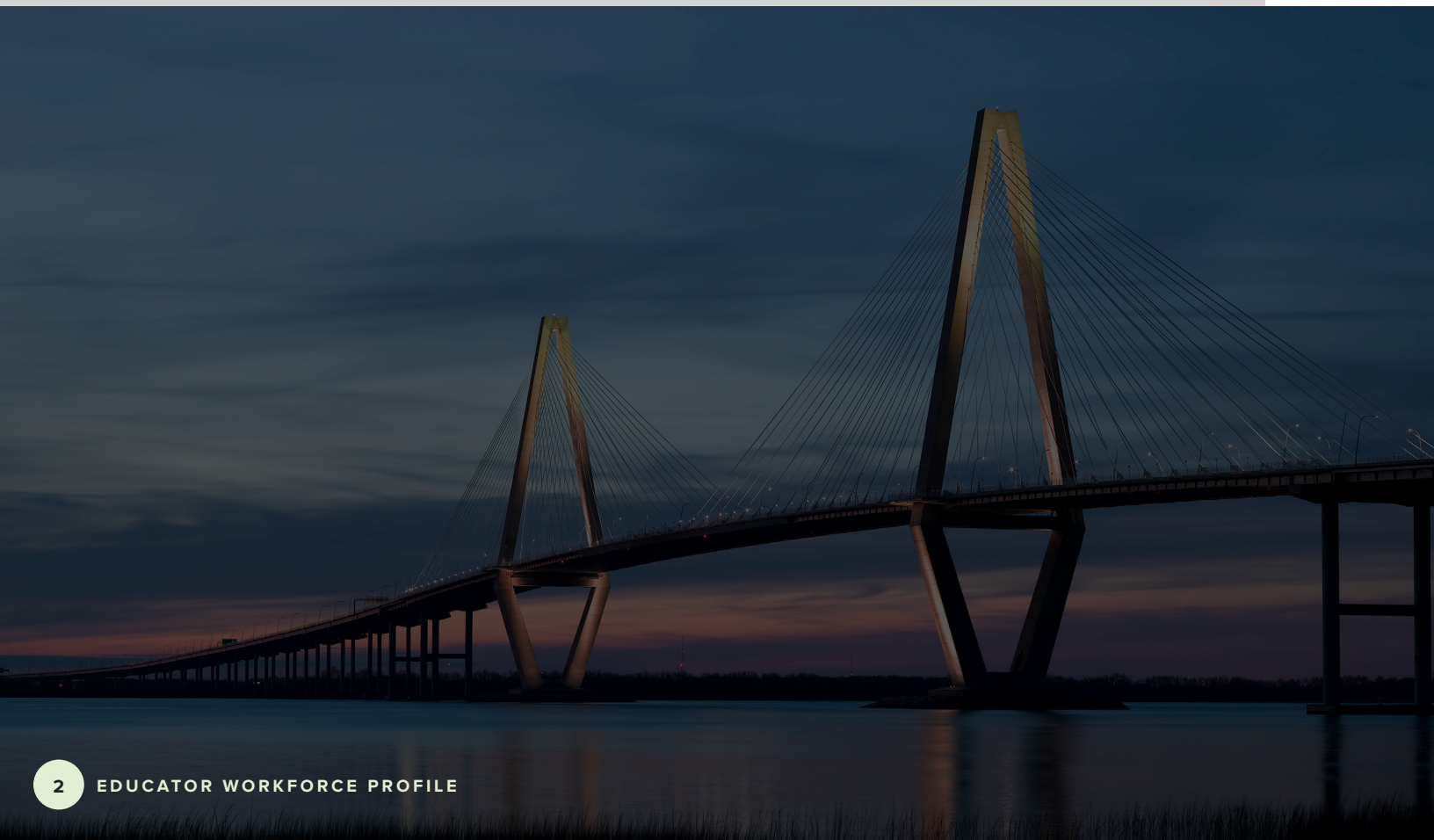
Rural schools employed the greatest percentage of teachers with alternative certification. Results also revealed that schools in the highest quartile of poverty had more teachers that were Black, female, and had alternative or international certification with fewer teachers that were White, scored "Met" on the Assisting, Developing, and Evaluating Professional Teaching (ADEPT) evaluation; and scored "Exemplary" on the SLO portion of the teaching evaluation. These trends were reversed for the schools in the lowest quartile of poverty.

Additionally, there were some differences between geographic locations when only considering the highest-poverty schools, though these were much smaller than the differences between poverty levels. However, rural high-poverty schools had more Black teachers and fewer White teachers and scored "Exemplary" on the SLO portion of the teaching evaluation compared to high-poverty schools in cities, suburbs, and towns. Both town and rural high-poverty schools had a higher percentage of teachers with international certification and total years of teaching experience compared to high-poverty schools in cities and suburbs. Conversely, suburban high-poverty schools had fewer Black teachers, more White teachers, the lowest percentage of teachers with alternative certification, and the highest percentage of teachers with National Board Certification compared to high-poverty schools in cities, towns, and rural communities. Further research is needed to understand the implications of these differences on student and school performance, as well as teacher recruitment, support, and retention.

+ INTRODUCTION

Based on the need to stimulate teacher recruitment and improve retention in South Carolina, in 2018 the South Carolina Commission on Higher Education provided funding for the South Carolina Teacher Education Advancement Consortium through Higher Education Research (SC TEACHER) in the College of Education at the University of South Carolina (USC). The South Carolina state Legislature approved additional funding for SC TEACHER during the 2022 legislative session to expand its continued development and deployment of a state-centric, longitudinal database system to understand statewide issues and best practices for establishing protocols and maintaining a data infrastructure necessary to answer key questions posed by policymakers and practitioners.

SC TEACHER continues to develop its longitudinal database of state educational-related data to contribute to a deeper understanding of teacher preparation, recruitment, and retention within South Carolina.



One of the first steps in doing so is to examine the landscape of the teacher workforce in the state. In 2020, SC TEACHER released its first profile of the South Carolina teacher workforce based on data from the 2018-2019 academic year (Dickenson et al., 2020). In this initial teacher workforce profile report, comparisons to national data showed South Carolina had more teachers that were Black, female, and had advanced degrees; fewer Hispanic teachers; and a lower average teacher salary. Compared to urban districts, rural districts employed teachers with more years of teaching experience and higher percentages that were international and had lower teacher performance on the assessment portion of the state teaching evaluation. Compared to low-poverty schools, high-poverty schools had more teachers that were Black and international, fewer teachers that were White and National Board-certified, and lower teacher salaries.

The primary focus of the current report was to update the 2018-2019 profile of South Carolina's teacher workforce using data from the 2020-2021 academic year. We revisited comparisons to provide a current view of the South Carolina teacher workforce and how those fit within national trends. In this updated work, we took a more granular approach in examining both geographic locale and poverty. As such, this report summarizes information on key variables for the South Carolina teacher workforce from the 2020-2021 school year by school locale (i.e., city, suburb, town, rural) and quartile for pupils-in-poverty (PIP), where the PIP rate represents the percentage of students living in poverty enrolled at the school.

Concerning school poverty, we considered low poverty as the school being in the lowest 25% or quartile of PIP rate across schools in South Carolina, moderate poverty as the school being in the middle 50% of PIP rate, and high poverty as the school being in the top 25% of PIP rate.

Lastly, we considered the profile of South Carolina's teacher workforce by geographic locale within each of the three aforementioned poverty categories.





TEACHER DEMOGRAPHICS

Most teachers in the United States are female (~77%), particularly in elementary grades, K-5th (NCES, 2020). Teacher gender has been associated with student performance and career decisions both in primary and secondary schools (Antecol et al., 2015; Dee, 2007; Holmlund & Sund, 2008; Muralidharan & Sheth, 2016; Paredes, 2014; Winters et al., 2013). Research suggests that teacher gender may affect students in several ways, including serving as role models for students of the same gender and through teacher biases that are correlated with gender (e.g., teachers may assume that boys have stronger math abilities and girls have stronger verbal abilities) (Paredes, 2014); suggesting that children may associate teaching as a profession with women. However, recent research indicates that teacher gender effects become insignificant once teacher behaviors and attitudes are considered. For example, teacher beliefs about male and female ability in math and science, as well as how teachers treat boys and girls in the classroom, matter more than the teacher's own gender (Sansone, 2017).

Despite calls to diversify the workforce, most teachers in the United States are White (~79%), followed by Hispanic (~9%), Black (~7%), and Asian (~2%) (NCES, 2020). Literature suggests that a match between the race/ethnicity of teachers and students can lead to improved achievement, especially for Black children (Redding, 2019). For Black students, the influence of student-teacher racial matching was strongest in elementary schools, suggesting that Black teachers may play a critical role in childhood in creating a culturally relevant instructional climate. Research also supports the benefits of student-teacher racial/ethnic matching on other student outcomes. Black and Hispanic students are rated as being less frequently disruptive in class when assigned to a Black or Hispanic teacher, respectively, although the evidence base is strongest for Black students with Black teachers. Data also suggest Black and Hispanic students' academic abilities are rated more positively when assigned to teachers of the same race/ethnicity (and less positively when assigned to teachers of another race/ethnicity) (Redding, 2019).



INFORMATION ON TEACHER PREPARATION

No Child Left Behind (NCLB; U.S. Department of Education, 2002) mandated rigorous accountability measures to ensure that all children develop proficiency in math and reading and that teachers are highly qualified to teach in their certification area. During the reauthorization of NCLB, its successor, the Every Student Succeeds Act (ESSA), eliminated the requirement of teacher qualification in their certification area. Excluding this provision has led to poor student proficiency being attributed to the scarcity of teachers highly qualified in their area of certification. The requirement of a strong teacher in every classroom is still one of several imperative elements thought to contribute to the success of students (Nye et al., 2004; Stronge et al., 2011). For example, Nye and colleagues (2004) found significant differences between teachers' quality and the ability to produce student achievement gains. Additionally, studies of teacher effects at the classroom level have indicated that differential teacher effectiveness is a robust determinant of differences in student

learning (Stronge et al., 2011). Prior research revealed that teacher preparation is one of the strongest associations with student achievement in reading and math, regardless of socioeconomic and language status (Darling-Hammond, 2000). However, research is mixed on how to best provide high-quality training to teachers. While some researchers advocate for easing entry into teaching as a means to attract strong candidates (U.S. Department of Education, 2002), others suggest investing in high-quality teacher preparation programs (National Commission on Teaching and America's Future, 2006). Although the present literature base confirms that teacher quality is an essential factor for student success, there is limited research on the relationship between specific teacher credentials and their effectiveness. In this report, we consider several variables associated with teacher preparation for South Carolina teachers, including degree level, alternative certification, international certification, and National Board Certification.

POSTBACCALAUREATE DEGREE

The percentage of public school teachers holding a postbaccalaureate degree (i.e., a master's, education specialist, or doctoral degree) has steadily increased from 47% in 2000 to 58% in 2018 (NCES, 2020). Approximately 55% of elementary school teachers and 61% of secondary school teachers held a postbaccalaureate degree in 2017-18. Previous studies have shown mixed results on the relationship between the teacher's educational attainment and student achievement. Clotfelter and others (2006) demonstrate a positive association between teachers holding advanced degrees and student performance in elementary and middle school. Additionally, Rowan and others (2010) show a relationship between teachers with subject-specific advanced degrees (i.e., teaching in a subject area that matched both their bachelor's and master's degrees) and increased student achievement for high schoolers. However, some studies find either no discernable relationship or even a negative association between teachers holding advanced degrees and student achievement (Eberts & Stone, 1984; Rowan et al., 2002).

ALTERNATIVE CERTIFICATION

Often to combat teacher shortages, states also offer alternative certification programs for individuals with at least a bachelor's degree from different educational backgrounds. South Carolina has ten separate alternative certification programs¹ that allow potential educators to meet eligibility requirements and obtain certification to teach in public schools. Nationwide, approximately 18% of public school teachers have entered teaching through an alternative route to certification (NCES, 2018). Research in education broadly indicates a lack of consistency within the current alternative certification pathways and a lack of consistent and/or positive influence on student outcomes within alternatively certified teachers (National Research Council, 2010). While teachers who participated in Teach for America have been linked to higher student achievement (Glazerman et al., 2006; Penner, 2021), most studies have shown no effects of alternative program attendance on student performance (Constantine et al., 2009) and other student outcomes (e.g., attendance and disciplinary incidents; Glazerman et al., 2006) between traditionally and alternatively certified teachers.

The traditional pathway to teacher induction requires the completion of an educator preparation program through an accredited college or university.

¹ South Carolina approved alternative route programs include Alternative Pathways to Educator Certification (APEC) Program, American Board, Carolina Collaborative for Alternative Preparation (CarolinaCAP), Converse Alternative Certification – Art Education (CACAE), Greenville Alternative Teacher Education (GATE), Program of Alternative Certification for Educators (PACE), TeachCharleston Alternative Certification Program, Teach for America (TFA), and Teachers of Tomorrow (ToT).



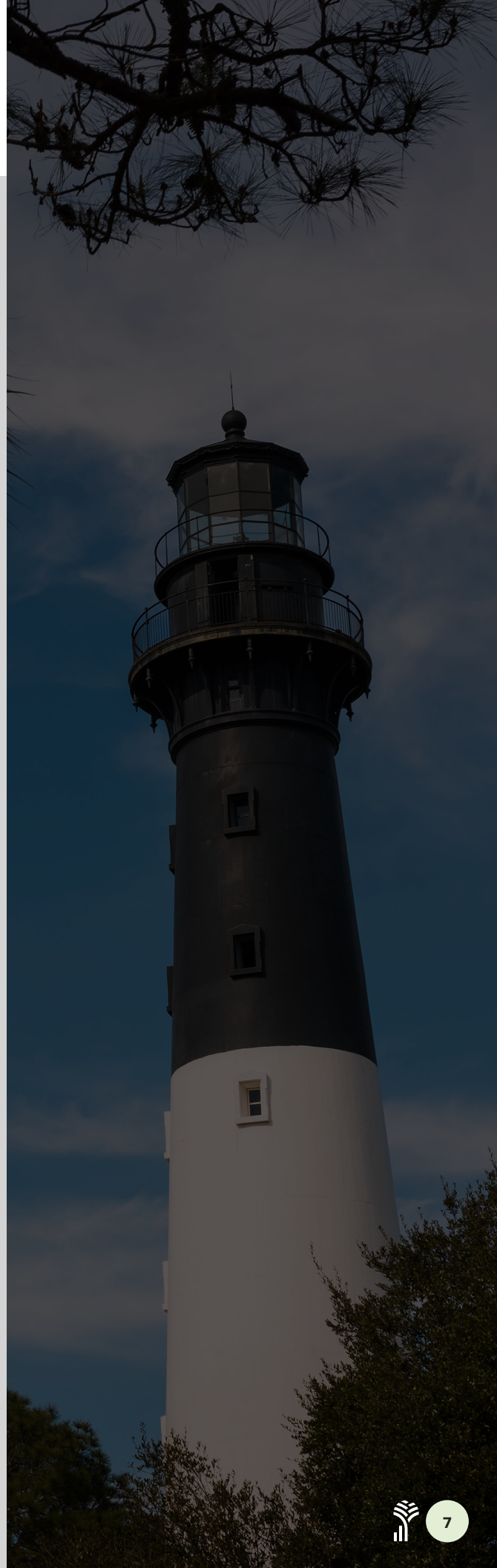
INTERNATIONAL TEACHER CERTIFICATION

In partnership with the South Carolina Department of Education (SCDE), school districts in South Carolina can host international teachers who may provide students with programs that are linguistically and culturally rich to better prepare them for future success in their personal, academic, and professional lives. The SCDE is a designated sponsor of an Exchange Visitor Program by the U.S. Department of State and sponsors teachers from other countries to teach in South Carolina through the International Visiting Teachers Program. Teachers are certified under the International Certificate, which is a short-term (three years) certificate for teachers from other countries. This program is used by some districts as a means to address teacher shortages.

NATIONAL BOARD CERTIFICATION

The National Board for Professional Teaching Standards (NBPTS) is a professional organization that provides national certification to teachers who apply for and meet the Board's standards for performance for accomplished educators. Just under 3% of the nation's teachers are National Board Certified, with North Carolina, Florida, Washington, South Carolina, and California representing the majority (NBPTS, 2022). States often display extensive interest in NBPTS as a marker of teacher quality, but research on teacher effectiveness is inconsistent.

Longitudinal studies with robust samples have demonstrated that the difference in value-added to student achievement between NBCTs and non-NBCTs is only 0.01 - 0.03 standard deviations in achievement scores. These results correspond to approximately 20-30% of the returns to the first five years of teaching experience or about 2-10% of annual achievement gains in the elementary years (Attebury et al., 2013; Bloom et al., 2008; Cowan & Goldhaber, 2016; Harris & Sass, 2011; Wisall, 2013).



TEACHING EXPERIENCE

The 2020 report from the National Center for Education Statistics (NCES) provided national averages for years of teaching experience and salaries by degree level. Based on data for the 2017-2018 school year, about 9% of the teachers had less than three years of teaching experience, 28% had between three and nine years of experience, 40% had between 10 and 20 years of experience, and 23% had more than 20 years of experience. In addition, the average salary was \$52,910 for teachers with a bachelor's degree, \$66,940 for those with a master's degree, \$70,540 for those with an education specialist degree or certificate, and \$73,730 for those with a doctoral degree (NCES, 2020).

TEACHER EVALUATION SYSTEM IN SOUTH CAROLINA

South Carolina utilizes the expanded Assisting, Developing, and Evaluating Professional Teaching (ADEPT) formal evaluation system that includes multiple sources of evidence that reflect a teacher's performance relative to each of the South Carolina Teaching Standards (SCTS) Indicators. At a minimum, the evidence incorporates lesson plans, classroom observations, reflections on instruction and student learning, a professional review, and the Student Learning Objective (SLO) and professional growth and development plan.

The SCTS 4.0 rubric is based on the performance standards designed and validated by the National Institute for Excellence in Teaching (NIET). The SCTS 4.0 includes four domains: instruction, planning, environment, and professionalism. There are 12 indicators of instruction, three indicators of planning, four indicators of environment, and four indicators of professionalism. Each indicator is rated using a 4-point scale (1 - Unsatisfactory; 2 - Needs Improvement; 3 - Proficient; 4 - Exemplary).

The SLOs, a measure of teachers' contributions to student learning, are used as an artifact to support teachers' ratings based on the SCTS indicators. The SLOs evaluation rubric has four performance levels ranging from 1-Unsatisfactory to 4-Exemplary. For example, a teacher obtains 4 points (Exemplary) when they set up rigorous goals for students, use appropriate assessments to monitor student progress, strategically revise instruction, and have growth targets met for 90% to 100% of their students². Conversely, a teacher receives 1 point (Unsatisfactory) when they inconsistently use assessments, fail to monitor progress, fail to adjust instruction based on progress monitoring data, and have growth targets met for 0% - 50% of their students. Teachers' SLOs scores are used as a modifier for the teacher's overall evaluation ratings. If a teacher earns an SLO score of 4 points, there will be an increase of 0.25 points in the teacher's overall evaluation rating. If a teacher earns an SLO score of 1 point, there will be a decrease of 0.25 points in the teacher's overall evaluation rating. If a teacher obtains an SLO score of 2 or 3 points, there will be no change in the teacher's overall evaluation ratings.

KEY COMPARISONS ACROSS SOUTH CAROLINA TEACHERS

This report provides key comparisons between South Carolina's teacher workforce and characteristics of a national sample collected by NCES. The most recent NCES report from the 2017-2018 school year includes percentages of representation across multiple demographic and teacher preparation variables



GEOGRAPHIC CONTEXT: COMPARING CITIES, SUBURBS, TOWNS, AND RURAL SCHOOLS

South Carolina includes a mix of city, suburban, town, and rural schools. The locale classification is a census-defined geographic indicator that describes the type of area where the school is located (NCES, 2006). Each of the four types³ (i.e., city⁴, suburban⁵, town⁶, and rural⁷) is divided into three subtypes based on population size or proximity to populated areas. In South Carolina, poor academic achievement is concentrated in rural schools. According to the Rural School and Community Trust's "Why Rural Matters 2019" report, South Carolina, with over 40% of the schools classified as rural, ranked in the top 10 in terms of highest-priority states in rural education (Showalter et al., 2019). More than 20% of the nearly 120,000 rural students in South Carolina live in poverty, and households in rural communities narrowly earn twice the poverty level on average. South Carolina's rural schools have some of the highest enrollment rates for students of color across the United States, and instructional spending and teacher salaries are well below national averages. Rural students' performance on standardized math and reading tests are among the lowest in the United States, and the gaps in student achievement between

rural and non-rural students in South Carolina are among the nation's widest (Showalter et al., 2019). Research on teacher retention across geographic locales is mixed. Some researchers have shown lower teacher retention rates in urban schools (Brill & McCartney, 2008; Papay et al., 2017), while others have demonstrated lower retention in rural schools (Miller, 2012; Monk, 2007). Still, others have found no correlation between geographic locale and teacher retention rates (Carver-Thomas & Darling-Hammond, 2017; Holme et al., 2018). Somewhat related to geographic context, research has indicated that smaller schools lost teachers, specifically historically underrepresented minorities, at higher rates than larger schools (Carver-Thomas & Darling-Hammond, 2017; Ingersoll et al., 2019). Given the disagreement within the extant literature on teacher retention and the significantly lower academic achievement of rural students in South Carolina, we are interested in comparing teacher variables by the geographic locale of the school.

² For 2020-21, 25.58% of districts (n = 22) used a locally developed SLO rubric.

³ Urban area boundaries are defined from qualifying census tracts and census blocks. To qualify as an urban area, the territory must encompass at least 2,500 people. Urban areas that contain 50,000 or more people are designated as Urbanized Areas (UAs); urban areas that contain at least 2,500 and less than 50,000 people are designated as Urban Clusters (UCs). Rural encompasses all population, housing, and territory not included within an urban area.

⁴ City-Large is a territory inside a UA and inside a Principal City with a population of 250,000 or more. City-Midsize is a territory inside a UA and inside a Principal City with a population of less than 250,000 and greater than or equal to 100,000. City-Small is a territory inside a UA and inside a Principal City with a population of less than 100,000.

⁵ Suburban-Large is a territory inside a UA and outside a Principal City with a population of 250,000 or more. Suburban-Midsize is a territory inside a UA and outside a Principal City with a population of less than 250,000 and greater than or equal to 100,000. Suburban-Small is a territory inside a UA and outside a Principal City with a population of less than 100,000.

⁶ Town-Fringe is a territory that is inside a UC that is less than or equal to 10 miles from a UA. Town-Distant is a territory inside a UC that is more than 10 miles and less than or equal to 35 miles from a UA. Town-Remote is a territory that is inside a UC that is more than 35 miles from a UA.

⁷ Rural-Fringe is a Census-defined rural territory that is less than or equal to 5 miles from a UA, as well as a rural territory that is less than or equal to 2.5 miles from a UC. Rural-Distant is a Census-defined rural territory that is more than 5 miles but less than 25 miles from a UA, as well as a rural territory that is more than 2.5 miles but less than 10 miles from a UC. Rural-Remote is a Census-defined rural territory that is more than 25 miles from a UA and is also more than 10 miles from a UC.



SOCIOECONOMIC CONTEXT: COMPARING POVERTY LEVELS OF SCHOOLS

South Carolina has a relatively high poverty rate (approximately 19%) for children compared to other states (approximately 14.5%), using the federal government’s definition of poverty (i.e., a family’s total income is below the amount deemed to be sufficient to purchase food, shelter, clothing, and other essential goods and services) (U.S. Department of Agriculture, 2022). Within the state, the poverty rate for children ranges from 10.5% in York County to 30.3% in Allendale County (U.S. Department of Agriculture, 2022). Poverty can negatively impact students in multiple ways during K-12 education and beyond. Students living in poverty often have fewer resources at home to complete homework and study. In particular, many impoverished families lack access to computers and high-speed internet. Parents of these students often work long hours or multiple jobs, resulting in less availability to assist their children with schoolwork. Additionally, in high-poverty schools, resources are often scarce. School districts with the highest rates of poverty often receive less state and local funding per student than those with the lowest rates of poverty (Morgan & Amerikaner, 2018). This can leave high-poverty schools with limited budgets to address hiring educators, updating resources for

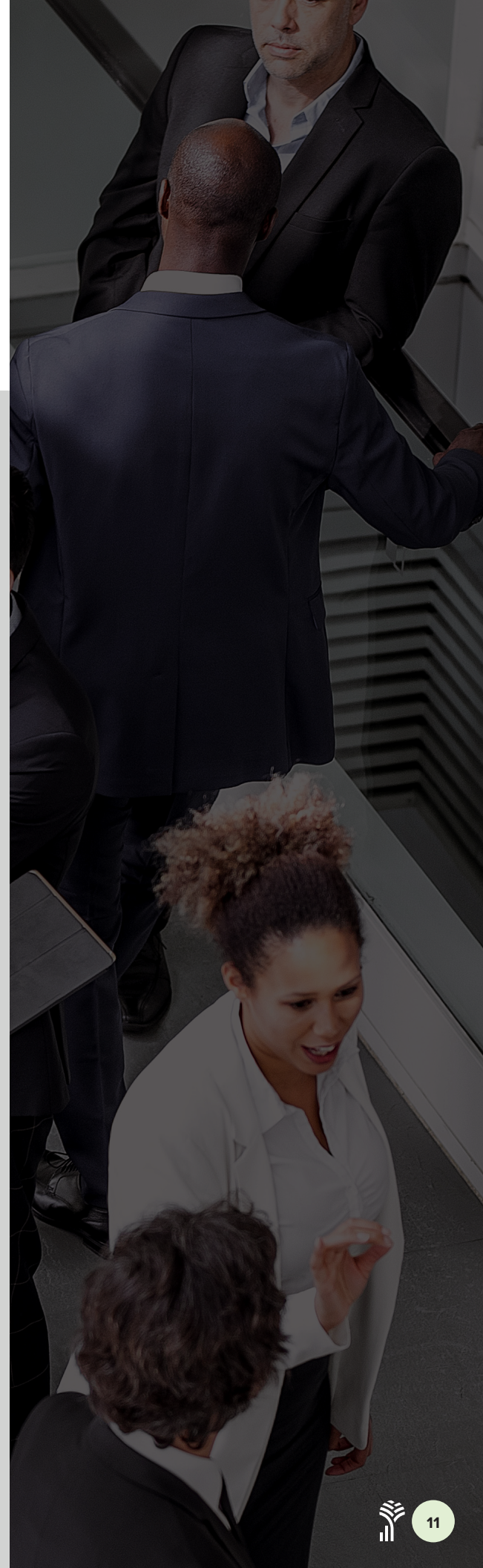
students, preparing students for postsecondary education or the workforce, providing professional development for teachers, and dealing with infrastructure. High-poverty schools also tend to show instructional gaps. Federal data show that low-income students are consistently more likely to be taught by less credentialed and novice teachers (Garcia & Weiss, 2019). Research also indicates that many teachers in high-poverty schools are inexperienced and often less effective than their more experienced peers, who are often recruited by higher-income districts. The lack of quality instruction serves to further divide academic achievement levels for students in high-poverty schools from students in schools with lower rates of poverty. Additionally, the school poverty level is negatively associated with teacher retention. Teachers are more likely to leave schools with high-poverty populations (Smith & Ingersoll, 2004), and teacher turnover rates in Title I schools are nearly 50% greater than those in non-Title I schools (Carver-Thomas & Darling-Hammond, 2019). Given the established relationship between poverty and educator quality, we wish to compare teacher variables with the percentage of children living in poverty at the school level.

RESEARCH QUESTIONS

Given the status of the educator workforce and the unique conditions in place in South Carolina, the goal of this report is to describe the teacher workforce for the 2020-2021 academic year. This description can allow for comparisons within varying contexts present in South Carolina and in contrast to the nation.

This paper addresses the following research questions:

- What are the characteristics of the South Carolina teaching population considering personal demographics, teacher preparation and experience, and teacher evaluation results? How do these characteristics compare with teachers nationally for available variables?
- How do teacher characteristics (personal demographics, teacher preparation and experience, and teacher evaluation results) compare between city, suburb, town, and rural schools in South Carolina?
- How do teacher characteristics (personal demographics, teacher preparation and experience, and teacher evaluation results) compare between relatively low-, moderate-, and high-poverty schools in South Carolina?
- How do teacher characteristics (personal demographics, teacher preparation and experience, and teacher evaluation results) compare between locales within each level of poverty (low, moderate, and high) in South Carolina?





Data Sources and Methods



Data Sources

The 2020-21 South Carolina school report card indicates that there were 53,689 teachers employed in public schools across the state. A file from the Professional Certified Staff (PCS) system was obtained to examine data related to employee demographics, certification status, education, and experience for certified staff members employed in South Carolina during the 2020-2021 school year. The PCS file also includes data on certificate numbers, employment locations, and positions for certified staff members in South Carolina. A separate file with summary information on educators' performance evaluations was also provided, which included information on ADEPT and Student Learning Objectives (SLOs) for the 2020-2021 years. Identifiers provided in the evaluation file include certificate numbers and educator names. The PCS file included 53,569 records. After duplicate records were removed, there were 53,053 educators in the file. Merging the evaluation file with the PCS file using certificate number, information about ADEPT, and SLO performance data, 50,968 unique records were available; this sample of educators was used for the current report.

The latest national summary of teachers' characteristics and trends available from the National Center for Educational Statistics (NCES) was from the 2017-2018 school year (<https://nces.ed.gov/fastfacts/display.asp?id=28>). We used available NCES data to provide a comparison with the data from the 2020-21 South Carolina sample of teachers.

Methods

Values of demographic variables for the South Carolina sample were calculated and compared to the comparable data from national figures. For all categorical variables, the percentages of teachers with the trait of interest were computed at the individual teacher level. For the number of years of experience as a teacher, the average years of teaching was computed across individual teachers. These demographic variables were then compared by location and poverty level. For location, schools were categorized according to census-defined geographic designations (city, suburb, town, or rural) assigned through NCES (NCES, 2021). Concerning student poverty status, the South Carolina Department of Education classifies a child as living in poverty if the student is enrolled in Medicaid, Temporary Assistance for Needy Families (TANF) and/or enrolled in the Supplemental Nutrition Assistance Program (SNAP), or in the foster system. The percentage of pupils-in-poverty (PIP) at the school level was identified by the South Carolina Department of Education.

Using the SCDE PIP designation, all schools in South Carolina were then ranked, and quartiles were obtained to create a poverty designation. Teachers at schools in the upper 25% of South Carolina schools in terms of PIP were categorized as teaching in high-poverty schools, and teachers at schools in the lowest quartile of PIP were categorized as teaching in low-poverty schools. Teachers at schools in the middle (25% - 75% of PIP rankings) were categorized as teaching at moderate-poverty schools. For some schools, the location code or PIP could not be obtained. In such instances, the teachers at those schools were not included in the analyses comparing across locations and/or poverty levels due to missing data.

Data Analysis

Separate analyses were conducted to compare teacher demographic variables across school location (city/suburb/town/rural) and poverty level (low/moderate/high). Chi-square tests of proportions were conducted to determine if there was an overall difference in percentages across locations, with an alpha of .05 used for testing. After examination of the omnibus hypothesis, if an overall difference in the percentages was found, individual tests comparing percentages between all possible group pairings for a variable were conducted. For example, when considering the percentage of teachers who met the ADEPT evaluation standard, teachers meeting ADEPT at city schools were compared separately to teachers meeting the ADEPT standard from suburban schools, town schools, and rural schools; teachers meeting ADEPT at suburban schools were compared to city, town, and rural teachers, etc. This allowed comparison where each characteristic combination was used as the baseline for comparison. The Holm-Bonferroni method was used to adjust p-values of these pairwise-comparisons so that false significant inferences could be avoided. For the number of years teaching variable, the means compared across location and poverty were tested through an ANOVA omnibus test followed by all possible pairwise comparisons in the same fashion noted above. Lastly, an effect size for all statistically significant comparisons was computed using Cohen's *h* (difference in proportions) and Cohen's *d* (difference in means) statistics. According to Cohen (1988), effect size values of 0.2 are considered small, 0.5 are considered medium, and values of 0.8 are considered large differences. We also note that our focus is on describing differences in terms of effect size with a de-emphasis on significance, as we are using the entire population of teachers in South Carolina (i.e., census) and are not inferring to a wider population of teachers.

+ RESULTS

Concerning the 2020-21 teaching workforce, positions held by teachers included special education (itinerant, self-contained, and resource), pre-kindergarten, kindergarten, classroom, and retired teachers. The majority (81%) were classroom teachers (i.e., 1st – 12th-grade teachers). Within the South Carolina population of teachers, 11% were special education teachers, 7% were pre-kindergarten or kindergarten teachers, and close to 1% were previously retired teachers who had returned to the classroom.

Table 1. Teaching Positions for SC Teachers in 2020-2021

Teaching Position	Frequency	Percent
Pre-Kindergarten (Child Development)	1,154	2.2
Kindergarten	2,507	4.7
Special Education (Itinerant)	160	0.3
Special Education (Self-Contained)	2,635	5.0
Special Education (Resource)	3,060	5.8
Classroom Teacher	43,174	81.4
Retired Teacher	363	0.7
Total	53,053	100.0

Descriptive Background Demographics

TEACHER POPULATION

We compared the demographic characteristics of the South Carolina teacher population to that of the United States (Table 2). Data on the teacher population in the United States came from the NCES database (2020). The majority (78%) of South Carolina teachers in the 2020-2021 school year were White, and 15% were Black. Less than 5% of the teachers were of other racial/ethnic backgrounds, and 2% of teachers' race/ethnicity was unknown. In comparison with national data, South Carolina had a higher percentage of Black teachers (15% vs. 7%), a lower percentage of Hispanic teachers (2% vs. 9%), and a similar percentage of White teachers (78-79%). Considering gender, 80% of South Carolina teachers were female, and 19% were male in the 2020-2021 school year. Nationally, 76% of teachers were female, meaning that the South Carolina workforce has roughly 4% more female teachers. Examining race/ethnicity and gender in combination, 60.9% of South Carolina teachers were White females, 14.5% were White males, 12.0% were Black females, and 2.8% were Black males in the 2020-2021 school year. Regarding teachers' academic degree, a higher percentage of South Carolina teachers (62.1%) had a postbaccalaureate degree (i.e., master's, education specialist, or doctorate) in comparison with the national data (58%).

Table 2. Comparison of State and National Teacher Demographic Variables (%)

Demographic Variable		SC (2020-2021)	US (2017-2018)
Gender	Female	80	76
	Male	19	24
	Not Reported	1	n/a
Race/Ethnicity	White	78	79
	Black	16	7
	Hispanic	2	9
	Asian	1	2
	Other	1	3
	Not Reported	2	n/a
Degree	Postbaccalaureate	62	58
	Not Postbaccalaureate	36	42
	Not Reported	2	n/a

Note. US data is from NCES, 2020

STUDENT POPULATION

While the teacher workforce, both in the United States and South Carolina, primarily consisted of White teachers, the population of students served was more diverse. The NCES (2020) reported that among the 50.7 million students enrolled in public elementary and secondary schools in Fall 2017, 24.1 million (47.5%) were White, 7.7 million (15.2%) were Black, 13.6 million (26.8%) were Hispanic, 2.8 million (5.5%) were Asian/Pacific Islander, and about 2.5 million (4.9%) were of two or more races or American Indian/Alaska Native. The racial demographics of students in South Carolina differ noticeably from the United States as a whole. According to the 2020-21 school year 180-day headcount of PK-12 students, 761,290 students were actively enrolled. Among them, roughly 48.7% were White, 32.6% were Black, 11.5% were Hispanic or Latino, 1.7% were Asian, and 5.5% were of two or more races, American Indian/Alaska Native or Pacific Islanders (South Carolina Department of Education, 2021). South Carolina has a much larger percentage of Black students compared to the United States as a whole. It is important to note that while South Carolina employs a higher percentage of Black teachers compared to the United States as a whole, the percentage of Black teachers (16% of all South Carolina teachers) is much lower than the percentage of Black students in South Carolina (32.6%).

Teacher Preparation

The majority (86.5%) of teachers had a professional certificate and about 6.6% had an initial certificate. Roughly 3.0% were certified to teach through alternative certification programs, and approximately 1.9% had international teaching certificates. Around 6.5% of South Carolina teachers in the 2020-2021 school year held National Board Certification.

EDUCATION LEVEL AND EXPERIENCE

Most teachers in South Carolina schools in the 2020-2021 school year had a postbaccalaureate degree (62.1%). According to NCES, this figure was 58% in 2017-2018 across the nation.

Table 3. *Certificate Class/Educational Attainment of SC Teachers in the 2020-2021 School Year*

Description	SC Frequency	SC Percentage	US Percentag (2017-2018)
Pre-Bachelor's Degree	10	0.0	2.7
Bachelor's Degree	15,600	29.4	39.3
Bachelor's Plus 18	3,673	6.9	n/a
Master's Degree	23,881	45.0	49.2
Master's Plus 30	7,965	15.0	n/a
Doctorate Degree	1,076	2.0	1.2
Not Reported	848	1.6	n/a
Total	53,053	100	

Note. NCES 2017-18 does not report educational attainment in terms of credit hours

South Carolina teachers in the 2020-2021 school year had an average of 14.1 years of experience as teachers, and 59.4% of teachers in South Carolina had at least 10 years of teaching experience. By comparison, 63% of teachers in the United States had 10 or more years of experience as teachers (NCES, 2020).

Teacher Evaluation Results

The South Carolina teacher evaluation data includes information about the type of evaluation model used to assess teachers, their contract status and hire status, and the results of their ADEPT and SLO evaluations. For the 50,968 teachers for whom evaluation data was matched to the PCS file, 88% were evaluated using the Expanded ADEPT (SCTS) model, and 11.6% were evaluated using locally developed models. Only two South Carolina districts (i.e., Florence 1 and Greenville) use a locally developed model. The increase in the use of locally developed models compared to the 2018-2019 SC TEACHER workforce report (Dickenson et al., 2020) reflects the approval of Florence 1's alternative, aligned model beginning in 2019-2020. The teacher evaluation system used in South Carolina was implemented based on teachers with different types of contracts. Teachers who have met the formal evaluation criteria set by the South Carolina State Board of Education, the requirements for annual-contract teachers set by the local board of trustees, and the requirements established by the State Board of Education for the professional teaching certificate are at the continuing-contract level. The majority (73.8%) of South Carolina teachers met these standards and were continuing-contract level. Teachers who are not eligible⁸ for a continuing contract may be employed under an annual contract; 12.9% of the teachers in the South Carolina workforce were employed with an annual contract. Teachers who possess a valid South Carolina pre-professional teaching certificate may be employed under an induction contract for up to three years; 7.2% of teachers in our state were induction teachers. Teachers who are eligible for induction or an annual contract but who are hired on a date that would cause their period of employment to be less than 152 days during the school year may be employed under a letter of agreement, and 2.6% of teachers were in this category (South Carolina Department of Education, 2018).

Table 4. *Evaluation Based on Contract Type and Forms of Evaluation*

Evaluation	Type	Frequency	Percentage
Contract Type	Continuing Contract	39,176	73.8
	Annual Contract	6,568	12.4
	Induction Contract	3,667	6.9
	Letter of Agreement	1,315	2.5
	No Contract Level	242	0.5
	(blank)	2,085	3.9
	Total	53,053	100.0
Evaluation Form	Goals-Based Evaluations (GBE)	36,900	69.6
	Formative	9,705	18.3
	Summative	4,314	8.1
	No Evaluation	49	0.1
	(blank)	2,085	3.9
	Total	53,053	100

⁸ Annual contracts are issued to teachers who have completed an induction-contract year and hold an initial certificate or teachers who have at least one year of experience from a non-public school setting. Additionally, a teacher can be issued an annual contract if out-of-state reciprocity is used to receive a state certificate, but a passing PLT exam is not on file at the State Department of Education. Annual contracts are also issued to teachers returning to teaching following ADEPT-related state sanctions.

In teacher evaluation, different forms of evaluation are adopted depending on the contract level and type of certificate. Goals-based evaluation (GBE) is the most widely used evaluation form. A GBE is an informal evaluation process designed for teachers at the Annual and Continuing contract levels who have successfully completed the summative evaluation process, and 69.6% of the teachers were evaluated using GBE process. Summative evaluations are high-stakes accountability measures used to measure and report learning outcomes and to inform certificate advancement, contract status, and contract renewal; 8.1% of South Carolina teachers were evaluated using summative evaluations. Formative evaluations are designed to promote professional growth and reflection; 18.3% of our state’s teachers are evaluated using formative evaluations.

South Carolina teachers’ final evaluation ratings are based on data from the SCTS and the SLOs. Analysis of the SLO scores for the 50,968 teachers matched with PCS data revealed that 36.7% of the teachers were rated as “Exemplary,” 49.5% as “Proficient,” 3% as “Needs Improvement,” and 0.8% as “Unsatisfactory.” The SLO scores for 3,223 teachers (6.1%) were not reported⁹. Teachers’ overall ratings were based on a composite score of SCTS ratings and SLO scores. Results indicate that the majority (92.9%) of teachers were in the “Met” category, 0.6% were “Not Met,” and 1.9% were in the category of “Incomplete.” A teacher who is employed under an induction, annual, or continuing contract and who is absent for more than 20 percent of the days in the district’s SBE-approved annual evaluation cycle may, at the recommendation of the district superintendent, have his or her ADEPT results reported to the SCDE as “Incomplete.”

Table 5. *Teacher Evaluation Ratings*

Evaluation	Ratings	Frequency	Percentage
SLO Evaluations	Exemplary	19,489	36.7
	Proficient	26,270	49.5
	Needs Improvement	1,571	3.0
	Unsatisfactory	405	0.8
	Unknown	3,233	6.1
	(unmatched)	2,085	3.9
	Total	53,053	100
Final Evaluations	Met	49,293	92.9
	Not Met	326	0.6
	Incomplete	1,015	1.9
	Unknown	334	0.6
	(unmatched)	2,085	3.9
	Total	53,053	100

Teachers’ evaluation ratings are used to inform employment. Analysis of the state’s 50,968 teachers’ hiring status based on evaluations revealed that 91.4% of the evaluated teachers were rehired, 5.8% resigned, 1.3% retired, and 0.4% were not rehired. There were 600 teachers (1.2%) for whom the next contract status was not reported.

⁹ The SLO may be exempted for classroom-based teachers who have too few students present for the interval of measurement or for teachers who were not present for 85% of the interval according to the SLO business rules (SC Department of Education, 2017).

Comparison by Geographic Context

We examined demographic characteristics of teachers to uncover potential differences in the workforce for schools located in city, suburb, town, and rural areas of South Carolina. Significant differences in the percentages of Black teachers and White teachers were found in almost all the comparisons between locations. Teachers at suburban schools had the highest percentage of White teachers (81.3%) and the lowest percentage and Black teachers (11.7%). Teachers at schools located in towns had the highest percentage of Black teachers (19.1%) and the lowest percentage of White teachers (73.2%). While statistically significant differences in the percentage of female teachers were found between rural and city/suburban schools, the differences were not large; none of the areas varied from the state average by more than 1%. In terms of teachers who were certified through alternative means, suburban schools had the lowest percentage of teachers who received certification in this manner (2.5%), significantly different from city, town, and rural schools. The percentage of teachers with international teaching certificates was statistically different between all locations, with the highest rate in town-based schools (4%) and the lowest percentage of international teachers found in suburban schools (1%). This trend was reversed for the percentage of teachers with National Board Certification, as suburban schools had the highest percentage of National Board Certified Teachers (7.8%, statistically different from the other three locations) while schools in towns had the lowest percentage of teachers who were National Board Certified (5.1%, statistically different suburban and rural schools).

Teachers at town-based schools had the lowest percentage of postbaccalaureate degrees (60%), which differed statistically from suburban and rural schools, but the differences were small (less than .3 in their effect size). Teachers at suburban schools met the ADEPT teacher evaluation at the highest rate (97.2%) with statistically significant differences compared to town and rural schools, but all differences were less than 1%. The percentage of teachers receiving ratings of “Exemplary” or “Proficient” for the SLO portion of the evaluation system was the only variable that did not show any statistical differences between areas. There was, however, a statistically significant difference in the percentage of teachers receiving “Exemplary” ratings on the SLO portion between all locations, with suburban teachers exhibiting the highest percentage receiving “Exemplary” (44.7%) and teachers in towns receiving the lowest percentage (31.8%). Additionally, a statistically significant difference in years of experience was found between suburban, town, and rural teachers, where the difference between any of the groups was less than two years. It should be noted that none of the statistically significant differences in these comparisons are considered at a practically meaningful level (i.e., medium or large differences in terms of their effect size) and reflect the large number of teachers used in analyses.

Table 6. Summary Statistics and Inferential Tests for Variables by Geographic Location

Variable	N	SC	City	Suburb	Town	Rural	X ² (df)	p
% Black teachers	50,917	14.9	17.4 ^{abc}	11.7 ^{ade}	19.1 ^{bdf}	15.5 ^{cef}	277.9(3)	<.001
% White teachers	50,917	78.0	74.2 ^{ac}	81.3 ^{ade}	73.2 ^{df}	77.7 ^{cef}	264.2(3)	<.001
% Female teachers	50,917	80.2	80.9 ^c	80.4 ^e	79.9	79.2 ^{ce}	14.5(3)	.002
% Teachers with alternative certification	50,917	3.0	3.6 ^{ac}	2.5 ^{ade}	3.6 ^d	3.9 ^{de}	34.0(3)	<.001
% Teachers with international certificate	50,917	1.9	1.9 ^{abc}	1 ^{ade}	4 ^{bdf}	2.4 ^{cef}	221.6(3)	<.001
% Teachers with National Board Certification	50,917	6.6	5.9 ^a	7.8 ^{ade}	5.1 ^{df}	6.2 ^{ef}	73.3(3)	<.001
% Teachers with master's degree or higher	50,917	62.1	61.4	62.3 ^d	60 ^{df}	62.4 ^f	12.8(3)	.005
% Met on ADEPT	49,098	96.7	96.9	97.2 ^{de}	96.5 ^d	96.3 ^e	26.3(3)	<.001
% Exemplary or Proficient on SLO	49,098	90.2	90.7	90.2	90.5	89.8	6.5(3)	.089
% Exemplary on SLO	49,098	38.5	39.1 ^{abc}	44.7 ^{ade}	31.8 ^{bdf}	34 ^{cef}	530.8(3)	<.001
Mean total years of experience*	50,917	14.1	13.2 ^{bc}	13.3 ^{de}	14.5 ^{bd}	14.5 ^{ce}	F=49.08	<.001

Note. ^asignificant difference between city and suburb; ^bsignificant difference between City and Town; ^csignificant difference between City and Rural; ^dsignificant difference between Suburb and Town; ^esignificant difference between Suburb and Rural; ^fsignificant difference between Town and Rural; * denotes ANOVA test for mean years

Comparison by Poverty Levels

Teachers at schools in the upper 25% of South Carolina schools in terms of poverty (PIP rates between 83.6 to 100) were categorized as teaching in high poverty, and teachers at schools in the lowest quartile of PIP (PIP rates between 8.8 to 55.5) were categorized as teaching in low-poverty schools. Teachers at schools in the middle (PIP rates 55.5 and 83.6) were categorized as teaching at moderate poverty schools. There were significant pairwise differences between every poverty level on every demographic variable examined in this report, except for years of teaching experience.

Considering racial characteristics of teachers, teachers at schools in the highest quartile of poverty had the highest percentage of female teachers (84.9%), the highest percentage of Black teachers (35.5%), and the lowest percentage of White teachers (54.1%) when compared to teachers at schools in the low and moderate levels of poverty.

Looking across the variables related to teacher preparation and certification, teachers at schools in the highest poverty category had the highest percentage of teachers with alternative (4.9%) and international certification (6.0%) and the lowest percentages of postbaccalaureate degrees (57.5%) and National Board Certification (3.4%). Unlike the geographic comparison, there were significant differences between every level of poverty for both the ADEPT and “Proficient”/“Exemplary” SLO evaluations, with teachers at high-poverty schools receiving the lowest percentage of passing rates. One of the most striking differences exists between the percentages of teachers earning an “Exemplary” SLO rating. The percentage of teachers earning the highest SLO rating at low-poverty schools (46.2%) is more than twice that of teachers earning the same rating at high-poverty schools (22.6%).

The only variable which did not show a significant difference between levels of poverty was the number of years of experience teaching; teacher experience did not vary across low, moderate, and high-poverty schools. While none of these statistically significant differences are considered large differences in terms of their effect size, there were three variables with medium-sized differences between the levels of poverty at the school. Compared to schools with lower poverty levels, there was a lower percentage of White teachers and a higher percentage of Black teachers at high-poverty schools, which was considered to be a meaningful difference, with an effect size noted at a medium level. Also, the lower percentage of teachers at high-poverty schools earning an “Exemplary” SLO rating compared to schools with lower poverty levels was considered a medium-sized difference. These medium effect sizes are marked with bolded red superscripts in Table 7

Table 7. Summary Statistics and Inferential Tests for Variables by Poverty Level

Variable	N	SC	Low Poverty	Middle Poverty	High Poverty	$\chi^2(df)$	p
% Black teachers	52,115	14.7	6.8 ^{ab}	12.5 ^{ac}	35.5 ^{bc}	4062.1(2)	<.001
% White teachers	52,115	78.0	86.7 ^{ab}	80.7 ^{ac}	54.1 ^{bc}	3884.1(2)	<.001
% Female teachers	52,115	80.5	77.7 ^{ab}	81.1 ^{ac}	84.9 ^{bc}	199.2(2)	<.001
% Teachers with alternative certification	52,115	3.0	2.1 ^{ab}	2.9 ^{ac}	4.9 ^{bc}	167.2(2)	<.001
% Teachers with international certificate	52,115	1.9	0.6 ^{ab}	1.4 ^{ac}	6.0 ^{bc}	988.0(2)	<.001
% Teachers with National Board Certification	52,115	6.5	9.3 ^{ab}	5.8 ^{ac}	3.4 ^{bc}	379.3(2)	<.001
% Teachers with master's degree or higher	52,115	61.6	65.0 ^{ab}	60.9 ^{ac}	57.5 ^{bc}	150.9(2)	<.001
% Met on ADEPT	50,107	96.7	97.6 ^{ab}	96.9 ^{ac}	94.6 ^{bc}	161.2(2)	<.001
% Exemplary or Proficient on SLO	50,107	89.6	92.6 ^{ab}	89.5 ^{ac}	85.1 ^{bc}	353.0(2)	<.001
% Exemplary on SLO	50,107	38.1	46.2 ^{ab}	38.4 ^{ac}	22.6 ^{bc}	1331.2(2)	<.001
Mean total years of experience*	52,115	14.1	13.9	14.2	14.0	F= 0.87	0.42

Note. ^asignificant difference between Low and Middle Poverty; ^bsignificant difference between Low and High Poverty; ^csignificant difference between Middle and High Poverty; Bold superscripts indicate effect sizes of .5 or greater (medium to large effect sizes); *denotes ANOVA test for mean years

Comparison by Geographic Context Within High-Poverty Schools

An additional set of analyses was conducted with teachers at high-poverty schools to understand if the differences observed between geographic differences and between school-based student poverty levels overlap. The same 11 demographic variables addressed in the previous sections were examined using only teachers who teach at high-poverty schools, and these teachers at high-poverty schools were compared according to their schools' geographic locations. Table 8 below describes the distribution of schools and teachers in the highest quartile of poverty for the students at that school. Almost half of the high-poverty schools (140 out of 305 high-poverty schools) and over a third of the teachers at those schools are found in rural areas.

Table 8. Distribution of High-Poverty Schools and Teachers Across Different Geographic Locations

Location	Number of High-Poverty Schools	Proportion of Schools in Similar Locations	Number of Teachers in High-Poverty Schools	Proportion of Teachers in Similar Locations
City	59	30.0%	2,075	21.7%
Suburb	44	11.7%	1,682	9.2%
Town	62	40.5%	1,769	33.5%
Rural	140	27.6%	3,449	19.3%
Total	305		8,975	

Table 9 provides the relative proportions of teacher characteristics at high-poverty schools across each location. There were no significant differences between locations when looking at the percentage of female teachers at these schools, the percentage of teachers earning a proficient ADEPT rating, or the percentage of teachers who had earned a postbaccalaureate degree. City and suburban schools employed a lower percentage of teachers with an international certificate, and their teachers had fewer years of experience in comparison to teachers at town and rural schools, but the sizes of these differences were small. Teachers at suburban high-poverty schools had a higher percentage of teachers who earned National Board Certification when compared to rural teachers, and they had a lower percentage of teachers with alternative certification compared to teachers at rural and city schools. High-poverty schools based in towns had the highest percentage of teachers who earned at least a “Proficient” score on the SLO assessment, a significant difference when compared to city and rural schools, but the differences are considered as small and are still lower than the statewide average for that measure. Racial differences among the teachers at high-poverty schools yielded differences between locations; however, the differences are considered small. In summary, there are some differences between teacher populations at different geographic locations when looking only at teachers in high-poverty schools, but these differences in teacher characteristics are small compared to the differences between schools at different poverty levels.

Table 9. Summary Statistics and Inferential Tests for Variables by Location within High-Poverty Schools

Variable	Overall S.C.	High-Poverty Schools	City	Suburb	Town	Rural	X ² (df)	p-value
% Black teachers	14.9	35.5	35.8 ^{ac}	28.1 ^{ade}	33.9 ^{df}	40.3 ^{cef}	77.4(3)	<.001
% White teachers	78.0	54.1	55.0 ^{ac}	61.4 ^{ade}	57.3 ^{df}	48.7 ^{cef}	84.1(3)	<.001
% Female teachers	80.5	84.9	86.1	85.1	86.3	84.1	6.6(3)	.087
% Teachers with alternative certification	3.0	4.9	5.6 ^a	3.5 ^{ae}	5.0	5.3 ^e	10.5(3)	.015
% Teachers with international certificate	1.9	6.0	3.3 ^{bc}	3.2 ^{de}	7.8 ^{bd}	8.0 ^{ce}	86.7(3)	<.001
% Teachers with National Board Certification	6.5	3.4	3.5	4.6 ^e	3.3	3.1 ^e	7.9(3)	.047
% Teachers with master’s degree or higher	61.6	57.5	57.6	57.8	56.3	58.4	2.2(3)	.584
% Scored Met on ADEPT	96.7	94.6	95.0	96.2	95.6	93.6	18.8(3)	<.001
% Scored Exemplary or Proficient on SLO	89.6	85.1	83.0 ^b	85.6	88.1 ^{bf}	84.5 ^f	20.1(3)	<.001
% Scored Exemplary on SLO	38.1	22.6	24.9 ^c	25.0 ^e	23.9 ^f	19.4 ^{cef}	32.3(3)	<.001
Mean total years of experience*	14.1	14	11.9 ^{bc}	12.3 ^{de}	14.8 ^{bd}	14.9 ^{ce}	F=41.5	<.001

Note. There are a total of 8,975 teachers in high-poverty schools. ^asignificant difference between City and Suburb; ^bsignificant difference between City and Town; ^csignificant difference between City and Rural; ^dsignificant difference between Suburb and Town; ^esignificant difference between Suburb and Rural; ^fsignificant difference between Town and Rural; * denotes ANOVA test for mean years

+ FINDINGS AND DISCUSSION

This report seeks to describe the characteristics of the South Carolina teacher workforce. We focused the analyses on 11 variables: percentage of Black teachers, percentage of White teachers, percentage of female teachers, percentage of teachers with alternative certification, percentage of teachers with an international teaching certificate, percentage of teachers with National Board Certification, percentage of teachers with a master's degree or higher, mean number of years of teaching experience, percentage of teachers who scored "Met" on ADEPT teaching evaluation review, percentage of teachers who scored "Exemplary" or "Proficient" on the SLO portion of their teaching evaluation, and percentage of teachers who scored "Exemplary" on the SLO portion of their teaching evaluation. Across these characteristics, we were able to make state and national comparisons for teacher race/ethnicity, gender, and degree attainment. Findings from this study were consistent with national findings in the percentage of White teachers. However, differences were found for South Carolina from national findings in the following areas: South Carolina had more Black teachers, fewer Hispanic teachers, more female teachers, and more teachers with advanced degrees.

Considering the 11 variables by geographic context, we found that schools in South Carolina towns tend to have the highest percentage of Black teachers, fewest White teachers, the most teachers with international certification, fewest National Board Certified Teachers, and fewest scoring "Exemplary" on the SLO portion of the teaching evaluation compared to schools in other areas. Suburban schools exhibited opposite trends, with the lowest percentage of Black teachers, more White teachers, the fewest teachers with alternative or international certification, and the highest percentage of teachers that were National Board Certified. Rural schools employed the greatest percentage of teachers with alternative certification, and schools in towns employed the highest percentage of teachers with international certification. While statistically significant differences existed between locations regarding years of teaching experience, postbaccalaureate degrees, and meeting ADEPT standards, the differences were small. No differences were found between locations in terms of the percentage of teachers scoring at least "proficient" on the SLO measure.

Considering the demographic variables by poverty rate, we found that schools in the highest quartile of school poverty had more Black teachers, fewer White teachers, more female teachers, more teachers certified through an alternative certification program, more teachers with international teaching certificates, fewer teachers who scored "Met" on the ADEPT teaching evaluation, and fewer teachers who scored "Exemplary" on the SLO portion of the teaching evaluation. These trends were reversed for the schools in the lowest quartile of poverty. Low-poverty schools employed the smallest percentage of international and alternatively certified teachers and greater percentages of teachers who were National Board Certified or earned an "Exemplary" rating on their SLO outcomes. Mean years of teaching experience was the only variable for which no significant differences were found between poverty levels. Out of all these comparisons, most of the statistically significant differences are considered small other than the differences high-poverty schools have in terms of the percentage of White teachers (lower percentage), Black teachers (higher percentage), and teachers earning an "Exemplary" SLO rating (lower percentage) when compared to the teachers at other schools.

When considering only the highest-poverty schools, the differences between locations were much smaller than the differences seen between different levels of poverty, but the differences were still significant. Within high-poverty schools, rural schools had more Black teachers, fewer White teachers, and fewer teachers who scored "Exemplary" on the SLO portion of the teaching evaluation compared to high-poverty schools in cities, suburbs, and towns. Both town and rural high-poverty schools showed a higher percentage of teachers with international certification and greater mean total years of teaching experience compared to high-poverty schools in cities and suburbs. Conversely, suburban high-poverty schools had fewer Black teachers, more White teachers, the lowest percentage of teachers with alternative certification, and the highest percentage of teachers with National Board Certification compared to high-poverty schools in cities, towns, and rural communities.

+ CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study is a follow-up to the profile of the South Carolina teacher workforce report conducted with 2018-2019 data. In the current report, further refining of the methods by which geographic location and poverty are defined has allowed for a more precise understanding of disparities that exist in the South Carolina teacher workforce. For example, the previous report indicated a small significant difference in the percentage of National Board Certified faculty between urban and rural areas. However, when locations are defined more granularly, and at the school level, it is suburban schools that employ more National Board Certified Teachers while urban schools are very similar to rural schools in the number of National Board Certified Teachers employed.

There are several key trends that are worth noting. First, South Carolina has more Black teachers compared to the nation; however, the percentage of teachers of color in South Carolina is under-representative of the student population at the state level. Whether this discrepancy between Black teachers and students persists when examined within different geographic locations is a question that begs further study, as this might suggest the need to focus on diversity in recruitment efforts for teacher preparation programs as well as placement of Black teachers within specific schools. Considering schools situated in different geographical settings, the differences between teachers are not significant in terms of experience, postbaccalaureate degrees obtained, and the earning of a proficient level of evaluated performance (“Met” with ADEPT and “Proficient” or higher with SLO). However, there are some significant differences between geographical locations in the prevalence of higher-performing teachers. When compared to urban, rural, and town schools, a greater percentage of teachers working in suburban schools possess National Board Certification and/or earn an “Exemplary” SLO assessment. Suburban schools also employ a lower percentage of alternatively and internationally certified teachers compared to the other locations. The differences in higher performing teachers are larger when compared by the poverty level of the schools at which they teach. The percentages of teachers who earned National Board Certification (9.3%) and “Exemplary” SLO rating (46.2%) in low-poverty schools are more than twice the percentages of those teachers in high-poverty schools (3.4% and 22.6% respectively) though the effect size between National Board percentages is considered a small difference. Meanwhile, the percentage of teachers in high-poverty schools that are certified through alternative (4.9%) or international means (6.0%) is greater than the percentage of teachers at lower-poverty schools who were certified in this manner, though these significant differences are also considered small differences once sample size is removed from the calculations. The largest effect sizes are related to racial/ethnic differences among teachers at high-poverty schools compared to other schools and a much lower percentage of teachers at high-poverty schools who earn an “Exemplary” SLO rating.

Limitations and Recommendations

Many of the limitations related to data quality described in the inaugural SC TEACHER workforce report were alleviated in this current study as most teachers were matched to their assessment data, thus providing a more accurate representation of the South Carolina teacher workforce. Some teachers were excluded from the comparisons based on location and poverty because a reliable measure for a school's geographical setting or level of poverty could not be identified, but the number of teachers excluded represents less than 4% of the overall South Carolina teacher population.

Second, national data used for analyses described the US teacher workforce at a different point in time than the South Carolina data. The most recent national data obtained from NCES described characteristics of teachers employed in the 2017-2018 school year, and South Carolina data was from the 2020-2021 school year. While we would not expect large differences from one school year to the next, using data from the same school year would improve the validity of the comparisons.

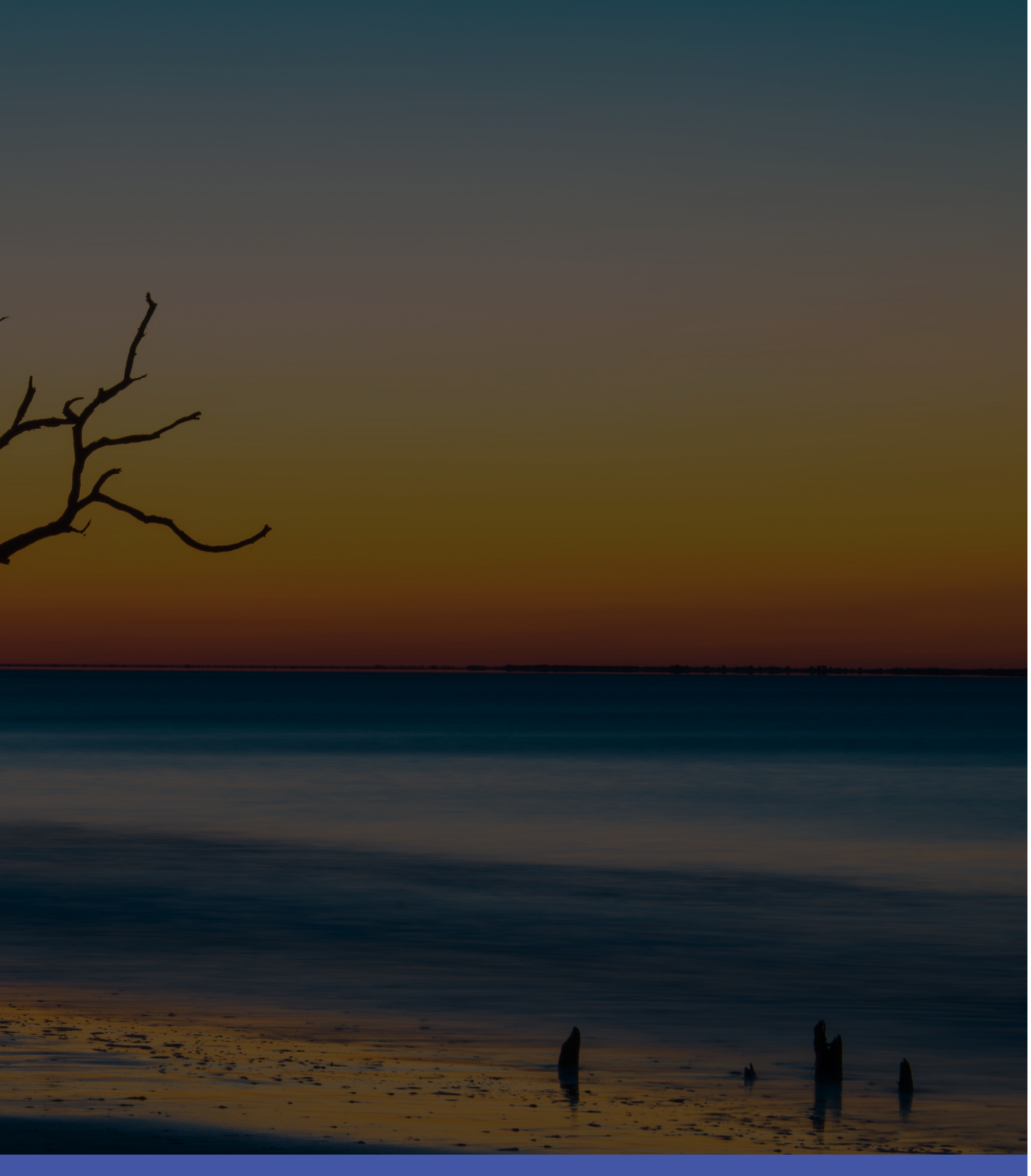
It is important to note that the findings of differences between teachers in different geographic settings or degrees of school poverty are simply descriptive. Thus, findings are not intended to imply causal forces. The differences do suggest, however, that more advanced study is warranted to understand how these differences, even those with small effect sizes, are related to student and school performance, teacher preparation and support, and the recruitment/retention efforts needed to ensure that students across the state have effective and thriving teachers. For example, given the growing presence of alternative or international certification programs in South Carolina, a more extensive examination of these programs is needed to determine their impact on student achievement and the extent to which both traditional and alternative certification programs are successful in their efforts to recruit and retain a diverse teaching workforce. Also, given the differences in the prevalence of National Board Certification status and “Exemplary” SLO ratings at different schools, it would be helpful to study further if differences in teacher preparation, recruiting, and professional development are related to these differences as well as differences in student and school outcomes. Lastly, it would be important to have a more precise understanding of the career trajectories of higher-performing teachers. Are fewer high-performing teachers recruited and/or developed in high-poverty schools, or are fewer such teachers retained at high-poverty schools? Addressing these questions can inform us further as to how teachers, schools, and public policy interact most effectively.

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