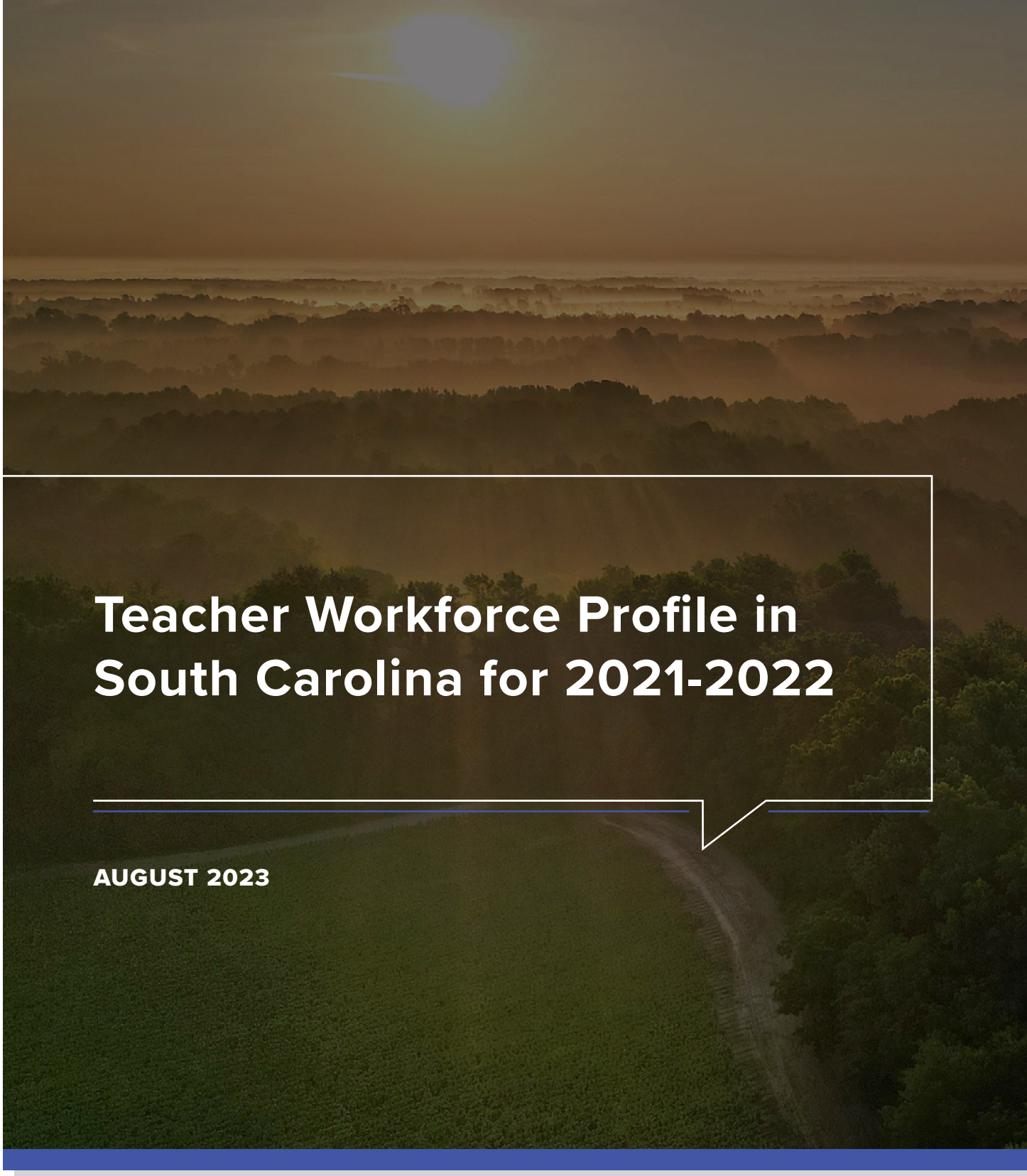
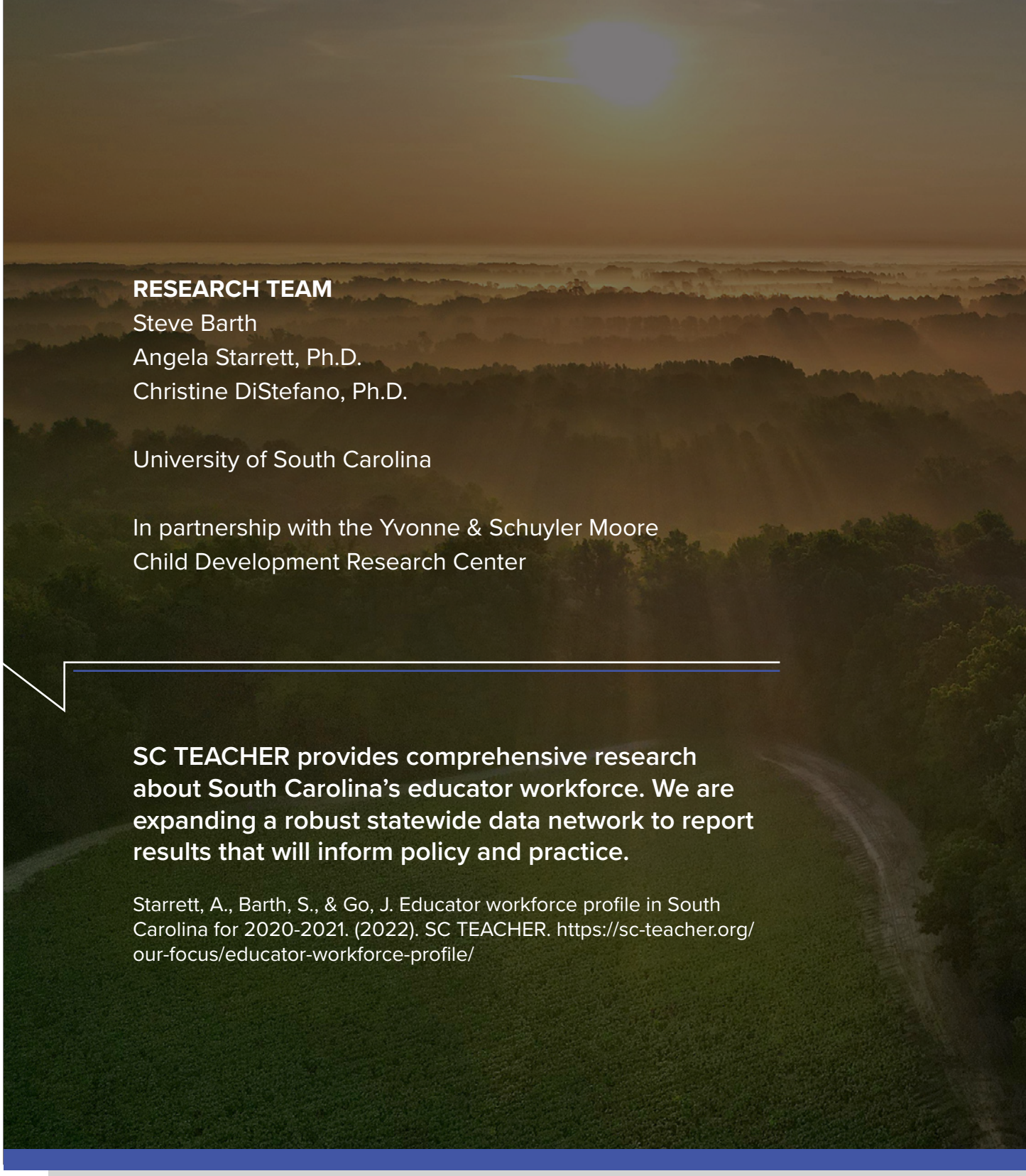


Teacher Workforce Profile in South Carolina for 2021-2022

AUGUST 2023

SC TEACHER | EDUCATOR WORKFORCE PROFILE



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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.

Starrett, A., Barth, S., & Go, J. Educator workforce profile in South Carolina for 2020-2021. (2022). SC TEACHER. https://sc-teacher.org/our-focus/educator-workforce-profile/

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Educator Workforce Profile

+ HIGHLIGHTS

Each year SC TEACHER publishes a workforce profile report to share details about South Carolina's educator workforce with educators, policymakers, and other community members. Utilizing statewide educational data from the 2021-2022 academic year, this report draws comparisons between the South Carolina teacher workforce and nationwide figures. Closer to home, this report provides a longitudinal view of state trends by comparing the 2021-2022 characteristics with results from the 2020-2021 SC TEACHER workforce profile report. Results are based on an analysis of data collected from 52,937 South Carolina classroom teachers with positions categorized as regular classroom teachers (1st – 12th grades), pre-kindergarten, kindergarten, special education (self-contained, resource, or itinerant), and retired teachers.

Main Findings regarding the South Carolina 2021-2022 Teacher Workforce

- The percentage of teachers who possess alternative (+0.5%) and international (+0.7%) certifications both increased over the course of one year, and the percentage of teachers with National Board Certification (-0.4%) decreased in the same period.
- Over the course of a year, South Carolina schools located in cities (+0.9%) and rural communities (+1.1%) saw the largest increases in the number of alternative certified teachers, while schools located in towns (+0.7%) experienced the largest increase in the number of international teachers. The mean number of years of teaching experience decreased in all South Carolina school locations, with schools in rural communities experiencing the largest decrease in experienced teachers (-0.9 years).
- The average years of teaching experience dropped considerably across the state, from 14.1 to 13.2 years. Teacher experience decreased at all types of schools in 2021-2022, but the largest decreases were in city and rural communities and at higher-poverty schools. These decreases indicate that more experienced teachers are either leaving the profession or at least comprising a smaller percentage of the teaching workforce.
- Longitudinal results showed the percentage of international teachers employed by South Carolina schools increased slightly, regardless of school poverty level (+0.1 to +0.3%), and the percentage of National Board Certified teachers decreased across all poverty levels (-0.4 to -0.2%).

Recommendations Regarding the Teacher Workforce Profile in South Carolina

- This report examines demographic factors related to teacher experience (e.g., degree level, certification pathway, National Board Certification, years of teaching experience, and ADEPT evaluation ratings) as possible indicators of educator quality. However, prior research shows inconsistent results when these variables are used to measure quality teaching. Deeper examination of these variables needs to be done to determine the best measures of teacher effectiveness that promote student learning.
- Given the decrease in average years of teaching experience and National Board Certified Teachers, more nuanced analyses that track individual teachers' career movements and distinguish among teachers who stay at a school, move to a new school, or leave the profession are needed to clarify trends in teacher retention. This work should include examining how specific working conditions contribute to patterns of attrition and retention.
- As South Carolina has continued to see annual increases in the numbers of alternatively certified and international teachers, evaluating teacher quality for teachers from different certification pathways is warranted, especially as recruitment efforts focus on hard-to-staff schools and subject areas for teachers from these pools. Investigations of the quality and success of these programs will better inform administrators when making hiring decisions.

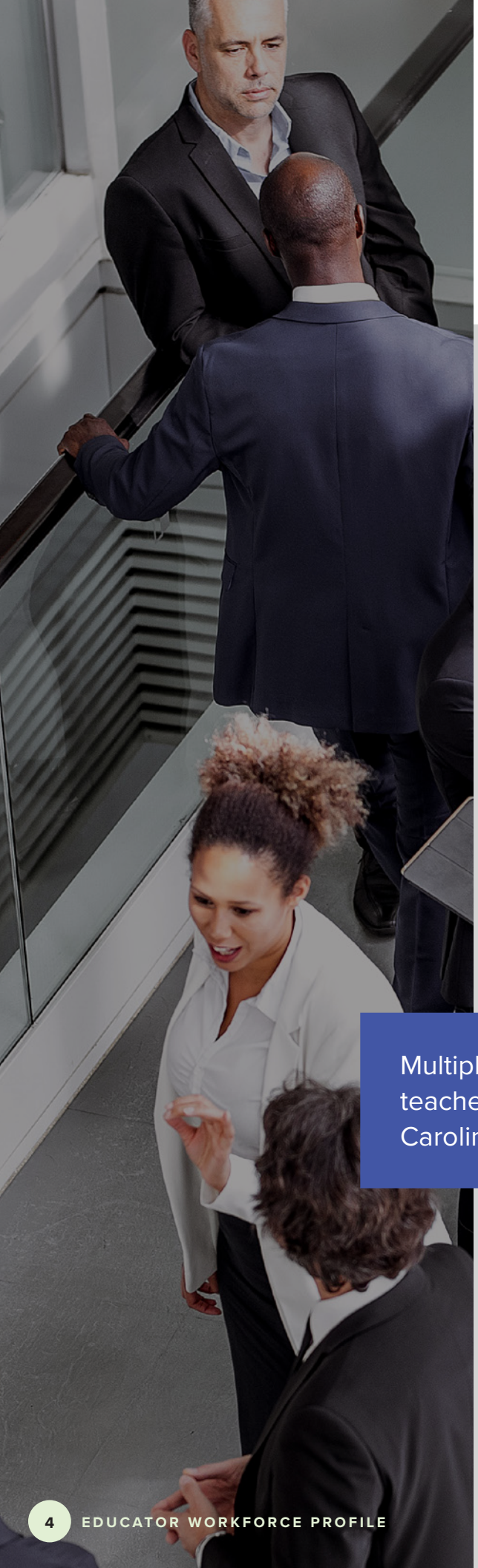
+ INTRODUCTION

Recruiting and retaining highly qualified teachers continues to be a persistent struggle in public education, yet it is considered one of the most important ways for schools to improve student learning. Highly effective teachers have a deep understanding of the subject matter they teach and can effectively communicate this knowledge to their students. They also use a variety of instructional strategies tailored to the needs of their students and build strong student-teacher relationships to create a positive learning environment. Darling-Hammond (2000) found that teacher preparation and certification are strongly associated with student achievement in reading and mathematics, even after controlling for student poverty and language status. This finding is supported by other studies showing the effectiveness of a teacher is a strong predictor of student learning (e.g., Nye et al., 2004; Stronge et al., 2011). Unfortunately, research is inconclusive as to which indicators of high-quality educator preparation are the most beneficial and how specific credentials relate to teacher effectiveness (Hammerness & Klette, 2015; Russell & McPherson, 2001).

While research shows that there is no "one-size-fits-all" approach to identifying the best indicators of teacher quality, results suggest a multimethod approach may be necessary to fully capture the complexity of educator effectiveness, by including multiple indicators such as degree level, certification pathway, National Board Certification, teaching experience, and evaluation results. Previous research on the relationship between teacher educational attainment and student performance has produced mixed results. Some studies have found a positive association, such as Clotfelter et al. (2006), who showed that teachers with advanced degrees had a positive impact on student achievement in elementary and middle school. Conversely, other studies have found no discernable relationship between teacher degree level and student achievement. For example, Eberts & Stone (1984) and Rowan et al. (2002) found that teachers with advanced degrees did not have a significant impact on student learning.

Research in teacher education indicates inconsistent results on the effectiveness of various certification pathways in exerting a positive influence on student outcomes (National Research Council, 2010). The gold standard remains the traditional pathway to teacher induction, which requires the completion of an educator preparation program through an accredited college or university. However, the number of candidates nationwide completing traditional teacher preparation programs has decreased by 28% between 2012-2013 and 2019-2020 (NCES, 2023). South Carolina currently has 29 approved educator preparation programs (S.C. Department of Education, 2023). South Carolina also has ten approved alternative certification programs for individuals with at least a bachelor's degree from different educational backgrounds. Nationally, alternative teacher preparation programs have gained in popularity, with enrollment increasing by [1]11% and completion increasing by 24% from 2012-2013 to 2019-2020 (NCES, 2023). In addition to traditional and alternative certification pathways, the South Carolina Department of Education (SCDE) is a member of the International Visiting Teachers Program from the U.S. Department of State that sponsors teachers from other countries. Teachers are certified under the International Certificate, a three-year certificate to allow international educators to teach in South Carolina.

[1] South Carolina-approved alternative certification programs include the following: 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).



Another possible indicator of teacher effectiveness is the receipt of National Board Certification (NBC) through the National Board for Professional Teaching Standards (NBPTS). This professional organization awards national certification to teachers who apply for and meet the standards for performance for accomplished educators as set by the NBPTS. The process for obtaining NBC is rigorous, with just under 3% of the nation's teachers being National Board Certified. South Carolina has 6.2% of teachers with NBC status, ranking 4th in the nation for the total number of NBC teachers (NBPTS, 2023). However, research does not consistently support NBC as a robust indicator of teacher quality. Some longitudinal studies have shown a minimal difference in value-added to student achievement between NBC and non-NBC teachers (Attebury et al., 2013; Bloom et al., 2008; Cowan & Goldhaber, 2016; Harris & Sass, 2011; Wisall, 2013). Though much of this research does not carefully control for the quality of the non-NBC teachers, and most of these studies were conducted in states that do not incentivize National Board Certification.

Annual teacher evaluation scores are another possible marker of teacher quality. South Carolina uses the expanded Assisting, Developing, and Evaluating Professional Teaching (ADEPT) formal evaluation system to measure teacher performance.

Multiple sources of evidence are used to measure a teacher's performance relative to each of the South Carolina Teaching Standards (SCTS) indicators.

ADEPT evidence includes a review of lesson plans, classroom observations, reflections on instruction and student learning, a professional review, a review of the Student Learning Objectives (SLO), and documentation of a professional growth and development plan.

Teachers' skills are rated using the SCTS 4.0 rubric, which is based on the performance standards designed and validated by the National Institute for Excellence in Teaching (NIET). The SCTS 4.0 measures teacher effectiveness across four domains: Instruction (12 indicators), Planning (3 indicators), Environment (4 indicators), and Professionalism (4 indicators). Each indicator is rated using a 4-point scale (1 – Unsatisfactory, 2 – Needs Improvement, 3 – Proficient, 4 – Exemplary). SLOs measure a teacher's contributions to student learning and support a teacher's SCTS ratings. The SCDE SLO evaluation rubric has four performance levels ranging from 1 – Unsatisfactory to 4 – Exemplary (SCDE, 2020); alternatively, school districts can develop their own SCDE-approved SLO rubric. SLO scores serve as a modifier for the ADEPT teacher evaluation ratings. For example, if a teacher earns an SLO score of 4 points, the teacher's overall evaluation rating increases by 0.25 points. Conversely, if a teacher earns an SLO score of 1 point, the teacher's overall evaluation rating decreases by 0.25 points.

In addition to educator effectiveness variables, teacher diversity is associated with improved student learning. Aside from promoting an inclusive school culture (Nevarez et al., 2019), research shows that students of color may benefit from having teachers of the same race or ethnicity, citing evidence of small but meaningful role model effects (Goldhaber et al., 2019; Redding, 2019). Furthermore, research demonstrates that teacher diversity can lead to positive outcomes for both White students and students from historically underrepresented populations (Bartolo & Smyth, 2009; Nevarez et al., 2019).

In addition to providing a comprehensive view of the South Carolina workforce, SC TEACHER's annual report will examine factors noted in the literature to determine how these demographic characteristics and teacher quality measures compare across different groups of South Carolina educators. This report provides the opportunity to examine the workforce in terms of demographic characteristics and effectiveness and to investigate emerging patterns over two academic years.

KEY QUESTIONS

The goal of this report is to describe South Carolina's teacher workforce during the 2021-2022 school year. With this description, comparisons can be made to the U.S. teacher workforce to determine how South Carolina compares to national figures. In addition, comparisons are made within the state to examine the effects of school-level factors (e.g., school geographic location, student poverty level) on the teacher workforce. The intent is for the information to help stakeholders better understand teacher needs allowing for the recruitment and retention of an effective educator workforce in South Carolina.

This report addresses the following key questions:

1. What are the characteristics of the South Carolina teaching population relative to personal demographics, teacher preparation and experience, and teacher evaluation results? How do these characteristics compare with teachers nationally?

2. How do teacher characteristics (personal demographics, teacher preparation and experience, and teacher evaluation results) compare among city, suburb, town, and rural schools in South Carolina?

3. How do teacher characteristics compare among South Carolina schools with different levels of student poverty?

DATA, VARIABLES, AND ANALYSES

This study used files for the 2021-2022 school year supplied by the South Carolina Department of Education. The files contain demographic data about individual teachers as well as certificate numbers, area(s) of certification, employment location(s), and current certified employment position. The database also included performance evaluation data from the ADEPT system and Student Learning Outcomes (SLOs) ratings from the 2021-2022 school year. Focusing on the position codes that indicated current classroom teaching assignments, a sample of 52,937 was obtained. Missing data within some records are noted; however, all available data were used when possible, resulting in slightly different sample sizes for some comparisons.

This study focused on nine demographic variables describing South Carolina teachers: racial/ethnic background, gender, educational and certification history (i.e., advanced degrees, alternative certification, international certification, National Board Certification), performance evaluation results (i.e., ADEPT and SLO ratings), and teaching experience. To allow comparisons across SC TEACHER reports, these are the same teacher characteristics examined in the 2020-2021 school year report.

Outside of the years of teaching experience, the percentages of teachers possessing a characteristic of interest (e.g., percent of NBC teachers by school locale) were computed at the individual teacher level. For the number of years of teaching experience, the average years was computed across individual teachers to provide a summary of teaching experience by location and poverty level. For location, schools were categorized according to census-defined geographic designations [2](city[3], suburb[4], town[5], or rural[6]) assigned through the National Center for Educational Statistics (NCES; NCES, 2019). SC TEACHER uses four geographic designations instead of the urban-rural dichotomy to provide a more nuanced context for location. Using the South Carolina Department of Education's Pupils-in-Poverty (PIP) designation, all schools in South Carolina were ranked, and quartiles were obtained to create a poverty designation of high-poverty, moderate-poverty, and low-poverty schools.

A detailed description of the statistical processes utilized in the analyses for this report is provided in the Technical Appendix. For each key question, the main portion of the report includes three parts: 1) a summary of the distribution of the teacher characteristics, 2) a comparison of the 2021-2022 results with the results from the 2020-2021 SC TEACHER workforce profile, and 3) a discussion of the results to draw comparisons between South Carolina findings and published research findings from across the U.S.

[2]The NCES uses standard urban and rural definitions developed by the U.S. Census Bureau, and each type of locale is either urban or rural in its entirety. The NCES locales can be fully collapsed into a basic urban–rural dichotomy or expanded into a more detailed collection of four distinct categories. These subtypes are differentiated by size (in the case of city and suburban designations) and proximity (in the case of town and rural designations)

[3]To be defined as a city, the territory must have at least 50,000 people and be located in an incorporated city.

[4]To be defined as a suburb, the territory must have at least 50,000 people and be located outside an incorporated city.

[5]To be defined as a town, the territory must have at least 2,500 and less than 50,000 people and be located some distance (designations include within 10 miles, between 10 and 35 miles, and more than 35 miles) away from a city or suburb.

[6]To be defined as rural, the territory must be located some distance away (designations include within 5 miles, between 5 and 25 miles, and more than 25 miles) from a city or suburb and some distance away (designations include within 2.5 miles, between 2.5 and 10 miles, and more than 10 miles) from a town.

Our Key Questions

+ KEY QUESTION 1:

What are the characteristics of the South Carolina teaching population relative to teachers' personal demographics, teacher preparation, years of experience, and teacher evaluation results? How do these characteristics compare with teachers nationally?

To address Key Question 1, we examined the percentage of teachers by categories of demographic characteristics, educational background, certification factors, and performance ratings. These percentages will be compared to national figures as well as to the percentages for these factors found in the 2020-2021 report.

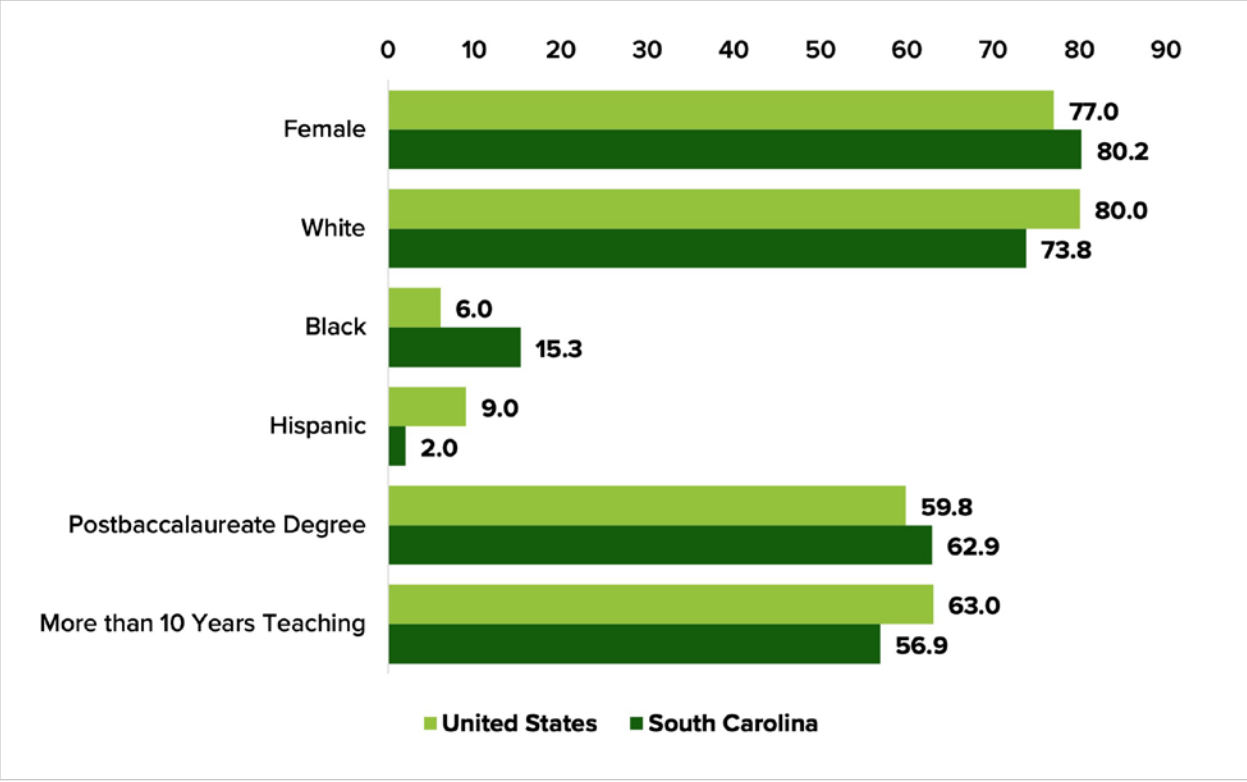
Characteristics of South Carolina Teachers

The majority (81%) of teachers in South Carolina public schools are classified as regular classroom teachers for 1st-12th grades. Special education teachers comprise the next largest category of teachers (10.7%), while kindergarten and pre-kindergarten teachers represent almost 6% of the teachers in South Carolina.

The demographic characteristics of South Carolina's teacher workforce mirror teachers in the United States. In South Carolina, teachers tend to be female (80% in S.C. compared to 77% across the U.S.) and White (78% versus 80%). While teachers of Hispanic background comprise the second largest racial/ethnic group among teachers in the U.S. (9%), they represent a small percentage of South Carolina's teacher workforce (2.2%). Black teachers, however, comprise a larger percentage of South Carolina teachers (15%) than nationwide (6%).

Concerning education level, most teachers in the United States (60%) possess some type of postbaccalaureate degree (e.g., master's, educational specialist, or doctorate degree). Compared to nationwide figures, a slightly larger percentage of South Carolina teachers (63%) possess a postbaccalaureate degree. Teachers in South Carolina have fewer years of experience than U.S. teachers; 57% of South Carolina teachers have ten or more years of experience, while 63% of teachers in the U.S. have taught for at least ten years. Figure 1 summarizes the key comparisons between South Carolina teachers and teachers across the United States.

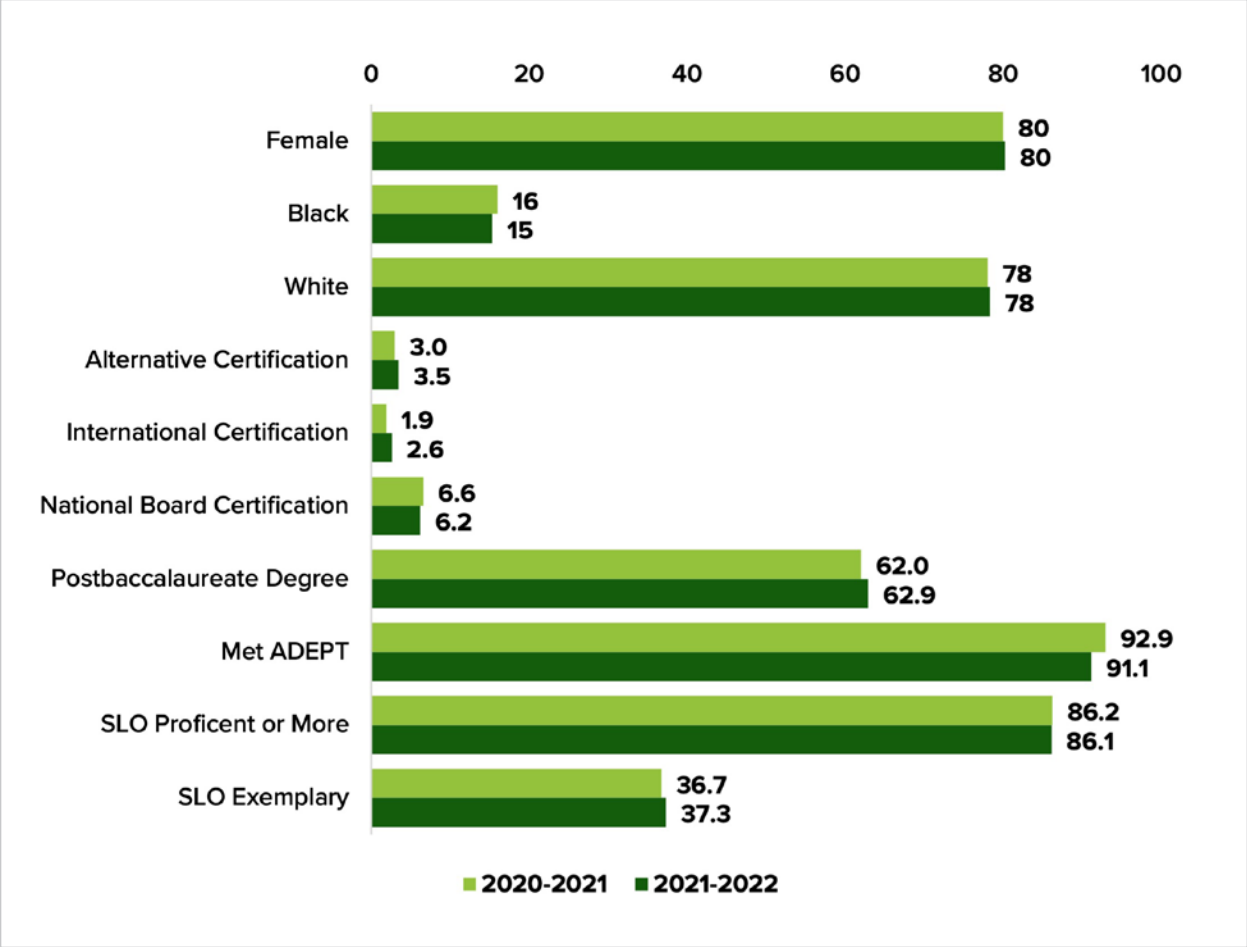
Figure 1. *Percentages of South Carolina Teacher Characteristics Compared to United States Teachers*



Teacher Characteristic Comparison Across Time

As multiple years of data have been analyzed by SC TEACHER, this allows for building a longitudinal examination of the South Carolina teacher workforce. For each characteristic, the percentage of teachers in each area was compared to identify changes over the two-year period. Figure 2 displays the relative percentages of teachers possessing each characteristic in the 2020-2021 and 2021-2022 academic years.

Figure 2. *Longitudinal Comparison of South Carolina Teacher Characteristics for 2020-2021 and 2021-2022 Academic Years*



The demographic profile of South Carolina teachers was relatively consistent over the two academic years. Across the categories, all differences were within one percentage point across the longitudinal period, showing differences that are small in magnitude. However, it is important to monitor potential trends. For example, the percentage of teachers who possess alternative and international certifications both increased over the course of one year; and the percentage of teachers with National Board Certification and who met ADEPT evaluation standards decreased over the same period.

While not tabled, the mean number of years of teaching experience was computed for each academic year. The average number of years of teaching decreased from 14.1 years in 2020-2021 to 13.1 years in 2021-2022.

Relationship Between South Carolina Teacher Characteristics Findings and Published Studies

The small changes in the South Carolina teacher workforce are worth monitoring. The finding that the mean years of teaching experience decreased indicates that the current workforce consists of teachers with fewer years of experience (on average) than in 2020-2021. Concurrently, the increased percentage of alternatively certified and internationally certified teachers signifies that some of these more experienced teachers in South Carolina may be replaced with teachers who have not been credentialed through traditional pathways. Literature has recognized that providing alternative pathways toward teaching certification has become an important tool for states and school districts to increase the pool of potential new teachers and alleviate shortages (King & Yin, 2022; Tooley, 2023). The increasing prevalence of international teachers working in the United States has been linked to a "stop-gap" method to reducing teaching shortages (Kissau, 2014; Kombe, 2017). However, it is difficult to conclude that these differences are consistent without tracking individual teacher trajectories. For South Carolina, as well as across the country, it will be important to assess if these methods for attracting new entrants to the teaching profession are an effective means for addressing shortages in the workforce, both in the short-term and for the future.

+ KEY QUESTION 2:

How do teacher characteristics (personal demographics, teacher preparation and experience, and teacher evaluation results) compare among city, suburb, town, and rural schools in South Carolina?

For Key Question 2, South Carolina schools were categorized by geographical location using the location codes provided by NCES (2021) to represent a city, suburb, town, or rural setting. After dividing teachers into these four categories based on their work location, the percentages of teachers by characteristics were compared.

Most teachers in South Carolina work in suburban (n = 18,840, 37%) or rural (n= 18,268; 35%) school settings. Fewer teachers work in city (n = 9,472; 18%) and town (n = 5,255; 10%) school settings. Percentage differences in teacher characteristics among locations were analyzed.

Differences in Teacher Characteristics Across Geographic Locations

While statistically significant differences among school locations were observed for every teacher characteristic examined, the magnitude of the difference was small. In other words, statistical significance may be found due to the large numbers of teachers compared, but the difference among locales is small.

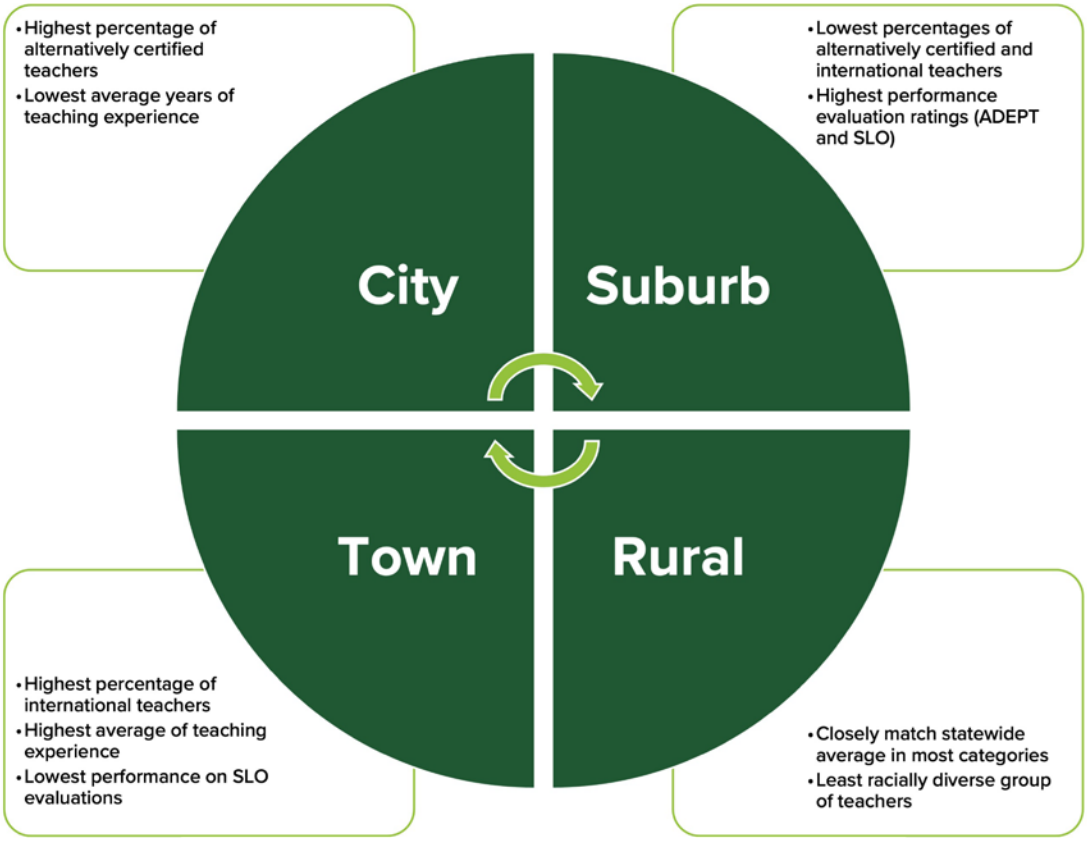
Looking among school locations in South Carolina, suburban schools were the most distinct. The teaching workforce at suburban South Carolina schools was racially different (lowest percentage of Black teachers and highest percentage of White teachers), certified differently (lowest rates of alternatively and internationally certified teachers), and was evaluated more highly as a group (highest percentages of meeting ADEPT standards, achieving National Board Certification, and proficient SLO ratings) than other locations in the state.

Teachers at rural schools were the group that most closely matched statewide averages for each teacher characteristic; however, rural teachers were the least racially diverse (less than 4% neither White nor Black) and were slightly lower performing, with 34% of rural teachers scoring "Exemplary" on their SLO evaluation. Statewide, 39% of South Carolina teachers earned an "Exemplary" rating.

Town schools in South Carolina included the highest percentage of international teachers (4.7%) and the second highest percentage of alternatively certified teachers (3.7%), indicating the largest percentage of teachers certified through non-traditional means compared to the other locations. Teachers at town schools also exhibited the lowest percentages of teachers meeting ADEPT standards and the lowest SLO ratings.

Teachers in South Carolina city schools were the least experienced, with 12.4 years of teaching experience on average (state average = 13.2 years). City schools employed the highest percentage of teachers (4.5%) who were certified through an alternative program, a full percentage point higher than the state average. Figure 3 below summarizes the main findings of comparing teacher characteristics across geographic locations.

Figure 3. *Summary of Differences in Teacher Characteristics Across School Locations*

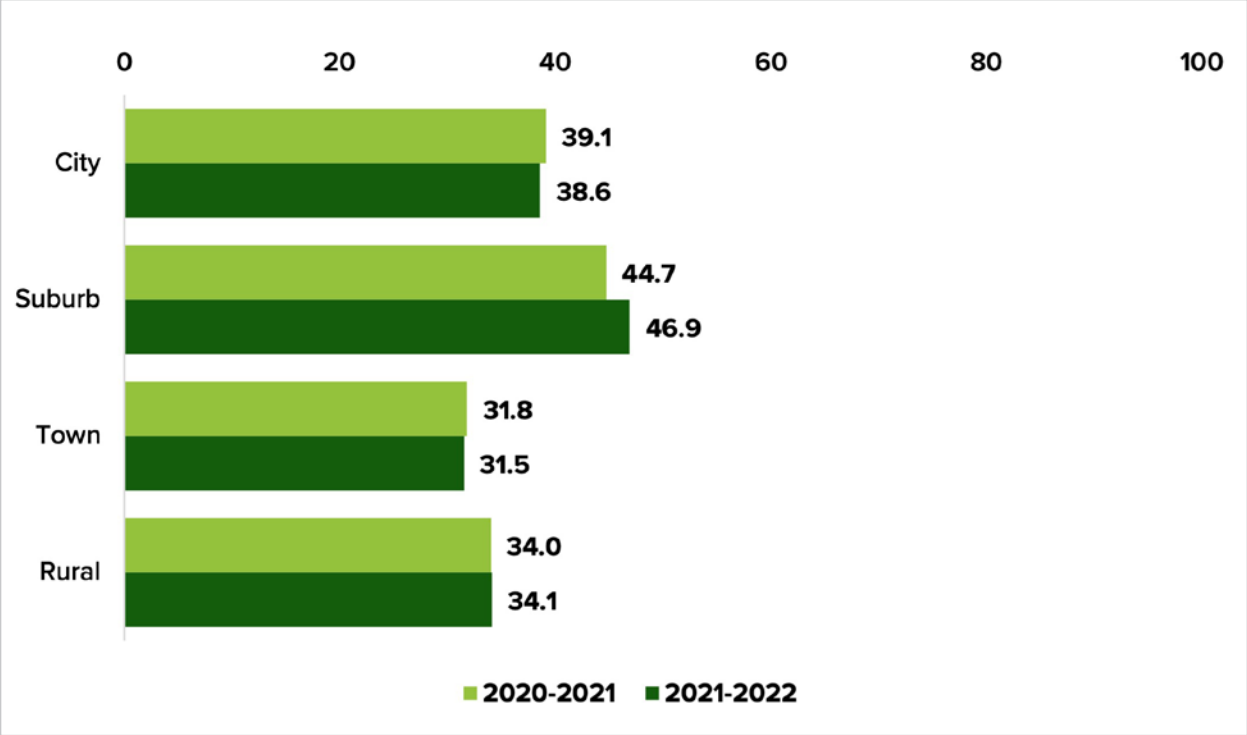


Geographical Differences of Teacher Characteristics Over Time

It is important to monitor trends in the characteristics of South Carolina's teachers, especially those attributes which have increased variability among geographic locations. The characteristics that appeared to vary the greatest among locations over the past two years investigated were the percentage of international teachers, the percentage of alternatively certified teachers, the percentage of teachers earning an "Exemplary" rating on their SLO evaluation, and the mean number of years of teaching experience. Figures 4 – 7 illustrate how these characteristics varied longitudinally and across locations.

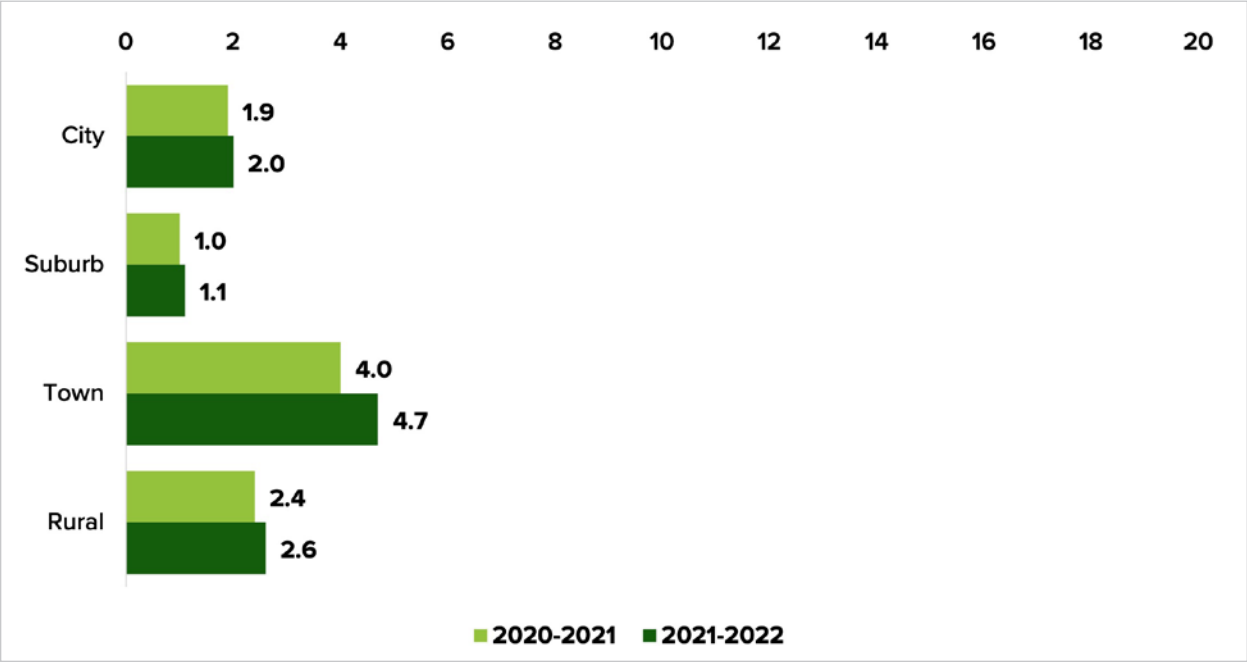
Figure 4 describes how the percentage of teachers earning an "Exemplary" SLO evaluation decreased or stayed constant in each location except for teachers in suburban schools. Suburban schools already employed a higher percentage of teachers who earned Exemplary ratings. The trend associated with the percentage across time might indicate a growing gap between suburban schools and schools in "other" locations of South Carolina.

Figure 4. *Percentage of South Carolina Teachers Receiving "Exemplary" SLO Evaluation by School Location, 2020-2021 and 2021-2022*



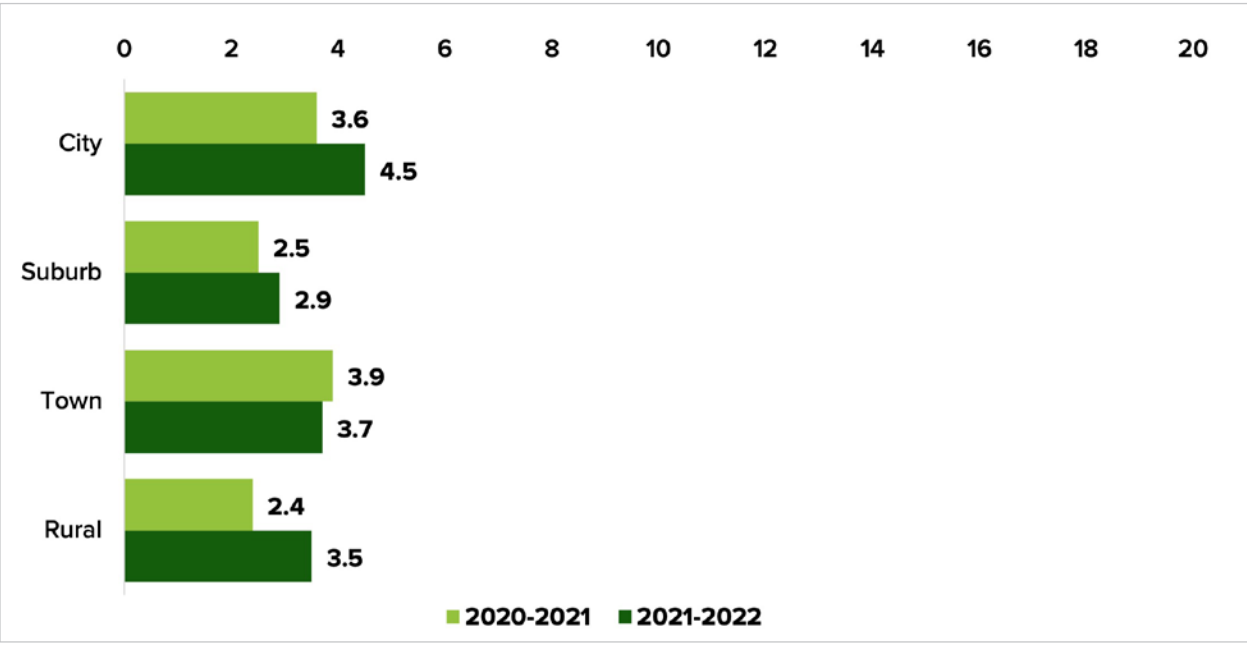
In Figure 5, each geographical area experienced a small increase in the percentage of international teachers employed. Town schools displayed the largest increase between 2020-2021 and 2021-2022. Compared to other locales in South Carolina, town-based schools employed the largest percentage of international teachers, a practice that appears to be increasing compared to other school locations.

Figure 5. *Percentage of International Teachers in South Carolina by School Location, 2020-2021 and 2021-2022*



Considering of the percentage of teachers who were certified through an alternative certification program (see Figure 6), three school locations in South Carolina (cities, suburbs, and rural areas) showed an increase in the percentage of alternatively certified teachers. Town-based schools showed a slight decrease in the percentage of teachers from alternative certification programs. This may be due to the higher percentage of international teachers in town locations.

Figure 6. *Percentage of South Carolina Teachers Certified Through Alternative Pathways by School Location, 2020-2021 and 2021-2022*



As shown in Figure 7, the average number of years of teaching experience for South Carolina teachers decreased for all school locations between the two years. Teachers in town and rural schools tended to have more years of teaching experience than teachers in other locations of the state. Additionally, across all school locales, the averages of teacher experience are decreasing.

Figure 7. *Average Years of Teaching Experience for South Carolina Teachers by School Location, 2020-2021 and 2021-2022*

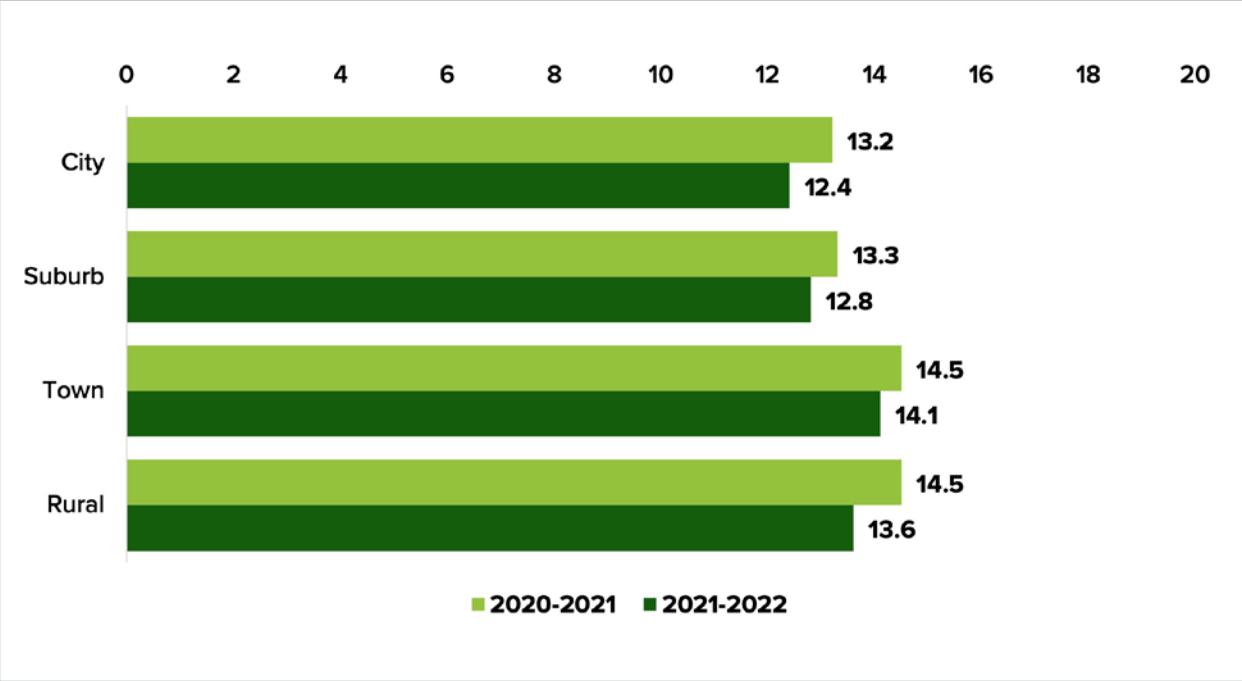


Figure 7 shows that across the two-year period, the average number of years of teaching experience for South Carolina teachers decreased for all school locations. Differences exist among school locations. Teachers in town and rural schools tended to have more years of teaching experience than teachers in other locations of the state. However, across all school locales, the averages are decreasing.

Relationship between South Carolina Teacher Characteristics Across Geographic Location and Published Studies

Research on teacher retention rates in different geographic locations is inconclusive. Some studies have found that urban schools have lower retention rates (Brill & McCartney, 2008; Papay et al., 2017), while others have found that rural schools have lower retention rates (Miller, 2012; Monk, 2007). Still, others have found no correlation between geographic location and teacher retention rates (Carver-Thomas & Darling-Hammond, 2017; Holme et al., 2018). However, there is some evidence that smaller schools, particularly those with high percentages of historically underrepresented minorities, have higher teacher turnover rates (Carver-Thomas & Darling-Hammond, 2017; Ingersoll et al., 2019). The SC TEACHER report on teacher retention rates for the 2020-2021 school year (Starrett et al., 2023) found that city schools possessed the lowest retention rates when compared to other geographical locations. This finding might provide some explanation for the decrease in average teacher experience and increasing employment of alternatively certified teachers in city schools. This SC TEACHER report also found that suburban schools reported the highest teacher retention rates, supporting the findings here that suburban schools in South Carolina have less need to recruit alternatively certified or international teachers. However, despite the relatively high retention rates found in suburban schools, the mean number of years of experience in suburban schools is below the state average. Future studies may follow the teaching placements for individual teachers to better understand these somewhat paradoxical findings– that suburban teachers are relatively less experienced than urban and rural teachers in South Carolina; but there is less turnover for teachers in suburban schools. Meanwhile, teachers in rural and town locations are, on average, more experienced; but there is greater turnover, necessitating recruitment of teachers from non-traditional pathways, such as international teachers or alternatively certified teachers.

+ KEY QUESTION 3:

How do teacher characteristics compare between South Carolina schools with different levels of student poverty?

For Key Question 3, South Carolina schools were categorized by the number of students living in poverty, using the South Carolina Department of Education's Pupils-in-Poverty (PIP) index. Schools in the highest 25% of the state's PIP ratings were considered high-poverty schools. Schools in the lowest quartile were marked as low-poverty schools. Schools falling between these two quartiles, the middle 50% of PIP ratings, were categorized as moderate-poverty schools. The smaller number of teachers in high-poverty schools (n = 9,111; 18%) compared to low-poverty schools (n = 16,191; 32%) suggests that high-poverty schools tend to be smaller with fewer teachers.

After dividing schools into three PIP levels, teacher characteristics were compared across categories. Differences among poverty levels were analyzed to determine if these differences were significantly different and if any differences demonstrated a meaningful level.

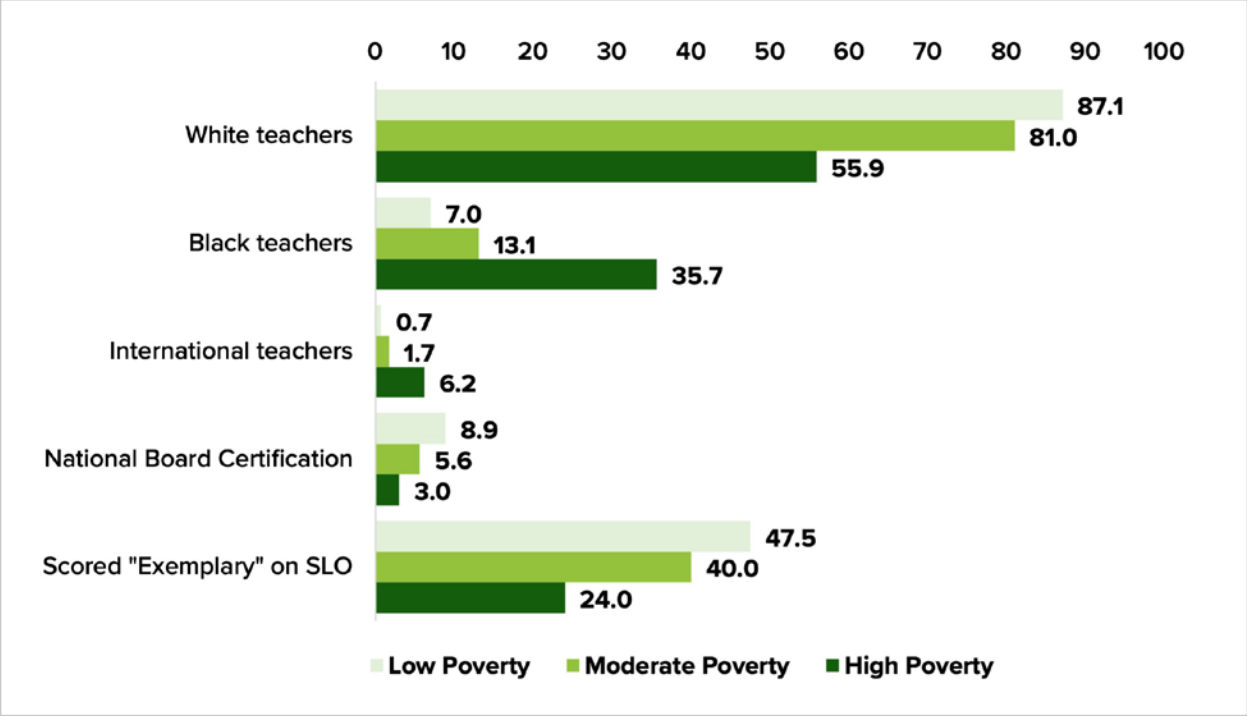
Differences in Teacher Characteristics Across School Poverty Levels

There were significant differences among school poverty levels across included teacher characteristics. The one exception was the mean years of teaching experience. Teachers at high-poverty schools had slightly fewer years of teaching experience on average (12.9 years) compared to moderate (13.1 years) and low (13.3 years) poverty schools. The remaining differences in teaching characteristics among school poverty levels were distinct, and, in a few cases, the differences were considered medium and even large in magnitude.

High-poverty schools in South Carolina employed significantly larger percentages of Black and female teachers and fewer White teachers. These teachers at high-poverty schools were more likely to be certified through alternative or international pathways and were less likely to possess a postbaccalaureate degree or possess National Board Certification. Regarding their performance evaluations, teachers at high-poverty schools were less likely to have met the ADEPT standard or to score "Proficient" or higher on their SLO evaluation.

Figure 8 indicates the largest differences in teacher characteristics when compared by school poverty level. Teachers at low-poverty schools were approximately twice as likely to earn an "Exemplary" SLO rating and three times as likely to have earned National Board Certification when compared to a teacher at a high-poverty school. In 2021-2022, there were more than six times as many international teachers employed at high-poverty schools compared to low-poverty schools. Finally, the racial composition of high and low-poverty schools differs greatly, such that students in low-poverty schools are much less likely to have a Black teacher, and students in high-poverty schools are much less likely to have a White teacher.

Figure 8. *Largest Differences in South Carolina Teacher Characteristics Across School Poverty Levels*

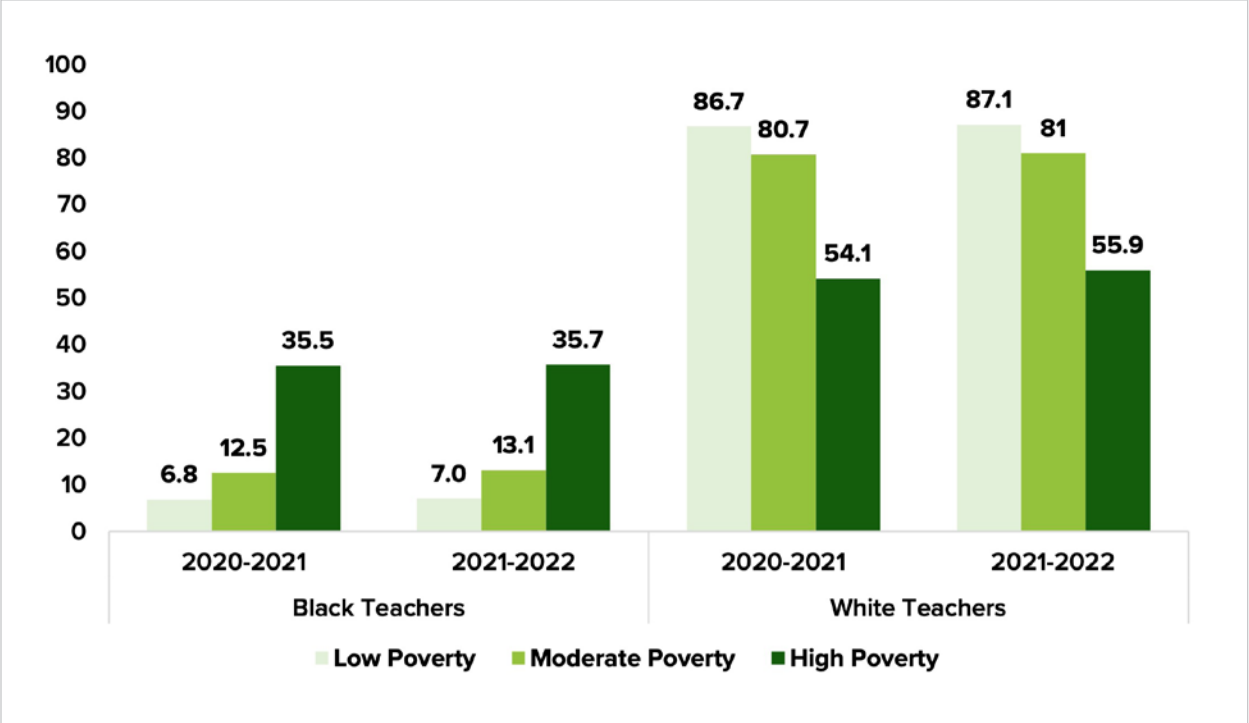


School Poverty Differences in Teacher Characteristics Over Time

The differences in teacher characteristics for 2021-2022 were noted in the previous SC TEACHER Workforce Profile report (Starrett et al., 2023). Consequently, it is important to monitor if these differences in teacher characteristics are changing over time or remaining consistent. The longitudinal analysis focused on the characteristics identified as having the largest differences in the previous section. Figures 9 – 11 illustrate how these characteristics varied longitudinally and across school poverty levels.

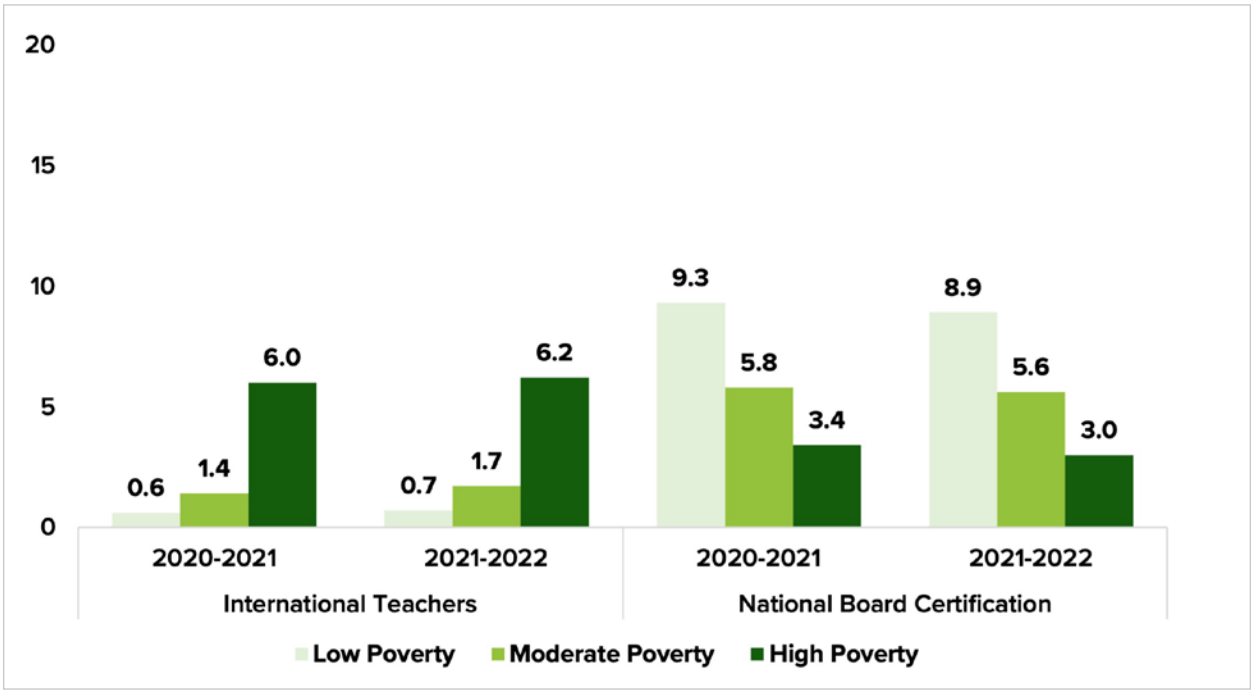
Figure 9 illustrates the percentage of Black and White teachers across school poverty-level categories. As shown, the distribution of teachers by race remained stable across the two academic years, with increases of no more than one percent.

Figure 9. *Percentages of White and Black Teachers Compared Across School Poverty Levels, 2020-2021 and 2021-2022*



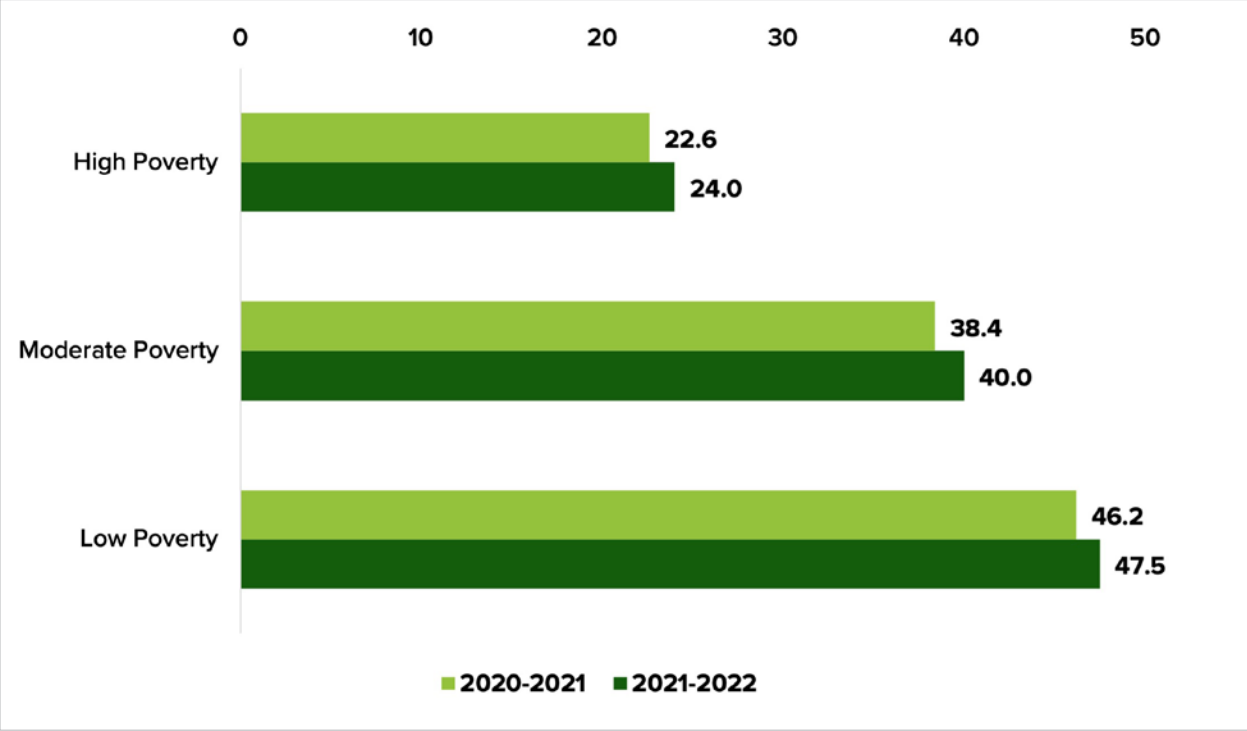
The percentage of international teachers employed by South Carolina schools increased slightly for every school poverty category (see Figure 10). During the same time period, the percentage of National Board Certified teachers in South Carolina schools decreased across all poverty-level groups

Figure 10. *Percentage of International Teachers and Teachers with National Board Certification in South Carolina by School Poverty Level, 2020-2021 and 2021-2022*



Differences in a measure of teacher performance, SLO ratings of "Exemplary," are displayed in Figure 11. Across the three poverty categories, the percentage of South Carolina teachers receiving a rating of Exemplary increased slightly over the two-year period. However, the percentage of teachers in high-poverty South Carolina schools rated as Exemplary was much lower than that of teachers receiving an Exemplary rating in low- or moderate-poverty locations.

Figure 11. *Percentage of South Carolina Teachers Earning "Exemplary" SLO Ratings by School Poverty Category, 2020-2021 and 2021-2022*



Relationship between South Carolina Teacher Characteristics Across School Poverty and Published Studies

Regarding the relationship between teacher characteristics and the degree of student poverty at the school workplace, findings reiterate what has been found in previous South Carolina studies and the more extensive literature. While differences in the racial composition of the faculty at a particular school should be considered as part of a larger study that includes trends in the demographic characteristics of the communities in which these schools are located, clearer connections can be postulated between the other teacher characteristics and the degree of school poverty. The recent SC TEACHER report on teacher retention rates (Starrett et al., 2023) found that high-poverty schools possessed significantly lower teacher retention rates when compared to other schools. Lower retention rates can lead to more openings, which are more likely to be filled by less experienced teachers and/or teachers certified through non-traditional pathways (i.e., alternative certification, international teachers). While the basis of this association is the level of student poverty at these schools, Simon and Johnson (2015) pointed out that teachers are not leaving these schools because of the students' poverty but because of the working conditions at these schools. The South Carolina Teacher Working Conditions Survey conducted in 2023 (Starrett et al., 2023) did find that teachers in high-poverty schools were more dissatisfied with student engagement and student behavior than other teachers but also found that student issues were not the most important factor in South Carolina teachers' job satisfaction or intention to stay in the profession.

+ CONCLUSIONS AND RECOMMENDATIONS

The purpose of this SC TEACHER report on the 2021-2022 South Carolina teacher workforce is to provide an accurate description of the state's teachers, to monitor trends in how the workforce changes over time, and to provide a basis for understanding how teacher characteristics impact important issues facing the state of South Carolina, such as promoting student learning and supporting the development of an effective teacher workforce. The SC TEACHER report uses a multimethod approach to capture teacher quality, including variables such as degree level, certification pathway, National Board Certification, teaching experience, and evaluation results. However, work needs to be done to determine effective indicators of quality for South Carolina teachers, which could include other variables like teaching outside of the certification area.

In 2020-2021 the average years of experience teaching did not vary significantly between schools. However, the average years of teaching experience dropped considerably across the state, from 14.1 to 13.2 years. Teacher experience decreased at all types of schools in 2021-2022, but the largest decreases were in city and rural communities and at higher-poverty schools. These decreases indicate that more experienced teachers are either leaving the profession or at least making up a smaller percentage of the teaching workforce. More nuanced analyses that track individual teachers' career movements and distinguish among teachers who stay at a school, move to a new school, or leave the profession are needed to clarify trends in teacher retention.

Schools in South Carolina are addressing teacher shortages by hiring more teachers from non-traditional pathways, such as alternative certification programs or international teachers. This trend is reflected in the findings of this report, as the state's percentage of both alternatively certified teachers and international teachers increased between the 2020-2021 and 2021-2022 school years. International teachers are more prevalent in schools based in towns with high levels of student poverty, especially in high-poverty schools in towns and rural areas. Given the increasing reliance upon these two populations of teachers, more study is needed to assess how these practices are faring for students regarding quality and promoting learning and for these teachers relative to their well-being and working conditions.

The teacher characteristics that provide information about teacher quality (National Board Certification and ADEPT/SLO evaluations) provided mixed results in 2021-2022. The percentage of teachers with National Board Certification or meeting ADEPT standards decreased slightly, the percentage of teachers earning "Proficient" or higher on the SLO evaluation stayed constant, and the percentage of teachers scoring "Exemplary" on SLO increased by a small amount overall. Teachers at suburban and low-poverty schools perform better in every measure, while teachers at schools located in towns and high-poverty schools perform the lowest. For example, teachers at high-poverty schools earn an "Exemplary" SLO rating at half the rate of teachers in low-poverty schools; also, teachers at low-poverty schools possess National Board certification at almost triple the rate of teachers at high-poverty schools. A deeper dive into National Board certification is warranted to examine if the prevalence of candidates similarly differs across poverty level to discern the impact of finances and supports. Additionally, this examination should explore the value-added of NBC on student learning in South Carolina. Several factors related to working conditions also impact teacher performances, including administrative support, teacher efficacy and motivation, available professional development resources, and even teachers' time after finishing their required daily duties. Overall, more information is needed to understand the inter-relationships of these to support teacher growth and effectiveness.

In terms of demographic factors that describe South Carolina, we focused on teachers' racial/ethnic background (Black, White) and gender. These factors are of interest due to prior research that indicates that students perform better in school when they have teachers from the same racial/ethnic backgrounds as the students they are teaching. The percentage of South Carolina teachers who are female greatly exceeds the percentage of female students in South Carolina schools. However, South Carolina's numbers match the national trend in which female teachers considerably outnumber male teachers. This discrepancy does not appear to vary much when compared across school locations or the degree of student poverty at the school. As for the racial/ethnic composition of the South Carolina teacher workforce, the percentage of Black teachers greatly exceeds the national average, which is helpful in trying to match the greater prevalence of Black students in South Carolina schools. Research consistently demonstrates that a racially diverse teacher workforce promotes positive outcomes for all students, such that educational leaders should make deliberate efforts to continue to increase teacher diversity.

The annual teacher workforce profile report by SC TEACHER is helpful for allowing more timely data-driven decision-making and policy creation. However, there is more work to be done toward finding the meaning or importance of these trends. Continuing a statewide prominence of research and analysis, developing more reliable and linked sources of data, and using this data to inform solutions to the issues facing South Carolina schools is an essential component to improving educational outcomes for students, teachers, schools, and our state.

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+ APPENDIX: DETAILED TECHNICAL ANALYSIS REPORT

This appendix details the research study and data analysis from a statistical perspective. All relevant hypothesis tests, tests of assumptions, and measures of results are described.

Data Sources

This study used personnel files and teacher evaluation files for the 2021-2022 school year supplied by the South Carolina Department of Education. The personnel file originated from the S.C. Educator System and contained demographic data about individual teachers as well as their certificate numbers and areas of certification, employment locations, and current positions of certified employment in South Carolina. The evaluation file contains information about teachers' performance evaluations and contract status, including summary results on ADEPT and Student Learning Outcomes (SLOs) for the 2021-2022 school year. Identifiers in the evaluation files include teaching certificate numbers and teacher names, allowing the files to be combined.

The personnel file contained 57,645 records for teachers. Focusing on the position codes that indicate current classroom teaching assignments (position codes 3-9) and removing duplicate records provided 52,937 unique teachers teaching in South Carolina classrooms during the 2021-2022 school year. The personnel file was then merged with the evaluation file, matching performance records for 51,096 teachers. For some of these matched records, the assessment results were recorded as "Unknown" or "Incomplete."

The latest national summary of teacher characteristics and trends from the National Center for Educational Statistics (NCES) was from the 2020-2021 school year (https://nces.ed.gov/programs/coe/indicator/clr). These figures provided a basis for comparison with the 2021-2022 sample of South Carolina 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 possessing the trait of interest were computed at the individual teacher level. The average number of years of experience as a teacher is the mean computed across 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, 2019). 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 on these factors.

Data Analysis

Separate analyses were conducted to compare teacher demographic variables across school locations (city/ suburb/town/rural) and poverty levels (low/moderate/high). Chi-square Tests of Proportions were used to determine if there was an overall difference in percentages across locations or poverty levels, with an alpha of .05 used as the basis for a significant difference with the global hypothesis test. After examination of the omnibus test, if an overall difference in the percentages was found, individual tests comparing percentages between all possible group pairings for the variable were conducted. For example, when considering the percentage of teachers who met the ADEPT evaluation standard, teachers meeting ADEPT at city schools were used as the reference group to compare teachers meeting the ADEPT standard from suburban schools, town schools, and rural schools; next, teachers meeting ADEPT at suburban schools were compared to city, town, and rural teachers, etc. Sequentially changing the reference group allowed each characteristic combination to be considered as the baseline for comparison. The Holm-Bonferroni method was used to adjust the p-values of these pairwise comparisons so that false significant inferences could be avoided.

For the number of years teaching variable, the means were compared across location and poverty using 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 percentages) 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. 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, we will emphasize any effect sizes that are medium or larger (greater than or equal to >.5) rather than focus on differences that are statistically significant but small in effect size.

Teacher Data

For the 52,937 South Carolina teachers included in this study, position assignments for the 2021-2022 school year were categorized as regular classroom teachers (1st – 12th grade), pre-kindergarten, kindergarten, special education (self-contained, resource, or itinerant), and retired. As shown in Table 1, a large majority (81.3%) of the teachers are classified as classroom teachers. Special education teachers of various types comprise almost 11% of the teaching positions in South Carolina. Kindergarten and pre-kindergarten teachers represent just under 7% of teachers in the state. Retired teachers who have returned to the classroom are just over 1% of the teaching positions in South Carolina.

Table 1. *Teaching Positions for South Carolina Teachers*

Teaching Position	2020-2021 Frequency	2020-2021 Percentage	2021-2022 Frequency	2021-2022 Percentage
Classroom Teacher	43,174	81.4	43,033	81.3
Special Education (Resource)	3,060	5.8	3,023	5.7
Special Education (Self-contained)	2,635	5.0	2,462	4.7
Kindergarten	2,507	4.7	2,478	4.7
Pre-Kindergarten	1,154	2.2	1,112	2.1
Retired	363	0.7	641	1.2
Special Education (Itinerant)	160	0.3	188	0.3
Total	53,053	100.00	52,937	100.00

Teacher Demographic Data

We compared the demographic characteristics of the South Carolina teacher population to the greater populations of teachers in the United States (Table 2). Data on the teacher population in the United States during the 2020-2021 school year was taken from recent National Center for Educational Statistics (NCES) reporting (NCES, 2023). The majority (78%) of South Carolina teachers in the 2021-2022 school year were White, and 15% were Black. Less than 5% of the teachers were of other racial/ethnic backgrounds, and 1.8% of teachers' race/ethnicity was unknown. In comparison with national data, South Carolina had a higher percentage of Black teachers (15% statewide vs. 6% nationwide), a lower percentage of Hispanic teachers (2% vs. 9%), and a similar percentage of White teachers (78% vs. 80%). Considering gender, 80% of South Carolina teachers were female, and 19% were male in the 2021-2022 school year. Nationally, 77% of teachers were female, meaning the South Carolina workforce has roughly 3% more female teachers. Examining race/ethnicity and gender in combination, 63% of South Carolina teachers were White females, 15.3% were White males, 12.3% were Black females, and 3% were Black males in the 2021-2022 school year.

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

Demographic Variable		S.C. Percentage (2020-2021)	S.C. Percentage (2021-2022)	U.S. Percentage (2020-2021)
Gender	Female	80	80.2	77
	Male	19	19.6	23
	Not Reported	1	0.2	n/a
Race/Ethnicity	White	78	78.3	80
	Black	16	15.3	6
	Hispanic	2	2.2	9
	Asian	1	1.8	2
	Two or more races	n/a	n/a	2
	Other	1	0.6	1
	Not Reported	2	1.8	n/a

Teacher Education, Certification, and Experience Data

Most teachers (62.9%) in South Carolina schools in the 2020-2021 school year had at least a postbaccalaureate degree (i.e., a master's degree). NCES uses a different classification system that does not focus on credit hour accumulation and includes educational specialist degrees and advanced professional certificate programs as postbaccalaureate programs in addition to master's and doctorate degrees. According to NCES, 59.8% of teachers in the United States possess a postbaccalaureate degree, slightly lower than the South Carolina percentage.

Table 3. *Comparison of State and National Teacher Certificate Class/Educational Attainment (%)*

Description	S.C. Percentage (2020-2021)	S.C. Percentage (2021-2022)	U.S. Percentage (2020-2021)
Pre-bachelor's degree	Less than 0.1	Less than 0.1	1
Bachelor's Degree	29.4	29.9	38
Bachelor's Plus 18 hours	6.9	6.5	n/a
Master's Degree	45.0	45.5	51
Master's Plus 30 hours	15.0	15.2	n/a
Doctorate Degree	2.0	2.2	1
Not Reported	1.6	0.5	n/a

For the 2021-2022 school year, South Carolina teachers had an average of 13.2 years of experience as teachers. In South Carolina, 56.9% of teachers had at least ten years of teaching experience as compared to 63.0% of teachers nationally (NCES, 2023).

Table 4. *Comparison of State and National Teacher Experience*

Teaching Experience	S.C. Frequency (2021-2022)	S.C. Percentage (2021-2022)	U.S. Percentage (2020-2021)
Less than 3 years	7,536	14.2	7
3 to 9 years	15,267	28.8	29
10 to 20 years	17,524	33.1	37
More than 20 years	12,610	23.8	26
Mean Years of Experience for South Carolina Teachers (2021-2022): 13.2 years			
Mean Years of Experience for South Carolina Teachers (2020-2021): 14.1 years			

The percentages of teachers in South Carolina during the 2021-2022 school year who originally became certified through alternative programs or held international certification increased from the previous school year. The percentage of alternatively certified teachers grew by 0.5% in 2021-2022, and the percentage of internationally certified teachers increased by 0.7%. Meanwhile, the percentage of National Board Certified teachers decreased by 0.4% in 2021-2022.

Table 5. *Percentages of South Carolina Teacher Certification Types (%)*

Certification	S.C. Percentage (2020-2021)	S.C. Percentage (2021-2022)
Alternative	3.0	3.5
International	1.9	2.6
National Board	6.6	6.2

Teacher Evaluation Data

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 51,096 teachers for whom evaluation data was matched to the personnel file, 88% were evaluated using the Expanded ADEPT (SCTS) model, and 11.6% were evaluated using a locally developed model. Two South Carolina districts (i.e., Florence 1 and Greenville) use a locally developed model.

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 given a continuing-contract level. The majority (74.1%) of South Carolina teachers met these standards and were on a continuing-contract level. Teachers who are not eligible for a continuing contract may be employed under an annual contract; 12.3% 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; 7.1% of teachers in our state were induction teachers. Teachers who are eligible for induction or an annual contract but 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 2.7% of teachers were in this category (South Carolina Department of Education, 2018).

In South Carolina, different forms of evaluation are adopted depending on a teacher's contract level and type of certificate. A goals-based evaluation (GBE) is the most widely used evaluation form. This is an informal evaluation process designed for teachers at the Annual and Continuing contract levels who have successfully completed the summative evaluation process; 69.9% of South Carolina teachers were evaluated using a GBE. Summative evaluations are high-stakes accountability measures used to measure and report learning outcomes and to inform certificate advancement, contract status, and contract renewal; 7.4% of South Carolina teachers were evaluated using summative evaluations. Formative evaluations are designed to promote professional growth and reflection; 19.1% of our state's teachers are evaluated using formative evaluations. Table 6 provides information about teacher contract types and evaluation forms.

Table 6. *Teacher Evaluation Information on Contract Type and Forms of Evaluation*

Evaluation	Type	Frequency	Percentage
Contract Type	Continuing Contract	39,237	74.1
	Annual Contract	6,530	12.3
	Induction Contract	3,734	7.1
	Letter of Agreement	1,403	2.7
	No Contract Level	192	0.3
	(blank - unmatched)	1,841	3.5
	Total	52,937	100
Evaluation Form	Goals-Based Evaluation (GBE)	37,002	69.9
	Formative	10,096	19.1
	Summative	3,927	7.4
	No Evaluation	71	0.1
	(blank - unmatched)	1,841	3.5
	Total	52,937	100

Note: "Blank – unmatched" records refer to teachers in the personnel file that could not be matched by certificate number with a record in the file containing evaluation information.

South Carolina teachers' final evaluation ratings are based on data from the South Carolina Teaching Standards (SCTS) rubric and the use of Student Learning Outcomes (SLOs). Analysis of SLO scores for the 51,096 teachers matched with PCS data revealed that 37.3% of the teachers were rated as "Exemplary," 48.8% as "Proficient," 3% as "Needs Improvement," and 0.5% as "Unsatisfactory." The SLO scores for 3,117 teachers (6.1%) were not able to be matched and were recorded as Unknown. Teachers' overall ratings within the ADEPT system are based on a composite score of SCTS ratings and SLO scores. Results for 2021-2022 indicated that the majority (91.1%) of South Carolina teachers were in the "Met" category, 0.5% were "Not Met," and 4.7% 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 their ADEPT results reported to the SCDE as "Incomplete."

Table 7. *Teacher Evaluation Ratings*

Evaluations	Ratings	S.C. Percentage (2020-2021)	S.C. Percentage (2021-2022)
SLO Evaluations	Exemplary	36.7	37.3
	Proficient	49.5	48.8
	Needs Improvement	3.0	3.0
	Unsatisfactory	0.8	0.5
	Unknown	6.1	6.1
	(blank - unmatched)	3.9	3.5
	Total	**100.00**	**100.00**
ADEPT	Met	92.9	91.1
	Not Met	0.6	0.5
	Incomplete	1.9	4.7
	Unknown	0.6	0.1
	(blank - unmatched)	3.9	3.5
	Total	**100.00**	**100.00**

Note: "Blank – unmatched" records refer to teachers in the personnel file that could not be matched by certificate number with a record in the file containing evaluation information.

Comparison of Teacher Variables by Geographic Context

We examined the demographic characteristics of teachers to uncover potential differences in the workforce for schools located in city, suburban, town, and rural areas of South Carolina. Significant differences in the percentages of Black teachers and White teachers were found in all the comparisons among locations. Teachers at suburban schools had the highest percentage of White teachers (82.0%) and the lowest percentage and Black teachers (11.7%). Teachers at schools located in towns had the highest percentage of Black teachers (19.9%) and the lowest percentage of White teachers (73.1%). 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 1.5%.

In terms of teachers certified through alternative means, suburban schools had the lowest percentage of alternative-certified teachers (2.9%), which was significantly different from city, town, and rural schools. The percentage of teachers with international teaching certificates was statistically different among all school locales, with the highest percentage of international teachers in town-based schools (4.7%) and the lowest percentage found in suburban schools (1.1%). This trend was reversed for the percentage of teachers with National Board Certification, as suburban schools had the highest percentage of NBC teachers (7.3%), which was statistically different from the other three locations). Schools in South Carolina towns had the lowest percentage of NBC teachers (4.6%), which was statistically different from suburban and rural schools (but not with city schools).

Teachers at town and city-based schools had the lowest percentage of teachers holding postbaccalaureate degrees (61.5%); this value differed statistically from the percentage at suburban and rural schools, but the differences yielded a small effect ($h < 0.3$).

Teachers at suburban schools met the ADEPT teacher evaluation at the highest rate (96.1%) with statistically significant differences compared to the other school locations; however, all differences demonstrated a small effect size. The percentage of teachers receiving ratings of "Exemplary" or "Proficient" for the SLO portion of the evaluation system differed among locations, but the differences were small, varying by only 3%. There was, however, a statistically significant difference in the percentage of teachers receiving "Exemplary" ratings on the SLO portion among all locations, with suburban teachers exhibiting the highest percentage receiving "Exemplary" (46.9%) and teachers in towns receiving the lowest percentage (31.5%).

Additionally, a statistically significant difference in years of teaching experience was found between suburban/city and rural/town teachers, with a difference of roughly two years between urban and rural-based teachers. It should be noted that none of the statistically significant differences in these comparisons achieved a practically meaningful level (i.e., medium or large effect size), and significance reflects the large number of teachers used in analyses.

Table 8. *Summary Statistics and Inferential Tests for Teacher Variables by Geographic Location*

Variable	N	S.C.	City	Suburb	Town	Rural	$\chi^2(df)$	*p*
% Black teachers	51,834	15.3	18.1[a,b,c]	11.7[a,d,e]	19.9[b,d,f]	16.1[c,e,f]	336.9 (3)	<.001
% White teachers	51,834	78.3	74.8[a,b,c]	82.0[a,d,e]	73.1[b,d,f]	80.0[c,e,f]	308.6 (3)	<.001
% Female teachers	51,834	80.2	80.7[c]	80.9[e]	79.6	79.2[c,e]	19.1 (3)	<.001
% Teachers with alternative certification	51,834	3.5	4.5[a,c]	2.9[a,d,e]	3.7[d]	3.5[c,e]	50.5 (3)	<.001
% Teachers with international certification	51,834	2.6	2.0[a,b,c]	1.1[a,d,e]	4.7[b,d,f]	2.6[c,e,f]	281.1 (3)	<.001
% Teachers with National Board certification	51,834	6.2	5.2[a,c]	7.3[a,d,e]	4.6[d,f]	5.9[c,e,f]	81.5 (3)	<.001
% Teachers with postbaccalaureate degrees	51,834	62.9	61.5[a,c]	63.2[a]	61.5	63.1[c]	13.1 (3)	.005
% Met on ADEPT	50,093	94.4	93.7[a]	96.1[a,d,e]	92.7[d]	93.4[e]	165.0 (3)	<.001
% Exemplary or Proficient on SLO	50,093	89.6	89.2[a,b,c]	90.8[a,d]	87.7[b,d,f]	90.3[c,f]	49.3 (3)	<.001
% Exemplary on SLO	50,093	39.0	38.6[a,b,c]	46.9[a,d,e]	31.5[b,d,f]	34.1[c,e,f]	771.5 (3)	<.001
*Mean total years of experience	51,834	13.2	12.4[b,c]	12.8[d,e]	14.1[b,d]	13.6[c,e]	F = 60.56	<.001

Note. [a]significant difference between city and suburb; [b]significant difference between city and town; [c]significant difference between city and rural; [d]significant difference between suburb and town; [e]significant difference between suburb and rural; [f]significant difference between town and rural; * denotes ANOVA test for mean years

Comparison of Teacher Variables by Poverty Levels

PIP rates were used to place into one of three poverty categories: poverty rates at the upper 25% (PIP rates between 81.58 to 100) were categorized as high-poverty schools, PIP rates between 54.4 and 81.58 were categorized as moderate-poverty schools, and schools in the lowest quartile (PIP rates between 8.8 to 54.4) were categorized as low-poverty schools. There were significant pairwise differences among every poverty level on every demographic variable examined in this report, except for years of teaching experience. Considering demographic characteristics, teachers at high-poverty schools in South Carolina had the highest percentage of female teachers (84%), the highest percentage of Black teachers (35.7%), and the lowest percentage of White teachers (55.9%) as compared to teachers at low and moderate poverty level schools. Further, each of these differences were medium effect sizes, indicating the differences were meaningful.

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 (5.4%) and international certification (6.2%) and the lowest percentages of postbaccalaureate degrees (58.8%) and National Board Certification (3.0%). All differences yielded small effect sizes though the percentage of teachers in high-poverty schools certified internationally is more than six times greater than teachers in low-poverty settings.

Unlike the geographic comparison, there were significant differences among every level of poverty for both the ADEPT and "Proficient"/" Exemplary" SLO evaluations, with teachers at high-poverty schools in South Carolina 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 (47.5%) is almost twice that of teachers earning the same rating at high-poverty schools (24%).

While none of these statistically significant differences are considered large differences in terms of their effect size, as described above, the significant differences in the racial composition of high-poverty schools compared to other schools and the difference in the percentages of teachers receiving an SLO rating of exemplary in low-poverty schools compared to high-poverty schools were considered important differences. These medium effect sizes are marked with bolded red superscripts in Table 9.

Table 9. *Summary Statistics and Inferential Tests for Teacher Variables by Poverty Level*

Variable	N	SC	Low	Moderate	High	$\chi^2(df)$	*p*
% Black teachers	50,682	15.3	7.0[a,**b**]	13.1[a,**c**]	35.7[**b,c**]	3902.5 (2)	<.001
% White teachers	50,682	78.3	87.1[a,**b**]	81.0[a,**c**]	55.9[**b,c**]	3528.9 (2)	<.001
% Female teachers	50,682	80.2	78.7[a,b]	80.9[a,c]	84.0[b,c]	105.6 (2)	<.001
% Teachers with alternative certification	50,682	3.5	2.6[a,b]	3.4[a,c]	5.4[b,c]	142.3 (2)	<.001
% Teachers with international certification	50,682	2.6	0.7[a,b]	1.7[a,c]	6.2[b,c]	853.8 (2)	<.001
% Teachers with National Board certification	50,682	6.2	8.9[a,b]	5.6[a,c]	3.0[b,c]	382.5 (2)	<.001
% Teachers with postbaccalaureate degrees	50,682	62.9	65.4[a,b]	61.5[a,c]	58.8[b,c]	122.4 (2)	<.001
% Met on ADEPT	49,017	94.4	96.4[a,b]	94.1[a,c]	91.3[b,c]	286.5 (2)	<.001
% Exemplary or Proficient on SLO	49,017	89.6	94.0[a,b]	89.0[a,c]	83.4[b,c]	689.3 (2)	<.001
% Exemplary on SLO	49,017	39.0	47.5[a,**b**]	40.0[a,c]	24.0[**b**,c]	1300.4 (2)	<.001
*Mean total years of experience	50,682	13.2	13.3[b]	13.1	12.9[b]	F=6.12	.002

Note. [a]significant difference between low and moderate poverty; [b]significant difference between low and high poverty; [c]significant difference between moderate and high poverty; Bold superscripts indicate effect sizes of .5 or greater (medium to large effect sizes); *denotes ANOVA test for mean years

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