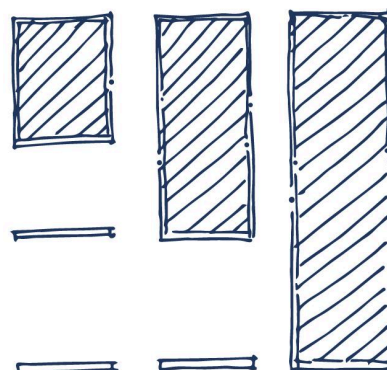# Evaluating the Impact
of the Culturally Responsive Teaching
Professional Learning Program
in Albemarle County Public Schools

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About the Authors

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Executive Summary

Decades of research has demonstrated the impact of Culturally Responsive Teaching (CRT) as a high leverage practice for addressing educational inequities (Aronson & Laughter, 2016; Ladson-Billings, 1995; Yu, 2022). Still, preparing educators to engage in effective CRT practices remains a challenge for districts across the nation (Chang & Viesca, 2022; Cruz et al., 2020; Picower & Kohli, 2017). This program evaluation documents Albemarle County Public Schools' (ACPS) CRT training initiative from participating educators who engaged in the initiative from 2016-2023. This includes educators who opted into full CRT certification programming as well as those who underwent micro-credentialing for comparative purposes. Our goal was to evaluate the impact of ACPS's CRT initiative on teacher experience and student learning in order to make recommendations regarding the program's present impact and future trajectory.

Through a mixed method approach that included learning outcomes for all students in mathematics and reading in grades 4-8 in 2023 and survey responses (n=161) and interviews (n=17) with certified and micro-credentialed teachers, our team evaluated the program based on the following outcomes:

1. **<u>Educators' experiences and perceptions</u>** – including educators' experience in the program, stated resources helpful to completing it, and perceived relationship between the CRT training, teaching practice, and student learning.

2. **<u>Student learning outcomes</u>** – documenting the relationship between program completion and student learning outcomes (specifically in math and reading)

3. **<u>Alignment</u>** – examining links between student learning outcomes, educator experiences, and the improvement theory underlying ACPS's culturally responsive teaching professional learning program

Regarding educator experiences and perceptions: Our findings indicate an overall positive perception of the program among educators. In particular, educators reported improved reflection on biases, relationships with families and perceptions of improved instruction. However, this relationship was much stronger for participants who completed the full certification program than those enrolled in the micro-credential program. Additionally, teachers reported that time during contract hours to complete the program was the most important factor for supporting their completion of the program, followed by support from equity specialists.

Regarding student learning outcomes: Our findings suggest a positive impact of the full certification program on student learning in math and reading (as measured by Standards of Learning Assessments' Value Added scores of student growth). We found a statistically significant correlation between students' math learning and placement with a fully certified mathematics teacher. However, this correlation was not present for micro-credentialed teachers. The same pattern was present in reading, though not to the level of statistical significance (see the Learning Growth in Reading section for posited reasons for this discrepancy).

Regarding alignment: The relationships described above were present across student groups, with particularly positive associations for special education students (in math) and for students of Color (in both math and reading). These results support the theory of change posited by the ACPS's programming—that impactful CRT preparation can accelerate learning for students not traditionally well-served in education systems.

Based on these findings, we provide recommendations around (1) maintaining the core characteristics of the learning program across all three CRT characteristics; (2) standardizing and expanding supports for educator buy-in, especially in contracted time and school-supported professional learning (particularly as the program moves from voluntary to mandatory); (3) providing staffing supports for equity coaching; and (4) continuing longitudinal research of the program for continued improvement and effectiveness.

Overview

To address persistent equity gaps in learning outcomes, Albemarle County Public Schools (ACPS) developed a training and certification program in Culturally Responsive Teaching (CRT) in 2015-2016. In 2020, this program became mandatory for all licensed educators in the division, and by 2023, over 100 teachers were completing the program annually. The purpose of this report is to provide insight into the effectiveness and implementation of Albemarle County's culturally responsive teaching professional learning program, using a mixed-methods approach with both statistical analysis of student learning outcomes and the reported experiences of educators in surveys and interviews. The evaluation uses student learning data from the 2022-2023 school year and includes educators who completed the program between 2016 and 2023.

Our goal is to provide insight into what has worked and what may be improved as the professional learning program continues to develop to meet the learning needs of educators so they may improve opportunities for all students in Albemarle County and make meaningful, sustained progress towards equity.

A Review of the Literature

Culturally Relevant, Culturally Responsive, & Culturally Sustaining Pedagogy

Culturally Responsive Teaching emerged as a theoretical construct in the 1990s when researchers studied classroom teachers who were successful in accelerating the learning of traditionally minoritized students, especially students of Color facing economic hardship, and identified a set of common characteristics among these educators that positively impacted student learning. A pioneer in the field, Gloria Ladson-Billings (1995) developed her theory of Culturally Relevant Pedagogy (CRP) over 28 years ago to challenge the deficit narrative in research about African American students. She examined the teaching practices of successful teachers of African American students and suggested three tenets of what students must learn to be successful:

1) Students must experience academic success or growth,
2) Students must develop and maintain cultural competence in their cultural identity and those of others, and
3) Students must develop critical consciousness to challenge inequalities in their society and apply what they are learning to question the status quo and take action to address issues in their community.

Geneva Gay (2010) defined Culturally Responsive Teaching as "using the cultural knowledge, prior experiences, and performance styles of diverse students to make learning more appropriate and effective for them; it teaches to and through the strengths of these students" (p. 31). She proposed that Culturally Responsive Teachers demonstrate these six characteristics:

- Bridge students' home and school experiences by acknowledging, validating, and affirming their students' cultural heritage as funds of knowledge that are worthy of informing the formal school curricula and instructional methods.

- Comprehensively educate their students by teaching them to "maintain identity and connections with their ethnic groups and communities; develop a sense of community, camaraderie, and shared responsibility; and acquire an ethic of success." These teachers create a community of academic actors (e.g., administrators and counselors) who support their students' success.

- Be multidimensional and purposeful with the "curriculum content, learning context, classroom climate, student-teacher relationship, instructional techniques, classroom management and performance assessment."

- Empower students to believe they can succeed and provide them with resources and scaffolds to help them succeed.

- Challenge "traditional educational practices" by using students' cultural resources to foster and demand academic success and develop cultural consciousness.

- Emancipate students from what traditionally counts for knowledge and give them the platform to "find their voice, to contextualize issues in multiple cultural perspectives, to engage in more ways of knowing and thinking, and to become a more active participant in shaping their learning" (pp. 31-38).

The tenets for Ladson-Billings's (1995; 2014) CRP and Gay's (2010) CRT are fundamentally similar, as both scholars emphasize how teachers may use their students' cultural referents to help students be more socially and academically successful. Both scholars encourage educators to teach students to celebrate their cultures, be open-minded about others, and critique the status quo in education and society. They challenge teachers to demand academic excellence in their students by connecting students' homes and communities to their experiences at school making learning more relevant and effective for these students.

Ladson-Billings (2014) welcomed the introduction of Culturally Sustaining Pedagogy (CSP), which builds on CRP. She recognized it as a necessary and fresh addition. The framework of CSP ensures the cultural and linguistic experiences and assets of Black, Indigenous, Asian Pacific Islanders, and Latinx communities continue to be "centered and sustained" instead of the tradition of centering whiteness and treating it as a norm in teaching and learning (Alim, Paris, & Wong., 2020).

Impact of Culturally Relevant-Sustaining Pedagogies

Previous studies have demonstrated practices of CRP's relationship to affective factors such as motivation (Bui & Fagan, 2013; Dimick, 2012; Ensign, 2003; Hill, 2012), students' interest in academic content and discussion (Choi, 2013; Dimick, 2012; Ensign, 2003; Martell, 2013) and judgment and attitudes of their abilities (Souryasack & Lee, 2007; Aronson & Laughter, 2016). These

affective factors are essential, considering they may act as mediators to increase student academic performance.

While students' academic achievement is often tied to students' test scores, Ladson-Billings (2014) encouraged scholars to focus on measuring students' outcomes on behaviors that depict longer-term academic gains. Although much has been written about Culturally Relevant Pedagogy, and some studies that link CRP to academic outcomes (Dee & Penner, 2017; Lopez, 2016) there is still great need for empirical research to connect the practices to student outcomes (Sleeter, 2012).

Professional Learning among Educators in Culturally Responsive Teaching

While the literature that identifies characteristics of Culturally Responsive Teaching among teachers who show success in improving the learning outcomes of traditionally minoritized students is relatively strong, the literature on the effectiveness of professional learning programs that attempt to instill these characteristics in other teachers is less robust (Debnam et al., 2015), and research shows that there are a number of potential barriers to implementing Culturally Responsive Teaching professional learning (Neri et al., 2019).

In a comprehensive literature review, Neri et al., (2019) studied implementation of Culturally Responsive Education (CRE) professional learning across a variety of contexts and created a framework for understanding resistance to these programs and how to approach this resistance as a learning problem. The framework categorizes causes of resistance by origins at three levels: institutional, organizational, and individual.

Institutional causes often stem from CRE being one of many other competing initiatives that staff must attempt to implement at the behest of the district without sufficient time to approach learning in-depth or when a district pressures staff to adopt CRE practices without providing sufficient support for them to do so. Organizational factors that influence resistance occur when school leaders themselves are not part of the CRE work and do not support it at their school. It also occurs when CRE PD occurs in an isolated setting rather than part of a school-based cohort. Finally, resistance occurs at the teacher level when teachers do not know how to implement CRE, or they believe it is ineffective. The authors suggest using this framework to design CRE PD to mitigate causes of resistance to ensure a greater likelihood of uptake of CRE practices across a district or institution.

Similar to the study above, in research on three years on an implementation of a CRE PD in a high school with over 120 educators, Mette et al. (2016) noted the program had success due to its use of teacher leaders in Professional Learning Communities (PLCs), however they also encountered resistance due to competing initiatives in the school and a misconception among teachers that CRE supported changes in perspectives, but not necessarily changes in instructional practice. While standardized test scores for students of Color and those in poverty improved, most teachers felt that CRE did not have a significant impact on these scores since they did not have time to fully incorporate changes into their instructional practice. Implications for practice included prioritizing CRE professional learning by abandoning or postponing competing initiatives, increasing time dedicated to CRE professional learning, and highlighting the research base of CRE in changing instructional practice and impacting student learning.

Despite these challenges to implementation, studies have also shown the potential for professional learning in culturally responsive pedagogy (CRP) to have positive impacts on student learning in both mathematics and literacy when implemented with sufficient time and coaching for teachers to increase their knowledge and practice applying CRP strategies with their students (Abdulrahim & Orosco, 2020; Cantrell et al., 2022).

Culturally Responsive Teaching in Albemarle County Public Schools

History of the Program

The last fifty-years of public education in Albemarle County Public Schools (ACPS) has seen a steady need for educators to learn to leverage the culture of families and students to build diverse classroom learning communities that maximize opportunities for all. Prior to integration in Albemarle County in the 1960s, equity gaps existed in education provided in segregated all-White and all-Black schools. After integration, these gaps persisted when many Black teachers were laid off in the transition to integrated schools, Black students faced discrimination and bias in their new schools, and most White educators' pedagogy did not align with Black students' cultural backgrounds.

As Albemarle's schools and population became increasingly diverse in the post-integration era, these opportunity gaps continued, negatively impacting not only Black students, but also those with special needs and emergent bilingual students, as well as students facing economic hardship from all backgrounds, including White families in poverty. The systems and pedagogy of ACPS, like those of schools throughout the United States, failed to provide equity in opportunity for students whose cultures and learning needs differed from those of the traditional middle and upper class White norm (Hinnant-Crawford, 2020).

The accountability movement of the early 2000s and the passage of the federal education law *No Child Left Behind* brought this inequity into stark relief. As ACPS's population grew more diverse, so too did gaps in equity, and in some schools this led to risks of losing state accreditation. In the early 2010s, the division's *Office of Community Engagement*, led by Assistant Superintendent Bernard Hairston, turned to research on Culturally Responsive Pedagogy as a possible solution. They worked with local educators and researchers at the University of Virginia to create a Culturally Responsive Teaching training and certification program to support educators to better meet the needs of students with learning preferences and cultural backgrounds different from those traditionally served by the public schools.

[The first group of four candidates](#)completed the certification in 2016. Each candidate [presented a portfolio](#) to support the impact of their work on student learning. The program showed promise as fully credentialed teachers achieved growth on outcomes such as attendance and SOL assessments, especially for students of Color and those facing economic hardship. In 2018, the program added a micro-credential option, in which candidates focused on one of three characteristics of Culturally Responsive Teaching, rather than demonstrate deep understanding and application of all three.

Figure 1 shows participation in the program from 2016 to 2024, including a large increase following the school board's initiative to make the program mandatory in 2020, a drop-off in 2023 after the initial increase, and another increase in school year 2023-2024 as the program changed the micro-credential program to include all three characteristics of CRT, make it asynchronous, and provide dedicated time during contract hours to complete the program. Figure 2 shows that in recent years this led to a decrease in the proportion of teachers completing full certification compared to those earning a micro-credential.

Participation in the ACPS Culturally Responsive Teaching PD Program
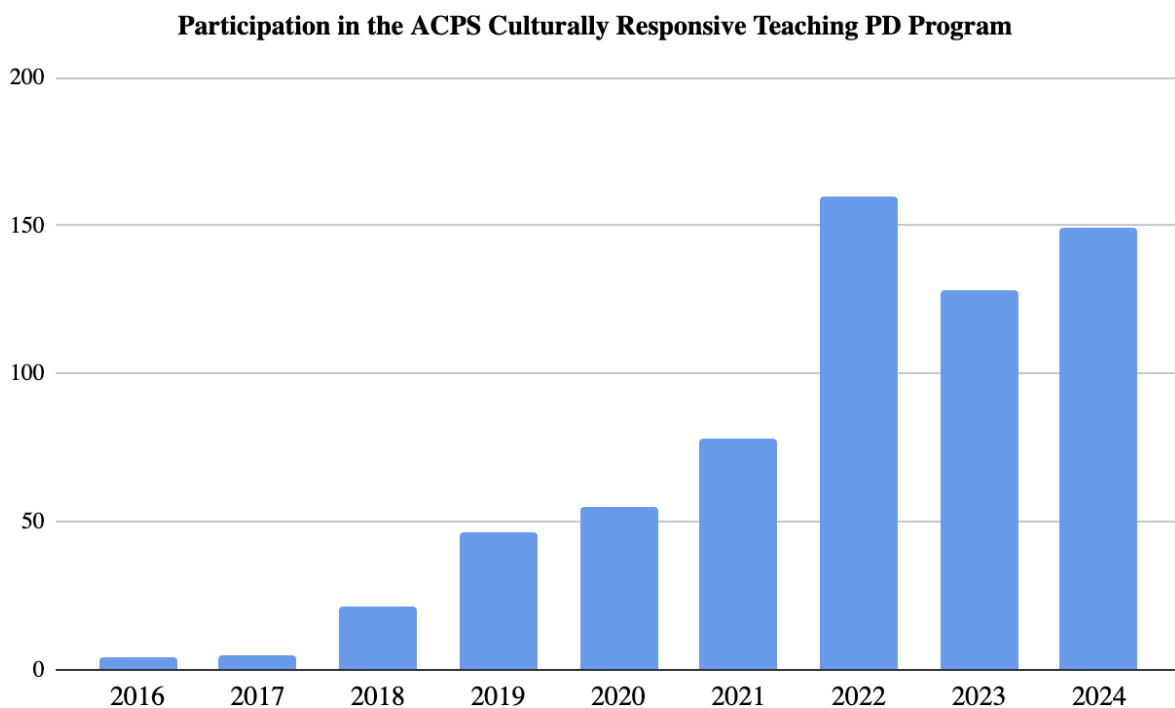
Figure 1. Participation in the CRT PD Program (2016-2024)

Number of Completed Full Certification vs. Micro-Credential
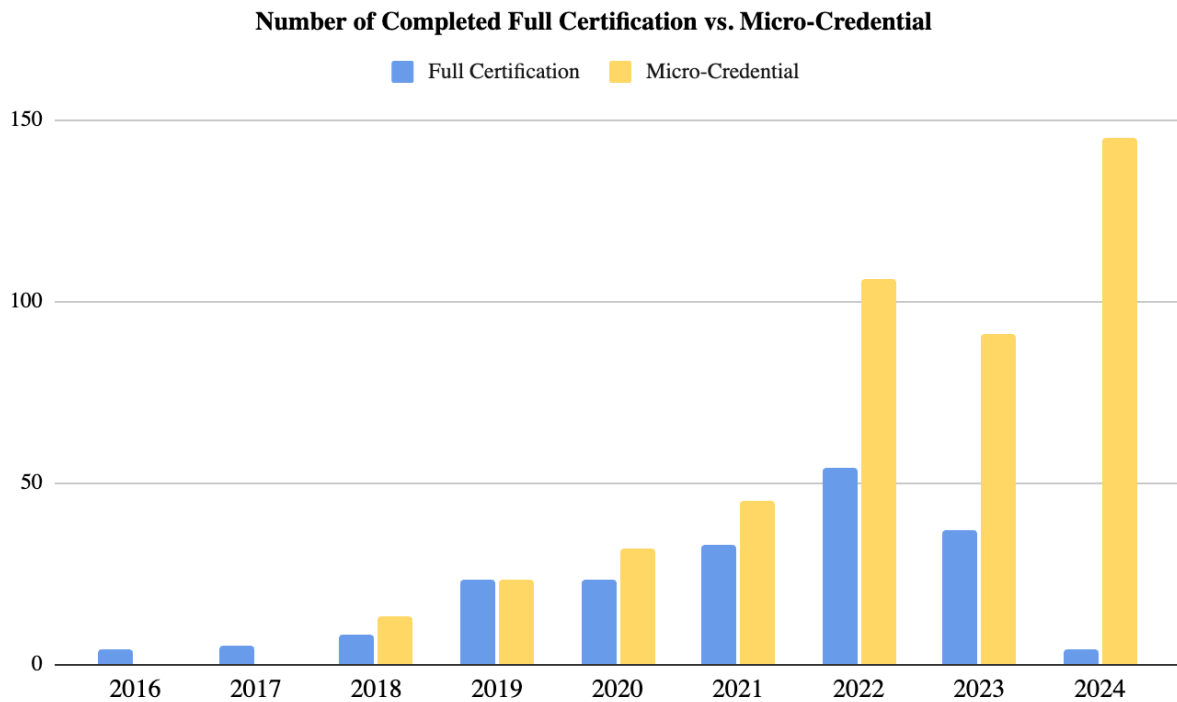
Figure 2. Participation in the Microcredential and Full Certification Programs (2016-2024)

Program Content: 2016 - 2023

The professional development program begins with a book study using the text *Culturally Responsive Teaching and the Brain* by Zaretta L. Hammond. This study was offered throughout the division in cohorts both within and across schools to give a foundation of knowledge about Culturally Responsive Teaching. The next step of the certification and credential process required creating a portfolio that demonstrated proficiency in the three characteristics of the CRT Framework for the full certification, or one of the characteristics for the micro-credential:

1. *Culturally Responsive Teachers acknowledge and incorporate the cultural influences of all students, while reflecting on their own personal cultural lenses.*

2. *Culturally Responsive Teachers teach to and through culture as they plan curriculum and instruction that is differentiated, rigorous, and relevant.*

3. *Culturally Responsive Teachers build positive learning partnerships with students and families.*

Teachers pursuing the full certification met together in cohorts with the support of both Equity Specialists from the division and instructional coaches at their schools. These cohort sessions analyzed each of the three characteristics of CRT and supported teachers in developing projects to implement in their educational context around each of the characteristics. They also led educators through a self-reflection tool to evaluate themselves as Culturally Responsive Educators, an equity audit to determine areas of focus in their context, and focus students or classes with whom they would implement culturally responsive projects to improve student learning outcomes.

The teachers' portfolios were meant to highlight the skills and new knowledge developed through self-reflection and implementation of the projects with students, and they involved two parts: 1) a written essay, website, or presentation, and 2) evidence of increased student achievement. Finally, teachers were asked to present these portfolios for review by a panel of CRT-certified educators.

Throughout this process, teachers were supported by a team of Equity Specialists in the ACPS *Office of Community Engagement* as well as instructional coaches in their school buildings. Finally, teachers who sought micro-credentialing completed the book study, but only had to provide in-depth evidence of implementation in one of the three characteristics.

Changes in the Program: 2023-2024

In 2023-2024, the program underwent significant changes as it scaled to accommodate more educators and responded to feedback from participants. The micro-credential became a series of asynchronous modules and expanded to include all three characteristics of CRT, but it did not require evidence showing the implementation of these characteristics. In-person and online coaching through these modules continued to be available for participants but was not required to complete the program.

In 2024-2025, the program will move from the *Office of Community Engagement* to the *Department of Instruction* to better align with the division's new vision for embedded professional learning. In this same year, the full certification will become an additive training program above and beyond the micro-credential that will continue to require demonstration of application, meant to support educators who have completed the new micro-credential program. The current evaluation does not include these changes, as it includes data only up to the 2022-2023 school year; however findings in this report provide guidance for the further development of the program as it undergoes these changes.

Program Evaluation: 2023-2024

Theory of Improvement

Evaluating a program requires identifying its underlying improvement theory (Langley et al., 2009). The problem ACPS's CRT program seeks to address is inequity in student learning outcomes. Its theory of change may be articulated as follows:

> *"When all ACPS educators develop the characteristics of Culturally Responsive Educators, all students will improve in their learning growth, and groups for whom the education system historically has not worked will experience accelerated learning compared to their peers, providing a foundation for a district-level transformation to better meet the needs of all students and make meaningful, sustained progress towards equity."*

An assumption within this theory is that the CRT learning program will change the educational system in a way that will improve learning for all, but will have a differential, acceleratory impact for students who historically were not meeting learning goals within that system.

Based on this improvement theory, we looked for evidence that the program changed educators' dispositions, beliefs, and ultimately actions as agents within the educational system, and whether those changes led to improvement in learning outcomes with differential, acceleratory learning gains for students who were historically less supported in the system: students with disabilities, English Learners, and those who identified as Black and/or Latinx.

Research Questions

The purpose of this evaluation is to consider several questions to evaluate and guide further development of the Culturally Responsive Teaching professional learning program in Albemarle County Public Schools:

1. How do educators who completed the Culturally Responsive Teaching professional learning program describe their experience in the program, the resources needed to complete it, and its relationship to their practice and student learning?

2. What is the relationship between completion of the Culturally Responsive Teaching professional learning program and student learning outcomes, specifically achievement on the

Standards of Learning Assessments' Value Added scores of student growth in math and reading?

3. How do student learning outcomes and educator experiences align (or not) with the improvement theory underlying ACPS's Culturally Responsive Teaching professional learning program?

Methodology

We used a mixed method approach to determine both the quantitative evidence for the program meeting the objectives of reducing equity gaps among students and qualitative evidence for teachers' experiences and reported changes in mindset and practices as a result of their participation in the program.

Research Question One: Teacher Experience.

To answer research question one, we surveyed all ACPS classroom teachers who had completed the program by June 2023 and were still working in the school division in 2023-2024. Of these 312 teachers, we received surveys from 161 participants, allowing for a confidence interval of 95% and a margin of error of 5%. The table below shows demographic comparisons between the sample population and the overall population of teachers who had completed the program. The sample was similar to the overall population for ethnicity and race; however, we oversampled certified teachers compared to micro-credentialed teachers by around 12%. To address this, we broke out responses by these groups to note differences when making interpretations of the data.

Table 1. Demographics of Survey Sample and Population of Certified and Credentialed Teachers

Race/Ethnicity of Teachers	Sample (n=161)	Population (n=312)
Asian	1%	2%
Black or African American	4%	4%
Latinx/Latina/Latino Hispanic, or Spanish origin	5%	4%
White or Caucasian	88%	89%
Native/Indigenous/Tribal	1%	1%

Certification Status of Teachers	Sample (n=161)	Population (n=312)
Full Certification	43%	31%
Micro-Credential	57%	69%

Qualitative data was also collected through open-ended responses on the survey and follow-up 1:1 interviews with educators who opted in. These interviews were semi-structured and focused on capturing the individual experiences of the teachers who completed the professional development program. Interviews were audio recorded and transcribed to capture accurate dialogue.

The first step of analysis involved open-coding the open-ended response question: "How do you currently define culturally responsive teaching?" These were open-coded separately by three members of the research team for inter-rater reliability, and the team was looking for how these teachers articulated their understanding of CRT. These codes were then synthesized into five codes and applied in a second-round to the open-ended responses.

The next step of analysis was applying these codes to the follow-up interviews to build the narrative answering the research question: *How do educators who have completed the Culturally Responsive Teaching professional learning program describe their experience in the program, the resources needed to complete it, and its relationship to their practice?* Specifically, we were interested in how they articulated culturally responsive teaching as it related to their work as educators.

Finally, the other open-ended question from the survey asked teacher participants to list examples of how they have used ideas or strategies from the professional development program in their pedagogy. These responses were synthesized and cataloged to highlight examples of how ACPS educators are applying this work in practice.

Research Question Two: Learning Outcomes.

To assess the relationship between program completion and student learning outcomes in mathematics and reading, we built a dataset of all 4th-8th Math and Reading SOL test scores for the 2023 school year that included the value added growth score for all students who had taken SOL tests in Virginia in previous years. The value added metric (VVAAS - Virginia Value Added Assessment System) for impact on student learning derives from a model that takes into account all of a student's prior scores on SOL assessments in Virginia and uses these to make a prediction for how a student will perform in a

particular year on a particular assessment, then measures the difference between that prediction and how the student actually performed on the assessment.

This value-added metric assists in program evaluation as it measures how much more or less a student learned in a particular year than what they learned on average in all previous years - showing the potential positive or negative impact of programming and other factors specific to that school year on the student's growth. With a large enough dataset, this metric is particularly useful in evaluating upper elementary and middle school teachers' differential impacts on reading and math, as these content areas are measured every year with SOL assessments, allowing for a careful analysis of growth across years.

The dataset included 9,520 cases of student information, including student demographics, teacher demographics, expected achievement, actual achievement, and the value added growth score (i.e. expected achievement - actual achievement). Student demographic information included gender, grade, Individualized Education Plan status, English Learner status, and race/ethnicity. Teacher demographic information included years of teaching experience, type of professional license, culturally responsive teaching status and year of program completion, gender, and race/ethnicity. In 929 cases, or about 10% of all cases, students did not have a value-added growth score due to not having previous SOL scores to generate a value-added score. These cases were removed from the growth analysis.

Albemarle County Public Schools collaborated with a team of graduate students from the University of Virginia's School of Data Science to analyze the dataset for relationships that could provide evidence of an impact of CRT training on the acceleration of student learning in Math and Reading. Since this data was not derived through an experiment, nor did it contain longitudinal data at the teacher level, the findings presented here are limited to providing evidence for *possible* causal relationships between CRT training and student learning and cannot determine with certainty that the relationships are caused by the program. Despite this, the inclusion of teacher demographic variables such as years of teaching experience, as well as the students' value-added score that does account for historical test results, make this observational analysis particularly robust, such that any relationships which do exist provide strong evidence for investigating further possible causal relationships with experimental and/or longitudinal studies.

The team used a Kruskal-Wallis test to determine whether culturally responsive teaching certification had a significant relationship with students' value-added growth score. When these relationships were found to be significant, Dunn's test was used to determine the differences in significance across certification status. The team also used univariate linear regression to analyze teacher certification's relationship with value-added growth scores, including all of the teacher and student demographic

variables listed above and stepwise regression to assist in identifying a subset of variables to build the regression mode, with an emphasis on including teacher-level variables.

Research Question Three: Program Evaluation.

To answer this question, we used artifact and document analysis from Albemarle County Public Schools' CRT program as well as interviews with program directors to identify the division's theory of improvement, then compared findings from research questions one and two to this theory to determine alignment to outcomes.

Findings

Research Question One

How do educators who have completed the Culturally Responsive Teaching professional learning program describe their experience in the program, the resources needed to complete it, and its relationship to their practice?

Overall, teachers reported positive experiences with the CRT training program in ACPS,though there was variation across different aspects of the program, as well as variation across groups of teachers depending on which type of the program they completed.

The strongest positive finding was that 83% of teachers reported that the program changed perspectives and biases that impacted their work with students. This finding was robust across both the micro credential and full certification cohorts and corresponds to Characteristic One of CRT: *acknowledging and incorporating the cultural influences of all students, while reflecting on one's own personal cultural lenses.*

Teachers' responses indicated they perceived the ACPS program having the strongest impact on this characteristic. The code that arose from teachers' open responses that corresponded to this finding was "mindset." Teachers defined the mindset that the program cultivated as one of routine self-reflection on how their own backgrounds and experiences impacted their work with students. One teacher shared that, "Culturally responsive teaching provides a mirror through which I can reflect on my own culture and practices and how they impact students."

Other aspects of the program had positive impacts on teacher practice, but lower levels of efficacy on student outcomes, with 73% of teachers reporting that they shifted their instructional practices as a result of the program, and 70% reporting improving relationships with students' families and communities. 68% reported improving their analysis of data to support students, and 66% reported a positive impact on their students' learning outcomes (see Figure 3 for all responses).
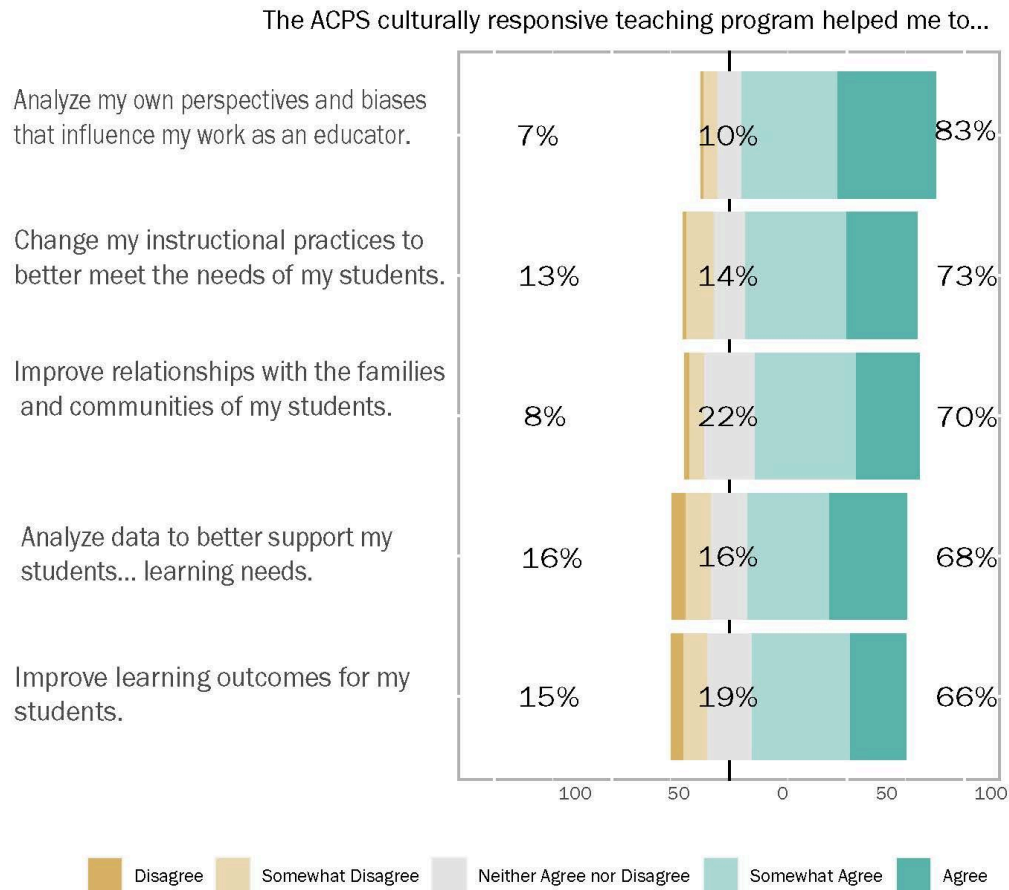
The ACPS culturally responsive teaching program helped me to...

Analyze my own perspectives and biases that influence my work as an educator. 7% 10% 83%

Change my instructional practices to better meet the needs of my students. 13% 14% 73%

Improve relationships with the families and communities of my students. 8% 22% 70%

Analyze data to better support my students... learning needs. 16% 16% 68%

Improve learning outcomes for my students. 15% 19% 66%

Disagree   Somewhat Disagree   Neither Agree nor Disagree   Somewhat Agree   Agree

Figure 3. Likert Scale Responses

In analyzing the responses across teachers who completed a micro-credential versus a full certification, this pattern of responding more positively to assertions that the program impacted perspectives and biases more than actions or learning outcomes persisted; however important differences arose between those who completed a micro-credential versus a full certification. For all questions about experience in the program, micro-credential teachers were less likely to agree the program made an impact on their work. Most stark were differences across groups in perception of impact on building relationships with families and impacting student learning outcomes: Only 58% of micro-credential candidates reported improved relationships with families as a result of the program, compared to 86% of full certification teachers; and 55% of micro-credential candidates reported that the program had a positive impact on student learning outcomes, compared to 79% of fully certified teachers. Overall, this data points to potentially significant differences in efficacy across full-certification and the micro credential groups, based on teachers' perceptions of their own experience within the programs (see Figure 4)
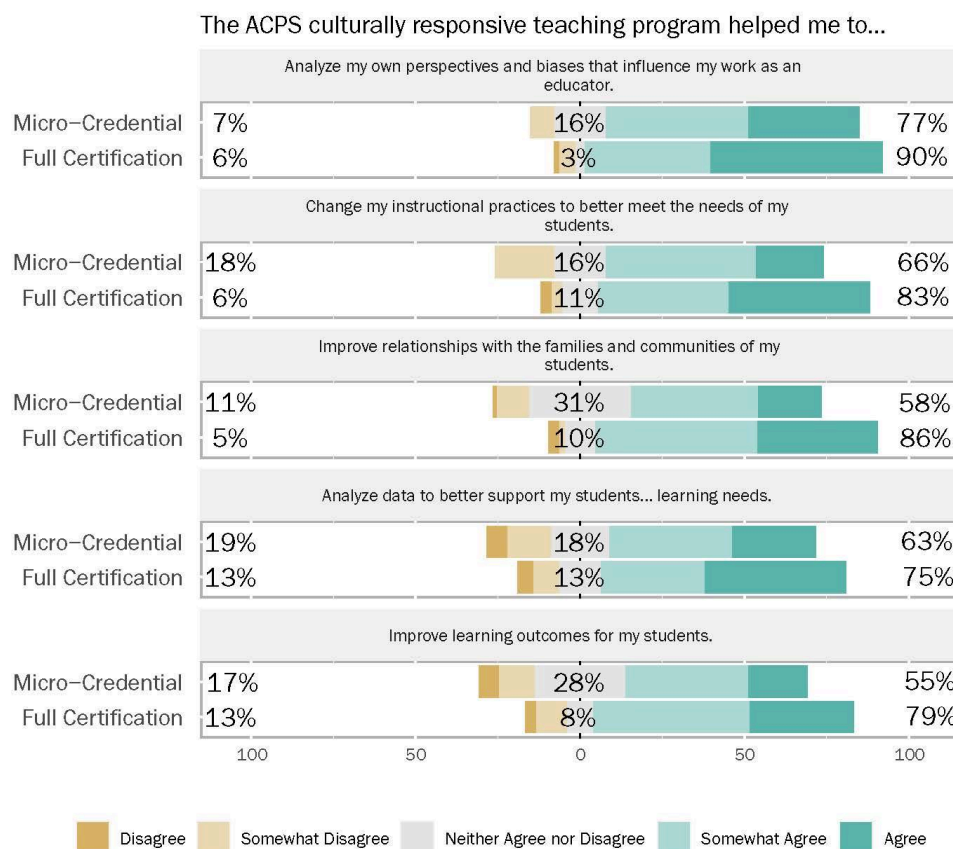
The ACPS culturally responsive teaching program helped me to...

Analyze my own perspectives and biases that influence my work as an educator.

Micro-Credential	7%	16%	77%
Full Certification	6%	3%	90%

Change my instructional practices to better meet the needs of my students.

Micro-Credential	18%	16%	66%
Full Certification	6%	11%	83%

Improve relationships with the families and communities of my students.

Micro-Credential	11%	31%	58%
Full Certification	5%	10%	86%

Analyze data to better support my students... learning needs.

Micro-Credential	19%	18%	63%
Full Certification	13%	13%	75%

Improve learning outcomes for my students.

Micro-Credential	17%	28%	55%
Full Certification	13%	8%	79%

Disagree   Somewhat Disagree   Neither Agree nor Disagree   Somewhat Agree   Agree

Figure 4. Likert Responses by Certification Type

Teacher Perceptions of Program Impact on Practice and Student Learning.

There was little variation across micro-credential and full certification teachers in identifying parts of the program they believed were most important for improving student learning. Both groups identified learning partnerships with family and community and culturally responsive strategies as most important (see Figure 5). This perception of family and community partnerships as being the most vital component for learning improvement may account for at least some of the variation across micro credential and full certification teachers in overall perceptions of program efficacy, as fully certified teachers were more likely to report their family and community partnerships changed as a result of the program when compared with micro credentialed teachers.
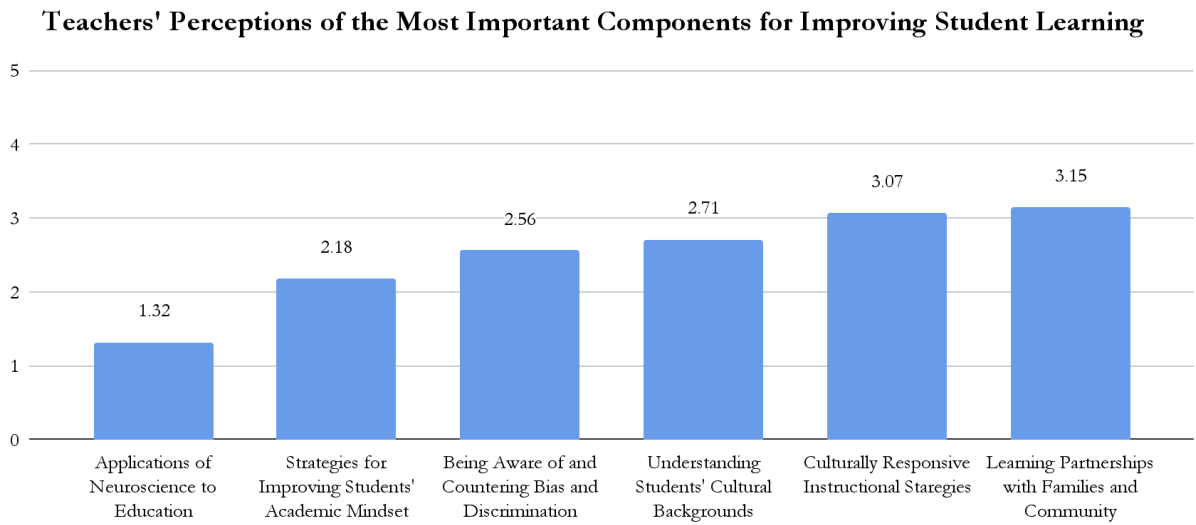
Teachers' Perceptions of the Most Important Components for Improving Student Learning

Applications of Neuroscience to Education	Strategies for Improving Students' Academic Mindset	Being Aware of and Countering Bias and Discrimination	Understanding Students' Cultural Backgrounds	Culturally Responsive Instructional Strategies	Learning Partnerships with Families and Community
1.32	2.18	2.56	2.71	3.07	3.15

Figure 5. Teachers' Perceptions on Improving Student Learning

Teacher Perceptions of School and Division Supports to Complete the Program.

Teachers identified dedicated time during contract hours as the most important factor for supporting their completion of the program, with Equity Specialists being the second most important support (see Figure 6). There was not substantial variation across the micro credential and full certification groups in identification of supports that were most important for finishing the program.
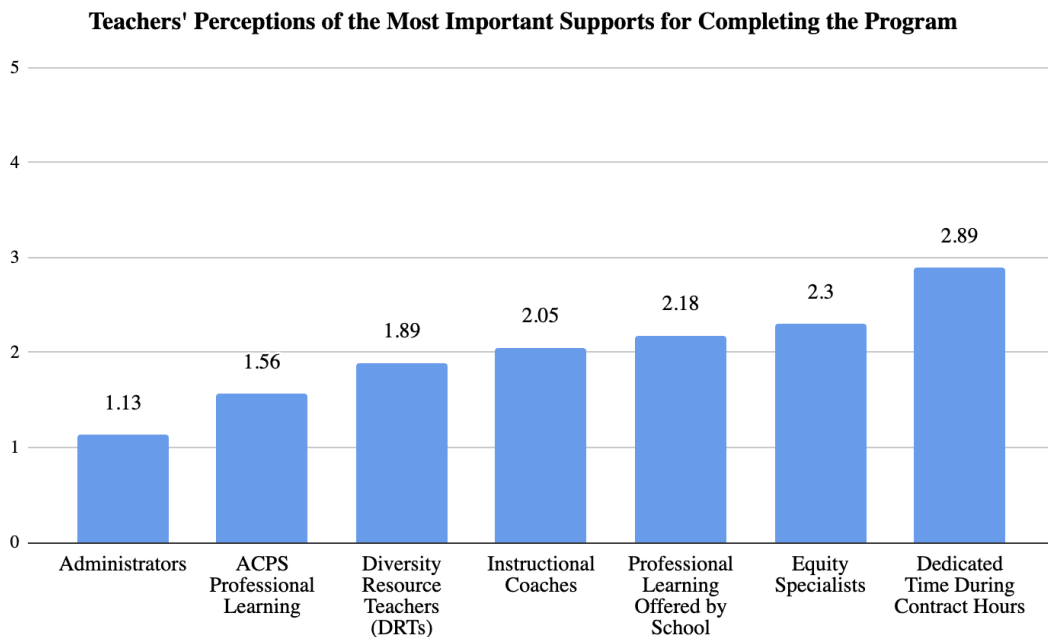
Teachers' Perceptions of the Most Important Supports for Completing the Program

Administrators	ACPS Professional Learning	Diversity Resource Teachers (DRTs)	Instructional Coaches	Professional Learning Offered by School	Equity Specialists	Dedicated Time During Contract Hours
1.13	1.56	1.89	2.05	2.18	2.3	2.89

Figure 6. Teachers' Perceptions of Supports

Dedicated time during contract hours occurred at many schools when administrators made time during professional learning days, faculty meetings, and other time without students for teachers to complete the CRT program. There were also opportunities on professional learning days for teachers to take part in sessions to support the completion of the culturally responsive teaching program. Of note is that most dedicated time during contract hours occurred due to administrator planning of school-based professional learning, though administrators ranked low on resources to support. This is likely due to teachers interpreting the administrator item as direct coaching support by administrators to complete the program, rather than structures created by administrators to support the program.

Equity Specialists are division-level personnel tasked with supporting teachers throughout the professional learning process in culturally responsive teaching. In addition to designing division and school level professional learning experiences, they also met teachers individually and in PLC groups to support completing the certification and credentialing program requirements. Many teachers identified Equity Specialists as valuable assets for understanding the expectations of CRT, implementing it in their classrooms, and building a portfolio to share this work with others.

Research Question Two

What is the relationship between completion of the Culturally Responsive Teaching professional learning program and student learning outcomes, specifically achievement on the Standards of Learning Assessments' Value Added scores of student growth?

For both the mathematics and reading datasets, the final predictors in the stepwise regression model were teacher certification type, teacher's race, teacher's years of experience, student disability status, teacher's license type, English Learner status, and student's gender.

The Relationship between CRT Certification and Student Learning Growth in Mathematics.

The analysis of the math data set reviewed the relationship between students' value-added growth scores and the certification status of their teacher, controlling for other student and teacher demographic variables, including teacher experience and degree type. Figure 7 shows the distribution of teachers by certification status in the data set.
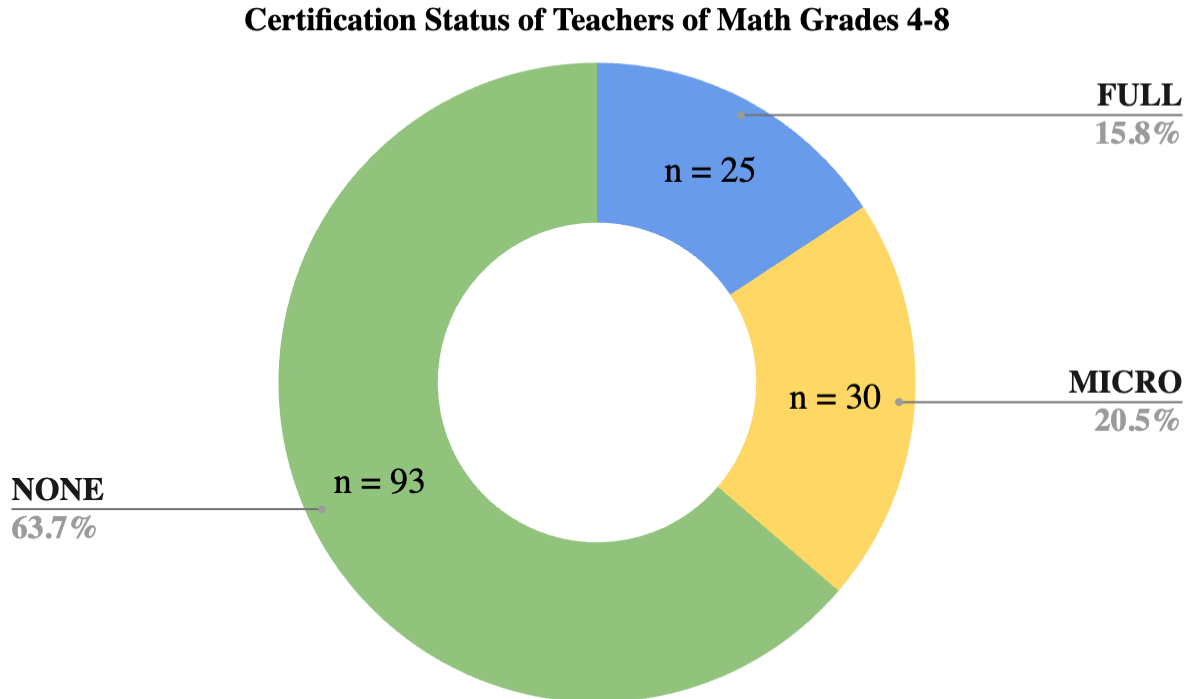
Certification Status of Teachers of Math Grades 4-8

Figure 7. Certification Status of Teachers

This analysis found a positive, statistically significant, and meaningful (effect size = .27) relationship between a student's placement with a fully certified mathematics teacher and their learning growth; however this relationship was not present for students placed with micro-credentialed teachers (see Figure 8). In fact, micro-credential status was indistinguishable from no certification in its relationship to student learning outcomes.
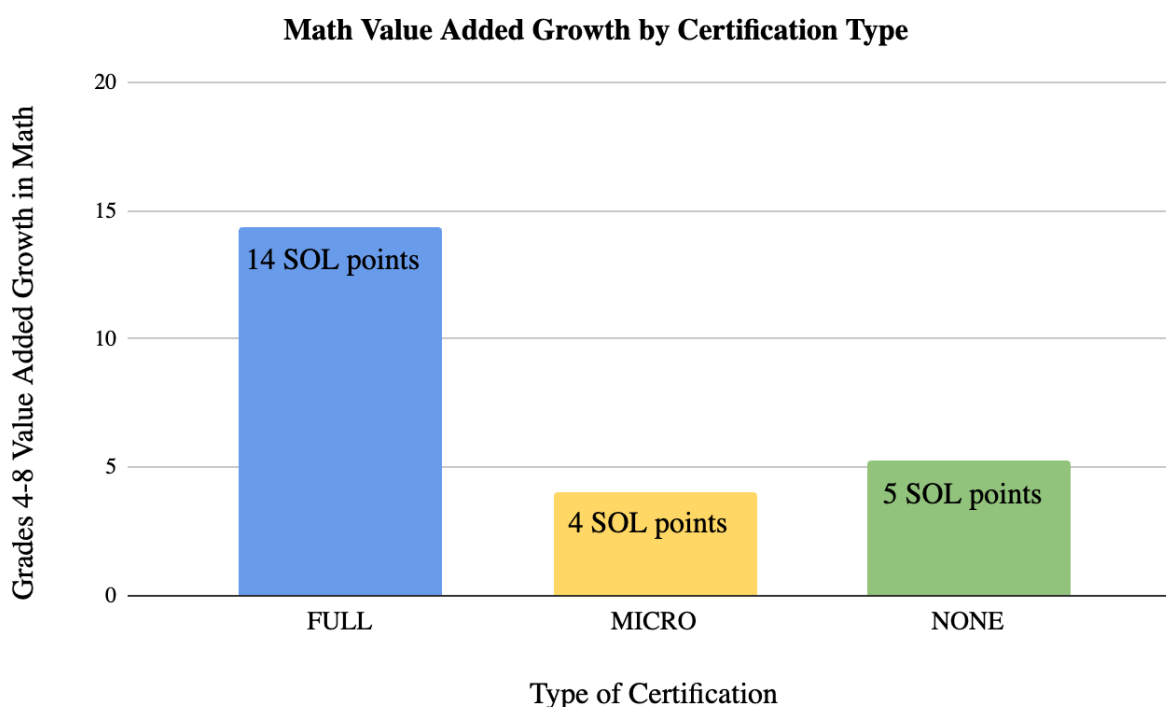
Math Value Added Growth by Certification Type

Figure 8. Math Value Added Growth by Certification Type

It is important to note that these findings are not based on experimental design, so effect sizes do not represent causal relationships, but rather the magnitude of difference in learning growth between students placed with teachers with full certification versus those placed with teachers with no certification. Also of note when considering the potential impact of this growth is that value added represents the amount of growth beyond what is typical for a student, so if a student usually grows 10 points per year on their Math SOL test score, then attains a value added growth score of 14, this would mean they grew 24 points in that particular year.

When analyzing for variation across racial and ethnic groups in the relationship between CRT certification and student learning, we found the relationship for full teacher certification was positive for *all* racial and ethnic groups; however was strongest for Black students, and stronger in general for

all students of color (see Figure 9). The effect size for special education students was similar to that for Black students at .40. There was too little data from English Learners to adequately analyze the potential relationship between certification status and learning for this group of students.
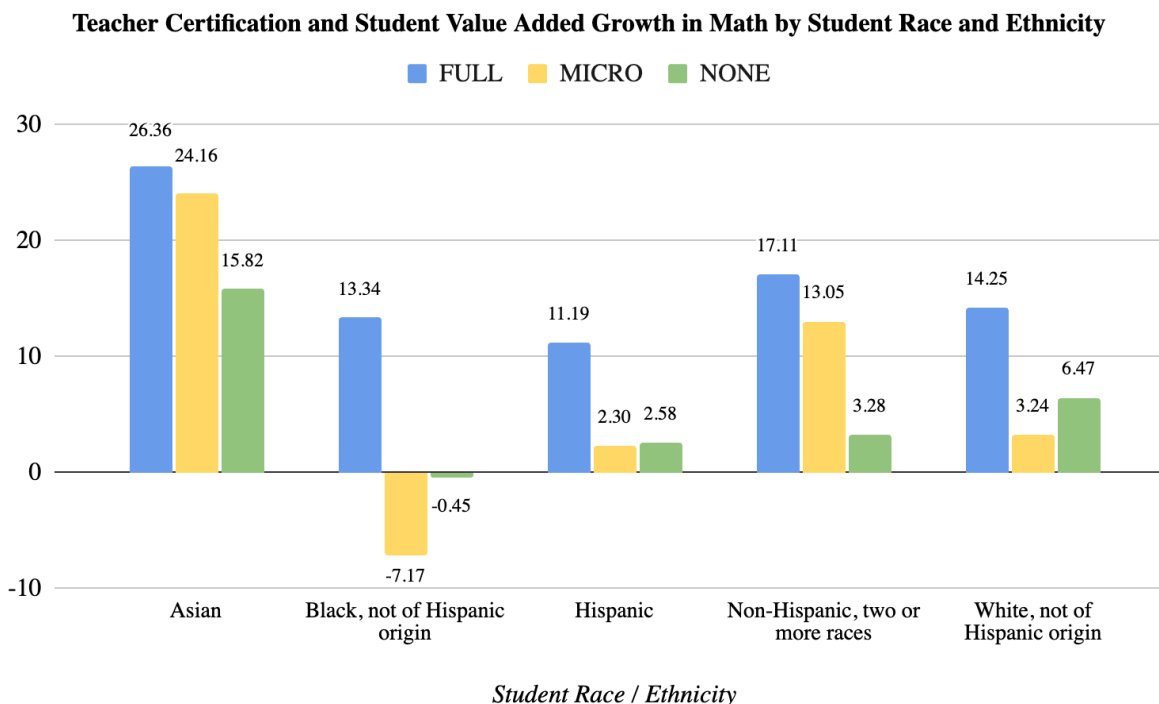
Teacher Certification and Student Value Added Growth in Math by Student Race and Ethnicity

Figure 9. Teacher Certification and Student Value Added Growth in Math by Student Race/Ethnicity

These findings in mathematics provide evidence to support the theory of improvement of the program: culturally responsive teaching can support all students, with an acceleratory effect for those whose learning needs differ from those for whom schools were traditionally designed. This analysis also provides evidence for an important difference between full certification and micro-credential in terms of their potential relationship to educator dispositions and actions that have a positive impact on student growth. This is not to say there are not positive outcomes associated with a micro-credential, but student learning growth did not show as one in this analysis. Further longitudinal or experimental research is needed to better understand these relationships.

The Relationship between CRT Certification and Student Learning Growth in Reading.

The distribution of teachers with certification, with micro-credentials, and without certification was similar in the reading dataset to that in the mathematics dataset (see Figure 10), and the same pattern of

relationships were also present in reading, however the magnitude of those relationships was smaller, so they were not statistically significant.
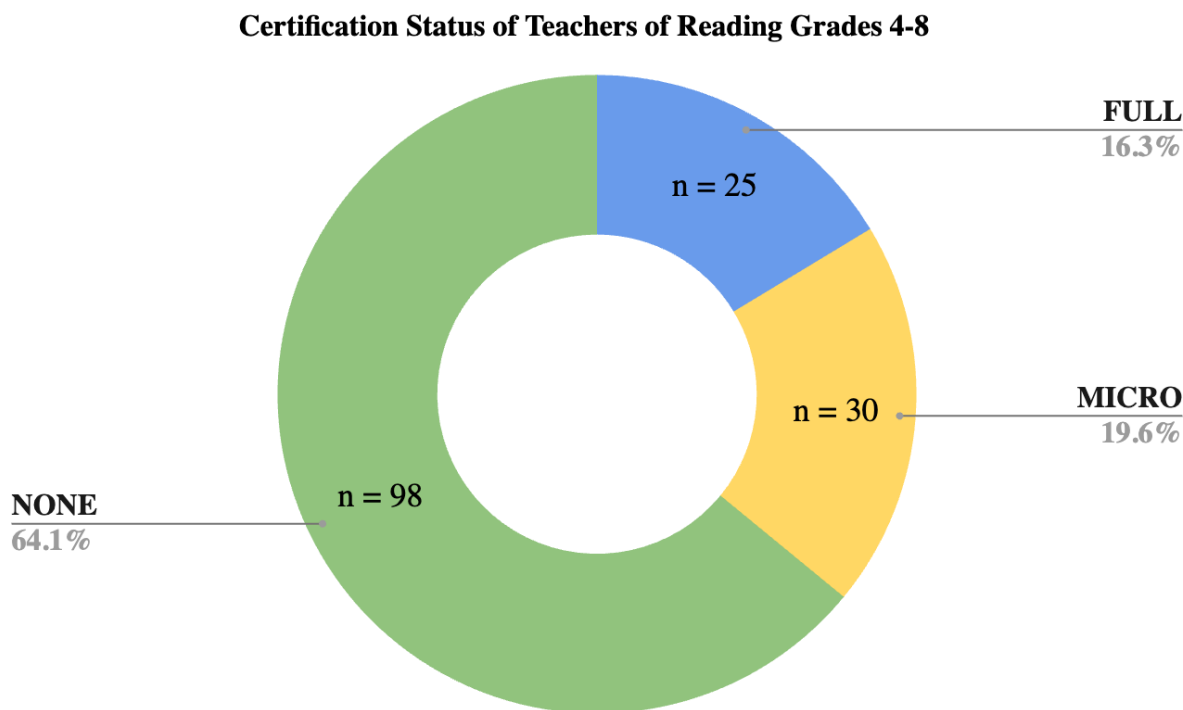
Certification Status of Teachers of Reading Grades 4-8

Figure 10. Certification Status of Reading Teachers (Grades 4-8)

We found a positive relationship between student value-added learning growth in reading and placement with fully certified teachers, and this relationship was stronger for students of Color (see Figures 11 and 12). For White students, there was only a slightly higher average growth score for those placed with fully certified teachers than those placed with teachers with no certification, with an effect size of .01 compared to an effect size of .26 for Black students. Since the majority of students in the dataset identified as White, this contributed to the lack of statistically significant findings for reading. The positive relationship between placement with a fully certified teacher and learning growth that was present for special education students in mathematics was not present in the reading dataset.
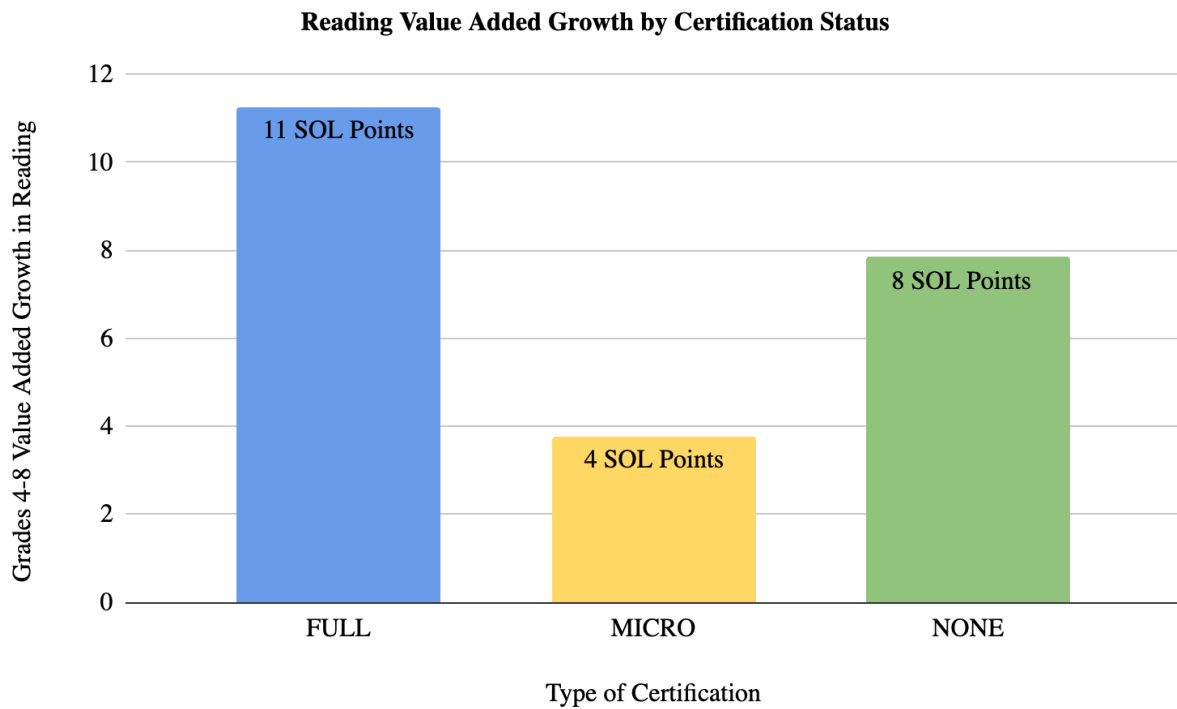
Reading Value Added Growth by Certification Status

Figure 11. Reading Value Added Growth by Certification Status

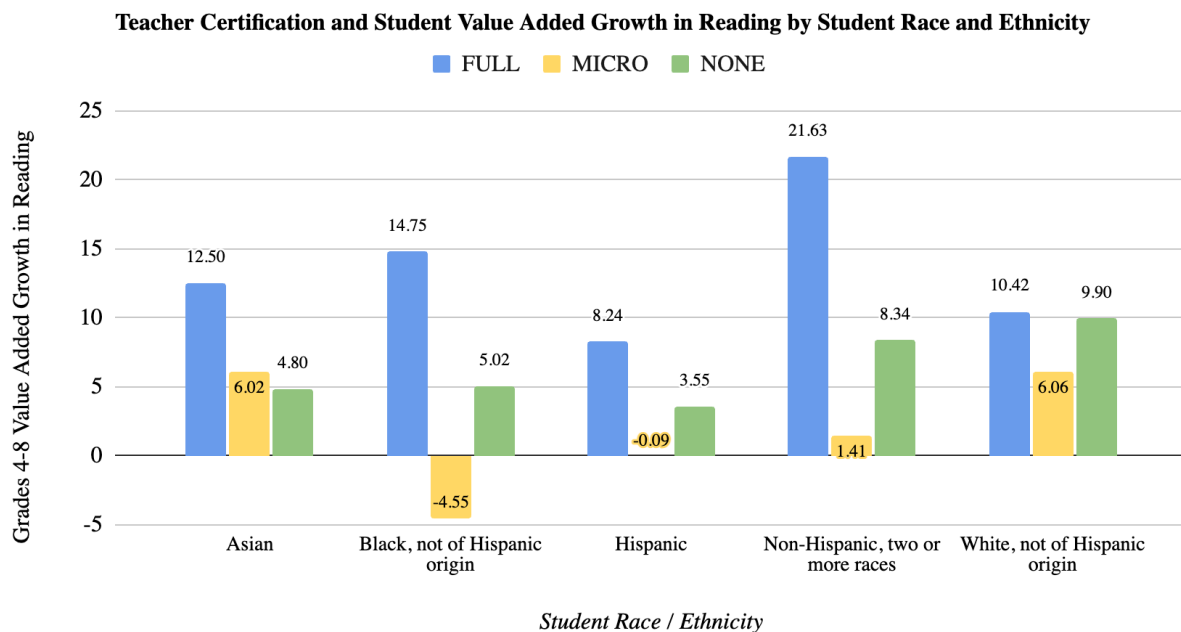**Teacher Certification and Student Value Added Growth in Reading by Student Race and Ethnicity**

Figure 12. Teacher Certification and Student Value Added Growth in Reading by Student Race/Ethnicity

In conversations with CRT certified teachers about this finding, they indicated this may be due to students with increased learning needs in reading often not receiving reading instruction from classroom teachers, but rather from special educators or reading specialists. This warrants further research into how best to pair reading learning growth to teacher instruction for special education students in ACPS.

Research Question Three

How do student learning outcomes and educator experiences align (or not) with the improvement theory underlying ACPS's culturally responsive teaching professional learning program?

Predictions from the Theory of Improvement.

The theory of improvement of the CRT professional learning program in ACPS predicts the following if the program is working successfully:

- Students will show increased learning value-added growth when placed with a teacher who uses CRT methods, assuming that the student's prior teachers were not using these methods.
- Students for whom the educational system historically was not designed, including special education, Black and Latino students, and students in poverty; will show accelerated growth compared to their peers when placed with a teacher using culturally responsive methods, if they had previously learned with teachers who did not use these methods.
- Teachers who complete the program will report it had the intended impact on their dispositions, practices, and student learning.

Evidence for Program Success and Challenges.

For teachers completing the full certification, the ACPS CRT professional learning program has shown efficacy in meeting its goals. Teachers reported participation in the program changed their dispositions and practices, and they perceived these changes as positively impacting student learning. These perceptions held true within the quantitative datasets: Statistically significant, positive relationships were found between a students' placement with fully certified teachers and their value-added learning growth in mathematics, controlling for both teacher and student demographic variables. These same relationships were present in reading, though were not statistically significant due to a smaller magnitude and a smaller effect size for white students. Positive relationships between learning and full certification existed across all student racial and ethnic groups, but were stronger for special education students in mathematics, and for mathematics and reading for students of Color, supporting a theory of improvement that seeks to positively impact learning for all and to accelerate learning for those not served well in traditional educational systems.

For teachers completing the micro-credential, there was less evidence for program efficacy. While most micro-credentialed teachers reported the program changed their dispositions and practices, especially when it came to recognizing biases that could impact their work, these numbers were 20- 25% lower

than fully certified teachers, and only 55% of micro-credential teachers reported these changes had a positive impact on student learning. Related differences manifested in the quantitative data, with the micro-credential being indistinguishable from no certification in terms of relationship to students' value-added growth, and in some cases having a negative relationship compared with no certification.

For both fully certified and micro-credentialed teachers, there was evidence the program was successful in creating a common understanding of culturally responsive teaching in ACPS. When coding teachers' responses to the question, "How do you define culturally responsive teaching?" themes aligned with the characteristics of culturally responsive teaching as described in ACPS's model (see Table 1). Similarly, when pulling the responses to the question "Provide examples of how you have used ideas or strategies from the CRT professional development program in your practice," teachers shared examples that aligned with what they had learned from the program (see Table 2). This alignment of teacher responses to program concepts across eight years of implementation and a variety of schools shows that the ACPS model successfully created a common, baseline understanding of culturally responsive teaching among teachers who completed the program.

Table 2. Codes from Survey Response Data aligned with CRT Characteristics

Code	Sample Quote from Data	ACPS CRT Characteristics
Mindset	"Culturally Responsive Teaching provides a mirror through which I can reflect on my own culture, practices, and how they impact students"	*Culturally Responsive Teachers acknowledge and incorporate the cultural influences of all students, while reflecting on their own personal cultural lenses.*
Bi-directionality	"…combating implicit and explicit biases (my own and students')."	
Rigor	"It is an umbrella from which to hang strong teaching practices that help all students meet rigorous academic outcomes."	*Culturally Responsive Teachers teach to and through culture as they plan curriculum and instruction that is differentiated, rigorous, and relevant.*
Environment	"When educators utilize a heightened awareness to school environment, personal culture of all stakeholders (students, families, teachers, coworkers, administrators)"	
Empathy	"Understanding the students, treating them fairly."	*Culturally Responsive Teachers build positive learning*

Whole Child	"Relationships with the students and families we serve wherein students are known and cared about holistically–academically, socially, emotionally, and culturally."	*partnerships with students and families.*

Table 3. Synthesized Classroom Examples from ACPS Educators

Classroom Examples of Culturally Responsive Teaching (list created from examples shared by ACPS educators)		
Student-Centered Instruction	**Sample Activities**	**Family Engagement**
Diverse Representation	Talk, Share, and Move Bodies	Home Visits
Student Voice	Cooperative, Project Based Learning	Regular Family Communication
Student Choice	Video Production and Authentic Audiences	Home Language Translation/Interpretation
1:1 Yearlong Goal Setting	Game-based Learning	Learning Partnerships

Recommendations

Ensure application of all three CRT characteristics

This evaluation strongly supports the recent program changes that include all three characteristics of CRT for educators completing a micro-credential. The prior version of the micro-credential that only focused on one of the characteristics showed no positive correlation with student growth in reading or mathematics, and teachers completing it reported lower levels of impact on student learning. It is likely that each characteristic of CRT bolsters the other, such that the presence of all three in a learning community has a synergistic effect that accelerates student learning. As the program moves forward, it will be vital for equity coordinators, administrators, instructional coaches, and others responsible for implementation to ensure that educators completing the micro-credential adopt and apply all three characteristics of culturally responsive teaching in their learning environments. The new micro-credential should hone as closely as possible to the previous model of full-certification to scale the benefits of the program found within this evaluation.

Provide greater emphasis on the components of family and community partnerships and applying CRT instructional strategies

Both qualitative and quantitative results of this evaluation indicate family and community partnerships and CRT instructional strategies are the most effective components for making a positive impact on learning. As the program undergoes changes in both content and implementation, leaders should consider how to deepen these aspects of the program and ensure all educators apply strategies to improve partnerships and use new instructional strategies in the classroom. While changing teacher dispositions may be a necessary and important part of the program, this evaluation indicates that to advance student learning, educators must *apply* culturally responsive instructional practices and develop deeper relationships with their students' families and communities.

Standardize and expand supports for educator buy-in as the program moves from voluntary to mandatory

As the program becomes mandatory, it will become increasingly important to provide concrete support for educators to complete the program. The following are recommendations based on teacher experiences for strengthening both division and school level support for educators.

Clarify and emphasize the role of administrators

Support for educators to complete the culturally responsive teaching program has varied across schools, with some providing time and targeted professional development for teachers to complete the program, while others used only division-level resources. In schools where administrators built CRT into school-based professional learning, teachers reported higher levels of engagement and feelings of efficacy in changing their practice. As one teacher shared, "I cannot overemphasize the importance of having designated time in our staff meetings to work on this and the collective accountability of it." Not only is time important so teachers can complete the program, but it can also positively contribute to staff holding each other accountable as they work together through the process. As employees are required to complete the program, the role of administrators in supporting its implementation through alignment of school based professional learning will become more vital for program success.

Develop peer-to-peer support networks

Teachers reported engagement with the CRT program was improved, and positive impact on students was deepened, when they were part of a peer network completing the program, either as teaching partners, a school, a grade level, or a professional learning community (PLC). Some teachers reported going through the program with peers was essential for success. One teacher shared that having a "close knit working PLC" was the only way she finished the program, while another shared how her PLC was where they had "the most rich conversations." In some contexts, collaboration occurred due to a group of teachers deciding to pursue a certification or credential together in the same school year. In others, it was due to a schoolwide push to apply CRT, highlighting further the impact of administrators in organizing school-level professional learning to support the program. Working together, as one teacher shared, allowed them to evaluate "every piece of data together," which helped them strengthen teamwork, collaboration, and accountability in the school. Another teacher stated, "true CRT teaching should be done this way." The prevalence of peer-to-peer support networks as a theme in the qualitative data suggests ACPS should work at the school and PLC-levels as much as possible to build cohorts of peer support networks that go through the program collaboratively and apply learning in a similar context.

Ensure sufficient contract time to complete the program

Time was the most important resource identified by teachers to engage, complete, and apply learning from the CRT professional learning program in their classrooms or learning environments. This finding supports ACPS's change to the program to include one hour of dedicated time during division-level professional learning days for CRT professional learning, and suggests that investing more time to this initiative, either at the division or school-level, would bear fruit through greater application of the three characteristics in classrooms throughout the district, as teachers at schools where more time was provided in school-based learning time reported higher levels of engagement and application.

Train Equity Coordinators and Instructional Coaches to provide 1:1 and small group equity coaching

In addition to contract time, teachers identified Equity Specialists as the most important support for completing and benefiting from the CRT program. In interviews, teachers reported Equity Specialists supported by helping them to understand expectations of the program, how to translate learning to their work with students, and providing resources on how to document the CRT practices they were incorporating with students, families, and communities. Equity Specialists did this individually with some teachers and in small groups with others; both contexts were cited as high yield supports in terms of finishing the program, changing practices, and ultimately impacting student learning. As the program moves to the *Department of Instruction* and the number of Equity Specialists is reduced, ACPS may consider equity coaching training for all Instructional Coaches at schools to increase 1:1 and small group support to teachers completing the program.

Conduct long-term program research and evaluation

Since the CRT learning program has undergone significant changes in the 2023-2024 school year and will impact hundreds of teachers in the coming years, it will be important to continue to monitor its progress and adjust as needed to meet teachers' needs while ensuring it has the intended impact. By continuing this research through next year, ACPS will gain access to longitudinal data on teacher and student growth, allowing for a stronger evaluation of the program's impact as it shifts from a volunteer to required model and updates the content of the micro-credential.

As ACPS considers new programming in the future, it will be useful to conduct pilot studies first, implementing programs in smaller environments and using experimental designs when

possible, to evaluate the impact of a program prior to scaling across the division. This approach will allow for more careful implementation and adjustment of programming to make the maximal and most efficient positive difference in the lives of children.

Conclusion

As ACPS continues to grow more diverse, the characteristics of Culturally Responsive Educators will become more and more essential to ensure learning for all and to address long standing issues of equity in the community. The CRT program used by ACPS during the last eight years shows evidence for successful implementation, yet also requires adjustments to maximize effectiveness. Full certification for teachers shows strong evidence of having a positive impact on both teacher practice and student learning; however the micro-credential showed much less effectiveness and was not sufficient to impact student learning at scale.

As culturally responsive professional learning continues for hundreds more educators, it will be vital to ensure the program has its intended impact. ACPS must improve support for educators to complete the program, including time during contract hours and small group or one on one coaching. Program leaders must build systems to ensure educators who complete the program apply all three characteristics of culturally responsive teaching with students, and monitor implementation of culturally responsive instructional strategies and partnerships with families and communities throughout the division. Such large-scale implementation, should the program's positive associations with student learning continue, has promise to transform the division, and provide a foundation for meaningful, sustained improvement towards educational justice in the Albemarle community for the next generation.

Limitations of Research Design

As this is an observational, rather than an experimental program evaluation, we can state there is moderately strong evidence to support claims about achieving program goals; however we cannot state that this study provides definitive proof of these claims, since there could be characteristics of teachers who opted into the full certification, rather than the micro-credential, that are unaccounted for within the quantitative dataset. For future evaluations, this team recommends using longitudinal, experimental designs whenever possible to allow for stronger causal inferences. Similarly, we recommend when ACPS creates new programming, that it implements in a way that can be evaluated on a smaller scale first to ensure the program is having the intended impact prior to scaling across the division.

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