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North Carolina Race to the Top: Overall Impact and Implementation Findings

Final Report

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Table of Contents

| | |
|--|----|
| Executive Summary | 3 |
| Evaluation Question 2: Exceeding Growth in Other States..... | 6 |
| Introduction and Background | 8 |
| North Carolina’s Race to the Top Plan | 8 |
| Pillar 1. Turning Around the Lowest-Achieving Schools | 8 |
| Pillar 2. Great Teachers and Leaders | 8 |
| Pillar 3. Standards and Assessments..... | 9 |
| Pillar 4. Data Systems to Support Instruction..... | 9 |
| Targets of the North Carolina RttT Plan | 9 |
| Overview of the Evaluation..... | 12 |
| Evaluation Questions..... | 12 |
| Quantitative..... | 13 |
| Qualitative..... | 13 |
| Data and Methods | 14 |
| Quantitative | 14 |
| Evaluation Question 1: Exceeding Expected Performance | 14 |
| Evaluation Question 2: Exceeding Growth in Other States..... | 14 |
| Qualitative | 15 |
| Evaluation Question 3: Implementation Fidelity | 15 |
| Evaluation Question 4: Enhanced Capacity..... | 15 |
| Evaluation Question 5: Sustainable Capacity | 15 |
| Findings..... | 17 |
| Quantitative Analysis | 17 |
| Evaluation Question 1: Exceeding Expected Performance | 17 |
| Evaluation Question 2: Exceeding Growth in Other States..... | 23 |
| Qualitative Findings | 27 |
| Evaluation Question 3: Fidelity of Implementation..... | 27 |
| Evaluation Question 4: Enhanced Capacity..... | 28 |
| Evaluation Question 5: Sustainable Capacity | 30 |
| Limitations | 32 |
| Conclusions and Emerging Lessons Learned | 33 |
| Conclusions | 33 |

NC RttT Overall Impact and Implementation Findings: Final Report
September 2015

| | |
|--|----|
| Emerging Lessons Learned from Race to the Top Implementation..... | 33 |
| Appendix A. Evaluation Lead Survey | 35 |
| Appendix B. Race to the Top in North Carolina: Summary of Amendments | 37 |
| Appendix C. Change in Attainment Gaps for LEP..... | 39 |
| Appendix D. Means and Standard Deviations of Teacher Evaluation Ratings | 42 |
| Appendix E. Race to the Top Omnibus Teacher and Leader Survey: Scale Items | 43 |
| Appendix F. Initiative Examples for North Carolina RttT Emerging Lessons Learned | 45 |

NORTH CAROLINA RACE TO THE TOP OVERALL IMPACT AND IMPLEMENTATION FINDINGS: FINAL REPORT

Executive Summary

Background

North Carolina's Race to the Top Plan

The ultimate goal of North Carolina's Race to the Top (RttT) plan was to build statewide capacity that could support sustained, long-term improvements in public education; namely, increases in student achievement, reductions in achievement gaps, and increases in graduation rates. To address these outcomes, North Carolina's proposal focused on strengthening the education workforce by providing great teachers for every student and a great principal for every school. Initiatives were designed to provide a coherent approach with mutually-reinforcing components across multiple reform pillars.

The strategies funded by RttT were required to address the federal grant program's four targeted pillars of reform:

1. Ensure the state standards and accountability system reflects internationally benchmarked standards;
2. Establish advanced data systems that measure student success and inform educator practice;
3. Increase teacher and principal effectiveness; and
4. Turn around the State's lowest-achieving schools, so that all students get the support they need to be successful.

North Carolina's Race to the Top Evaluation

North Carolina's RttT proposal included a commitment to an independent external evaluation of individual initiatives and of the overall impact of the reform efforts across the state. For this evaluation, the North Carolina Department of Public Instruction (NCDPI) contracted with the Consortium for Education Research and Evaluation–North Carolina (CERE-NC) to provide formative and summative feedback on implementation and outcome findings.¹ As of July 2015, the Evaluation Team has completed over 50 evaluation reports across 13 state and local initiatives.²

Evaluation Questions

The purpose of this report is to assess the overall, statewide impact of North Carolina's RttT efforts over the course of the four-year grant period. Achieving this goal in full is somewhat

¹ CERE-NC is comprised of qualitative and quantitative researchers from the Friday Institute for Educational Innovation at North Carolina State University, the Education Policy Initiative at Carolina at the University of North Carolina-Chapel Hill, and the SERVE Center at the University of North Carolina-Greensboro.

² All evaluation reports for each initiative are available at <http://cerenc.org>.

limited by the nature of the implementation of the initiatives, which in most cases prevented our ability to identify valid comparison groups— groups who are like the group impacted by RttT initiatives in almost every way except that they were not exposed to RttT initiatives. Despite this key limitation, the Evaluation Team was able to use a three-pronged mixed-methods approach to chart the performance of North Carolina’s education system during the years of RttT implementation (2010-11 through 2013-14). First, *intra-state changes* were assessed for key outcomes before and after RttT implementation by using North Carolina’s rich data to determine whether North Carolina exceeded anticipated performance based on prior data. Second, *inter-state comparisons* were made between North Carolina and selected non-RttT states on common national education measures. Finally, implementation findings and recommendations were synthesized from previous reports with input from members of the Evaluation Team in order to provide *qualitative information about implementation and potential sustainability* of individual-level initiatives.

Taken together, these strategies were used to address the following five quantitative and qualitative evaluation questions:

Quantitative

- *Evaluation Question 1: Exceeding Expected Performance:* How are North Carolina public schools performing after the implementation of RttT in relation to their expected performance based on pre-RttT data?
- *Evaluation Question 2: Exceeding Growth in Other States:* How does North Carolina perform on common measures of educational outcomes compared to selected groups of states.

Qualitative

- *Evaluation Question 3: Fidelity of Implementation:* To what extent was each RttT initiative implemented as intended with regard to timeline, scale, and objectives?
- *Evaluation Question 4: Enhanced Capacity:* To what extent has RttT enhanced North Carolina’s capacity to support the four RttT pillars of reform and strengthen the education workforce?
- *Evaluation Question 5: Sustainable Capacity:* What initiatives demonstrate the capability to sustain implementation and promise toward ultimately impacting student and teacher perceptions, behaviors, and achievement?

Data and Methods

Quantitative Analysis – To determine whether and the extent to which North Carolina’s performance exceeded expected performance, the Evaluation Team used prior data on schools, teachers, and students to establish the state’s trajectories on multiple important outcomes (teacher effectiveness, student achievement, and the achievement gap). By comparing these pre-RttT trajectories to trajectories of the same measures during the RttT years, we generated one estimate of the effects of RttT.

To determine North Carolina's performance relative to other states, growth on ten national education measures was compared for North Carolina and several other groups of states, including other RttT grant recipients, all other non-RttT awardees, seven neighboring states in the southeast,³ and the ten non-RttT recipients with scores closest to North Carolina on each outcome prior to RttT.⁴

Qualitative Analysis – RttT evaluation leads were surveyed to gauge (based on their initiative-level evaluations) their perceptions of the extent to which each initiative met identified targets for the three qualitative evaluation areas of interest: Implementation, Sustainability, and Outcomes. Leads were asked to rate objectively elements in each of the three categories as well as to provide narrative justification and/or clarifications of those ratings.

In addition, findings from the initiative-level evaluation reports were used to assess the extent to which each initiative showed promise for achieving immediate, intermediate, and longer-term outcomes and for enhancing the state's capacity to support the four RttT reform pillars.

Findings

Evaluation Question 1: Exceeding Expected Performance

Exceeded expected performance: Overall, North Carolina exceeded its expected performance in two of six education outcomes: 1) student graduation rates continued an upward trend that began before RttT implementation for an overall increase of 9.5 percentage points over the last three years of the grant; and 2) graduation attainment gaps narrowed. The graduation attainment gap between white students and minority students was cut in half, from 13.9 percentage points for the graduating class of 2009 to 7.0 points for the class of 2014, and the graduation attainment gap between economically disadvantaged students and their less-disadvantaged peers narrowed from 14.8 to 10.6 percentage points over the same time period.

Met expected performance: There were no significant differences found in teacher effectiveness as measured by principal evaluation ratings, teacher value-added, or in the narrowing of the racial and economic achievement gaps.

Declined in performance: Only one outcome—student achievement—declined over the RttT period, but the decline may reasonably be attributed to North Carolina's adoption of new achievement exams aligned with the Common Core State Standards, along with adoption of higher proficiency standards.

Outcomes with mixed results: Teachers' perceptions of their work environments and practices were mixed. Responses on the Omnibus Teacher and Leader survey administered annually by the Evaluation Team indicate that teachers felt that they improved in areas targeted by the state (knowledge-sharing and formative assessment), but that they did not perceive positive changes in

³ The neighboring states comparison includes Virginia, West Virginia, Kentucky, Alabama, Mississippi, Louisiana, and Arkansas. These states were chosen because they were not RttT recipients.

⁴ The comparison group of states with similar scores on outcomes was chosen by selecting the 10 states which did not receive RttT funds that had scores closest to North Carolina on each outcome in 2010 or in 2009 for NAEP scores.

the actions or services provided by the state, such as professional development opportunities or teacher evaluations.

Evaluation Question 2: Exceeding Growth in Other States

Overall, findings from inter-state comparisons across ten national scholastic outcomes suggest that RttT states performed similarly to non-RttT recipients during the period of the federal grant on most outcomes but may have improved faster on National Assessment of Educational Progress (NAEP) reading scores. North Carolina posted greater gains than other states on NAEP reading and 8th grade mathematics scores, Scholastic Aptitude Test (SAT) mathematics scores, and cohort graduation rates but posted smaller gains on Advanced Placement exam-taking and saw SAT reading and writing scores decline.

Evaluation Question 3: Fidelity of Implementation

Out of the eleven state-level initiatives evaluated, nine started on time or within a year of planned implementation, eight were implemented to scale, and eight met their implementation objectives.

Evaluation Question 4: Enhanced Capacity

Over the course of the grant, North Carolina implemented initiatives that enhanced capacity in each of the four RttT pillars, including: statewide professional development to enhance local capacity to transition successfully to new Common Core State Standards; an online Instructional Improvement System; a revised teacher and principal evaluation process that includes new measures of student growth; and an expanded school turnaround effort to improve the proficiency of the state's lowest-performing schools.

Evaluation Question 5: Sustainability

Nine initiatives met at least three of four sustainability characteristics (structure, personnel, infrastructure, and ongoing demand). In addition, initiative-by-initiative progress toward attaining immediate, intermediate, and longer-term outcomes was encouraging, with five initiatives achieving all of their intended outcomes and four at least partially meeting all outcomes.

Limitations

There are several key limitations to an evaluation of this scope that should be considered when assessing the estimations in this report of the impact of this multi-year state-level intervention comprised of multiple initiatives: 1) the absence of valid comparison groups precluded the ability to establish causality; 2) the presence of competing or conflating initiatives may have influenced outcomes of interest; 3) other external factors such as changes in leadership and the economic climate also may have influenced outcomes; and 4) the length of time between initial implementation and measurement of some outcomes may not be sufficient to capture the eventual effects of some initiatives.

Conclusions

This overall impact evaluation of North Carolina's RttT plan revealed notable successes in program implementation, the presence of key sustainability factors, and improvements in the critical education outcome of increased student graduation rates. The comparison between North Carolina and other states also demonstrated that North Carolina posted faster gains than other states on some important academic measures.

While analyses of other key education outcomes (such as teacher effectiveness) did not result in significant positive findings, and some measures of student achievement declined in the wake of adoption of new standards, taken as a whole, the evaluation data support the conclusion that North Carolina's education infrastructure and important markers of educational attainment are better off now than they were before the start of RttT.

The state's commitment to the more promising RttT initiatives, especially school turnaround and transformation, should not end once grant funding has been exhausted. In order to maintain these successes and improve opportunities for all students to receive an adequate education, the state should continue to commit time and resources to sustaining the successful components of RttT for the foreseeable future.

Emerging Lessons Learned

Not everything worth learning about North Carolina's RttT efforts can be gleaned from analyses of data alone. For this final overall evaluation, the Evaluation Team also reviewed the findings and recommendations in all of the individual initiative evaluation reports that preceded this final report and identified several emerging lessons learned—potentially of use not only to implementers but also to grantors—that cut across multiple initiatives:

- *Prioritize and actively promote collaboration throughout the reform process.* Communication, a coordinated vision for implementation, and collaboration among leaders can reduce conflicting agendas and implementation challenges in a complex reform process.
- *Value simplicity.* Usually, the most successful initiatives are those with the fewest moving parts.
- *Engage the broader community.* A comprehensive education reform agenda attends to in-school and out-of-school stakeholders at multiple levels.

Introduction and Background

North Carolina's Race to the Top Plan

In 2010, North Carolina was awarded nearly \$400 million as one of twelve competitive grant recipients of federal Race to the Top (RttT) funding. The \$4.35 billion RttT program, an American Recovery and Reinvestment Act initiative, was established to support investment in statewide and targeted strategies for education reform.

The ultimate goal of North Carolina's RttT proposed plan was to build statewide capacity that could support sustained, long-term improvements in public education; namely, increases in student achievement, reductions in achievement gaps, and increases in graduation rates. To address these outcomes, North Carolina's proposal focused on strengthening the education workforce by providing great teachers for every student and a great principal for every school. Initiatives were designed to provide a coherent approach with mutually-reinforcing components across multiple reform pillars (areas of focus). These pillars and the North Carolina initiatives proposed to address each one are outlined here.

Pillar 1. Turning Around the Lowest-Achieving Schools

The goal for this pillar is to identify the state's persistently lowest-achieving schools and support districts in turning them around, in order to improve educational opportunities for students in those schools.

North Carolina's proposal included the following initiatives in this area:

- Expansion of District and School Transformation efforts; and
- Development of networked STEM thematic schools.

Pillar 2. Great Teachers and Leaders

The goals for this pillar include increasing teacher and principal effectiveness, along with improving their equitable distribution statewide.

North Carolina's proposal included the following initiatives related to *educator effectiveness*:

- Revision and expansion of the teacher and principal evaluation processes;
- Incorporation of student growth measures to provide additional information on teacher effectiveness; and
- Provision of performance incentives for effective teachers in the lowest-achieving schools.

North Carolina's proposal included the following initiatives related to achieving *a more equitable distribution of effective educators* statewide:

- Alternative preparation programs for effective school leaders provided by Regional Leadership Academies;

- Creation of a New Teacher Support Program to strengthen the development of novice teachers in the lowest-performing schools;
- Development of Virtual Public School blended learning STEM courses to expand curriculum offerings and provide effective instruction when teachers for a subject are not available locally;
- Support for state and local strategic staffing initiatives to encourage the movement of effective teachers into lower-performing schools;
- Development of a North Carolina Teacher Corps and expansion of Teach for America in eastern North Carolina to increase the number of effective teachers employed in low-income rural areas and high-need urban schools;
- Monitoring and reporting on the effectiveness of teacher and principal preparation programs; and
- Expansion of statewide professional development in support of RttT goals and initiatives (including online professional development and the Distinguished Leadership in Practice program).

Pillar 3. Standards and Assessments

This pillar focuses on the state’s adoption of rigorous standards and assessments that prepare students for success in college and the workplace.

North Carolina’s proposal included the following initiative in this area:

- Transition to new standards and assessments statewide (supported by professional development).

Pillar 4. Data Systems to Support Instruction

The purpose of this pillar is to support construction of data systems that measure student success and inform teachers and principals in ways that help them improve their practices.

North Carolina’s proposal included the following initiatives in this area:

- An increase in the use of data statewide for decision-making (to be supported by the North Carolina Education Cloud and by professional development); and
- Development of an online Instructional Improvement System for educators, students, and parents (now called Home Base).

Targets of the North Carolina RttT Plan

The state established several targets for tracking progress toward achieving its goal of building capacity to support long-term improvements in student outcomes. Targets included positive changes in annual measures of student achievement, graduation rates, college readiness, and college enrollment. Table 1 (following pages) includes the targets and the state’s progress toward those targets to date. Progress toward these goals and targets has been tracked by the North Carolina Department of Public Instruction (NCDPI) as part of their internal monitoring process.⁵

⁵ <https://www.rtt-apr.us/state/north-carolina/2013-2014/intro>

Table 1. Approved North Carolina Priority Goals for Race to the Top and Measured Outcomes⁶

| State RttT Goal | Measure | Baseline 2009-10 | Targets <i>Actual Results to Date</i> | | | |
|--|--|---------------------|--|--------------|--------------|--------------|
| | | | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| 1. Student Achievement <i>* The large discrepancies between targets and actual results for the 2012-13 and 2013-14 school years reflect the fact that, in 2012, new assessments aligned to new standards (including the Common Core) were implemented in NC, but targets were not adjusted in the state's RttT Scope of Work in line with that change.</i> | % of All Students Proficient - Grade 4 Reading | | 74.6% | 77.6% | 80.6%* | 83.6%* |
| | (State End of Grade test; a proxy for NAEP Grade 4 Reading) | 71.6% | 71.6% | 71.6% | 43.7% | 44.6% |
| | % of All Students Proficient - Grade 4 Math | | 85.0% | 87.0% | 89%* | 91.0%* |
| | (State End of Grade test; a proxy for NAEP Grade 4 Math) | 83.0% | 83.8% | 85.1% | 47.6% | 47.1% |
| | % of All Students Proficient - Grade 8 Reading | | 72.5% | 75.5% | 78.5%* | 81.5%* |
| (State End of Grade test; a proxy for NAEP Grade 8 Reading) | 69.5% | 69.8% | 71.1% | 41% | 42.3% | |
| % of All Students Proficient - Grade 8 Math | | 86.9% | 89.9% | 92.9%* | 95.9%* | |
| (State End of Grade test; a proxy for NAEP Grade 8 Math) | 83.9% | 84.4% | 85.2% | 34.2% | 34.6% | |
| 2. Graduation Rates** | 4-Year Cohort Rate | | 76% | 79% | 82% | 85% |
| <i>** Targets for this measure have been updated since the initial RttT application to reflect actual, rather than projected, 2009-10 baseline data; the targets are now more ambitious.</i> | | 74.2% | 77.9% | 80.4% | 82.5% | 82% |
| 3. College Readiness⁷ | Average SAT Composite in Reading & Math (% students taking)*** | | 1,005 (66%) | --- | --- | --- |

⁶ Targets are on the top line of each row; actual results are in **bold italics** under the targets.

⁷ The North Carolina State Board of Education has approved an additional measure for this category—the WorkKeys Composite—which is a measure of the percent of Career and Technical Education graduates who achieve a Silver certificate or better; the measure is not tracked on the United States Department of Education's Annual Performance Report webpage.

| State RttT Goal | Measure | Baseline 2009-10 | Targets Actual Results to Date | | | |
|---|--|-----------------------|-----------------------------------|-----------------------|-----------------------|-----------------------|
| | | | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| 3. College Readiness (cont.) | Average ACT Composite (% students taking)*** | 1,004 (64%) | 1,001 (67%) | 997 (68%) | 1001 (62%) | 997 (59%) |
| | | --- | --- | --- | 18.3 | 18.4 |
| | | | | 18.2 (100%) | 18.4 (100%) | 18.5 (100%) |
| | % of AP exams taken on which students scored 3 or above (% of students taking AP exams)*** | | 60% (11%) | 62% (13%) | 64% (15%) | 66% (17%) |
| | | 57.6% (10%) | 61.8% (10%) | 61.8% (11%) | 59.2% (12%) | 55.7% (13%) |

*** Language for these three goals has been modified or added since the initial RttT application to more clearly identify the specific indicator/data being referenced and/or to reflect policy updates.

Legislation passed in 2011 requires the administration of the ACT statewide, which impacts the representativeness of the SAT as a college readiness measure.

USED has approved the inclusion of the ACT as a measure for college readiness and the State Board of Education has approved the targets noted above.

| | | | | | | |
|--|--|--------------|--------------|--------------|--------------|--------------|
| 4. College Enrollment and Course Completion⁸ | % of high school graduates who enroll in post- secondary education programs**** | | 67% | 68% | 70% | 72% |
| | | 66.0% | 64.0% | 61.3% | 68.1% | 66.9% |
| | % of students who complete at least a year's worth of college credit that is applicable to a degree within two years of enrollment in an institution of higher education. | | | | 63% | |
| | | | | 58.5% | 64% | |

**** The 2010-11 target for this measure has been updated (increased) since the initial RttT application to reflect actual, rather than projected, 2009-10 baseline data (NCES, 2008).

⁸ The state began tracking the **College Course Completion** goal in 2013-14 after approval from the United States Department of Education.

Overview of the Evaluation

In addition to NCDPI's internal monitoring of progress toward the priority goal targets, North Carolina's RttT proposal also included a commitment to an independent external evaluation of individual initiatives and of the overall impact of the reform efforts across the state. For this evaluation, NCDPI contracted with the Consortium for Education Research and Evaluation–North Carolina (CERE-NC) to provide formative and summative feedback on implementation and outcome findings. CERE-NC is comprised of qualitative and quantitative researchers from the Friday Institute for Educational Innovation at North Carolina State University, the Education Policy Initiative at Carolina at the University of North Carolina-Chapel Hill, and the SERVE Center at the University of North Carolina-Greensboro. As of July 2015, the Evaluation Team has completed over 50 evaluation reports across 13 state- and local-level initiatives.⁹

Evaluation Questions

The purpose of this report is to assess the overall, statewide impact of North Carolina's RttT efforts over the course of the four-year grant period. This task is challenging for many reasons, one of the greatest of which is our limited ability to directly and definitively link many of the outcomes of interest to the changes brought about by RttT. To generate meaningful estimates of how North Carolina's RttT efforts impacted targeted outcomes (estimates that are sometimes referred to as *causal estimates*) requires valid comparison groups—groups who are like the group impacted by RttT initiatives in almost every way except that they were not exposed to RttT initiatives. Without these comparison groups, it is not possible to isolate the impact of RttT from the impact of other competing or conflating factors (for example, other concurrent non-RttT initiatives, changes in leadership, or changes in the state's economic conditions). In particular, one of the key RttT target populations—students in low-achieving schools—already receives a high concentration of intervention services, some of which provide similar supports, and many of which target the same outcome.

With these limitations in mind, the Evaluation Team used a three-pronged mixed-methods approach to chart the performance of North Carolina's education system during the years of RttT implementation (2010-11 through 2013-14). First, *intra-state changes* were assessed for key outcomes before and after RttT implementation by using North Carolina's rich data to determine whether North Carolina has exceeded anticipated performance based on prior data. Second, *inter-state comparisons* were made between North Carolina and selected non-RttT states on common national education measures. Finally, implementation findings and recommendations were synthesized from previous reports with input from evaluation leads in order to provide *qualitative information about implementation and potential sustainability* of individual-level initiatives.

Taken together, these strategies were used to address the following five quantitative and qualitative evaluation questions:

⁹ All evaluation reports for each initiative are available at <http://cerenc.org>.

Quantitative

- *Evaluation Question 1: Exceeding Expected Performance:* How are North Carolina public schools performing after the implementation of RttT in relation to their expected performance based on pre-RttT data?
- *Evaluation Question 2: Exceeding Growth in Other States:* How does North Carolina perform on common measures of educational outcomes compared to selected groups of states.

Qualitative

- *Evaluation Question 3: Fidelity of Implementation:* To what extent was each RttT initiative implemented as intended with regard to timeline, scale, and objectives?
- *Evaluation Question 4: Enhanced Capacity:* To what extent has RttT enhanced North Carolina's capacity to support the four RttT pillars of reform and strengthen the education workforce?
- *Evaluation Question 5: Sustainable Capacity:* What initiatives demonstrate the capability to sustain implementation and promise toward ultimately impacting student and teacher perceptions, behaviors, and achievement?

Data and Methods

Quantitative

Evaluation Question 1: Exceeding Expected Performance

The Evaluation Team used North Carolina's comprehensive longitudinal education datasets to track the performance of North Carolina schools since the implementation of RttT. Data for two years prior to the start of RttT (2008-09 and 2009-10) were used to establish the state's trajectories on multiple important educational outcomes. By comparing these pre-RttT trajectories of the performance history of schools, teachers, and students to trajectories of the same measures during the RttT years, we are able to obtain one estimate of the effects of RttT.

Evaluation Question 2: Exceeding Growth in Other States

For the inter-state comparison, we compared North Carolina to groups of other states on ten national outcome measures. The ten outcome measures include National Assessment of Educational Progress (NAEP) test scores in reading and mathematics for 4th and 8th grade students, Advanced Placement (AP) exam-taking rates, average AP exam scores, Scholastic Achievement Test (SAT) scores in mathematics, reading, and writing, and cohort graduation rates. These outcome measures were chosen because they are available for most states from 2007 to 2014.¹⁰ The groups of states to which we compared North Carolina included other states that received RttT grants during the first two phases of the program, all states that did *not* receive RttT grants during the first two phases, seven neighboring states in the southeast,¹¹ and the ten non-RttT recipients with the closest scores to North Carolina on each outcome prior to RttT.¹²

To conduct this comparison, we used a statistical technique called *difference-in-differences*, which allows us to isolate effects related to North Carolina's RttT reforms from effects related to national trends that would have affected all states in the absence of RttT, as well as from preexisting differences between North Carolina and other states. In addition, these analyses control for demographic and economic differences between states, as well as changes in these conditions over time. The state-level control variables used in the analyses were total enrollment in Kindergarten through 12th grade, the proportion of adults with a bachelor's degree, the proportion of the state population below the poverty line, median income, and the unemployment rate.¹³ The control variables are important because they help to separate the influence of RttT reforms from changes in economic circumstances of various states in the wake of the national recession that overlapped the RttT period.

¹⁰The NAEP is conducted biennially, so NAEP scores are only available in odd-numbered years from 2007 to 2013.

¹¹ The neighboring states comparison includes Virginia, West Virginia, Kentucky, Alabama, Mississippi, Louisiana, and Arkansas. These states were chosen because they were not RttT recipients.

¹² The comparison group of states with similar scores on outcomes was chosen by selecting the 10 states that did not receive RttT funds that had scores closest to North Carolina on each outcome in 2010 (or in 2009, for NAEP scores).

¹³ All control variables are drawn from the American Community Survey from 2007 to 2013. For 2014 and for any missing controls, data on the control variable from the nearest available year were used.

Qualitative

The RttT initiative-level evaluations were conducted by several different teams across the four years, each with a designated evaluation lead who was responsible for managing the evaluation. For this report, these leads were surveyed to gauge (based on their initiative-level evaluations) their perceptions of the extent to which each initiative reached identified targets for the three qualitative evaluation areas of interest: Implementation (Evaluation Question 3), Capacity (Evaluation Question 4), and Sustainability (Evaluation Question 5; see Appendix A for survey questions). Leads were asked to rate objectively elements in each of the three categories as well as to provide narrative justification for and/or clarifications of those ratings. Survey responses were summarized in tables to reflect initiative-level attainment across each of the metrics. In addition, findings from individual-level evaluation reports were reviewed to assess the extent to which each initiative met its proposed outcomes and enhanced North Carolina's capacity to support the four RttT pillars of reform.

Evaluation Question 3: Implementation Fidelity

Evaluation leads were asked to score the extent to which their respective initiatives were implemented on time, achieved the proposed scale (e.g., number of students, teachers, and/or schools served), and met implementation objective. Each element was rated on a three-point scale, from 0 (met few to none of the proposed objectives) to 1 (demonstrated intermediate progress toward meeting objectives) to 2 (fully met objectives). Initiatives that fully met objectives for each of the three categories received an overall implementation score of six out of six ($6/6 = 2/2 + 2/2 + 2/2$). Note that, because initiatives and their outcome goals were modified through amendments submitted and approved by the United States Department of Education over the life of the grant, criteria for scoring implementation progress were the objective benchmarks included in the final versions of approved Detailed Scopes of Work, not the original scopes. Appendix B includes an overview of amendments granted to RttT states and a breakout by initiative of North Carolina's amendments.

Evaluation Question 4: Enhanced Capacity

To address this question, the Team documented the extent to which North Carolina's RttT funding has supported growth in educators' capacity to make data-driven decisions, provide and support great teachers and leaders, turn around the lowest-achieving schools, implement high standards, and use assessments effectively for formative, benchmark, and summative purposes.

Evaluation Question 5: Sustainable Capacity

The potential sustainability of the capacity for each initiative was evaluated by assessing the extent to which organizational structure, personnel, infrastructure, and ongoing demand for services were in place by the end of the grant period. Evaluation lead narrative responses were categorized as indicating that a component was fully in place or evident, a component was partially in place or evident, a component was not in place or evident, or assessment was not yet possible. Initiatives with each of the four elements of sustainability fully in place received a rating of four out of four (4/4).

In addition, findings from the initiative-level evaluation reports were used to assess the extent to which each initiative showed promise for achieving its proposed immediate, intermediate, and longer-term outcomes.

Findings

Quantitative Analysis

Evaluation Question 1: Exceeding Expected Performance

This section presents analyses of changes in several state-level outcome measures related to RttT initiative work: principals’ evaluations of teacher performance, estimations of the value added by teachers to student learning, measures of student achievement, graduation rates, and teachers’ impressions of their work environments and practices. Overall, change was mixed, with North Carolina exceeding expected performance in some areas (such as graduation rates) but showing little evidence of positive movement in others (such as student achievement).

Exceeded expected performance. North Carolina exceeded its expected performance in overall student graduation rates and in closing graduation attainment gaps between white students and minority students and between economically disadvantaged students and their less-disadvantaged peers.

Graduation rates. Table 2 shows that during the RttT years student graduation rates continued an upward trend that began before RttT implementation, for an overall increase of 9.5 percentage points in the last three years of the grant, compared to the three years prior to the start of RttT.

Table 2. North Carolina 4-Year Cohort Graduation Rates, 2007-08 through 2013-14

| Year | Overall | White | Non-White | Econ. Disadv. | Limited Eng. Prof. | Std. w/ Disabilities ¹⁴ |
|---------|---------|-------|-----------|---------------|--------------------|------------------------------------|
| 2007-08 | 70.3 | 75.7 | 62.6 | 59.2 | 49.9 | 56.6 |
| 2008-09 | 71.8 | 77.7 | 63.8 | 61.8 | 52.1 | 56.8 |
| 2009-10 | 74.2 | 79.6 | 67.2 | 66.2 | 48.3 | 57.6 |
| 2010-11 | 77.9 | 82.6 | 72.0 | 71.2 | 48.1 | 57.2 |
| 2011-12 | 80.4 | 84.7 | 75.4 | 74.7 | 50.0 | 59.9 |
| 2012-13 | 82.5 | 86.2 | 77.9 | 76.1 | 48.8 | 62.3 |
| 2013-14 | 83.9 | 87.1 | 80.1 | 78.0 | 51.7 | 64.4 |

Graduation attainment gap. In addition to the positive overall growth in graduation rates, during this same period the important “graduation attainment gaps” between white students and minority students and between economically disadvantaged students and non-economically disadvantaged students have narrowed.

¹⁴ See Appendix C for analysis of the attainment gap for Limited English Proficient students and students with disabilities.

The attainment gap between white and minority students has been cut in half over the RttT period, from 13.9 percentage points for the graduating class of 2009 to 7.0 points for the class of 2014 (Table 3).

Table 3. North Carolina Racial Attainment Gap, 2007-08 through 2013-14

| Year | Overall | White | Non-White | Gap |
|-----------|---------|-------|-----------|------|
| 2007-2008 | 70.3 | 75.7 | 62.6 | 13.1 |
| 2008-2009 | 71.8 | 77.7 | 63.8 | 13.9 |
| 2009-2010 | 74.2 | 79.6 | 67.2 | 12.4 |
| 2010-2011 | 77.9 | 82.6 | 72.0 | 10.6 |
| 2011-2012 | 80.4 | 84.7 | 75.4 | 9.3 |
| 2012-2013 | 82.5 | 86.2 | 77.9 | 8.3 |
| 2013-2014 | 83.9 | 87.1 | 80.1 | 7.0 |

The economic attainment gap, defined as the difference in graduation rates between students who qualify for federal lunch program subsidies and students who do not qualify, also narrowed during RttT, although the decrease was not as dramatic. The average gap declined from 14.8 percentage points in the pre-RttT baseline years (2007-08 through 2009-10) to 10.6 percentage points in the three most recent years (2011-12 through 2013-14).

Met expected performance. There were no significant differences found across the RttT years in teacher effectiveness as measured by principal evaluation ratings, teacher value-added, or in the narrowing of racial and economic achievement gaps.

Teacher effectiveness: Principals' evaluation ratings of teachers. Under North Carolina's state teacher evaluation system, principals rate teachers on five standards: 1) Teachers demonstrate leadership; 2) Teachers establish a respectful environment for a diverse population of students; 3) Teachers know the content they teach; 4) Teachers facilitate learning for their students; and 5) Teachers reflect on their practice.

Analysis of the annual results of these evaluations suggest that principals did not observe higher-quality teaching across the RttT period, whether for all teachers collectively or for the subgroup of first-year teachers.¹⁵ As shown in Figure 1 (following page), in any given year, there is little variability in principal ratings for all teachers, averaging between 3.5 and 3.7 on a 5-point scale across all standards.

¹⁵ Means and standard deviations for each standard across four years for all teachers and for first-year teachers are included in Appendix D.

Figure 1. Teacher Evaluation Ratings, 2010-11 through 2013-14

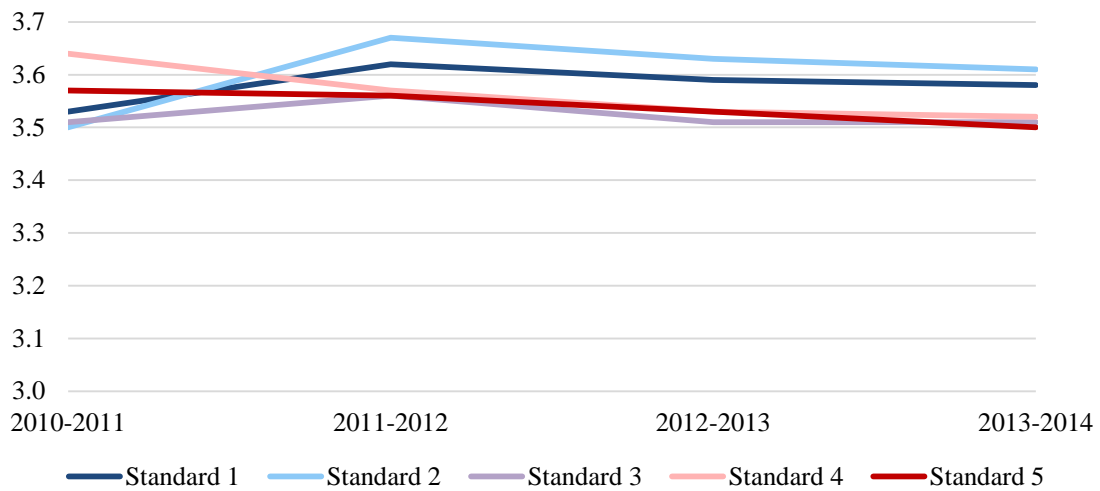
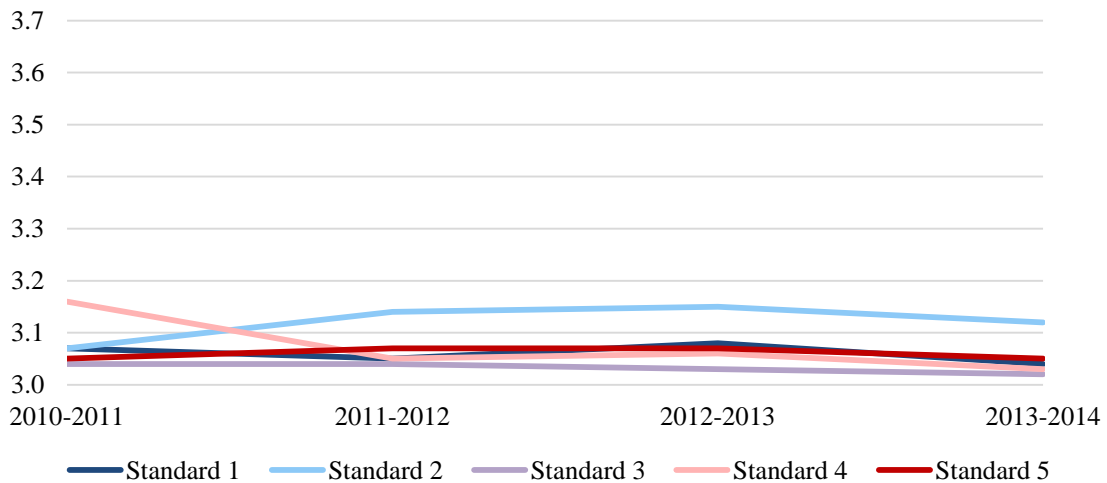


Figure 2 shows evaluation ratings for first-year teachers only. Again, there is little variability among ratings, but, as might be expected for less-experienced teachers, the ratings are systematically lower than the statewide average across all standards, ranging between 3.0 and 3.2 on the 5-point rating scale. As with the overall teacher ratings, first-year teacher ratings did not change significantly over the time period in which the RttT initiatives were in effect.

Figure 2. First-Year Teacher Evaluation Ratings, 2010-11 through 2013-14



Teacher effectiveness: Teacher value-added scores. There also were no statistically significant findings to indicate that the effectiveness of first-year teachers or of teachers whose careers began prior to RttT changed more than might have been expected during RttT (for this analysis, expectations are based on changes in teacher performance in the years prior to RttT, as measured by the state’s value-added estimations). In other words, with one exception (detailed below),

teachers improved with experience during the RttT period, but not at a rate that was any different from the rate of improvement of teachers before RttT.

For example, there is no clear pattern of improvement across cohorts in the value-added scores of each cohort of teachers during their first year of teaching (Table 4). For the first three cohorts of first-year teachers during the RttT period (the 2010-11 through 2012-13 cohorts), value-added scores were consistently nearly a full standard deviation unit (a measure of how far away a value is from the mean or average value) below the state value-added average for all teachers—no different than the performance of first-year teachers in the year prior to RttT. Though there are as yet not enough data to indicate whether the change is permanent, the 2013-14 cohort did fare somewhat better in its first year, nearly reaching a level of performance (as measured by value-added) as that of the 2008-09 (pre-RttT) cohort.

Value-added measures for the first three RttT cohorts then improved to around the state average in teachers’ second year for the teachers who stayed, and to nearly one-half of a standard deviation above the average in their third year, but these improvements are no larger than—and in some cases less than—those of pre-RttT teacher cohorts. (These differences include increases not only due to improvement based on experience but also due to annual attrition from the cohort of less effective teachers.)

Table 4. Early-Career Teacher Value-Added, 2008-09 through 2013-14

| | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Cohort 2008-09 | -0.58 | 0.00 | 0.41 | 0.44 | 0.53 | 0.43 |
| Cohort 2009-10 | | -0.95 | 0.24 | 0.55 | 0.46 | 0.60 |
| Cohort 2010-11 | | | -0.92 | -0.02 | 0.47 | 0.47 |
| Cohort 2011-12 | | | | -0.93 | -0.17 | 0.31 |
| Cohort 2012-13 | | | | | -0.98 | -0.04 |
| Cohort 2013-14 | | | | | | -0.64 |

Value-added scores are standardized within year, with the average (mean) score set to 0. Teachers who only teach one year are excluded from the analyses.

Achievement gaps. Detailed subgroup analyses of racial and economic achievement gaps reveal that gaps in proficiency rates between white students and their non-white peers, as well as between economically disadvantaged students and their non-disadvantaged peers, have not narrowed significantly over the course of the RttT grant.

As shown in Table 5 (following page), the racial achievement gap closed only slightly, from an average percentage point gap of 25.1 in the three years prior to Race to the Top (2007-08 to 2009-10) to 24.2 percentage points in the most recent three years of RttT intervention (2011-12 to 2013-14). For economically disadvantaged students, the gap increased slightly from a three-year average of 26.7 percentage points before RttT to 30.9 percentage points during RttT, as shown in Table 6 (following page).

Table 5. North Carolina Proficiency Gap, by Race, 2007-08 through 2013-14

| Year | Overall | White | Non-White | Gap |
|---------|---------|-------|-----------|------|
| 2007-08 | 60.5 | 72.4 | 44.6 | 27.8 |
| 2008-09 | 68.0 | 79.1 | 53.8 | 25.3 |
| 2009-10 | 73.9 | 83.9 | 61.6 | 22.3 |
| 2010-11 | 73.4 | 83.4 | 61.7 | 21.7 |
| 2011-12 | 72.2 | 82.6 | 60.4 | 22.2 |
| 2012-13 | 36.0 | 47.7 | 23.1 | 24.6 |
| 2013-14 | 46.2 | 58.6 | 32.8 | 25.8 |

Table 6. North Carolina Proficiency Gap, by Economic Status, 2007-08 through 2013-14

| Year | Overall | Not Econ. Disadv. | Econ. Disadv. | Gap |
|---------|---------|-------------------|---------------|------|
| 2007-08 | 60.5 | 72.4 | 42.7 | 29.7 |
| 2008-09 | 68.0 | 78.8 | 52.9 | 25.9 |
| 2009-10 | 73.9 | 85.4 | 61.0 | 24.4 |
| 2010-11 | 73.4 | 85.7 | 60.7 | 25.0 |
| 2011-12 | 72.2 | 86.6 | 59.6 | 27.0 |
| 2012-13 | 36.0 | 53.1 | 20.7 | 32.4 |
| 2013-14 | 46.2 | 64.0 | 30.8 | 33.2 |

Declined in performance. Only one outcome—student achievement—declined over the RttT period, but the decline may reasonably be attributed to North Carolina’s adoption of new achievement examinations aligned with the Common Core State Standards, along with adoption of higher proficiency standards.

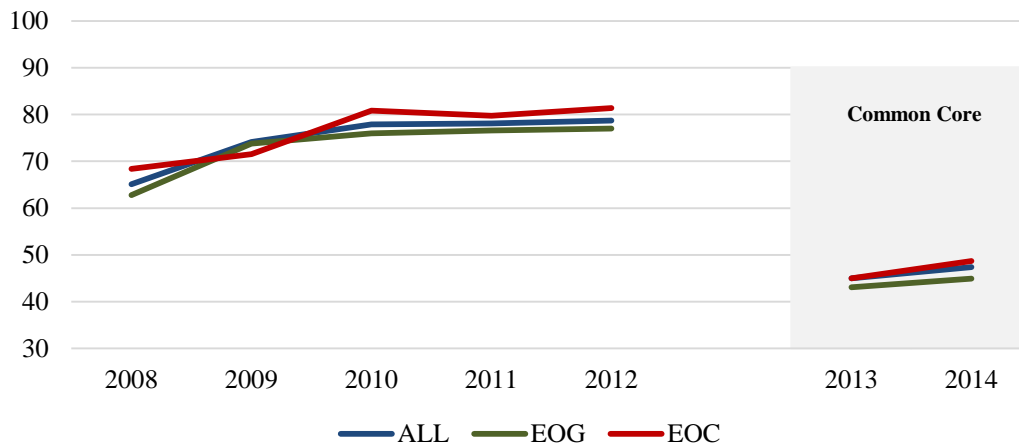
Student achievement. At first glance, Table 7 suggests that there was a considerable drop in overall student proficiency beginning in the 2012-13 school year, after years of improvement. However, this drop was concurrent with the adoption of a new suite of achievement examinations based on the Common Core State Standards that set higher standards for student proficiency. In addition, changes took place in the number and selection of tests during the 2012-13 school year.

Table 7 North Carolina Student Proficiency Rates, 2001-02 through 2013-14

| Year | Overall | EOG | EOC |
|---------|---------|------|------|
| 2007-08 | 60.5 | 62.8 | 55.6 |
| 2008-09 | 68.0 | 73.8 | 67.6 |
| 2009-10 | 73.9 | 76.0 | 70.1 |
| 2010-11 | 73.4 | 76.6 | 70.7 |
| 2011-12 | 72.2 | 77.0 | 71.2 |
| 2012-13 | 36.0 | 43.1 | 43.9 |
| 2013-14 | 46.2 | 44.9 | 44.7 |

Figure 3 illustrates the overlap of these changes with the decrease in proficiency, providing a compelling case that these findings are an artifact of North Carolina’s adoption of new standards and assessments. Note that the slopes of the lines from 2012-13 to 2013-14 are positive and appear to be parallel to slopes for the period before new standards were introduced, indicating that, even after introduction of the higher standards, student progress continued to be positive and in line with previous growth patterns.

Figure 3. North Carolina Student Proficiency Rates, 2007-08 through 2013-14

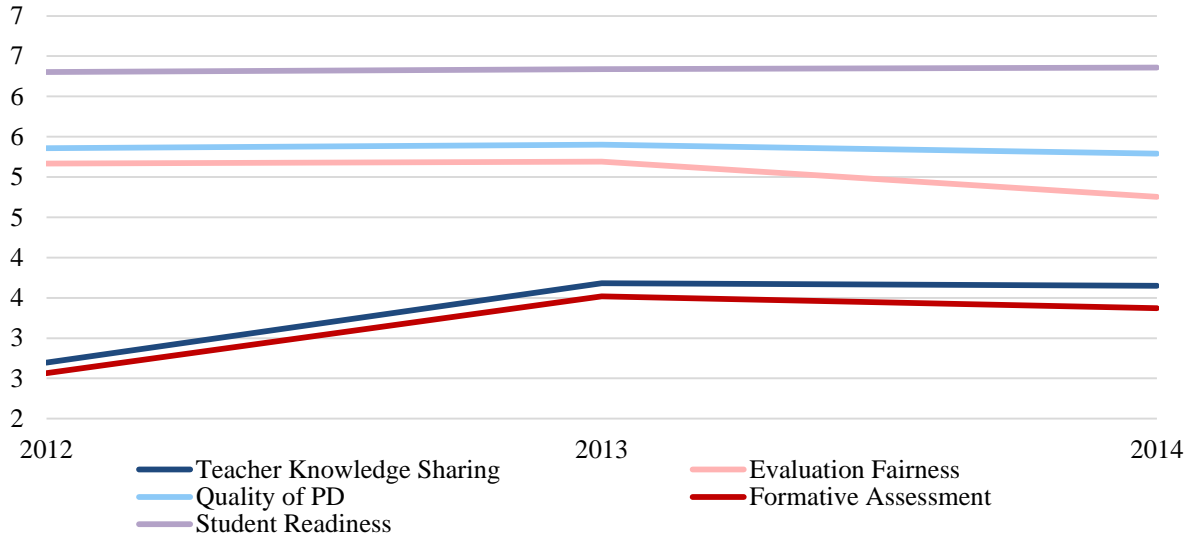


Outcomes with mixed results. Responses on the Omnibus Teacher and Leader survey administered annually by the Evaluation Team indicate that teachers felt that they improved in areas targeted by the state (knowledge-sharing and formative assessment), but that they did not perceive positive changes in the actions or services provided by the state, such as professional development opportunities or teacher evaluations.

Work environments and practices. Figure 4 (following page) illustrates changes in teachers’ responses to five groups of survey items¹⁶ from the RttT Omnibus Teacher and Leader Survey. These five groups were chosen because of their relation to conditions that it is reasonable to expect might be influenced by RttT initiatives: Teacher Knowledge-Sharing, Quality of Professional Development, Evaluation Fairness, Formative Assessment, and Student Readiness. The Student Readiness and Quality of Professional Development scales remained stable across the three RttT-period survey administrations. Teachers’ perceptions of the fairness of the evaluation system dips in the third survey year (2013-14), while Teacher Knowledge-Sharing and Formative Assessment increase in the second survey year (2012-13) and remain at higher levels through 2013-14. Together, these results suggest that teachers felt that they improved in areas targeted by the state (knowledge-sharing and formative assessment), but that they did not perceive positive changes in the actions or services provided by the state, such as professional development opportunities or teacher evaluations.

¹⁶ See Appendix E for Omnibus survey items.

Figure 4. Teacher Survey Scales, 2012 to 2014



Evaluation Question 2: Exceeding Growth in Other States

Overall, findings from inter-state comparisons suggest that RttT states performed similarly to non-RttT recipients during the RttT period on most outcomes but may have improved more on NAEP reading scores. North Carolina posted greater gains than other states on NAEP reading and 8th grade mathematics scores, SAT mathematics scores, and cohort graduation rates but posted smaller gains on AP exam-taking and declines in SAT reading and writing scores.

It is important to note that these analyses are purely descriptive and cannot determine whether any gains in outcomes were due to RttT programs, but the results provide information about whether North Carolina is moving in a positive direction on important outcomes and whether North Carolina is improving at a faster or slower pace than other states.

Changes in national outcome measures for North Carolina and other states. Table 8 (following page) shows the change in each national outcome measure for North Carolina and other states from 2009 to the most recent year for which the outcomes was measured. For the comparisons in Table 8, states were broken into groups depending on whether they were RttT Grantees.¹⁷ This division distinguishes between states whose outcomes may have been influenced by RttT programs and those who did not receive any RttT funding.

¹⁷ For the purpose of this comparison, only states receiving RttT funds during phases 1 or 2 were counted as RttT grantees (see <http://www2.ed.gov/programs/racetothetop/awards.html> for awardees). This distinction is made because the size of the awards was much smaller and the scopes of the initiatives were less broad for phase 3 states.

Table 8. Gains on National Outcome Measures for North Carolina Compared to Other States

| | North Carolina | Non-RttT States | All RttT States |
|--|----------------|-----------------|-----------------|
| National Assessment of Educational Progress: 2009 to 2013 | | | |
| 4 th Grade Mathematics | 1.00 | 2.10 | 3.25 |
| 8 th Grade Mathematics | 2.00 | 1.18 | 2.83 |
| 4 th Grade Reading | 3.00 | 0.59 | 1.83 |
| 8 th Grade Reading | 5.00 | 2.69 | 3.92 |
| Advanced Placement Exams: 2009 to 2014 | | | |
| AP Exams per 100 students | 5.79 | 6.79 | 9.75 |
| Average AP Exam Score | -0.04 | 0.06 | -0.04 |
| SAT Scores: 2009 to 2014 | | | |
| Mathematics Score | 4.00 | 1.38 | -3.17 |
| Reading Score | -4.00 | 0.08 | -3.83 |
| Writing Score | -3.00 | -2.18 | -7.42 |
| Graduation: 2009 to 2013 | | | |
| Cohort Graduation Rate | 10.70 | 3.19 | 0.07 |

- NAEP mathematics and reading (4th and 8th grade). The first section of Table 8 shows gains in NAEP scores for mathematics and reading at the 4th and 8th grade levels from 2009 to 2013. All groups of states show positive movement on NAEP scores, but these changes are very small. RttT states gained more points in each subject and at each grade level than did non-RttT states. North Carolina individually gained more than either group in reading at both grade levels and gained more than non-RttT states in 8th grade mathematics, but less than the average for RttT states. North Carolina gained less than both groups of states in 4th grade mathematics.
- Advanced Placement exam-taking and scores. The second section of Table 8 shows the gains in the proportion of students taking AP exams and on scores on the AP exams from 2009 to 2014. The number of AP exams taken per 100 students increased for each group, but increased less for North Carolina than for either non-RttT states or all RttT states. The average AP exam score changed very little for any of the groups—0.06 points out of a maximum of 5 points—but may have slightly decreased for North Carolina and other RttT states.
- SAT mathematics, reading, and writing. The third section of Table 8 shows the changes in SAT mathematics, reading, and writing scores from 2009 to 2014. Again, these changes were very small, with the largest being 7.42 points out of 800 possible points. In addition, many of the changes were negative. SAT scores in all three subjects dropped for RttT states. SAT scores in North Carolina dropped in reading and writing but rose in mathematics.
- Cohort graduation rates. The final section of Table 8 shows changes in the cohort graduation rate from 2009 to 2013. The cohort graduation rate remained very stable for RttT states overall, but rose approximately three percentage points for non-RttT states. However, the cohort graduation rate in North Carolina rose much more than it did in either of the other groups of states—an increase of over 10 percentage points during that five-year timeframe.

Comparison of changes for RttT grantees versus changes in other states. The changes in outcomes in Table 8 could have been caused by many other changes both within and outside the education system. In order to better isolate changes that could be related to RttT, a difference-in-differences regression analysis was used to control for changes in state demographics, economies, and overall trends.¹⁸ Table 9 shows the results of a difference-in-differences analysis that compares all RttT states to all non-RttT states.

Table 9. Difference-in-Differences Gains for RttT Grantees compared to Other States, 2009 to 2014

| | Differences in Outcomes for RttT vs. Non-RttT States Prior to RttT | Change in Non-RttT States during RttT Years | Change in RttT States compared to Non-RttT States during RttT |
|--|--|---|---|
| National Assessment of Educational Progress | | | |
| | 2009 | 2011-13 | 2011-13 |
| 4 th Grade Math | -0.195 (1.506) | 1.262** (0.570) | 1.934 (1.292) |
| 8 th Grade Math | -2.689 (2.207) | 1.535** (0.672) | 2.299 (1.606) |
| 4 th Grade Reading | 1.255 (1.735) | 0.793 (0.686) | 2.576** (1.041) |
| 8 th Grade Reading | -1.472 (1.639) | 1.438*** (0.532) | 1.590* (0.943) |
| Advanced Placement Exams | | | |
| | 2009 | 2010-14 | 2010-14 |
| AP Exam-Taking | 0.0402** (0.0186) | -0.0188 (0.0158) | 0.000717 (0.0142) |
| Average AP Exam Score | 0.0160 (0.0662) | 0.0720*** (0.0188) | -0.00669 (0.0316) |
| SAT Scores | | | |
| | 2009 | 2010-14 | 2010-14 |
| Mathematics Score | -29.54*** (9.192) | -5.678 (3.508) | 0.341 (3.530) |
| Reading Score | -29.25*** (9.461) | -6.255* (3.527) | -0.385 (3.312) |
| Writing Score | -26.74** (10.11) | -5.580 (3.570) | -1.235 (3.014) |
| Graduation | | | |
| | 2009 | 2010-13 | 2010-13 |
| Cohort Graduation Rate | 1.582 (2.234) | -0.133 (0.942) | -1.404 (2.118) |

* = significant at 0.05; ** = significant at 0.01; *** = significant at 0.001

- **Pre-RttT outcome differences.** The first column of the table shows the differences in outcomes between the two groups of states in the years immediately prior to the RttT awards. States that received RttT grants exhibited higher rates of AP exam-taking but lower SAT

¹⁸ Difference-in-differences models are described in greater detail in the **Data and Methods** section.

scores than other states prior to receiving RttT awards. Other outcomes were not significantly different between the two sets of states.

- Change in outcomes for non-RttT states. The second column shows the change in outcomes between the RttT years and the years immediately prior to RttT for states that did not receive RttT grants. During the time of RttT, non-RttT states had significant gains on NAEP scores in mathematics and in 8th grade reading, significant increases in AP exam scores, and a significant decrease in SAT reading scores. All of these changes were very small and could have been caused by many things, including changes in the educational systems of those states or economic changes that affected all states.
- Change in outcomes for RttT states compared to non-RttT states. The third column shows how much more or less states that received RttT funds gained from the years prior to RttT compared to states that did not receiving RttT awards. States receiving a RttT grant gained more on NAEP reading scores in both 4th and 8th grade during the RttT years than did states that did not receive a RttT grant. On all other outcomes, the gains made by RttT grantees were not significantly different than those for states that did not receive a RttT award. It is not possible to say from this analysis whether gains in NAEP reading scores were due to RttT programs, but the fact that scores increased more in states receiving RttT is promising.

Comparison of changes in North Carolina compared to a select groups of states. Table 10 uses a difference-in-differences design to compare North Carolina to non-RttT states, other RttT states, seven nearby states that did not receive RttT awards, and the ten states most similar to North Carolina in the two years prior to RttT for each outcome. The numbers in each column illustrate how much more or less North Carolina gained for each outcome during the RttT years compared to each comparison group.

Table 10. North Carolina Difference-in-Differences Gains during RttT Compared to Other Groups of States¹⁹

| | Non-RttT States | RttT States | Neighboring States | Similar States |
|---|-----------------|-------------|--------------------|----------------|
| <i>National Assessment of Educational Progress: 2009 to 2013</i> | | | | |
| 4 th Grade Mathematics | 1.30 | -0.40 | 0.98 | 1.51 |
| 8 th Grade Mathematics | 0.75 | -0.97 | 0.76 | 1.23 |
| 4 th Grade Reading | 3.88 | 1.68 | 5.27 | 3.89 |
| 8 th Grade Reading | 2.40 | 1.47 | 3.76 | 2.23 |
| <i>Advanced Placement Exams: 2009 to 2014</i> | | | | |
| AP Exam Taking | -2.00 | -2.84 | -1.92 | -2.49 |
| Average AP Exam Score | 0.07 | 0.08 | 0.19 | 0.01 |
| <i>SAT Scores: 2009 to 2014</i> | | | | |
| Mathematics Score | -0.90 | 0.074 | -7.22 | -0.95 |
| Reading Score | 0.98 | 2.31 | -5.17 | 0.53 |
| Writing Score | -1.04 | 1.04 | -6.76 | 0.03 |
| <i>Graduation: 2009 to 2013</i> | | | | |
| Cohort Graduation Rate | 3.46 | 4.77 | 1.46 | -1.13 |

¹⁹ Statistical significance is not reported for coefficients in Table 10 due to small sample sizes.

For most outcomes, North Carolina’s gains were very similar to those of the comparison groups. However, North Carolina gained as much as several points more on NAEP mathematics and reading tests compared to non-RttT states, neighboring states, and similar states. North Carolina also gained more on NAEP reading tests than other RttT states, but the differences were small. North Carolina gained more than non-RttT states, other RttT states, and neighboring states on cohort graduation rates, but gained less than other states that had similar cohort graduation rates prior to RttT. In addition, North Carolina had lower gains in instances of AP exam-taking than did any of the comparison groups, and it had larger decreases (mathematics, writing) or smaller gains (reading) in SAT scores than did neighboring states.

Qualitative Findings

Evaluation Question 3: Fidelity of Implementation

North Carolina implemented eleven state-level initiatives over the course of the RttT grant period for the purpose of enhancing and leveraging capacity to support an effective education workforce and prepare students for success in college and the beyond. Overall, most of these initiatives (eight of eleven) were started on time or within a year of their planned start dates, were implemented to scale, and met identified implementation objectives (Table 11).

Table 11. Degree to which Initiatives Reached Implementation Targets

| Initiative | Implementation | | | Sum |
|------------------------------------|----------------|-----------|----------------|-----|
| | On Time | Met Scale | Met Objectives | |
| Performance-Based Incentives | 2 | 2 | 2 | 6/6 |
| Regional Leadership Academies | 2 | 2 | 2 | 6/6 |
| New Teacher Support Program | 1 | 2 | 2 | 5/6 |
| North Carolina Teacher Corps | 0 | 1 | 1 | 2/6 |
| NCVPS Blended STEM Courses | 0 | 1 | 1 | 2/6 |
| State Strategic Staffing | 2 | 0 | 0 | 2/6 |
| Professional Devel. Initiative | 2 | 2 | 2 | 6/6 |
| Online Professional Development | 1 | 2 | 2 | 5/6 |
| Distinguished Ldrshp. in Practice | 2 | 2 | 2 | 6/6 |
| District and School Transformation | 2 | 2 | 2 | 6/6 |
| STEM Anchor & Affinity Schools | 1 | 2 | 2 | 5/6 |

0 = No (> 1 year) 0 = No (under 25%) 0 = None
 1 = w/in 1 yr of plan 1 = 25%-99% 1 = Some (25%-75%)
 2 = yes 2 = 100% 2 = All/near all (75%+)
 Note: 50% (e.g.) means that 75 of 150 teachers were served, etc.

How to Read This Table

Each row summarizes implementation information for a given initiative. For example, for **Performance-Based Incentives** (the first row) and **New Teacher Support** (the third row), the table could be read as follows:

“The Performance-Based Incentives initiative was implemented according to plan (6/6). The New Teacher Support program met its objectives and grew to scale by the end of the grant period, but its start was initially delayed for a few months (5/6).”

The implementation of the North Carolina Teacher Corps and North Carolina Virtual Public School’s Blended STEM Courses required an additional year of planning before they were

started. In addition, both of these initiatives, along with the state's effort to sponsor a statewide strategic staffing initiative, collectively met only some of their targets for implementation scale and objectives. The evaluation reports for these individual initiatives include more details about the reasons behind these implementation issues.²⁰

Evaluation Question 4: Enhanced Capacity

This section outlines the cumulative contribution of individual initiatives toward impacting one or more of the four RttT pillars of educational reform.

Pillar 1 – Standards and Assessments. This pillar focused on the state's adoption of rigorous standards and assessments that prepare students for success in college and the workplace.

Over the RttT period, North Carolina rolled out a statewide comprehensive professional development initiative that provided Local Education Agencies (LEAs)²¹ and schools with the skills and resources necessary for a successful transition to the new Smarter Balanced suite of achievement exams based on the Common Core State Standards (CCSS). An important focus of the initiative was on building capacity for higher-quality locally-provided professional development, which was accomplished via regional trainings, webinars, and online modules.

Pillar 2 – Data Systems to Support Instruction. The purpose of this pillar was to support construction of data systems that measure student success and inform teachers and principals in ways that help them improve their practices.

The state developed Home Base, an online Instructional Improvement System now in place statewide for use by educators, students, and peers. The state's RttT grant also supported the development of the North Carolina Educational Cloud, which is a computing infrastructure designed to serve local technology needs on a statewide basis.

Pillar 3 – Great Teachers and Leaders. The goals for this pillar included increasing teacher and principal effectiveness and improving their equitable distribution statewide.

North Carolina developed more initiatives in support of this pillar than for all other pillars combined in an effort to provide multiple routes to enhance the states' capacity to increase the effectiveness and equitable distribution of educators.

To help measure its progress, North Carolina developed, piloted, and implemented a modified teacher and principal evaluation process that incorporated objective assessments of educators (both educators in historically tested subject areas and educators in areas without formal tests) to accompany the ratings by supervisors on existing standards for performance. A key reform in this process was the addition of a student growth measure as a formal evaluation standard, which provided objective information to both principals and teachers to better gauge their effectiveness in contributing to student achievement growth.

²⁰ Available at <http://cerenc.org>

²¹ LEA is North Carolina's term for traditional school districts and charter schools.

To enhance North Carolina’s capacity to achieve a more equitable distribution of effective leaders, the state’s RttT plans included establishment of three Regional Leadership Academies to increase the pipeline of qualified principals to serve low-performing schools. Similarly, the state developed a New Teacher Support program to providing induction support for new teachers in the lowest-performing schools in the state. Both of these initiatives developed the infrastructure and secured the funding necessary to continue their work, at least partially, beyond the close of the RttT period.

Pillar 4 – Turning Around the Lowest-Achieving Schools. The goal for this pillar was to identify the state’s persistently lowest-achieving schools and to support LEAs in turning them around, in order to improve educational opportunities for students in those schools.

The state developed the Turning Around the Lowest-Achieving Schools (TALAS) initiative, administered by NCDPI’s District and School Transformation division, to provide school- and LEA-level instructional coaching and professional development to the state’s 118 lowest-achieving schools and 12 low-achieving LEAs. The state also sponsored the ongoing development of a network of innovative and collaborative STEM schools to serve this population of students. Impact evaluations of the TALAS efforts²² have shown that school-wide achievement growth (as measured by the state’s official measure) increased in both the first and second full years of implementation, and that gains in student proficiency scores occurred in both 2012-13 and 2013-14 (the final years for which data were available). Across all levels of TALAS schools, proficiency in mathematics and science increased more than in similar schools, and proficiency in reading increased in elementary and middle schools, which is consistent with the TALAS emphasis on literacy. Graduation rates also consistently increased more in TALAS high schools. In addition, LEA-level transformation services appeared to produce larger gains in student achievement growth. These increases in student, teacher, and school performance are unlikely to be maintained without continued support for TALAS—support that as of this writing has not yet been secured.

²² Most recently, Henry, G. T., Guthrie, J. E., & Townsend, T. (2015). *Outcomes and Impacts of North Carolina’s Turning Around the Lowest Achieving Schools Initiative*. Consortium for Educational Research and Evaluation—North Carolina. <http://cerenc.org>.

Evaluation Question 5: Sustainable Capacity

Nine of the eleven initiatives met at least three of the four sustainability characteristics (Table 12). The state strategic staffing initiative did not appear to establish any of the four sustainability elements, while the Performance-Based Incentives initiative established only one of four.

Table 12. Degree to which Initiatives Reached Sustainability Targets

| Initiative | Sustainability | | | | Sum |
|------------------------------------|----------------|-----------|----------------|----------------|-------|
| | Structure | Personnel | Infrastructure | Ongoing Demand | |
| Performance-Based Incentives | ✘ | ✘ | ✘ | ✓ | 1/4 |
| Regional Leadership Academies | ✓ | ✓ | ✓ | ✓ | 4/4 |
| New Teacher Support Program | ✓ | ✓ | ✓ | ✓ | 4/4 |
| North Carolina Teacher Corps | ✓ | ✓ | TBD | ✓ | 3/4 |
| NCVPS Blended STEM Courses | ✓ | TBD | ✓ | ✓ | 3/4 |
| State Strategic Staffing | ✘ | ✘ | ✘ | ✘ | 0/4 |
| Professional Devel. Initiative | ✓ | ✓/✘ | ✓ | ✓ | 3.5/4 |
| Online Professional Development | ✓ | ✓ | ✓ | ✓ | 4/4 |
| Distinguished Ldrshp. in Practice | ✓ | ✓ | ✓ | ✓ | 4/4 |
| District and School Transformation | ✓ | ✓/✘ | ✓/✘ | ✓ | 3/4 |
| STEM Anchor & Affinity Schools | ✓ | ✓ | ✓ | ✓ | 4/4 |

✓ = Component in place/characteristic evident

✘ = Component not in place/characteristic not evident

✓/✘ = Some aspects of component/characteristic in place/evident

TBD = To be determined pending ongoing implementation

How to Read This Table

Each row summarizes sustainability information for a given initiative.

For example, for **Performance-Based Incentives** (the first row) and **Professional Development Initiative** (the seventh row), the table could be read as follows:

“Despite ongoing interest in providing differentiated pay opportunities for teachers statewide, there are no plans in place to sustain the Performance-Based Incentives initiative (1/4). The Professional Development Initiative, however, will continue to be able to meet ongoing demand through its current structure and infrastructure, though the end of RttT funding will require new solutions for supporting an adequate level of personnel (3.5/4).”

Table 13 suggests that initiative-by-initiative progress toward attaining immediate, intermediate, and longer-term outcomes was encouraging, with five initiatives achieving all of their intended outcomes and four at least partially meeting all outcomes. As above, only the Performance-Based Incentives and state strategic staffing initiatives did not meet any outcome measures.

Table 13. Degree to which Initiatives Reached Outcomes Targets.

| Initiative | Outcomes | | | Sum |
|------------------------------------|-----------|--------------|-------------|-------|
| | Immediate | Intermediate | Longer-Term | |
| Performance-Based Incentives | - | - | - | 0/3 |
| Regional Leadership Academies | + | + | N/A | 2/2 |
| New Teacher Support Program | + | + | + | 3/3 |
| North Carolina Teacher Corps | +/- | +/- | N/A | 1/2 |
| NCVPS Blended STEM Courses | + | +/- | N/A | 1.5/2 |
| State Strategic Staffing | - | - | - | 0/3 |
| Professional Devel. Initiative | + | + | +/- | 2.5/3 |
| Online Professional Development | + | + | N/A | 2/2 |
| Distinguished Ldrshp. in Practice | + | +^ | N/A | 2/2 |
| District and School Transformation | + | + | N/A | 2/2 |
| STEM Anchor & Affinity Schools | + | +/- | N/A | 1.5/2 |

^ = Not able to determine statistical significance

+ = Met all outcome measures for this time period

+/- = Met some outcome measures for this time period

- = Did not meet outcome measures for this time period

N/A = Relevant and/or necessary data not yet available

How to Read This Table

This table summarizes the degree to which initiatives reached Outcomes targets.

Each row summarizes this information for a given initiative.

For example, for **Performance-Based Incentives** (the first row) and **North Carolina Teacher Corps** (the fourth row), the table could be read as follows:

“Quantitative and qualitative evidence indicated that the Performance-Based Incentives initiative did not meet any of its outcome goals (0/3). Both quantitative and qualitative evidence do suggest that the North Carolina Teacher Corps met some of its short-term and intermediate outcome objectives, but longer-term outcomes were not measurable by the program’s end (2/2).”

Limitations

Determining the impact of a multi-year, state-level intervention comprised of multiple initiatives in multiple locations with a variety of implementers is challenging at best. Thus, there are several key limitations to an evaluation of this scope that should be considered when assessing the information provided in this report:

1. Due in some cases to the universal exposure of students and educators to some of the initiatives (e.g., adoption of the Common Core State Standards assessments) and in other cases to the targeting of all members of distinct population subgroup (e.g., all of the state's lowest-performing schools), it is not possible to establish a valid comparison group against which to measure the impacts of many of the individual initiatives, much less North Carolina's RttT program as a whole. As a result, it is not possible to determine firm estimations of the isolated impact of the RttT reform efforts separate and apart from the impacts of other concurrent non-RttT initiatives and events.
2. Furthermore, the concentration of most of the RttT interventions within the state's lowest-achieving schools and LEAs means that they almost always are in operation alongside other existing programs that may be providing similar services and/or targeting the same outcomes, thereby either masking or inflating the true impact of RttT initiatives alone.
3. Over the course of the four years of implementation, there have been important changes in leadership and economic conditions across the state that also likely impacted the outcomes of interest completely independently of the initiatives themselves.
4. Finally, the timeframe from initial implementation to outcome measurement may not yet have been sufficient to capture many of the initiatives' eventual intended effects. Most RttT initiatives were new or substantially enhanced service, both of which require time for scale-up and program adjustments before truly being implemented as intended. Also, many of the initiatives directly targeted educators rather than students, meaning that their impact on student outcomes may be delayed until after educators have had a chance to fully integrate the capacity-building aspects of the initiatives into their work. In addition, student-level outcome data often are not available until the following school year, meaning RttT impacts for the final year of implementation (the no-cost extension year, 2014-15) were not able to be included in these analyses.

Conclusions and Emerging Lessons Learned

Conclusions

North Carolina's RttT proposal laid out an ambitious plan for education reform. Beginning in the 2010-11 school year, eleven distinct state-level initiatives, along with multiple LEA-level initiatives, were developed and implemented to address the four RttT pillars of Standards and Assessments, Data Systems to Support Instruction, Great Teachers and Leaders, and Turning Around the Lowest-Achieving Schools.

As the state's RttT grant period comes to a close, this overall impact evaluation indicates largely successful implementation of each initiative and the presence of key characteristics required for program sustainability. Outcome objectives were met for increasing graduation rates, and of particular note was the evidence that some high school graduation attainment gaps—especially those across ethnicities—began to close over the course of RttT. In addition, when compared to other states, North Carolina exhibited greater gains on NAEP reading and 8th grade mathematics scores, SAT mathematics scores, and graduation rates.

While there was no evidence of RttT impact on either teacher effectiveness or most measures of student achievement, without a valid comparison group it is not possible to determine whether this lack of evidence reflects meaningful performance outcomes.

As noted earlier, it is important to keep in mind that the nature of the available data and of initiative implementation prevent the findings presented in this report from providing solid evidence of the outcomes of RttT or of the degree to which RttT's influence surpassed or was overshadowed by the influence of other confounding events. Despite these limitations, however, the data can and do support the conclusion that the education landscape in North Carolina is indeed better off at the conclusion of RttT than it was before. These findings are even more compelling given the state's adverse economic conditions at the start of the grant period and the intensive and extensive changes in assessments and performance standards for both students and teachers that was part of the implementation phase.

The state's commitment to the more promising RttT initiatives, especially school turnaround and transformation should not end once grant funding has been exhausted. In order to maintain the successes outlined in this report and improve opportunities for all students to receive an adequate education, the state should continue to commit time and resources to sustaining the successful components of RttT for the foreseeable future.

Emerging Lessons Learned from Race to the Top Implementation

Not everything worth learning about North Carolina's RttT efforts can be gleaned from analyses of data alone. For this final overall evaluation of North Carolina's RttT initiatives, members of the CERÉ-NC Evaluation Team also reviewed the findings and recommendations in all of the individual initiative evaluation reports that preceded this final report and identified several emerging lessons learned that cut across multiple initiatives. The most prominent of these cross-initiative emerging lessons (presented below) may be of value not only for guidance in planning

and implementing similar large-scale initiatives undertaken by state agencies, but also for funding agencies as they structure requirements for future programs.

Overall, reviews of the RttT evaluation reports²³ suggested three thematic groupings of emerging lessons learned that may be aligned with successful implementation and sustainability of initiatives: 1) the importance of careful coordination and collaboration across state-, local-, and school-level stakeholders; 2) the power of simplicity of design; and 3) the necessity of engaging a broad stakeholder community.

Theme 1- Prioritize and actively promote collaboration throughout the reform process. A complex reform agenda like North Carolina's Race to the Top initiatives increases the likelihood of conflicting agendas and implementation challenges. To reduce these problems, focus on:

- *Communication* – Emphasize and sustain quality cross-agency interactions and discussion;
- *Coordinated Vision for Implementation* – Avoid overlapping or redundant interventions; and
- *Collaboration among Leaders* – Early and ongoing investment in developing initiative-focused leadership capacity is a critical ingredient for establishing cohesive partnerships and collaboration.

Theme 2 – Value simplicity. Usually, the most successful initiatives are those with the fewest moving parts. To minimize the number of variables, work toward:

- *Concentration of Services* – Streamline services by focusing more resources on fewer initiatives and, within initiatives, on fewer components; and
- *Thoughtful Growth and Development of Structures and Process for Sustaining Progress* – To prepare for end-of-initiative transitions, plan for in-grant capacity-building

Theme 3 – Engage the broader community. A comprehensive education reform agenda attends to in-school and out-of-school stakeholders by taking into account:

- *Opportunities for Local Decision-Making* – Where appropriate, allow for school- and LEA-level input on planning and decision-making about resource use and implementation;
- *Stakeholder Buy-In* – Dedicate time and resources to engaging out-of-school stakeholders to become optimal contributors to each initiative; and
- *Expanded Engagement* – For many K-12 initiatives, encouraging involvement from Higher Education and business communities can strengthen overall impact.

Appendix F includes initiative-level examples that support each theme.

²³ Each theme was informed by findings and recommendations from evaluations of one or more of the following RttT initiatives: Teacher and Leader Effectiveness Evaluation; performance-based incentives for teachers in low-performing schools; the Regional Leadership Academies; the New Teacher Support Program; the North Carolina Teacher Corp and the Teach for America expansion; local strategic staffing; state strategic staffing; North Carolina Virtual Public School's blended STEM courses; the Professional Development Initiative; Distinguished Leadership in Practice; Turning Around the Lowest-Achieving Schools; the STEM Anchor and Affinity Schools; and spending patterns at the LEA level.

Appendix A. Evaluation Lead Survey

1) *To what extent was each RttT initiative implemented as intended and adapted to meet challenges in the educational environment during RttT?*

For item 1, compare to the original proposal; for items 2 and 3, compare implementation to the final, USED-approved version as described in the state's official Detailed Scope of Work (not to the original proposal). The final Detailed Scope of Work can be found [here](#). The *primary audience* for this section is the United States Department of Education; much of the information provided in this section already has been shared with the implementer(s).

1. Did the initiative ***start on time?*** (As originally planned, not as amended)

0=No (beyond 1 year)

1=within year of plan

2=yes

2. Did it ***meet its scale targets*** (e.g., # of students served, # of teachers prepared, etc.)?

0=No (under 25%)

1=25%-99%

2=100%

3. Did it ***meet its objectives*** (as amended)?

0=None

1=Some (25%-75%)

2=All or near all (75%+)

4. What is our ***overall estimate*** of the implementation? (May not apply to all initiatives)

5. What is the ***current status*** of the initiative now (e.g., At the end of RttT, is the initiative still in operation? Who is managing it? etc.)

2) *What initiatives show promise for continuing impact on capacity, educator effectiveness, and student achievement?*

6. ***Structure*** – Is there a clearly identifiable entity or organization in charge of the initiative's work? If so, who or what?

7. ***Personnel and Positions*** – In your estimation, does that entity or organization have the right type of positions, enough people for those positions, and people who know what to *do* in those positions (i.e., the *right* people)?

8. ***Infrastructure*** – Do #1 and #2 combined provide the means for continuing to develop and deliver the product after Race to the Top support ends?

9. To what extent do you think the need for and demand for the initiative is likely to continue to exist after School Year 2014-15? Is the initiative still needed, or has it met its objectives?

Evaluation Leads: Please provide a short narrative. Where possible, provide justification(s) to support your assessment(s).

- 3) *What evidence did you and your team collect that immediate outcomes, intermediate outcomes, and/or longer-term goals for the initiative were met?*

Evaluation Leads: Please provide a short narrative for each item below. Pull from your final, summative evaluation report, if appropriate.

1. Immediate (short-term) Outcomes:
 2. Intermediate Outcomes:
 3. Longer-Term Goals:
- 4) *Please include any extenuating or notable factors related to outcomes that may not have surfaced in the reports (e.g., implementation fidelity issues not covered in the reports).*

Evaluation Leads: Please provide a short narrative, if necessary and appropriate.

Appendix B. Race to the Top in North Carolina: Summary of Amendments

This document summarizes the 19 amendments the state of North Carolina made to its original Race to the Top (RttT) Scope of Work. The United States Department of Education had the authority to approve amendments to the plan and budget, provided that such changes did not alter the scope or objectives of the approved proposals.

National Context

All nineteen RttT Round 1, Round 2, and Round 3 states filed for and received amendments. North Carolina’s approved amendment total was sixth-highest (Table B1).

Table B1. RttT States with the Highest Number of Amendments

| State | Number of Amendments | Grant Size | Award Round |
|-----------------------|----------------------|----------------------|-------------|
| New York | 24 Amendments | \$700 Million | 2 |
| Maryland | 23 Amendments | \$250 Million | 2 |
| Massachusetts | 22 Amendments | \$250 Million | 2 |
| Ohio | 20 Amendments | \$400 Million | 2 |
| Tennessee | 20 Amendments | \$500 Million | 1 |
| Florida | 19 Amendments | \$700 Million | 2 |
| North Carolina | 19 Amendments | \$400 Million | 2 |
| Georgia | 16 Amendments | \$400 Million | 2 |
| Hawaii | 14 Amendments | \$75 Million | 2 |
| Delaware | 13 Amendments | \$100 Million | 1 |
| District of Columbia | 13 Amendments | \$75 Million | 2 |
| Rhode Island | 10 Amendments | \$75 Million | 2 |
| Illinois | 7 Amendments | \$43 Million | 3 |
| New Jersey | 6 Amendments | \$38 Million | 3 |
| Kentucky | 5 Amendments | \$17 Million | 3 |
| Pennsylvania | 5 Amendments | \$41 Million | 3 |
| Colorado | 4 Amendments | \$18 Million | 3 |
| Louisiana | 2 Amendments | \$17 Million | 3 |
| Arizona | 1 Amendment | \$25 Million | 3 |

The number of amendments suggests the complexity of managing and implementing a plan on the scale of RttT—which required states to address teaching and learning in thousands, or even hundreds of thousands, of classrooms—but there are additional factors worth considering as well. One might expect larger grants—typically grants to larger states with more implementation sites—to require more amendments. One also might expect longer-running grants (i.e., those from Rounds 1 and 2) to require more amendments (since they were in operation longer). Thus, it is not surprising that states that received over \$250 million in awards required the most amendments (i.e., that the size of the grant awarded contributed to the complexity of managing and implementing it), nor is it surprising that no Round 3 states (which not only started later but also whose grants were smaller in size) applied for a high number of amendments.

It is worth noting, however, that, relative to other states with grants its size or bigger and with similar implementation schedules (i.e., Round 1 and Round 2 states), North Carolina’s amendment total was lower than all but one (Georgia), suggesting that North Carolina’s original plan was relatively stable.

Overview of the Amendments

Amendments were categorized by the sections of the original proposal that they modified, including the four RttT “pillars”: (A) State Success Factors; (B) Standards and Assessment; (C) Data Systems to Support Instruction; (D) Great Teachers and Leaders; (E) Turning Around the Lowest-Achieving Schools; and (P) Competitive Preference Priorities. Most of North Carolina’s nineteen amendments included changes to multiple initiatives, with later amendments including more changes than earlier amendments.

As shown in Table B2, the largest proportion of North Carolina’s amendments fell under the pillar with the largest number of initiatives. Great Teachers and Leaders totaled 25 requests across nine initiatives.

Table B2. List of Initiatives, the Number of Mentions and the Amendments Associated

| RttT Pillar | Amendment Requests | Amendment(s) |
|-----------------------------------|---------------------------|---|
| (A) State Success Factors | 5 | 10, 12, 14, 16, 19 |
| (B) Standards and Assessment | 1 | 4 |
| (C) Data Systems to Support Inst. | 3 | 1, 8, 10 |
| (D) Great Teachers & Leaders | 25 | 2, 3, 5, 6, 7, 8, 9, 10, 13, 15, 16, 17, 18 |
| (E) Turning Around Low Schools | 3 | 2, 9, 16 |
| (P) Priority (STEM) | 1 | 11 |

Overall, the amendments indicate that implementation delay was the most common reason for requesting implementation adjustments. Delays were mentioned in six amendments explicitly and in others less directly (e.g., as refinements to the original implementation plan, redistributions of unexpended funds, or need for additional start-up time). Some of these requests were the result of the state’s opportunity to apply for a no-cost extension at the end of the 2013-14 school year (Amendment 18).

Appendix C. Change in Attainment Gaps for LEP

One area of concern that emerges from our analysis of state graduation rates is that the graduation rate for students with limited-English proficiency (LEP) has not increased over the past seven years, resulting in a percentage-point gap in comparison to non-LEP students that has grown from an average of 22.7 percentage points during the three year baseline period (SY2008, SY2009, and SY2010) to 33.0 percentage points during the three year post-RttT period (SY2012, SY2013, and SY2014).

As noted above, the state did not make progress toward narrowing the attainment gap between students identified with limited English proficiency (LEP) and their English proficient peers. While the graduation rate for English learners has stayed relatively stable between the baseline period (50.1%) to the post-RttT period (50.2%), the gap has grown as the rest of the state has improved by over ten percentage points from 72.8% to 83.1%.

The language proficiency attainment gap has increased as the overall number of English learner graduates has decreased.

Table C1. North Carolina Language Proficiency Attainment Gap, 2007-2008 through 2013-2014

| Year | Overall | Non-Lim. Eng. Prof. | Lim. Eng. Prof. | Gap |
|---------|---------|---------------------|-----------------|------|
| 2007-08 | 70.3 | 49.9 | 21.0 | 29.8 |
| 2008-09 | 71.8 | 52.1 | 20.4 | 39.6 |
| 2009-10 | 74.2 | 48.3 | 26.7 | 36.1 |
| 2010-11 | 77.9 | 48.1 | 30.7 | 33.4 |
| 2011-12 | 80.4 | 50.0 | 31.3 | 30.0 |
| 2012-13 | 82.5 | 48.8 | 34.6 | 28.1 |
| 2013-14 | 83.9 | 51.7 | 33.0 | 26.0 |

Figure C1. North Carolina Graduation Rates by English Learner Status, 2007-2008 through 2013-2014

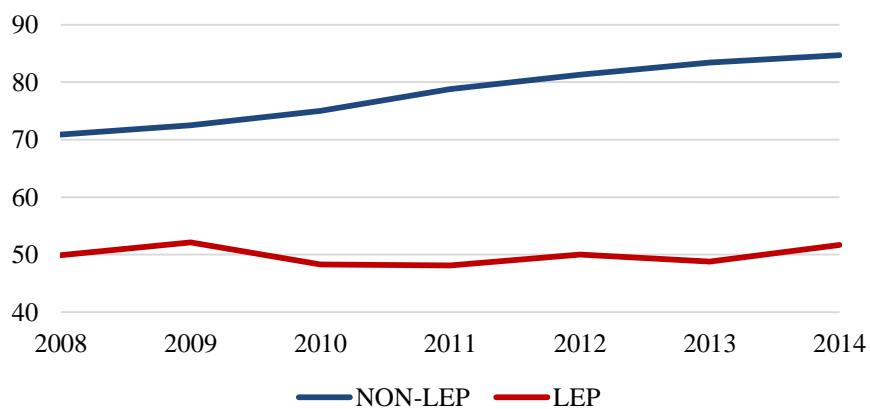
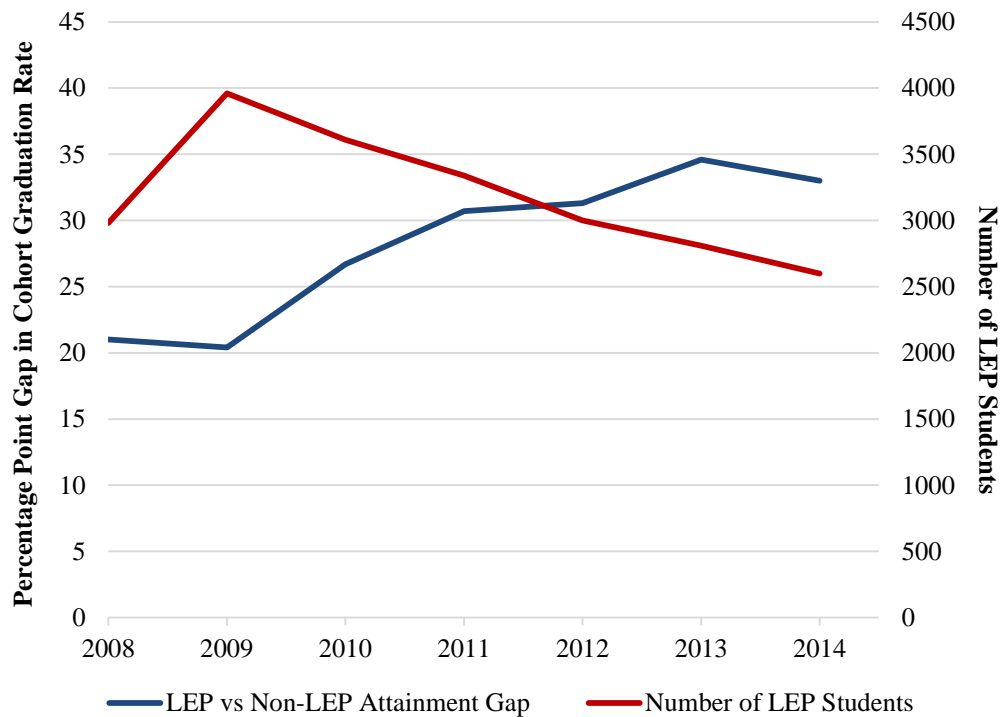


Figure C2. North Carolina Language Proficiency Attainment Gap, 2007-2008 through 2013-2014



The attainment gap between students with disabilities (SWD) and their able peers also widened slightly during North Carolina’s Race to the Top years, from 16.6 percentage points in the baseline period to 22.3 percentage points in the most recent three years of data.

Table C2. North Carolina Students with Disabilities Attainment Gap, 2007-2008 through 2013-2014

| Year | Overall | Non-Student w/Disabl. | Student w/Disabil. | Gap |
|---------|---------|-----------------------|--------------------|------|
| 2007-08 | 70.3 | 71.6 | 56.6 | 15.0 |
| 2008-09 | 71.8 | 73.3 | 56.8 | 16.5 |
| 2009-10 | 74.2 | 76.0 | 57.6 | 18.4 |
| 2010-11 | 77.9 | 80.2 | 57.2 | 23.0 |
| 2011-12 | 80.4 | 82.8 | 59.9 | 22.9 |
| 2012-13 | 82.5 | 84.8 | 62.3 | 22.5 |
| 2013-14 | 83.9 | 85.9 | 64.4 | 21.5 |

Figure C3. North Carolina Graduation Rates by Disability Status, 2005-2006 through 2013-2014

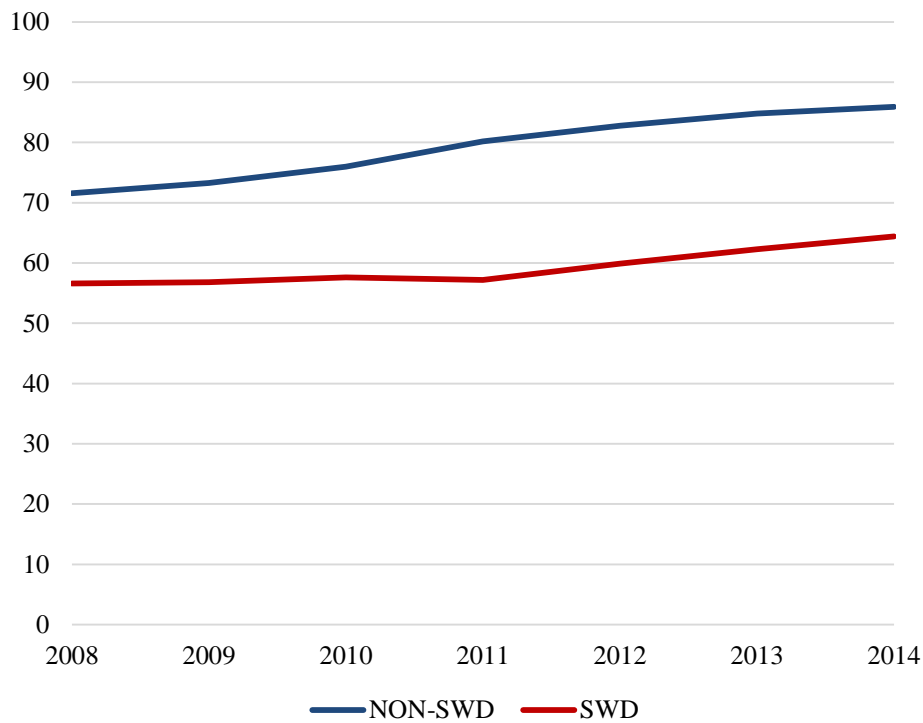
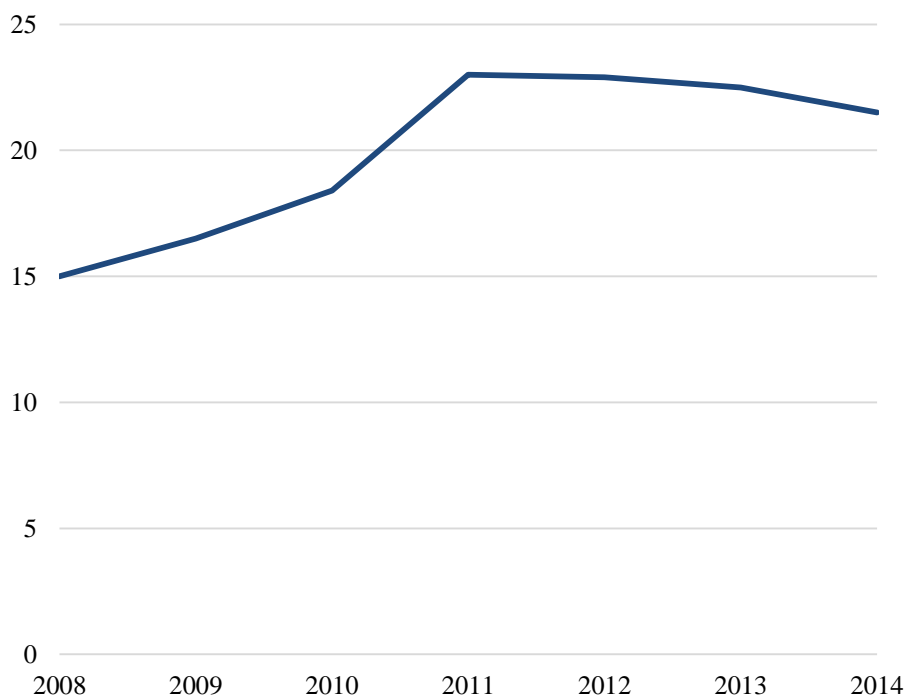


Figure C4. North Carolina Students with Disabilities Attainment Gap, 2007-2008 through 2013-2014



Appendix D. Means and Standard Deviations of Teacher Evaluation Ratings

Table D1. All Teacher Evaluation Ratings, 2010-2011 through 2013-2014

| | 2010-11 | | 2011-12 | | 2012-13 | | 2013-14 | |
|------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|
| | <i>Mean</i> | <i>S.D.</i> | <i>Mean</i> | <i>S.D.</i> | <i>Mean</i> | <i>S.D.</i> | <i>Mean</i> | <i>S.D.</i> |
| Standard 1 | 3.53 | 0.71 | 3.62 | 0.71 | 3.59 | 0.70 | 3.58 | 0.69 |
| Standard 2 | 3.50 | 0.67 | 3.67 | 0.70 | 3.63 | 0.69 | 3.61 | 0.69 |
| Standard 3 | 3.51 | 0.69 | 3.56 | 0.69 | 3.51 | 0.68 | 3.51 | 0.69 |
| Standard 4 | 3.64 | 0.70 | 3.57 | 0.67 | 3.53 | 0.67 | 3.52 | 0.66 |
| Standard 5 | 3.57 | 0.70 | 3.56 | 0.70 | 3.53 | 0.69 | 3.50 | 0.69 |

Table D2. First-Year Teacher Evaluation Ratings, 2010-2011 through 2013-2014

| | 2010-11 | | 2011-12 | | 2012-13 | | 2013-14 | |
|------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|
| | <i>Mean</i> | <i>S.D.</i> | <i>Mean</i> | <i>S.D.</i> | <i>Mean</i> | <i>S.D.</i> | <i>Mean</i> | <i>S.D.</i> |
| Standard 1 | 3.07 | 0.56 | 3.05 | 0.53 | 3.08 | 0.49 | 3.04 | 0.50 |
| Standard 2 | 3.07 | 0.56 | 3.14 | 0.59 | 3.15 | 0.55 | 3.12 | 0.56 |
| Standard 3 | 3.04 | 0.52 | 3.04 | 0.53 | 3.03 | 0.50 | 3.02 | 0.49 |
| Standard 4 | 3.16 | 0.59 | 3.05 | 0.57 | 3.06 | 0.53 | 3.03 | 0.53 |
| Standard 5 | 3.05 | 0.54 | 3.07 | 0.55 | 3.07 | 0.51 | 3.05 | 0.50 |

Appendix E. Race to the Top Omnibus Teacher and Leader Survey: Scale Items

Scale: Teacher Knowledge Sharing

How frequently do you do each of the following with teachers in your school?

1. Share ideas on teaching
2. Discuss what you/they learned at a workshop or conference
3. Share and discuss student work
4. Discuss particular lessons that were not very successful
5. Discuss beliefs about teaching and learning
6. Share and discuss research on effective teaching methods
7. Share and discuss research on effective instructional practices for English language learners
8. Explore new teaching approaches for under-performing students

Scale: Quality of Professional Development

Overall, my professional development experiences this year have...

1. Been sustained, rather than short-term.
2. Been coherently focused, rather than unrelated
3. Included enough time to think carefully about, try, and evaluate new ideas
4. Professional development at my school has prepared teachers to...
5. Implement the state Standard Course of Study
6. Integrate computers and technology into lessons
7. Develop warm relationships with students
8. Implement good behavior management
9. Use data to tailor instruction to students' needs

Scale: Evaluation Fairness

At my school . . .

1. The evaluation process encourages teachers to reflect on their instructional practice.
2. Teachers use feedback from the teacher evaluation system to improve their teaching
3. Teacher evaluation is fair.
4. The criteria on which I am evaluated are clear.
5. The teacher evaluation process encourages professional growth

This school year, overall . . .

6. I am satisfied with the teacher evaluation process

Scale: Formative Assessment

How often do you do each of the following?

1. I use checklists when gathering information about student learning.
2. I use rubrics for assessing my students.
3. I write learning targets on the board and go over them with my students
4. I provide students specific information (without using grades or rubrics) about where they are in meeting the learning targets.
5. I plan or modify classroom instruction based on the information I receive from classroom assessment.
6. I give students opportunities to self-assess and set goals for future learning.
7. I give students opportunities to reflect on and share their learning progress with others.
8. I give students opportunities to provide input on assessment design.
9. I give students opportunities to summatively assess their peers.
10. I give students opportunities to formatively assess their peers.

Scale: Student Preparedness

This school year . . .

1. I covered the material required by the State Standard Course of Study.
2. I prepared my students for their EOG/EOC exams.
3. I prepared my students to move to the next level of schooling.

Appendix F. Initiative Examples for North Carolina RttT Emerging Lessons Learned

Theme 1: Prioritize Collaboration

A complex reform agenda increases the likelihood of conflicting agendas and implementation challenges.

RttT required development of multiple innovative reforms. The state did not always have the capacity to manage effectively every reform, and some combinations of reforms led to overlapping mandates. In addition, in some cases, new initiatives conflicted with older or more established structures. Together, these issues sometimes led to confusion in agency and individual responsibilities. The Evaluation Team recommends focusing on:

1. *Communication* – Emphasize and sustain quality cross-agency interactions and discussion.²⁴

Most initiatives required coordination of operations across more than one agency, but in some cases such coordination was challenging and ended in breakdowns in communication and subsequent implementation challenges.

For example, in the Performance Incentives initiative, awareness of the performance incentive program among teachers and administrators in eligible schools was very low from the start, and it remained low throughout. Insufficient communication resulted in a critical breakdown. Evaluation reports for another initiative, District and School Transformation, identified conditions that created communication dysfunctions: 1) Lack of trust; 2) Fear of risking conflict; 3) High turnover; 4) Lack of accountability; and 5) Inconsistency.

Other initiatives provided examples of how good coordination of communication can strengthen initiatives. For example, the Distinguish Leadership in Practice (DLP) initiative combined professional, regional, and agency networking. The trainings gave leaders communication opportunities with professionals across the state, including peer-to-peer exchanges of best practices.

2. *Coordinated Vision for Implementation* – Avoid overlapping or redundant interventions²⁵

RttT's introduction of multiple new initiatives in the same school setting sometimes led to confusion or uncertainty among participants. For example, some participants perceived certain professional development modules to be redundant or irrelevant relative to their specific school needs. Also, faced with a number of overlapping interventions both old and new, some teachers in DST schools struggled to differentiate between supports like DST coaches and similar services from other RttT and non-RttT initiatives.

In other cases, however, RttT initiatives helped to clarify the landscape for educators. For example, one of NTSP's purposes was to align comprehensive induction support for novice

²⁴ This component was informed by findings and recommendations from evaluations of the following initiatives: Incentives, RLA, STEM, PDI, DST, and DLP.

²⁵ This component was informed by findings and recommendations from evaluations of the following initiatives: PDI, DST, Incentives, NTSP.

teachers across the state by helping those teachers to understand the array of new requirements and initiatives and also receive support tailored to their individual school environments. Participant surveys and interviews suggest that NTSP was successful in doing so.

3. *Collaborative Leadership* – Early and ongoing investment in developing initiative-focused leadership capacity is a critical ingredient in establishing cohesive partnerships and collaboration.²⁶

Several RttT initiatives demonstrated that the more collaborative the style of initiative leaders, the more receptive teams are to embracing cross-agency partnerships and ideas. The success of many school- or district-level initiatives frequently hinged on the presence of a dynamic, committed, visionary leadership that was open to working across levels; conversely, even the best collaborative ideas struggled to find firm footing without strong collaborative leadership.

For example, for many initiatives (e.g., for the Professional Development Initiative [PDI]), implementers at the Department of Public Instruction (DPI) worked to build relationships with staff in the Regional Education Service Areas, Local Education Agencies (LEAs), and schools as part of their implementation efforts. In addition, several of the initiatives themselves were constructed around the notion of developing collaborative leaders. One of DST's six principles focused on building a collaborative culture with distinguished leadership.

Theme 2: Value Simplicity

Often, the most successful initiatives are those with the fewest moving parts

Most initiatives—especially those that are not built on previously-proven concepts—benefit from having a small number of components, which not only maximizes comprehensibility for practitioners but also minimizes the number of things that can go wrong and cuts down on a proliferation of multiple interpretations of how an initiative should be constructed and managed. The Evaluation Team recommends focusing on:

1. *Concentration of Services* – Streamline services by focusing more resources on fewer initiatives and, within initiatives, on fewer components.²⁷

The North Carolina Virtual Public School (NCVPS) STEM Blended Learning initiative provides a good example of the importance of streamlining initiatives when they are in their earliest stages. The NCVPS blended STEM courses juggled introduction of several new components (e.g., requirement of iPad usage, requirement of project-based learning,

²⁶ This component was informed by findings and recommendations from evaluations of the following initiatives: DST, NCTC, NCVPS, Local SS.

²⁷ This component was informed by findings and recommendations from evaluations of the following initiatives: NCVPS, NCTC, Local SS, State SS, Incentives, DST.

introduction of new courses with which NCVPS did not have previous experience, and/or integration of Grand Challenges), any one of which would have been challenging on its own to manage in a new course. In part as a result of this complexity, the initiative's start was delayed and fidelity of implementation suffered.

On a much broader scale, early quantitative evidence suggests that the RttT grant's focus—and, as a result, the state's focus—on the lowest-performing schools (in North Carolina, originally only 118 schools) paid dividends not only in the form of better-than-expected student performance gains in many of these schools, but also in the form of capacity-building in some of these schools that can contribute to ongoing improvement after RttT. For instance, in districts in which DST has been working for several years, officials and DST coaches share a clear understanding of where they are going and how they plan to get there.

2. *Thoughtful Growth* – To prepare for end-of-initiative transitions, plan for in-grant capacity-building and post-grant sustainability as part of the initial implementation planning process.²⁸

Some initiatives either included or developed provisions for post-RttT sustainability. The STEM initiative included several examples of post-RttT sustainability: For example, North Carolina New Schools will continue to offer STEM services to their network schools, funded by their partners and other grants. In addition, NCDPI has planned ways to use state funds to continue its STEM school recognition program and implement the NCSSM designed courses, and STEM initiative leads have secured private funds to support the STEM portal work.

Other initiatives did less to address planning for capacity-building and sustainability in preparation for the post-RttT period. For example, for DLP, post-RttT participant recruitment became a concern because the program did not adjust its largely volunteer approach to participation; participant feedback about the demanding nature of the DLP program suggested that volunteer participation may drop off over time.

Theme 3: Engage the Broader Community

Engage not only families, business leaders, and politicians, but also the educators who will be leading implementation at the school level. A comprehensive education reform agenda attends to students' in-school and out-of-school communities.

Education reform does not happen in a vacuum; cultural and social forces intertwine and interact with more formal education structures. RttT evaluation findings suggest that schools and districts in which initiatives were more successful benefited from the presence of outside supports for academic efforts. Findings from several of the evaluations also suggest that balancing centralized and localized control can contribute to productive reform efforts. The Evaluation Team recommends focusing on:

²⁸ This component was informed by findings and recommendations from evaluations of the following initiatives: RLA, PDI, Incentives, State SS, DLP, STEM.

1. *Opportunities for Local Decision-Making* – Where appropriate, allow for school- and LEA-level input on planning and decision-making about resource use and implementation.²⁹

In several evaluations, LEA and school staff suggested that they might have benefited from more direct control of some of the initiatives, and patterns in the use of local RttT funding suggest that some localities may have made good use of such opportunities. Even though the funding that went directly to the LEAs had some strings attached, evidence from LEA use of those funds suggests that some LEAs—if given the flexibility—can and will operate innovative and effective initiatives that are sensitive to important local contexts. Similarly, early findings from the PDI evaluation suggested that early input from LEAs about local teacher proficiency levels in RttT areas of focus could have helped inform more flexible professional development requirements that were better tailored to individual LEA needs.

However, findings also suggest that certain aspects of a particular intervention were more effective when control was centralized. For example, although local input might have helped the state to better tailor professional development to local needs, effective implementation of the PDI required centralized data collection to track participants and course completion hours. Another example came from NTSP teachers, who expressed significantly higher levels of satisfaction with their NTSP instructional coaches than the comparison sample teachers expressed about their locally-provided mentors.

2. *Stakeholder Buy-In* – Dedicate time and resources to engaging out-of-school stakeholders to be optimal contributors to each initiative.³⁰

The focus of much of RttT was on training teachers, principals, and LEAs to implement elements of the RttT grant. However, there was also evidence of a parallel need to inform participating schools' communities about the reform efforts in order to generate local buy-in to help support the reforms. For example, the rural and sometimes remote locations of many of the NCTC and TFA placement schools contributed to Corps Members' feelings of isolation—often a component of beginning teacher attrition. A major factor complicating integration of Corp Members into their new communities was the general perception—among Corps Members, non-Corp Members, students, and community members alike—that Corps Members likely were only temporary residents. Attention to generating community support for the integration of these Corps Members may have altered that dynamic.

A few initiatives did make efforts to create links to out-of-school stakeholders. For example, the STEM initiative developed community-focused partnerships that in some cases appeared to contribute to increased engagement of students traditionally underrepresented in STEM disciplines. Also, there was some evidence that anchor school partnerships with industry and institutions of higher education provided important benefits to staff and students.

²⁹ This component was informed by findings and recommendations from evaluations of the following initiatives: Local Spending, Local SS, PDI, STEM

³⁰ This component was informed by findings and recommendations from evaluations of the following initiatives: DST, PDI, Local SS, Local Spending, STEM, NCTC.

3. *Expanded Engagement* – For many K-12 initiatives, encouraging involvement from Higher Education and business communities can strengthen overall impact.³¹

Higher education and the business community are the two largest consumers of schooling in America; most initiatives likely would benefit from greater engagement of these entities in educational reform efforts. For example, the STEM initiative not only successfully facilitated partnerships between schools and LEAs and local industries and institutions of higher education, but also involved those partners in efforts to support sustainability of RttT-supported STEM services and offerings after RttT.

³¹ This component was informed by findings and recommendations from evaluations of the following initiatives: RLA, STEM, NTSP, NCTC.

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