Race to the Top in North Carolina, 2010-2012

A Summary of Formative Findings

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[*]Publication delayed until all reports referenced in this summary were approved

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Introduction

In November 2012, the State reached the mid-point of its four-year implementation of the ambitious and multi-layered package of initiatives described in its Race to the Top (RttT) scope of work. The tasks are complex and the North Carolina Department of Public Instruction (NCDPI) has made great strides toward full implementation of the initiatives. Reaching this mid-point provides RttT leadership with a valuable opportunity to reflect on its successes and review its initial implementation plans, with an eye towards making mid-course improvements that will ensure successful completion of the scope of work. This memorandum acknowledges all of the important work that has taken place and serves as an opportunity to provide the State with a framework for identifying areas for improvement over the remaining two years of implementation.

The memorandum summarizes formative assessments provided by the RttT Evaluation Team[1] to North Carolina RttT implementers for initiative work conducted between November 2010 and June 2012. The goal of the Evaluation Team's formative assessments is to provide timely data, analyses, and recommendations to help the initiative teams improve their ongoing work. Formative assessment is one of three components of the RttT Evaluation Team's work; other components include documentation of the activities of RttT initiatives and summative evaluations to determine whether or not the RttT initiatives met their goals and to inform future policy and program decisions. While all three components are often included in initiative evaluation reports, this memorandum focuses exclusively on the formative aspects of previously-released evaluations of individual RttT initiatives.

Method and Data Sources

To date, ten of the RttT Evaluation Team's fifteen formal reports have focused on individual RttT initiatives and have included either initiative-specific formative evaluation findings or findings that contribute to the larger formative assessment of overall RttT implementation.[2] These ten reports—grouped below by RttT pillar—inform the contents of this memorandum:

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[1] The Consortium for Educational Research and Evaluation–North Carolina (CERE–NC) conducts the evaluation of North Carolina's RttT initiatives. CERE–NC is a partnership of the Carolina Institute for Public Policy at the University of North Carolina at Chapel Hill, the Friday Institute for Educational Innovation at North Carolina State University, and the SERVE Center at the University of North Carolina at Greensboro.

[2] The Evaluation Team also has released five technical briefings and baseline reports (available at: http://cerenc.org), but since these reports do not contain formative findings or focus on specific initiatives, they are not included in this summary. They include: a technical report on using high-tech recording systems in classroom observations (October 2011), a baseline report on characteristics of STEM schools in North Carolina (December 2011), an initial technical report on value-added modeling (February 2012), a baseline report on local strategic staffing plans (September 2012), and a second expanded report on value-added modeling (October 2012).

- **Equitable Supply and Distribution of Teachers and Leaders**

  1. *Regional Leadership Academies Cost-Effectiveness Framework – (RLA) – March 2012*

  2. *North Carolina Teacher Corps Start-Up and Teach for America Expansion: Initial Findings on Recruitment, Training, and Placement – (NCTC) – Under Review*

  3. *North Carolina New Teacher Support Program (NC NTSP): First Annual RttT Evaluation Report – (NTSP) – Under Review*

- **Professional Development**

  4. *Building LEA and Regional Professional Development Capacity: First Annual Evaluation Report – (PD-Y1) – January 2012*

  5. *Distinguished Leadership in Practice (DLP): First Annual RttT Evaluation Report – (DLP) – September 2012*

  6. *Building LEA and Regional Professional Development Capacity: Second Annual Evaluation Report (Includes Race to the Top Online Professional Development Evaluation: Interim Report) – (PD-Y2 [and OPD]) – Under Review*

- **District and School Transformation**

  7. *Turning Around North Carolina's Lowest Achieving Schools (2006-2010) – (DST) – September 2011*

  8. *STEM Affinity Networks: Year 1 Report – (STEM-Y1) – April 2012*

  9. *STEM Affinity Networks: Year 2 Report – (STEM-Y2) – Under Review*

- **Local-Level Implementation and Spending**

  10. *Local Education Agency Race to the Top Expenditures: An Initial Analysis – (Local) – September 2012*

Major Formative Assessment Themes

The Evaluation Team reviewed the formative findings in each of the ten reports and identified four thematic categories of findings that appear across two or more of the reports: ***Implementation Capacity***, ***Implementation***, ***Local Support***, and ***Planning for 2013 and Beyond***. When taken collectively, these findings provide a comprehensive summary of the development of promising practices supported by RttT, as well as of areas in which RttT implementers may benefit from additional reflection and planning.

Implementation Capacity

> *Reports Informing this Category:* (*NCTC, NTSP, PD-Y1, PD-Y2, OPD, DLP, DST, STEM-Y1, STEM-Y2*)

Summary of Formative Findings to Date

The State continues to move toward stronger management of all of the initiatives funded by RttT. To this point, the State has implemented the RttT initiatives using two different models—one in which NCDPI has primary responsibility for developing, managing, and implementing an initiative (e.g., District and School Transformation), and one in which NCDPI shares development and implementation responsibilities with one or more partners, sometimes vesting a partner with most of those responsibilities (e.g., development of the Education Cloud).

Through its application of the first model, NCDPI has demonstrated a capacity to propose, develop, and manage a wide array of new initiatives and, in so doing, has lowered historical barriers to collaboration between departments and programs within the agency. Under the second model, management also has been strong in most cases; the few initial co-managerial difficulties that arose during the first year of implementation are now largely resolved.

Implications for Planning for the Future

As the State approaches the mid-point of RttT funding, NCDPI should examine the current management structure of each of the initiatives for which it is directly responsible and determine which initiatives may benefit from management modifications that strategically engage partners in order to enhance the capacity that already has been built to this point. Additionally, NCDPI may consider examining management structures again towards the end of the grant in order to sustain capacity and progress beyond the life of the grant. In particular, NCDPI may benefit from examining the most successful and seamless of the collaboration models to this point (e.g., the Distinguished Leadership in Practice program) to determine whether any other initiatives could benefit from such partnerships.

Updating the Education Workforce

> *Reports Informing this Category:* (*NCTC, NTSP, PD-Y1, PD-Y2, OPD, DLP, DST, STEM-Y1, STEM-Y2*)

Summary of Formative Findings to Date

State and local implementers have been able to launch many of the programs and projects outlined in the state's proposal, though delays and disagreements among partners about the implementation of some initiatives suggest that there is still room for improvement in some areas of planning, communications, and timely implementation.

To date, the single largest product of the various RttT initiatives has been provision of professional development in an effort to rapidly and effectively update the education workforce on such topics as the Common Core and Essential Standards. Preliminary evaluation results to

this point indicate that most of these efforts have been successful. Overall, participants have reacted positively to most of the professional development activities, with ratings for most sessions indicating that they have been useful, informative, and on-point for addressing the targeted issues or problems. In addition, participants have appreciated the opportunities provided during many of these events for face-to-face networking; some participants have suggested that they might benefit from even more time to interact and collaborate with their counterparts in other schools and Local Education Agencies (LEAs).

Implications for Planning for the Future

Trainings and other forms of professional development have not always been uniformly effective across some of the RttT initiatives and might be strengthened by:

- Moving toward greater differentiation of materials and resources not only across but also within modules, to accommodate the wide array of experiences and backgrounds of participants;

- Making clear and consistent connections between specific initiative goals, broader policies and goals, and the immediate, on-the-ground training provided to participants; and

- Continuing to improve utilization of technology's capacity to stimulate deeper interactions among participants, as well as between participants and facilitators—there are numerous programs and resources available, but technology is not yet being used to its fullest potential or in ways that enhance practitioner learning and networking.

Local Support

> *Reports Informing this Category: (NCTC, NTSP, PD-Y1, PD-Y2, DLP, DST, STEM-Y1, STEM-Y2, Local)*

Summary of Formative Findings to Date

Perhaps the most complex and delicate task associated with RttT is encouraging local-level participation in the implementation of the State's initiatives while simultaneously supporting the seamless integration of local-level initiatives into the larger implementation process. Evidence to date suggests that the State's approach to administering the RttT grant has supported the grant's principle of local autonomy; programs and projects are being integrated at the local level in multiple ways.

Local capacity to implement both State- and LEA-initiated RttT projects remains varied across LEAs, however, and there are some concerns at the local level about ongoing support. In some cases, the indirect costs of implementation to LEAs and schools have been higher than anticipated, and current local resources may be insufficient to support the continued implementation of some RttT initiatives, both during the remainder of the grant period and beyond.

Implications for Planning for the Future

As the grant timeline shifts from start-up and early implementation to full implementation and sustainability, high-quality, ongoing implementation of RttT initiatives at the local level may require greater attention on the part of NCDPI and other partners to differences in LEA capacities. Plans for the final two years of the grant may benefit from modifications that incorporate more flexibility to address the fact that multiple stakeholders remain at different stages of implementation preparedness. When feasible, implementers should consider moving toward regional and even local customization of delivery of programs and projects.

Planning for 2013 and Beyond

Reports Informing this Category: (RLA, PD-Y1, PD-Y2, DLP, DST, STEM-Y1, Local)

The ultimate goal of a program like RttT is to identify the most successful initiatives supported by the grant and integrate them into the ongoing provision of educational services across the state. The mid-point of the grant is the optimal time for beginning to plan for continuation or discontinuation of RttT-funded initiatives when the grant period ends. The extended time required for full and effective implementation of some initiatives is becoming clearer, and stakeholders already are concerned about the sustainability of funding past the grant period.

In addition to preparing to assess which of the RttT-funded initiatives should be targeted for ongoing support and expansion after RttT, state implementers also should begin now to plan for identifying stakeholders whose ongoing engagement in each initiative will be most beneficial. Ensuring now the involvement of the right balance of participants at both the local and state levels will strengthen implementation after the grant ends.

Finally, the State should begin reviewing now the types of data it currently collects for each initiative, with a goal of determining whether those data will continue to be adequate for conducting post-RttT assessments of their ongoing impact. Such reviews will be especially important for those initiatives that are not yet fully operational (e.g., the Instructional Improvement System) and are not likely to provide enough data to generate meaningful conclusions about their impact by the time RttT ends.

It is clear that NCDPI and its implementation partners have made significant progress since the beginning of the grant period, and with careful planning and reflection at this critical mid-point, the prospects will remain bright for ongoing success.

Moving from Formative to Summative: A Look Ahead

RttT implementation has now entered its third year, and with the turning of that corner the Evaluation Team is beginning preparations for a series of final formative and summative reports, of which this memorandum is the first.

In October 2013, the Evaluation Team will update this memorandum with a final summary of the formative assessments generated for each RttT initiative, with a goal of providing feedback on

the most promising practices across all initiatives. That report will be followed in November 2013 by an initial overall cost and sustainability analysis of the RttT initiatives.

Finally, in September 2014, the Evaluation Team will synthesize policy recommendations across initiatives. The Team then will conclude its work by providing a summative report on the preliminary impacts of the highest-priority initiatives, including professional development, efforts to turn around the lowest performing schools, and initiatives to increase the supply and equitable distribution of high quality educators.

Appendix A. Executive Summary: *Regional Leadership Academies Cost-Effectiveness Framework* **(March 2012)**

Overview

The North Carolina Race to the Top plan for ensuring equitable distribution of high-quality teachers and leaders includes development of Regional Leadership Academies (RLAs) that will "increasing the number of principals qualified to lead transformational change in low-performing schools in both rural and urban areas." The RLAs are to be "approved for certifying principals" and will "provide a new model for the preparation, early career support, and continuous professional development of school leaders." To prepare to address questions about post-RttT sustainability of the RLAs, evaluators created a framework for completing a cost-effectiveness analysis (CEA) of these programs that will address: (a) whether the targeted outcomes of the RLAs outweigh the added costs associated with them, relative to traditional school administration preparation programs that do not specifically or exclusively prepare leaders for low-performing school settings; and (b) whether the RLAs are cost-effective relative to alternative programs that serve the same or similar purposes.

Selection of Comparison Programs

The Evaluation Team selected three large in-state Master's of School Administration programs (Appalachian State University, the University of North Carolina at Charlotte, and East Carolina University's program), along with the North Carolina Principal Fellows Program, for the first comparison, and two independent programs (the New Leaders for New Schools program and the Aspiring Principals Program [APP] at the New York City Leadership Academy [NYCLA]) for the second comparison.

Measures of Cost-Effectiveness

Proposed measures of cost-effectiveness include both short- and long-term measures. Short-term measures will track (a) whether successful participants or program completers became certified or licensed to serve as principals and (b) growth over time in key areas of leadership knowledge and expertise. Long-term measures will track (c) whether participants become principals, (d) whether those who become principals stay in high-need schools, (e) school performance gains that parallel program matriculant school leadership, and (f) teacher retention levels at schools led by program completers.

A Plan for the Cost-Effectiveness Analysis

- *Step 1*: Collect expenditure data from each of the RLAs.

- *Step 2*: Separate ongoing costs from start-up costs and non-essential costs.

- *Step 3*: Conduct twice-yearly surveys with RLA matriculants as they move through the programs and into NC schools.

- *Step 4*: Contact comparison programs and solicit their cooperation around cost data collection and program participant outcomes.

- *Step 5*: Report in 2014 on short-term CEA findings and prepare a proposal based on these findings for continuing evaluation activities through at least 2017.

Short-term findings are projected for 2014. These findings will serve as the basis for seeking support to extend CEA efforts beyond NC RttT funding, to at least 2017.

Appendix B. Executive Summary: *North Carolina Teacher Corps Start-Up and Teach for America Expansion: Initial Findings on Recruitment, Training, and Placement* **(October 2012)**

The Consortium for Educational Research and Evaluation–North Carolina is evaluating North Carolina's use of Race to the Top (RttT) funds to develop a North Carolina Teacher Corps (NCTC) and to expand the presence of Teach for America (TFA) in the state. The evaluation's goals are to assess the extent to which these programs contribute to an increase in the presence of effective teachers in high-need schools and Local Education Agencies (LEAs) targeted in the RttT proposal. This first report presents baseline measures for future evaluations of NCTC, describes early results of TFA's expansion under RttT via its Eastern North Carolina (TFA-ENC) chapter, and provides formative feedback to NCTC in support of its growth and improvement.

Initial Observations and Findings: North Carolina Teacher Corps

Recruitment

- NCTC participated in 20 recruitment events across the state between February and June, 2012. Five of these events each attracted interest from 30 or more potential recruits, with the highest numbers at the Research Triangle Park National Career Fair (61) and an East Carolina University event (60).

- In all, 441 of the 481 candidates expressing interest came from the 20 recruitment events, and 113 eventually applied.

- Forty-two of the 113 applicants were invited to attend the inaugural NCTC Summer Institute, 34 of whom attended; of those 34, 29 remained in the program for the start of the 2012-13 school year.

- Almost 90% of the inaugural NCTC cohort attended North Carolina colleges or universities, in line with the program's goal to recruit in-state individuals.

- Recruitment for 2013-14 began in September 2012 and will include two acceptance dates: December 2012 and March 2013.

Inaugural Summer Institute

- The NCTC Summer Institute took place over three weeks, with an initial three-day training session followed by a two-week in-school practicum. The Institute concluded with a one-day follow-up training session.

- The three-day training session provided corps members with training on state policies, the state's new Common Core and Essential Standards, and basic pedagogy.

- The in-school practicum paired corps members with practicing teachers in year-round schools. NCTC also provided periodic after-hours Round Table meetings during the practicum period, during which issues and concerns raised by corps members were addressed.

- During their practicum experiences, corps members indicated that the Summer Institute was beneficial overall, but that both the training sessions and the practicum were too short, with a need for additional guidance and training on lesson-planning and subject-specific pedagogy.

Employment and Distribution of Corps Members (2012-13)

- For the 2012-13 school year, NCTC fell short of its first-year goal of securing employment for 100 new corps members in high-need schools not served by TFA.

- To date, 22 of the 29 NCTC corps members have secured employment in 9 of the 18 eligible school districts.

- Two corps members are in RttT District and School Transformation (DST) schools, 17 are in LEAs with RttT DST schools, and 3 are in an LEA with a history of high teacher turnover.

Characteristics of Past and Current Eastern North Carolina Teach for America Corps Members

- In total, TFA placed or retained 157 corps members in Eastern North Carolina at the beginning of school year 2011-12, and 219 corps members at the beginning of 2012-13.

- For the 2010-11, 2011-12, and 2012-13 school years, RttT funds helped TFA-ENC meet its overall goal for growth in Eastern North Carolina—TFA-ENC supported 20, 90, and 115 of its total number of corps members in those three years with RttT funds.

- Since 2008, about 87% of TFA-ENC corps members have completed two full years of teaching; however, the retention rate for the 2010 cohort (84%) was somewhat lower than the rate for the two preceding cohorts.

- TFA-ENC corps members who are dismissed or depart early do not appear to be different than those who stay in terms of GPA, leadership potential, or undergraduate institution selectivity.

- Between 2011 and 2012, TFA-ENC increased the number of corps members intentionally placed in school-level "pods" (clusters of three or more teachers); TFA-ENC formed pods in 21 of 44 participating schools in 2011-12, and in 33 of 51 participating schools in 2012-13.

Recommendations and Suggested Best Practices for North Carolina Teacher Corps

Recruitment

- *Expand the use of Internet recruitment tools*. NCTC should consider providing recruits with immediate access to application materials at career fairs, and it should explore supplementing face-to-face recruitment with Internet-based and other social networking strategies.

- *Customize recruitment activities for multiple audiences*. To date, NCTC's approach to recruitment has been similar for each event, even though the potential candidates who attend them are different; NCTC should make efforts to adjust its recruitment approach from event to event to reflect these differences. In addition, NCTC should develop discussion points (to accompany current recruitment materials) that help set expectations for candidates with respect to both the opportunities and the challenges they will face in targeted schools.

- *Develop relationships with recruitment event sponsors and hosts*. Event sponsors or others on campus with ties to campus organizations and student groups that share values similar to those of NCTC may be good ongoing resources for corps member recruitment. Such relationships can result in extending recruitment to opportunities beyond the career fairs.

Summer Institute

- *Extend and expand the Summer Institute*. As budget, recruitment, and partnering allow, NCTC should consider beginning Summer Institute earlier in the summer to allow for more time to: (a) cover in greater depth the mechanics of teaching (e.g., lesson planning); (b) extend modules so that they can better model effective teaching practices; and (c) extend each corps member's practicum experience.

- *Offer pre-Summer Institute in-school experiences*. Arranging informal observation time in schools for corps members before the Summer Institute begins—something now possible because of NCTC's earlier recruitment calendar—will provide important context and help set expectations for corps members as they transition to Summer Institute and their schools.

- *Seek Summer Institute partnerships*. An arrangement in which NCTC conducts part of its Summer Institute in partnership with other new teacher summer training and induction programs has the potential to (a) reduce costs, (b) pool intellectual resources and expertise, and (c) support the development of a larger, statewide network of first-year teachers.

Employment

- *Dedicate more resources to multiple components of the employment process*. As time and resources allow, NCTC should: (a) consider de-emphasizing corps member LEA preference as a criterion in the employment process; (b) increase the amount of information provided to corps members about the employment process; and (c) consult with other programs to identify additional strategies for promoting individual corps members for specific positions.

- *Target schools and LEAs that demonstrate a capacity for supporting corps members and their development, and provide additional support for corps members in schools that do not*. Ideal employment settings are host schools with cultures or structures that facilitate a sense of community and integration for all staff members. In addition, NCTC should investigate ways to provide corps members with techniques for successful school integration, both prior to employment and throughout their first year of teaching.

- *Monitor closely the experiences of corps members employed in schools at which no other corps members are employed*. TFA-ENC focus group data indicate that, in some cases, corps member isolation may negatively impact retention. Expansion of social networking tool use may help.

- *Attempt to fit school-level cohort size to school, LEA, and corps member needs*. Evidence from TFA-ENC focus groups suggests that an optimal number of corps members at a single school is between three and five—larger clusters (or "pods") hinder healthy integration of corps members into the larger school community, and small pods may not support retention goals.

Appendix C. Executive Summary: *North Carolina New Teacher Support Program (NC NTSP): First Annual RttT Evaluation Report* **(March 2013)**

Based on research showing that beginning teachers represent more than 6% of North Carolina's public school teachers, have the greatest potential for rapid improvement in terms of raising student achievement, and exit teaching at significantly higher rates than more experienced peers, providing comprehensive induction supports to increase the effectiveness and retention of beginning teachers was identified as a high-priority reform initiative in the North Carolina Race to the Top (RttT) proposal. To meet this need, the University of North Carolina General Administration (UNC-GA), in partnership with the North Carolina Department of Public Instruction (NCDPI), has developed and implemented the North Carolina New Teacher Support Program (NC NTSP) for novice teachers in the lowest-achieving schools in the state.

Overview of RttT NC NTSP Activities

NC NTSP provides a three-phase induction program, modeled in part after the Teach For America support program used for teachers in similar school settings. The program begins before teachers enter the classroom and continues for three years, at the conclusion of which successful teachers will qualify for their full (continuing) license.

NC NTSP has three main components:

1. An intensive one-week Summer Institute before teachers begin their first school year;

2. Six full-day follow-up professional development sessions, three each during the fall and spring semesters of Years 1 and 2;

3. Classroom observations and mentoring by instructional coaches, at least once per month continuing for three years.

The program goal is to improve the effectiveness of novice teachers through intensive and relevant induction support, aligned to each teacher's individual teaching assignments and school contexts and designed to help them (a) understand and apply the Common Core State Standards and North Carolina Essential Standards at the grade level and in the content area they will be teaching; (b) engage in instructional planning focused on effective teaching practices, effective use of data, and classroom lessons aligned with the curriculum goals; and (c) address the specific challenges of working with diverse groups of students, many of whom have a history of low achievement in challenging schools.

Overview of RttT NC NTSP Evaluation Activities

North Carolina's RttT proposal included a commitment to independent evaluations for each initiative. Over the next two years, the RttT Evaluation Team will document NC NTSP activities and collect data about program implementation, participation, and short- and long-term outcomes for teacher effectiveness, retention, and ultimately student achievement. Data will be collected via surveys, direct classroom observation, and analysis of administrative data on students, teachers, and schools. The purpose of this evaluation is to provide detailed information about the implementation and outcomes of NC NTSP for new teachers in the lowest-achieving schools.

Summary of Formative Findings, 2010-2012
March 2013

The evaluation of the RttT New Teacher Support Program is guided by four primary research questions that address the topics of program implementation, program participation, short-term outcomes, intermediate outcomes, and long-term outcomes. We structured the Findings section of this report around these four questions:

1. Is NC NTSP being implemented as intended, and what recommendations could improve implementation if needed?

2. Does access to the teacher induction program (NC NTSP) increase teachers' confidence and retention?

3. Does access to the teacher induction program (NC NTSP) increase teachers' effectiveness in terms of student achievement, instructional proficiency, and student engagement?

4. What are the recommendations to sustain the benefits attributed to NC NTSP, if any?

This report addresses program implementation and participation and short-term/intermediate outcomes of NC NTSP. Long-term outcomes (student achievement and teacher retention) and recommendations to sustain the benefits attributed to NC NTSP, if any, will be addressed in future evaluation reports.

Evaluation Findings

Program Implementation and Participation

NC NTSP was designed to support novice teachers working in low-achieving schools with the goal of enhancing classroom instruction, improving teacher effectiveness, and decreasing teacher turnover. The three-component model is comprised of an intensive five-day Summer Institute, direct instructional coaching throughout the school year, and targeted professional development to meet the needs of these teachers. The intended population for NC NTSP in 2011-12 was all beginning teachers (approximately 200) in schools in the lowest-achieving 5% within four of the eight regions of North Carolina. Of the 54 lowest-achieving schools eligible for NC NTSP in 2011-12, 13 schools chose to participate. In all, 33 beginning teachers from these 13 schools attended the 2011 NC NTSP Summer Institute, 24 of these teachers received NC NTSP instructional coaching, and 16 of these teachers participated in formal NC NTSP professional development sessions. An Executive Director for the NC NTSP was hired in March 2012; since that time, the program has demonstrated significant progress toward meeting the implementation goals for the statewide rollout of the program in 2012-13.

Short-Term Outcomes

According to a survey conducted in August 2011, almost all NC NTSP teachers reported feeling knowledgeable and confident in their ability to carry out practices essential to teaching success by the conclusion of the 2011 Summer Institute. Approximately 85% of participants reported being familiar with the NC Standard Course of Study for their grade and/or subject; over 90% of respondents had a clear vision of the knowledge and critical thinking skills their students should attain; and nearly all respondents were familiar with the components of a classroom management plan and were aware of management styles that best promote student achievement.

Intermediate Outcomes

This report focuses on teacher instructional practices, self-efficacy, and student engagement using CLASS observations and Omnibus survey data. Overall, these data suggest that NC NTSP teachers had slightly higher levels of instructional proficiency, but reported slightly lower levels of self-efficacy than the comparison sample of teachers chosen from the remaining four regions. Several factors require that one exercise caution when interpreting this data. First, NC NTSP teachers were not exposed to the full NC NTSP model as intended, so one would not expect them to have received the full potential benefit. Second, and perhaps most importantly, the small sample size of this first cohort makes it challenging to detect statistically significant differences between NC NTSP and comparison teachers.

Recommendations

Data from the NC NTSP implementation in 2011-12 suggest several strategies that could be employed to help strengthen the education workforce through the support of novice teachers. To further enhance the program's effectiveness, the RttT Evaluation Team recommends the following considerations as NC NTSP is implemented statewide.

1. *Offer differentiated instruction*

   Feedback from participants at the 2011 Summer Institute suggests the need for further differentiation of instruction based on the types of preparation for teaching that individuals had received prior to the institute. Some traditionally prepared teachers reported that the material covered was redundant with their formal training, whereas it was reported as novel by the alternatively prepared teachers. Maximizing differentiation among grades, subjects, and preparation types would promote a more tailored learning environment. It is recommended that consideration also be given to how best to tailor the information for alternative-entry teachers versus traditionally prepared teachers.

2. *Provide immediate treatment supports after the Summer Institute*

   During the 2011-12 start-up year, instructional coaches were not hired until the spring of 2012, and many participants in NC NTSP did not receive further support (after the Summer Institute) until well into their second semester of teaching. Coaching visits and professional development sessions should be scheduled immediately following the start of the school year.

3. *Improve standardization of treatment components*

   The strategy of using anchor institutes to support the coaching and professional development activities of proximal geographic regions receiving services from NC NTSP has the benefit of localized knowledge and support of participating teachers and schools. However, data from 2011-12 revealed significant variation in both the frequency and content of the treatment components between the two anchor institutes. For example, instructional coaches in the UNC-Charlotte region averaged over 27 visits per NC NTSP teacher, while instructional coaches in the ECU region averaged 6 coaching visits per NC NTSP teacher.

4. *Investigate factors influencing attendance at the Summer Institute*

   The Summer Institute is a distinguishing treatment component of this induction program; however, it provides the greatest challenge for widespread exposure among eligible teachers. The UNC-GA program implementers are in the process of conducting additional follow-up with schools and LEAs regarding the factors influencing Summer Institute attendance. Data will be available in 2012-13 from LEAs to better understand the factors influencing Summer Institute attendance and guide decisions about the format and approach for 2013.

5. *Formalize the social networking efforts*

   Informal networking was observed at the 2011 Summer Institute among new teachers within the same districts, schools, and grade level/content areas. Participants expressed a desire to continue those connections after the institute had concluded, but this was not a part of the original program design. The program design should be expanded to include the use of forums, such as Edutopia or other social networking platforms, to facilitate networking amongst participants, along with explicit requirements for networking and social events for the institutions and instructional coaches in each of the regions.

6. *Consider adjusting the reporting timeline in relation to reporting key outcome variables*

   Currently, the evaluation reports are due in October, which is before data sources such as McREL evaluations, value-added estimates of teachers' effectiveness, and student surveys (Tripod) are available for analysis. The RttT Evaluation Team, UNC-GA program implementers, and NCDPI RttT administrators should consider altering the due dates for future evaluation reports to maximize the timeliness of the information that can be provided. Moving the next delivery deadline to March 2014 would allow time for the RttT Evaluation Team to obtain, merge, analyze, and report on the additional data.

7. *Practice shared decision-making and clarify expectations between UNC-GA and the North Carolina Department of Public Instruction (NCDPI).*

   Discussions during the development of this report with NCDPI RttT leadership revealed differences in expectations between the program implementers (UNC-GA) and NCDPI RttT leadership regarding the extent of NC NTSP's service area in Year 1. Specifically, after discussions between UNC-GA and NCDPI in the summer of 2011, UNC-GA believed the first year's implementation would be limited to four of the state's eight educational regions and that school participation would not be mandatory. NCDPI RttT leadership has since stated that their expectation was for mandatory services for all schools within the served regions. Discovery of this discrepancy—made midway through the 2012-13 school year—precluded the possibility of making corrections for Year 1. In addition, NCDPI RttT leadership has indicated that they were not aware of some key programmatic decisions made by the implementation team during 2011-12 until implementation was underway. These examples illustrate the importance of maintaining an agreed-upon communication plan and emphasize the need to establish and maintain a more collaborative approach going forward.

Next Steps for the NC NTSP Evaluation

Data necessary to fully assess the impact of NC NTSP on teacher retention and student achievement is not available for analysis at the time of this report. In this report, the Evaluation Team assesses implementation and short-term/intermediate outcomes. Future evaluations will expand analyses of these intermediate outcomes by including McREL evaluation scores and student survey responses and will also examine longer-term student achievement and teacher retention outcomes. In addition, a detailed and targeted survey of teachers' perceptions of the quality and effectiveness of each component of NC NTSP will be administered to the treatment group, while a tailored version will be administered to a control sample to try to isolate the relative impact of this program above and beyond standard induction practices that may already exist in these low-performing schools. Evaluation data collected after the final year of the program will be essential to identify the full impact of the program.

Appendix D. Executive Summary: *Building LEA and Regional Professional Development Capacity: First Annual Evaluation Report* **(January 2012)**

The North Carolina RttT professional development plan, led by the North Carolina Department of Public Instruction (NCDPI), is an expansive and multi-faceted effort to increase student achievement by updating the knowledge and skills of the public education workforce. This professional development initiative aims to address the challenge of preparing educators throughout the State for the changes driven by the new Common Core State Standards and North Carolina Essential Standards; the increased use of data to inform classroom and school decisions; rapid changes in the technologies and digital resources available for teaching and learning; the new teacher and administrator evaluation processes; increased emphasis on formative assessment to inform instructional decisions; and increased emphasis on differentiating professional development needs for individual educators with different backgrounds. All of the major NC RttT initiatives depend upon professional development; none of them will be successful unless North Carolina's educators are well-prepared and supported as they work to implement these changes in their schools and classrooms.

The challenge – engaging the state's 100,000 teachers and 2,400 principals in professional development that will enable them to extend their knowledge and improve their professional practices in order to increase student achievement overall and close achievement gaps among student groups – is formidable. All of this is to be accomplished within the four-year period of the grant across a large and diverse State with many small, rural, and resource-limited local education agencies (LEAs) that continue to struggle under the weight of recession. In addition, the plan is expected to result in a statewide professional development infrastructure that can be sustained after RttT funding ends.

The RttT professional development evaluation is being conducted with full recognition of the enormous challenges being addressed by the RttT Professional Development Implementation Team and the deep commitment of the members of the Team to do so. The Evaluation Team's intent for this report is to provide data-driven information that can support reflection about and improvement of the RttT professional development effort.

Four general questions guide the overall evaluation effort:

1. State Strategies: To what extent did the state implement and support proposed RttT professional development efforts?

2. Short-Term Outcomes: What were direct outcomes of State-level RttT professional development efforts?

3. Intermediate Outcomes: To what extent did RttT professional development efforts successfully update the NC education workforce?

4. Impacts on Student Performance: To what extent are gains in student performance outcomes associated with RttT professional development?

This report focuses on Question 1 and provides some initial data related to Question 2. The questions about intermediate outcomes and impacts on student performance cannot be addressed until local professional development programs are implemented; those questions will be covered in future evaluation reports.

This report consists of five sections:

I. An overview of the RttT plan for building local professional development capacity;

II. Initial evaluation data about the RttT professional development activities through the Summer of 2011 (with a focus on the Summer Leadership Institutes), and recommendations for future implementations of these activities;

III. An overview of the data being collected for the overall, four-year evaluation of the outcomes and impacts of the RttT professional development activities;

IV. A summary of baseline data already collected as part of the overall outcomes and impact evaluation, with some recommendations for professional development based on these data; and

V. A summary of the next steps for the RttT professional development evaluation, including activities for which close collaboration with the NCDPI Professional Development Implementation Team will be required.

This executive summary will summarize the key points from each section, with a focus on data-driven recommendations. The full report details the methodology and findings that led to each recommendation.

In addition to the statewide professional development initiative, the overall RttT plan includes professional development activities housed under other RttT-funded initiatives. These activities are designed to address specific groups of educators: principals, educators in the lowest-achieving schools, educators in selected STEM schools, online teachers of NCVPS STEM courses, and new teachers entering low-performing schools. The evaluations of these activities will be covered in other reports.

I. The RttT Plan for Building Local Professional Development Capacity

The core strategy of the NCDPI statewide professional development plan is to guide and support capacity-building in LEAs and charter schools to ensure that they can provide high-quality professional development. The overall plan is built around annual cycles comprised of summer institutes, formative support for LEA and charter school Professional Development Leadership Teams, and additional face-to-face support sessions provided by the NCDPI Professional Development Implementation Team in collaboration with the Regional Education Service Agencies (RESAs) and centrally developed resources (online workshops, webinars, support materials, etc.) that can be incorporated into local professional development programs. Through implementation of this Annual Professional Development Cycle, NCDPI aims to both guide and support the development of local professional development through a high-quality, systemic, blended approach for effective professional development, defined as job-embedded, research-driven, data-informed, professional community-based, and aligned to the RttT initiatives.

During the summer of 2011, NCDPI implemented its first set of two-day, RttT professional development institutes, which were facilitated by several NCDPI sections, including Curriculum and Instruction, District and School Transformation, Educator Recruitment and Development, and Exceptional Children. These Summer Leadership Institutes were conducted in six locations throughout the state and were designed for LEA-level and charter school teams. The purpose of the Institutes was to prepare local-level Professional Development Leadership Teams that will design, develop, and implement local professional development to help their K–12 teachers transition to the new standards. More specifically, as a result of attending the Institutes, participants were expected to:

- Determine expectations for the work involved in implementing local professional development programs;

- Demonstrate to local teachers how the NCDPI training fits with the local RttT Scope of Work and supports the state's efforts with the new Common Core State Standards and North Carolina Essential Standards;

- Demonstrate how to access a series of online modules designed to help teachers build their capacity to understand the new Common Core State Standards and North Carolina Essential Standards; and

- Work with LEA and school leaders to develop a plan for rolling out the professional development to teachers prior to the 2012–13 school year.

Each day of the institute was divided into two types of sessions: *Content Sessions* (e.g., K–5 mathematics, grades 6–12 English language arts) and *LEA Planning Process Sessions*. NCDPI teams collaborated across departments to develop detailed plans and materials for each session and to prepare facilitators for each content area and facilitators for the LEA Planning Process Sessions. More than 2,200 educators attended the sessions in the six Institutes conducted statewide—an impressive number in a period of just 30 days.

II. Evaluation of Implementation of State-Level RttT Professional Development Activities

Data sources

The evaluation of the Summer Leadership Institutes is based upon the following data:

- *Observations* conducted by two evaluators at each of the Institutes, following an observational protocol. Observations took place in 108 Content Sessions (at least 20 of each of the four major content areas) and 83 LEA Planning Sessions;

- *Participant interviews* conducted by the evaluators during each day of each Institute using a standardized, open-ended question format to obtain participants reactions to the Institute and suggestions for improvement;

- *Post-institute surveys*, which participants were asked to complete online after the Institute. The survey contain both forced-choice and optional open-ended items. It was designed by the NCDPI team that planned the Institutes and, unfortunately, did not meet standards for effective and reliable evaluation instruments and did not obtain information that would have

allowed detailed and useful analysis of the results. However, this report uses the data obtained as far as possible; and

- *Focus groups* with NCDPI staff involved in planning and conducting the Institutes, to gather information about the planning process and recommendations for improvements in the future.

Summary of major findings

- NCDPI has placed 15 highly-qualified Professional Development Leads in the field to work directly with the LEAs and charter schools to further local and regional professional development. This is an important step in implementing the RttT plans.

- The Institute planning and implementation was conducted by a cross-division team that brought together expertise from different groups within NCDPI. The individuals involved expressed pride in their accomplishment and see their collaboration as a model for LEA planning teams. The planning and implementation effort was intense and demonstrated a deep commitment from the NCDPI staff involved.

- A total of 2,212 educators attended the six Summer Institutes, and 1,457 (66%) of them completed the post-Institute survey. About half of the participants reported they were classroom teachers, 10% were school administrators, 18% district administrators, and 23% had other support roles, such as curriculum specialist, professional development coordinator or instructional technology director. The Summer Leadership Institutes comprised the largest field-based professional development activity ever conducted by NCDPI.

- Overall,[3] participants reported that the Institutes were valuable professional development experiences, and their comments contain praise for the NCDPI planning staff and the session facilitators. On the post-Institute survey, 83% of participants said the Institute was valuable or very valuable. In addition, more than 60% of the participants said they would be very likely to attend another Institute and recommend that colleagues do so. There was a high level of consistency across the final five Institutes. Participants from charter schools found the Institutes to be about as valuable as did participants from LEAs.

- Relatively equal proportions of participants who rated themselves as low on prior knowledge about the new Standards and participants who rated themselves as high on prior knowledge considered the Institutes to be valuable, suggesting that the Institutes appear to have been successful in addressing the needs of a range of participants. The group that rated themselves low in prior knowledge did find the Institutes to be more challenging.

- Overall, teachers rated the Institute as more valuable than did administrators and professional development coordinators, although both groups found it worth attending.

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[3] The first Summer Leadership Institute, held in Asheville, was combined with a Superintendents' retreat. This overlap led to problems with session schedules, space, and other issues that were beyond the control of the NCDPI staff and interfered with their ability to carry out their plan. The ratings for this Institute showed far less participant satisfaction than did the ratings from the other five, which were very consistent with each other. Since the final five Institutes followed the designed plan that forms the basis for future professional development activities, the Evaluation Team excluded data from the first Institute from all analyses.

Recommendations related to Summer Leadership Institutes

1. *Continue to encourage and strengthen cross-division work at NCDPI.* NCDPI staff valued the Summer Leadership Institute planning effort. To encourage and strengthen future efforts, they suggested that NCDPI leadership: (a) clarify leadership roles; (b) create and communicate a shared vision and purpose; (c) clarify timelines; (d) provide responses to requested input; (e) realistically plan for getting new staff on board; (e) conduct post-Institute debriefing sessions; and (f) foster continued intra-agency collaboration.

2. *Provide more and better information and guidance prior to Institutes.* Attendees recommended that detailed agendas, timelines, and expectations be clearly articulated and provided before the Institutes, along with materials to help them prepare to maximize the time at the Institutes. They also requested more clarification of the expected composition of local teams.

3. *Reorganize Content Sessions.* These sessions should be differentiated in the future so that there are sessions for those who are first learning about the new standards and assessments and sessions for those who are already at least somewhat knowledgeable. Participants also suggested dedicating more time for discussion and less time for presentations, during the Content sessions. It appears from the open-ended responses and observational data that participants were more satisfied with the balance in the math and science sessions than they were with the balance in the ELA and social studies sessions, so a comparison of the plans for each type of session might be useful. Finally, more focus should be placed on addressing the needs of administrators responsible for professional development policies and programs, but without reducing attention to the needs of the teachers who attend as members of the LEA leadership teams. Principals in particular indicated that they would have valued sessions on implementing the new Standards overall, rather than having to choose a specific content area session. Principals also would like time in role-alike sessions to share information and learn from their colleagues.

4. *Re-conceptualize LEA Planning Sessions.* Similarly, LEA Professional Development Leadership Teams desired more time to work as a team, with facilitation from NCDPI experts, and less time listening to presentations. They also desired materials that provide more specific guidance about constructing local professional development plans.

5. *Foster more collaboration across LEAs and charter schools.* Further attention should be paid to fostering content-area collaborations among LEAs and among charter schools that can continue after the Institute. Including role-alike groups during the Institute was one suggested approach. In future Institutes, further consideration should be given to grouping LEAs with other, similar LEAs, and charter schools with other, similar charter schools in planning sessions.

6. *Address concerns about ongoing, post-Institute support.* LEA and charter school teams both expressed a need for substantial ongoing support and additional resources for local use, as well as a schedule indicating when these would be received. NCDPI needs to assure them about the plans and schedule for providing these. Charter school participants in particular expressed concern about whether they would continue to receive the same level of support as the LEAs. They suggested further involvement of the NCDPI Charter Schools Department

and also suggested the creation of a network of charter schools with similar demographics for future collaborations.

7. *Incorporate greater attention to technology*. Participants requested more exposure to the web-based resources and tools, more emphasis on the Information and Technology Essential Standards, and more support for using web-based tools to support professional development and within- and across-LEA collaborations.

8. *Build on the strengths of the best resources*. The *Crosswalks* and *Unpacking Standards* resources received positive responses and should be used as models for the development of future resources. The *Call for Change* module and the Webinars leading up to the Institutes received a number of negative comments. Further feedback about these modules should be gathered and, if necessary, appropriate changes made. Participants would prefer that the information provided on CD or via the web be in modifiable (e.g., .doc or .rtf) format, rather than in .pdf format, so that they can adapt the materials for use in their local programs.

9. *Review approaches to addressing diversity*. Several participants raised concerns about a perceived lack of sensitivity to diversity in some presentations and materials.

10. *Improve locations and logistics*. The Institute locations, food, and hotel and meeting space accommodations received many negative comments and should be improved for future Institutes.

III. Baseline Data Collection for Evaluating the Impact of RttT Professional Development

The overall plan to evaluate professional development outcomes and impacts over the four years of the RttT grant includes an annual *Omnibus Survey* of a statewide sample of teachers and administrators, as well as a *longitudinal study* of a purposeful sample of schools. Along with other data, these tools will enable the evaluation team to provide both formative data during each year of the RttT grant and summative information to inform decisions about sustaining programs after the grant period ends.

The Omnibus Survey was designed to assess change across a wide range of constructs that may be influenced by the collective set of NC RttT activities, with items in several constructs corresponding to professional development activities. The Survey is comprised of 170 items across 23 dimensions, such as *teacher-leadership respect*, *teacher-teacher trust*, *teacher knowledge sharing*, and *teacher-student relationships*. Each respondent received a random sub-sample of the questions to decrease respondent burden.

The purpose of the longitudinal descriptive study is to provide detailed information concerning implementation of both state and local professional development initiatives and to determine the impact of those initiatives in diverse school settings across the state. The Evaluation Team developed a *purposeful sample* of schools that reflects the variation that occurs across the state to participate in the longitudinal descriptive study. The Team considers it essential that these schools are not identified to those outside of the Evaluation Team, so that they do not receive attention that is in any way different from that given to other schools across the State. The data collected from these schools each year will include administrative data (including student achievement data); surveys completed by central office staff, school leaders, and teachers; LEA and school leader interviews; teacher focus groups; and classroom observations.

IV. Short-Term Outcomes: Baseline Data

For this report, five dimensions of the Omnibus Survey were identified as playing a pivotal role in understanding the evolution of the professional development component of RttT. These include:

- Quality of Professional Development

- Alignment of Professional Development

- Attention to Common Core State Standards

- Data-Driven Instruction

- Formative Assessment (This dimension was measured using a different scale and is analyzed separately)

Summary of major findings

- Overall, educators' ratings of their current experiences with professional development and professional development-relevant topics, as measured by the first four dimensions, varied somewhat across the eight regions of the State but were generally positive. The proportion of respondents in each region who expressed agreement or strong agreement (the top two responses on a seven-point scale) with positive statements related to each construct were: Quality of Professional Development, 59.6%–73.3%; Alignment of Professional Development, 53.7%–63.9%; Common Core, 69.7%–80.4%; and Data-Driven Instruction, 65.4%–78.2%. The highest ratings on each of these dimensions were given in Region 8 (the Western region).

- Across the first four dimensions, elementary teachers gave the highest ratings for the professional development they receive, followed by middle school teachers, with high school teacher giving the lowest ratings.

- Responses to items in the fifth dimension provide early evidence that adoption of some formative assessment strategies may be occurring inconsistently across regions.

- Data from the Teacher Working Conditions Survey (TWCS) was used to classify schools as providing low, medium, or high levels of professional development support. Responses on several TWCS items were very consistent with data from the professional development dimensions of the Omnibus Survey. That is, teachers at schools classified as "low" in meeting teachers' professional development needs on the TWCS gave the lowest ratings on Omnibus Survey items, while teachers at the "medium" professional development schools gave intermediate ratings, and teachers at the "high" professional development schools gave the highest ratings.

- From the longitudinal study interviews, principals reported having access to information about professional development and that they work with their teachers and staff to ensure that appropriate professional development is either provided through the school or district or is available through other means. They were concerned about funding and expected to make greater use of cost-effective online and blended approaches in the future.

- Principals reported that they used the *North Carolina Teacher Evaluation Process* to inform professional development planning.

- Between one-third and one-half of the principals reported that their schools already had received some professional development on each of the new Standards, on formative and summative assessments, and on using data to improve instruction.

- Overall, principals were knowledgeable about professional development but were looking for guidance, resources, and support to help them make sure that effective professional development will be available for their teachers and staff.

Another dimension of the survey asked teachers to estimate how often they used each of a variety of formative assessment techniques with their students. Though there are no major findings to report from an analysis of the initial data, the results for this dimension will provide baselines for considering whether there is increased use of formative assessment as a result of professional development.

Recommendations

1. The state professional development effort should take advantage of, build upon, and enhance the effective processes for planning and providing valuable professional development opportunities that already exist in many schools and LEAs.

2. Careful attention needs to be paid to developing coherent professional development programs in which activities clearly relate and build upon each other to address major professional development needs. This is true at all levels of professional development: school, local, regional, and state.

3. Further attention needs to be paid to differentiating professional development for elementary, middle, and high school teachers, with a particular focus on high school teachers, who tend to rate the professional development they receive as being of less value than do teachers at the other levels.

4. There is growing interest in online professional development, collaboration, mentoring, and resources. The effective use of online technologies to enhance professional development, along with blended models of professional development, should receive increased attention in future years of the RttT professional development initiative.

5. Schools and districts range in the availability and quality of professional development they provide for their teachers. Schools and districts rated low in this area by their teachers on the TWCS and Omnibus survey need additional support to ensure that equitable access to high-quality professional development is available to all educators throughout the state.

V. Next Steps for the Professional Development Evaluation

The next steps of the professional development evaluation include the following:

1. Evaluation of the Distinguished Leadership in Practice Principal Institutes, with an interim report planned for Spring 2012.

2. Evaluation of the Online Professional Development Modules, Webinars, and Online Supports, also with an interim report planned for Spring 2012.

3. Continuation of the Omnibus Survey and Longitudinal Study during each year of the RttT grant.

4. Implementation of the Professional Development Participant Data Base, which is essential in order to track the overall impacts and outcomes of the RttT professional development initiative; this implementation will require close collaboration with NCDPI to quickly implement the needed system.

5. Improvement of surveys for the next round of professional development activities, to ensure that both the Professional Development Implementation Team and the Evaluation Team have reliable and valid data that allow for the disaggregation necessary to answer key evaluation questions. This work also will require close collaboration with NCDPI.

6. Evaluation of specific-purpose RttT professional development activities for principals, educators in the lowest-achieving schools, educators in selected STEM schools, online teachers of NCVPS STEM courses, and new teachers entering low-performing schools. The evaluations of these activities will be covered in other reports.

Appendix E. Executive Summary: *Distinguished Leadership in Practice (DLP): First Annual RttT Evaluation Report* **(September 2012)**

Providing high-quality, accessible professional development to all teachers and principals is a critical component of the professional development plan funded by North Carolina's federal Race to the Top (RttT) grant. One key professional development program funded through RttT focuses on providing professional development for practicing principals. The North Carolina Department of Public Instruction (NCDPI) has partnered with the North Carolina Principals and Assistant Principals' Association (NCPAPA) to provide a leadership development program for practicing school principals. This professional development model, entitled Distinguished Leadership in Practice (DLP), is aligned to the performance evaluation standards adopted by the State Board of Education for North Carolina's school leaders (i.e., the North Carolina Standards for School Executives).[4]

Overview of NC RttT DLP Activities

The DLP initiative employs a non-traditional professional development model. Participants examine the meaning and application of school leadership through a problem-based approach delivered via a series of face-to-face, regional, cohort-based sessions, which are followed by online activities. Throughout the year-long experience, practicing North Carolina principals are coached using a continuous improvement model. Participating principals are provided with models of exemplary school leadership, which allows them to study the behaviors, attitudes, and competencies that define a distinguished school leader. The DLP experience is built around six components:

- Component One: Strategic Leadership for High-Performing Schools
- Component Two: Maximizing Human Resources for Goal Accomplishment
- Component Three: Building a Collaborative Culture through Distributive Leadership
- Component Four: Improving Teaching and Learning for High Performance
- Component Five: Creating a Strong Internal and External Stakeholder Focus
- Component Six: Leading Change to Drive Continuous Improvement

Overview of NC RttT DLP Evaluation Activities

North Carolina's RttT proposal included a commitment to independent evaluations of each initiative. Over the next three years, the RttT Evaluation Team will document the DLP activities and collect data about participation in, satisfaction with, and the impact of DLP professional development activities through surveys and focus groups with DLP participants and facilitators, as well as analysis of longitudinal education data on students, teachers, leaders, and schools. The purpose of this evaluation is to provide detailed information about the implementation and impact of this professional development effort that targets practicing principals. This evaluation study is one part of a larger effort to evaluate the implementation and impact of NC's RttT

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[4] Available at http://www.ncpublicschools.org/profdev/standards/

professional development initiatives in order to determine if the initiatives as implemented have led to the intended outcomes with respect to school leader practice, the culture and climate of achievement at those leaders' schools, and, potentially, teacher and student performance.

The questions for the DLP evaluation fall into seven categories and are aligned with the overarching evaluation questions for RttT professional development.

I.   *Program Description*: How is the DLP initiative operationalized and implemented?

II.   *Participation*: To what extent does DLP reach the intended participants?

III.   *Program Quality*: To what extent does the DLP program meet standards of high-quality professional development?

IV.   *Short-Term Outcomes*: To what extent did participants acquire intended knowledge and skills as a result of their participation in DLP?

V.   *Intermediate Outcomes*: What was the impact of DLP on participants' practice?

VI.   *Long-Term Outcomes*: What was the impact of the principals' participation in DLP on their schools' culture/climate of achievement?

VII.   *Distal Outcome*: To what extent are gains in student performance outcomes associated with principals' participation in DLP?

This report addresses questions I through IV (program description, participation, program quality, and short-term outcomes), and it also provides some initial information related to question V (intermediate outcomes). Questions VI and VII (long-term and distal outcomes) will be addressed in future evaluation reports.

Evaluation Findings

I.   *Program Description*: The DLP program employs a non-traditional professional development model that allows participants to examine critically the meaning and application of school leadership through a problem-based, real-world approach. This cohort-based, experiential program is delivered over a one-year period using a blended model of face-to-face sessions supplemented by online sessions. Sessions are facilitated by 20 highly-qualified individuals who are former or current principals.

II.   *Participation*: DLP sessions were conducted in four regions (Central, Northeast, Southeast, and West). The program began with 194 principals participating across the regions, 157 of whom completed all six components. This participation level was in line with the proposed target of serving 200 principals annually. Data from participants' applications indicate that participants come from a variety of backgrounds and school contexts, and that they are representative of principals around the state, based on Teacher Working Conditions Survey data.

III.   *Program Quality*: The DLP program components most closely align with the RttT focus on updating the education workforce, in that DLP's goal is to help principals progress professionally, as measured by the North Carolina Standards for School Executives. Nearly all of the participants (96%) agreed or strongly agreed that both the face-to-face sessions and the DLP program as a whole were of high quality overall; a high percentage

(91%) of participants also agreed or strongly agreed that the online sessions were of high quality. The observational data provided converging evidence of the overall quality of the DLP program. Participants reported overwhelmingly positive reactions to DLP; they enjoyed the experience, and they found it was well worth the significant time commitment.

IV.   *Short-Term Outcomes*: Almost all participants (95% to 100%, depending on the objective) indicated they were satisfied or very satisfied that the specific learning objectives had been accomplished, and only a small fraction of respondents indicated that they were somewhat satisfied or not satisfied. Results from the participant survey show that most of the principals agreed or strongly agreed that they developed specific knowledge (87% to 95%) and skills (86% to 98%) targeted by DLP. Focus group results also provide evidence that participants acquired knowledge and skills—from the facilitators as well as from each other—that will help them become better leaders.

V.   *Intermediate Outcomes:* The results were overwhelmingly positive, with at least 94% of respondents agreeing or strongly agreeing that they had applied the knowledge and skills learned in DLP in ways that reflect progress along the NC Standards for School Executives.

Recommendations

As detailed in this report, the data show that the DLP team has designed and implemented a high-quality program that meets the professional development needs of the participating school leaders. This level of quality reflects the DLP team's commitment to a continuous improvement process. To continue to strengthen the program, data collected for this report suggest that the DLP team should:

- *Differentiate Activities*: Feedback from participants suggested the need for further differentiation of activities based on participants' years of experience and types of experience. A pre-DLP needs assessment survey may help clarify those differentiation needs.

- *Provide Opportunities for Participant Leadership*: Participants could be assigned to lead group discussions or give formal presentations on short segments of material or about their areas of expertise. Small groups of participants also could present to each other after working on a collaborative problem-solving project in face-to-face or online sessions.

- *Increase Time for Collaboration and Networking*: A reoccurring theme across all participant data sources was the value of providing time for networking and collaboration. Participants would have liked even more time to share experiences and collaborate to solve shared problems.

- *Improve Quality of Feedback in the Online Sessions*: Data from participants and program observers suggest that there is room for improvement in the quantity, quality, and consistency of feedback that participants receive in the online sessions.

- *Increase Variety of Activities and Use of Technology Tools*: A review of the online sessions indicated that the variety of activities was inconsistent—some sessions offered good variety, while others consisted almost entirely of asynchronous, text-based activities (e.g., reading a document, writing a response, and replying to a peer). Tools that can be integrated include,

but are not limited to: wikis, video-making tools, audio editing tools, data visualization tools, simulations, synchronous interaction platforms, blogs, survey tools, and mind mapping tools.

- *Improve Data Collection Instruments*: The current instruments used by DLP leadership have several limitations in terms of their length, the prompt-item-response option alignment, item wording, and the response options provided. The Evaluation Team recommends that NCPAPA staff and DLP leadership collaborate with the Team to develop, implement, and analyze all instruments related to DLP professional development activities.

Next Steps for the DLP Evaluation

Data on the long-term and distal outcomes of the DLP program are not yet available. However, over the course of the RttT grant period (through 2014), the Evaluation Team will seek to assess the impact the program has on the culture and climate of achievement, as well as on student performance, at participating principals' schools. While student outcomes will be the primary focus, the report also will examine the impact on school culture and climate, including teacher working conditions. The evaluation also will benefit from surveying participants some time after they have completed the program, which may allow them to better report on how they applied what they learned, as well as on any related issues they encountered. Text

Appendix F. Executive Summary: *Second Annual Race to the Top Professional Development Evaluation Report: Part I—Statewide Face-to-Face Professional Development Formative Evaluation; Part II—Local Outcomes Baseline Study; Part III—Race to the Top Online Professional Development: Year 1 Report* **(December 2012 and March 2013)**

The North Carolina Race to the Top (RttT) professional development plan is an expansive and multi-faceted effort to increase student achievement by updating the knowledge and skills of the entire public education workforce. This initiative is driven by a host of recent changes, including: adoption of new Common Core State Standards and North Carolina Essential Standards; increased use of data to inform classroom and school decisions; rapid changes in the technologies and digital resources available for teaching and learning; new teacher and administrator evaluation processes; and an increased emphasis on formative assessment to inform instructional decisions.

The human resources challenge of the initiative—to provide the state's 100,000 teachers and 2,400 principals with professional development that will enable them to extend their knowledge, improve professional practices, and, ultimately, increase student achievement overall and close achievement gaps among student groups—is formidable. The timeframe (the four-year period of the grant), diversity of the State (from large metropolitan local education agencies [LEAs] to small, rural, and resource-limited LEAs, many of which continue to struggle under the weight of fiscal constraints), and expectations (to create a statewide professional development infrastructure that can be sustained after RttT funding ends) only increase that challenge. The RttT professional development evaluation is being conducted in full recognition of these circumstances, as well as of the deep commitment of the members of the RttT Professional Development Implementation Team. The intent of the evaluation is to provide data-driven information that can support reflection about and improvement of this effort.

Four general questions guide the evaluation:

> *1. State Strategies: To what extent did the state implement and support proposed RttT professional development efforts?*

> *2. Short-Term Outcomes: What were direct outcomes of State-level RttT professional development efforts?*

> *3. Intermediate Outcomes: To what extent did RttT professional development efforts successfully update the NC education workforce?*

> *4. Impacts on Student Performance: To what extent are gains in student performance outcomes associated with RttT professional development?*

The Evaluation Team is providing this second annual assessment of progress in three separate but related reports. The first report—*Statewide Face-to-Face Professional Development Formative Evaluation*—documents the current status of the state's RttT face-to-face professional development efforts related to the Annual Professional Development Cycle (described below) and addresses specific questions under Evaluation Question 1 (*State Strategies)* and Evaluation Question 2 *(Short-Term Outcomes)*. The second report—*Local Outcomes Baseline Study*—addresses LEA and school-level outcomes of statewide face-to-face RttT professional

development efforts. The third report—*Race to the Top Online Professional Development: Year 1 Report*—addresses implementation and impact of the State's Online Professional Development efforts.

I. Statewide Face-to-Face Professional Development Formative Evaluation

Overview of Annual Professional Development Cycle

The overall plan for RttT professional development is built around annual cycles that are comprised of Summer Institutes, formative support for LEA and charter school Professional Development Leadership Teams, and additional face-to-face support sessions provided by the NCDPI RttT Professional Development Implementation Team in collaboration with the Regional Education Service Agencies (RESAs):

- *2012 Summer Institutes.* The 2012 Summer Institutes—themed "Connecting to Serve All Learners"—were two-day, face-to-face institutes for LEA and charter school Professional Development Leaders. A collaborative effort of staff across NCDPI divisions, these six Institutes offered 102 hours of professional development to 2,541 attendees, with a goal of preparing the local Professional Development Leaders to design, develop, and implement local-level professional development to help teachers transition to the new standards.

- *NCDPI Intra-Agency Collaboration for Support of RttT Professional Development Efforts.* Staff across five NCDPI agencies collaborated to develop and deploy ongoing professional development opportunities to educators statewide. In addition to working together on RttT professional development efforts, NCDPI staff also participated in an ongoing internal capacity-building effort (the North Carolina Learning Technology Initiative [NCLTI]).

- *NCDPI-RESA Sessions.* For the 2011-12school year, NCDPI and the RESAs collaborated to provide 966 hours of training to 3,646 attendees across all eight regions on: Common Core State Standards; Fidelity Support; Technical Assistance; North Carolina Professional Teaching Standards; Teacher Effectiveness/New Accountability Model; and Principal Training for Common Core and Essential Standards.

Summary of Major Findings

Cross-Cutting Findings

- *Overall Quality.* Data indicate that the overall quality of the Annual Professional Development Cycle events for the 2011-12 school year was high, with some variation across session type. Evaluators, participants, and facilitators all recognized various strengths of the professional development events but also recommended directions for improvements.

- *Needs Assessments.* Professional development needs—identified in NCDPI-RESA Fidelity Support sessions, pre-Institute surveys, and data and findings from the *First Annual Evaluation Report for RttT Professional Development*—are clear; providing adequate time and resources to meet these needs remains a challenge for both the State and LEAs.

- *Alignment with RttT Priorities*. State-level professional development efforts provided a total of 938 hours of professional development during the Annual Professional Development Cycle related to the four RttT priorities: (1) successful transition to the new standards (573 hours); (2) implementation of formative and summative assessments (146 hours); (3) use of data to support instruction (24 hours); and (4) effective utilization of the North Carolina Educator Evaluation System (195 hours). As this was the first full academic year of state-level professional development, efforts were focused on the transition to new standards and assessments, which was consistent with the proposal plan. An increased focus on the use of data to support instruction is anticipated in the next annual cycle.

- *Participant Knowledge and Skills.* Participants' assessments of both the NCDPI-RESA sessions and the Summer Institutes indicated a general belief that these events helped educators develop knowledge and skills around the new standards and some of the new statewide models for assessment and accountability.

- *Characteristics of Participants*. Participating teachers, school administrators, and central office staff at the NCDPI-RESA events and Summer Institutes represented every grade level, curriculum area, and LEA in the state. Most participants also had a wealth of experience to draw on, with a large majority having more than ten years of experience in education.

Findings Related to 2011-12 NCDPI-RESA Sessions

- *Overall Quality*. A high proportion of participants surveyed agreed or strongly agreed that the events incorporated traits of high-quality professional development, including clear objectives (85%), relevance (83%), and opportunities for participants to share knowledge (83%). Most respondents (80-85%) also agreed or strongly agreed that the online resources used were accessible and were effectively employed by the facilitators.

  Additional data reveal that participants and observers were most positive about the quality of the content and materials presented in the *Professional Standards Training for Principals and Assistant Principals, Detailed Scope of Work (DSW)*, and *Content Support* sessions, as well as about the facilitation of the *Fidelity Support* sessions. Participants rated the *Principal Training for Common Core and Essential Standards* lowest, and adequate opportunities for participants to share knowledge, experiences, and insights were observed the least often in the *Teacher Effectiveness* sessions.

Findings Related to 2012 Summer Institutes

- *Institute Quality*. Most surveyed participants agreed or strongly agreed that the Summer Institute had clear objectives (94%), was relevant to their professional development needs (90%), was well structured (90%), was of high quality overall (88%), built upon previous professional development efforts (87%), was engaging (86%), and met their expectations (85%). Most (90-95%) also noted the effective integration of online resources.

  In participants' ratings of specific session content quality, a majority gave the *Content* sessions (56%) and *Facilitative Team Time* (58%) sessions excellent ratings. Only about one-third of participants gave an excellent rating to the content of the *Leaders with Leaders, Understanding Assessments and Accountability*, and *Listening Lunches* sessions.

Of all the strands, *K-5 Mathematics* received the highest percentage of "excellent" ratings for content from participants (82%), followed by *English Language Development* (77%), *Guidance* (74%), and *Arts Education* (73%). *K-5 Mathematics* also received the highest percentage of "excellent" ratings for facilitation from participants (88%), followed again by *Arts Education* (83%), *English Language Development* (78%), and *Guidance* (77%). The lowest percentage of "excellent" content ratings (39-42%) were given for the *K-5 Science*, *6-12 Social Studies*, *6-12 English Language Arts*, *Information and Technology Standards*, and *Media* strands. Participants assigned the highest percentage of "poor/fair" ratings for facilitation to many of these same strands (*K-5 Science* [15%], *K-5 English Language Arts* [14%], and *6-12 Social Studies* [13%]).

Overall, observers found that sessions exhibited characteristics of accomplished, effective professional development, though there was some variation by session type, with *Content Strand* and *Facilitative Team Time* sessions rated the most positively, and *Assessment and Accountability* and *Leaders with Leaders* sessions rated at lower levels.

- *Participant Application of Skills*. A majority of participants agreed or strongly agreed that the RttT-related professional development events would help their LEAs develop, refine, and implement their transition to the new standards. Large majorities (85-92%) also agreed or strongly agreed that the Summer Institute would help them develop skills aligned to the North Carolina Professional Teaching and North Carolina School Executive Standards. Participants were less confident that the Summer Institutes would help them develop rigorous and engaging assessments for the new Common Core and Essential Standards.

Summary of Major Recommendations

Cross-Cutting Recommendations

1. *Emphasize interconnectedness of RttT priorities*. For example, NCDPI staff should include explicit information about how the new standards and assessments are connected to the Teacher Evaluation Process, data literacy, and instructional technology tools and resources.

2. *Continue commitment to work in the field*. NCDPI should continue to build relationships with RESAs, LEAs, and schools by engaging directly with local-level staff across the state.

3. *Continue to build NCDPI intra-agency collaboration*. Revise and improve the structures already in place to further facilitate development of strong collaborations within cross-divisional work teams. Improve communication and collaboration across the divisions by clarifying purpose, expectations, roles, and responsibilities for divisions. The success of NCLTI can serve as a good working model.

4. *Use the NC Education registration system for all face-to-face RttT sessions*. A statewide system is essential in order to track the overall impacts and outcomes of the RttT professional development initiative. A major roadblock to building local capacity is participant turnover; use of a linked, statewide registration system can help ensure that a consistent team of educators from each LEA attends the NCDPI-RESA sessions and the Summer Institutes.

2011-12 NCDPI-RESA Sessions

1. *Increase opportunities for participant discussion and reflection*. Session activities could include more opportunities for participants to share knowledge; consider classroom applications of resources, strategies, and techniques; reflect about concepts, strategies, and issues; and share experiences and insights.

2. *Continue to provide opportunities for participants to collaborate across schools and LEAs*. Participants regularly identified collaboration with colleagues as one of the most beneficial aspects of the regional RttT trainings.

3. *Increase focus on instructional tools aligned to the new standards*. Continue to provide opportunities for session participants to review, share, and identify or create high-quality units and lessons aligned to the new standards.

4. *Increase differentiation for LEAs based on stage of transition to new standards*. Different LEAs need different levels of information and support, depending on where they are with implementing their plan for transitioning to the new state standards and assessments.

5. *Clarify objectives for professional development events*. Identify and regularly communicate session objectives to local educators. Once those objectives are set, do not change the purpose or focus; LEAs use the calendar and description of events from NCDPI to plan the timeline for local training events.

2012 Summer Institutes

1. *Work toward developing more engaging activities*. For example, include more opportunities for discussion and sharing among participants; more hands-on, interactive activities; and activities focused on developing resources to take back to their LEAs.

2. *Provide more facilitative team time*. Teams wanted even more time devoted to working together.

3. *Increase differentiation*. To the extent possible, 6-12 grade *Content Strand* sessions should be broken-up into middle and high school groups, and *Leaders with Leaders* sessions should separate out school- and LEA-level administrators. It would also be beneficial to differentiate sessions based on LEA progress on the RttT priorities.

4. *Reduce redundancy and review*. Provide introductory sessions for those participants who have never attended a state-supported RttT professional development event.

5. *Allow LEA teams to facilitate some sessions*. Staff from local schools and LEAs can share best practices and resources related to many of the RttT priorities. This strategy also addresses participants' need for additional networking and collaboration opportunities.

6. *Reconsider the structure of the* Accountability and Assessment *session*. The timing and format of the session made the information difficult for some participants to absorb; recommendations included moving to an interactive session with Assessment and Accountability staff during the *Leaders with Leaders* strand, and providing additional professional development in the areas of deepening understanding of assessment, using data, and the new school accountability model.

7. *Incorporate participant-recommended topics into future professional development events.*
   Some of the requested topics include: formative and summative assessments; Common Core
   and Essential Standards; instructional practices for, planning under, and cross-curricular
   integration of the new standards; meeting diverse needs of learners; the new teacher
   evaluation process; collecting and interpreting data; and technology integration.

8. *Seek out more flexible facilities.* Identify better workspaces for facilitating learning for adults
   with room for small group collaboration and comfortable seats and tables.

9. *Shorten the length of each day.* Nine hours a day was too long to engage in deep thinking
   around RttT priorities. Consider a three-day event that starts later and ends earlier each day.

II. Local Outcomes Baseline Study

The *Local Outcomes Baseline Study* provides a baseline (first-year) assessment of the State's
progress toward updating the education workforce in North Carolina (Evaluation Question 3).
For this report, the Evaluation Team (a) collected and analyzed relevant data from all 115 LEAs,
and (b) identified a purposeful sample of 27 schools to examine more deeply the extent to which
LEA and school staff increased capacity to provide high-quality professional development. The
other two reports address (1) the state's progress in delivering face-to-face professional
development statewide, and (2) implementation and impact of the State's Online Professional
Development.

Summary of Major Baseline Findings

To address Evaluation Question 3, the Team examined the extent to which participation in the
state's professional development efforts impacted (a) local capacity to provide high-quality
professional development, (b) shifts in local organizational conditions to support RttT priorities,
and (c) changes to instructional practice. Results from these baseline analyses will be used in
future reports to gauge progress toward updating the education workforce statewide.

> *Evaluation Question 3.A.: To what extent did leader participants improve practices for support
> of organizational change, including capacity to provide high-quality local PD aligned to RttT
> priorities?*

Planning and Accessing Professional Development.

For most schools, focus group and interview data reveal that school-level professional
development was informed by what was being offered at the state level and typically was
designed around resources available at the LEA level. In line with the state-endorsed "train the
trainer" model, LEA-level Professional Development Coordinators indicated that they were
primarily responsible for identifying and disseminating the most relevant professional
development resources and making them available to principals and teachers in their LEAs. Most
LEA Coordinators mentioned using tools like wikis, website postings, and staff development
newsletters and calendars to condense professional development resources and make them more
easily accessible to teachers and principals. However, despite the multiple methods of

dissemination described by LEA leaders, data indicate that some principals and teachers still remained uninformed about NCDPI-support professional development opportunities.

Implementing Professional Development.

Most Professional Development Coordinators agreed that their LEA leadership had the capacity to implement and plan professional development, but fewer believed that their LEA leaders used data to inform their professional development decisions. Some LEAs called on teams of school-level leaders to develop implementation strategies. In most schools, professional development training was implemented through Professional Learning Communities (PLCs), and in some LEAs, training opportunities were extended beyond the school year.

Alignment with RttT Priorities.

LEA Professional Development Coordinators statewide and teachers in the representative school sample held different perceptions about whether professional development helped teachers build their knowledge and skills related to some RttT priorities, such as understanding revised state standards (91% of Coordinators but only 64% of teachers agreed that it helped) and deepening their content knowledge (81% and 58%, respectively). For other priority areas, the perceptions of both groups were more closely aligned, but were typically low (e.g., only 51% and 52%, respectively, agreed that teachers built knowledge and skills related to revised state assessments).

In addition, while 92% of Coordinators reported that LEA-provided RttT professional development was aligned with and built upon existing professional development initiatives, only 64% of the coordinators agreed that their LEAs utilized data on staff technology proficiency when planning RttT professional development. Furthermore, only 60% agreed that their LEAs have plans for how to use the NCDPI Professional Development Leads in each region for support in their delivery of professional development. Overall, these differing perceptions suggest a lack of consistency among LEA PD coordinators in their efforts to align professional development with RttT priorities at the local level.

Quality of Local Professional Development

As they reflected on the academic year, about 70% of teachers surveyed agreed or strongly agreed that their local professional development experiences were both sustained and coherent, though fewer believed that they had time to reflect on and experiment with what they learned—a sentiment that was echoed in focus group responses. Teachers generally gave lower ratings for their experiences with LEA-provided professional development than did LEA Professional Development Coordinators, but interview and focus group data highlighted principals' and teachers' positive experiences with local coaches and specialists, as well as their positive impressions of the value of PLCs.

Evaluation Question 3.B.: How did school culture/organizational conditions change to support RttT priorities?

Changes in Conditions related to Transition to the New Standards

Most LEA Professional Development Coordinators agreed that their LEAs have strategies in place for communicating about availability of, collaborating on, and integrating state resources into professional development related to revised state standards, but preparation for integrating other aspects of the curriculum with those standards varies. Results from the RttT Omnibus Survey showed that nearly all teachers felt strongly about their own preparation for the transition to Common Core but were less sure about whether school leaders or other teachers in their school really understood how to implement the new standards effectively.

Changes in Conditions related to Data-based Decision Making and the Revised Teacher Evaluation Process

Between 2010-11 and 2011-12, there were slight decreases in teacher perceptions of their schools' use of data for decision-making, as well as in their perceptions of the new teacher evaluation process, but both changes may be the result of a sizeable increase in response rates. The Evaluation Team will monitor annual survey results to determine whether these patterns persist.

Evaluation Question 3.C.: To what extent did teachers improve classroom practice?

Data gathered for this section provide baseline information about current learning activities for comparison to similar data in subsequent years of RttT. Overall, Math teachers most frequently reported daily instructional time on instructional strategies related to new standards, followed by English Language Arts (ELA), Science, and Social Studies teachers. Across each content area:

- ELA: The highest percentage of teachers estimated that students spent time almost daily on listening skills (76%) and on general vocabulary (66%).

- Math: The highest percentage of teachers reported that on almost a daily basis, students made sense of problems (80%), persevered in solving problems (72%), and used appropriate tools strategically (67%).

- Science: Teachers reported that their students practiced participating in hands-on activities (32%), completed activities with a real-world context (24%), and used tools to gather data (19%).

- Social Studies: Students spent time almost daily on recognizing and appreciating contributions of diverse cultural groups (30%), demonstrating chronological thinking (29%), and analyzing cause-and-effect relationships (28%).

On average, observed classrooms in the sample schools received midrange ratings across the five dimensions of the Evaluation Team's standard classroom observation protocol[5] that are most directly aligned with implementation of the new Common Core and Essential Standards (Regard

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[5] Classroom Assessment Scoring System, or CLASS (http://www.teachstone.org/about-the-class/). In all, there are 12 CLASS domains.

for Student Perspectives, Quality of Feedback, Instruction Dialogue, Analysis and Problem Solving, and Content Understanding). Across content areas, teachers sometimes scaffolded discussion in the classroom and made attempts to integrate student feedback. ELA classrooms were scored slightly higher on average than were other core courses in the frequency and quality of examples of three of the dimensions of effective teaching (Regard for Student Perspectives, Quality of Feedback, and Instruction Dialogue). Social Studies classrooms received the lowest average ratings for observed frequency and quality of the other two dimensions (Analysis and Problem Solving and Content Understanding). Finally, teacher surveys indicated that while some formative assessment practices were common across classrooms, others were employed infrequently. These observation data mirror results from teachers' self-report surveys about frequency of effective, standards-based teaching practices.

Summary of Results

Overall, the baseline results presented in this study indicate that schools and LEAs have taken some initial steps toward developing a process for professional development that supports RttT priorities, including transition to the new state standards, implementation of formative and summative assessments, use of data to support instruction, and effective utilization of the new North Carolina Educator Evaluation System. These aggregated results provide a cursory baseline assessment of Year 1 progress toward achieving and sustaining local capacity to provide high-quality professional development, supporting shifts in local organizational conditions to support RttT priorities, and encouraging changes in instructional practice.

III. Race to the Top Online Professional Development: Year 1 Report

The North Carolina Race to the Top (RttT) proposal (North Carolina Office of the Governor, 2010) specifies that the state's Professional Development Initiative will focus on the "use of e-learning tools to meet the professional development needs of teachers, schools, and districts" (p. 191). It points to research demonstrating that "well-designed and -implemented online professional development programs are not only valued by teachers but also positively impact classroom practices and student learning." It then states that:

> [North Carolina will leverage technology to] strengthen professional development offerings in many ways, such as:

- Ensuring that professional development that addresses priority content is available statewide;

- Providing alternatives for educators who prefer the flexibility, pacing, and learning styles possible through online learning;

- Providing opportunities for teachers to interact with mentors and content experts when face-to-face meetings are not possible;

- Engaging educators in virtual learning as students, thereby providing them with first-hand experiences that will help them understand and employ the potential of e-learning with their students; and

- Extending and enhancing on-site workshops, professional learning communities, coaching, mentoring, classroom observations, and other components of local professional development programs through the use of online communications and resources. (p. 191)

This first annual report on the State's progress to date on designing and implementing online professional development addresses the following general evaluation questions that guide the overall evaluation of all RttT professional development efforts:

1. *State Strategies*: To what extent did the state implement and support proposed RttT professional development efforts?

2. *Short-Term Outcomes*: What were direct outcomes of state-level RttT professional development efforts?

As a supplement to the previously-submitted baseline evaluation report on the Professional Development Initiative, *Building LEA and Regional Professional Development Capacity*, the purpose of this report is to evaluate the extent to which the state has implemented and supported the proposed RttT online professional development, as well as the direct outcomes of those efforts (outlined in Appendix A). It focuses exclusively on progress made through June 30, 2012 (the first year of implementation) toward meeting the goals for online professional development (OPD) as set out in the state's RttT proposal and scope of work; all progress after that date will be addressed in future reports. It is primarily intended to provide formative feedback about the state's approach to and progress to date in using online (also called e-learning) technologies to extend opportunities for professional learning for K-12 teachers and administrators. As such, the report focuses on professional development efforts in which online formats were the primary method for delivering content or facilitating activities (e.g. webinars, online learning modules, and content repositories).

Overview of NC RttT Online Professional Development Activities

The North Carolina Department of Public Instruction (NCDPI) is responsible for leading and managing the Professional Development Initiative. One of the primary goals of this initiative is to "expand the online professional development infrastructure to provide accessible and high-quality online professional development for all educators throughout North Carolina" (North Carolina Office of the Governor, 2010, p. 10).

NCDPI's primary approach to addressing the state's RttT OPD goals has been to provide LEAs with access to self-paced online modules that present to educators instructional content related to RttT priority areas via text, graphics, and audio and video components, along with some embedded questions and offline activities (the latter implemented locally) to check for understanding or to suggest further reflection and discussion. NCDPI also has provided a series of real-time webinars in which NCDPI staff present information and provide opportunities for questions to be addressed. Finally, NCDPI has provided various online resources (for example, crosswalks of the current and new standards) to support professional development activities.

NCDPI created a RttT Facilitator's Guide[6] (North Carolina Department of Public Instruction, 2011) for LEA professional development teams. The plan outlined in this Guide conveys that each LEA is responsible for providing effective professional development for local educators, and that the NCDPI online resources should be used as a part of those LEA-level programs. The systemic, blended approach to providing online and offline components outlined in the Facilitator's Guide defines effective professional development as job-embedded, research-driven, data-informed, professional community-based, and aligned to RttT initiatives. The Facilitator's Guide also articulates seven specific responsibilities of the RttT Regional Professional Development Leads in supporting Local Education Agency (LEA) and charter professional development efforts, including establishing and supporting professional learning communities (PLCs).[7]

Through June 2012, the primary online resources provided by NCDPI were 90-minute modules provided via the NC Education Moodle Learning Management System. To date, the Phase I and Phase II modules, including NC FALCON, have addressed the following key RttT-related priority areas: (a) successful transition to the new Common Core and Essential Standards; (b) implementation of formative and summative assessment; (c) use of data to support instruction; (d) effective utilization of the new North Carolina Educator Evaluation System (NCEES); and (e) use of technology for teaching and learning.

NCDPI also has provided a series of webinars, or "chats," that address RttT priority areas. These are 60- to 90-minute live online sessions with NCDPI leaders and content experts, intended for LEA professional development leaders and other educators. The webinars are archived online so that educators can continue to access them after the live event. They have covered a range of RttT-relevant topics, such as the new standards and assessments, the planned Instructional Improvement System, the Educator Evaluation System, resources to help schools meet the state's STEM strategic plan, planning professional development, and curriculum mapping.

In addition, NCDPI has provided a set of web-based resources that can be used in local professional development programs. These include materials from RttT-funded regional summer institutes for LEA-level professional development teams, the Facilitator's Guide to assist LEA and charter school teams that are planning local professional development initiatives, resources that unpack the new standards and provide crosswalks showing how they differ from the previous standards, resources supporting formative assessment processes, information about changes in writing instruction, and a variety of other information about RttT-related plans and activities. Additional modules and resources were released beginning in June 2012, including six new RttT Phase II modules and a cohort-based, facilitator-led version of the *North Carolina Professional Teaching Standards* module (which became available on September 17, 2012); an additional NC FALCON module will be released in Fall 2012. In addition, an online tutorial on the North Carolina Educator Evaluation System (NCEES) was developed for administrators and made available through the NCEES Wiki. These additional modules and resources will be discussed in future evaluation reports.

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[6] http://www.ncpublicschools.org/docs/acre/resources/facilitator-guide.pdf
[7] One such model recommended by NCDPI for PLCs is the DuFour framework, which emphasizes a culture of collaboration and a focus on results:
http://www.allthingsplc.info/pdf/articles/DuFourWhatIsAProfessionalLearningCommunity.pdf

Evaluation Findings

The evaluation findings are based upon data collected from NCDPI web analytics, surveys of the users of the online resources, reviews of the online modules and resources, observations of webinars, and detailed data (via surveys, interviews, and focus groups) from schools participating in the RttT Professional Development Evaluation longitudinal descriptive study. Major findings are summarized below.

Overall Relevance, Interest, and Access

- Online modules, webinars, and resources were aligned to the RttT professional development priorities and directly addressed the standards for teaching adopted by North Carolina.

- Website analytics show that, since July 2011, there has been considerable interest in and access to the RttT online materials. Approximately one-half of the state's educators had completed at least one module as of June 30, 2012, with an average of about 2.1 modules per educator. Between August 2011 and March 2012, approximately 1,800 educators participated in the webinars, with those on mathematics attracting the most interest by far. There were more than 27,000 visitors to the NC Essential Standards webpage in January alone.

- Educators reported difficulty finding specific RttT resources, since they are distributed across multiple online locations.

Online Modules [8]

- Evaluator reviews and educator feedback revealed that the online modules provided a concise overview, objectives were clearly described, and directions for activities were easy to follow. The online modules and webinars were aligned to the RttT professional development priority areas and directly addressed the North Carolina standards for teaching.

- The state's original RttT Detailed Scope of Work (DSW) (pp. 52-53) specified that 16 modules to support the transition to the new standards and assessments would be available by the end of 2011. In July, 2012, USED approved an amendment asking for an extension to the original timeline for development in response to delays in the state hiring process for online developers, with new target dates of November 2011 for the first seven modules and June 2012 for the remaining nine. As of June 30, 2012, 13 of the 16 modules specified in the revised timeline were developed and made available to educators, with two additional modules planned for release later in the year. Within the original timeframe proposed by the DSW, however, only one module was released on schedule; several LEA Professional Development Coordinators stated that these delays negatively impacted local professional development plans to incorporate the modules.

- Approximately 76% of educators agreed that the modules were easily accessible. Of those who indicated difficulties with access, teachers reported more issues than did school

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[8] The evaluation findings are limited to the Phase I Online Learning Modules, including NC FALCON (detailed in Section I), webinars, and additional online resources made available to LEAs during the 2011-12 school year. The Phase II modules released in June 2012 are included for the purpose of addressing the scheduled timeline for module development proposed in the state's detailed scope of work through June 2012, but are not reflected in the findings throughout this report. These modules will be addressed in the September 2013 Annual Report.

administrators. Access issues included difficulty locating the modules, outdated software, unreliable or slow Internet access, and incorrect log-in information.

- Overall, 78% of module participants agreed that the modules were relevant to their professional development needs. Two major weaknesses educators reported that limited the value of the modules were that they were (a) redundant with prior professional development activities and (b) not sufficiently tailored to specific content and grade-level needs for teachers.

- When asked whether the modules were of high quality, 78% of educators agreed or strongly agreed. Administrators were more likely to agree that the modules were of high quality than were teachers, and, among them, elementary and middle school teachers were more likely to do so than were high school teachers.

- On more specific survey items, 83% of participants rated the modules as well-organized, but only 71% agreed that the modules provided meaningful opportunities for collaboration and/or social interaction. While 79% agreed that the modules increased their understanding of the material, 70% agreed that the modules provided constructive feedback and were free of technical issues.

- A review of the online modules using a rubric aligned to the Learning Forward/NSDC (2011) professional development standards (Appendix B), in addition to participant data, suggest that many of these standards are not being fully addressed. Areas in which the modules could better align include: learning community approaches; prioritization and coordination of professional development resources and activities by local leadership; use of data to plan, assess, and evaluate professional learning; effective adult learning designs; support for long-term professional development implementations; and a focus on specific student learning outcomes.

Webinars

- Almost 83% of webinar participants agreed that the webinars were relevant to their professional development needs, while 78% agreed they were of high quality.

- More recent webinars were highly rated for accessibility, with 92% of survey participants agreeing that they were easily accessible.

- Members of the Evaluation Team who observed webinars selected "*listening to a formal presentation by the facilitator*" as a primary activity in 95% of observations. Evaluators also indicated that opportunities for meaningful collaboration and/or interaction were present in only 30% of the session periods observed (protocol, Appendix C; results, Appendix D).

Local Use and Capacity

- While the NCDPI Facilitator's Guide recommends that participants complete the modules in PLCs, the actual context for their use varied widely. Only 27% of survey participants reported that they completed the online module activities in a PLC setting, as recommended. Approximately 74% of participants reported that they completed the module activities independently, with only some of those indicating that they had opportunities for follow-up discussions. More detailed information from 18 LEAs participating in the RttT PD

Evaluation's longitudinal study revealed that, of the 14 LEAs that reported having accessed the modules, six used the modules in PLCs. Two schools reported that they completed the modules in a large-group face-to-face setting with a facilitator and six LEAs directed educators to use the modules independently, with three of those facilitating some follow-up discussions. One LEA provided opportunities for educators to have online discussions related to the content of the modules. Overall, these results suggest that local professional development leaders may need additional support to ensure that they are able to incorporate the modules into their local professional development programs as intended.

- Educators have interest in using technology tools (such as threaded discussions, shared content repositories with social networking features, collaborative wikis, synchronous chat, messaging, and blogs) to enhance professional development, but many LEAs do not have the technology resources and/or expertise to support the effective use of these tools. While tools exist within the NC Education Moodle Learning Management System and across the Internet to support the kinds of online communication and collaboration described in the RttT proposal, by June 2012, NCDPI and LEAs had not yet made full use of these tools to support implementation of the modules. Many LEAs may lack both the models and the tools to provide the kinds of high-quality online professional development envisioned by the RttT proposal.

Summary of Findings

NCDPI has created and utilized a substantial set of online resources, conducted dozens of webinars, and developed online learning modules to support local PLCs. To date, the online resources provided by NCDPI have been designed and used primarily to disseminate information to educators statewide; LEAs have been primarily responsible for providing the collegial interactions, connections with practice, opportunities for reflection, and differentiation to meet varied professional needs required for effective professional development.

While NCDPI's efforts have positively impacted thousands of educators throughout the state, and the majority of educators have indicated their satisfaction with these resources, the current collection of OPD activities and resources does not yet fully leverage all of the potential benefits of technology to extend and enhance professional development. The findings suggest that the use of these resources at both the state and local level is not yet wholly consistent with national standards for online professional development. Many LEAs likely will need additional guidance, training, support, technology tools, and/or content resources to ensure that local efforts contribute to the quality of the experiences for educators and that the vision for online professional development outlined in the state's RttT proposal is realized and can be sustained beyond RttT.

As detailed below, NCDPI already has recognized the steep learning curve resulting from a project of this scale, has learned from many of the challenges encountered during the first implementation year, and is working to address these issues during the second year of implementation.

Recent Developments in RttT-Related Online Professional Development

After review of a preliminary draft of this report, NCDPI staff noted that several developments already were underway to ensure that NCDPI can continue to build its internal capacity for developing and delivering online instructional resources and activities, and for supporting local implementation. To that end:

- Since the completion of the Phase I online learning modules, NCDPI has expanded its instructional design team to five members;

- NCDPI has established a new development process for the next phase of online professional development modules scheduled for release after June 2012;NCDPI has developed a plan for implementation of the new modules, outlined in its *Phase II Online Module Implementation Guide*.[9] This supplemental guide provides guidance to LEA and charter school teams in the implementation of the Phase II online modules for professional development developed by NCDPI for the 2012-2013 school year. It also details six different models for implementation at the LEA level, including best practices and strategies for facilitation and incorporation of PLCs;

- NCDPI has partnered with the Friday Institute for Educational Innovation's Education Workforce Development team[10] to provide their staff with training and support for technology-enabled learning, including training related to online professional development; NCDPI also now hosts a central online location for all professional development resources[11];

- NCDPI will continue to explore ways to provide participants with online opportunities to interact with peers and participate in facilitated online professional development experiences, including the use of a cohort-based, facilitator-led online course; and

- NCDPI also will continue to provide targeted support to LEAs to ensure that online modules and resources are integrated successfully into local professional development plans.

Recommendations

Based on the findings of this evaluation, the following recommendations are provided for consideration as NCDPI seeks to achieve the goals for OPD outlined in the RttT proposal, build statewide capacity, and better align future efforts to standards for high-quality online professional development.

1. Ensure LEAs have the guidance and support needed to implement the new strategic plan outlined in the *Phase II Online Module Implementation Guide* to further the use of effective online and blended professional development statewide.

2. To improve alignment to the state's RttT proposal and to national standards for online professional development, expand statewide OPD activities and/or support local initiatives to: (1) provide educators with access to a greater variety of online learning experiences (e.g., online communities, workshops, peer mentoring); (2) increase opportunities for online peer interaction across LEAs and across all online professional development offerings; and (3)

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[9] http://www.rt3nc.org/pubs/implementation_guide_2012.pdf

[10] A unit of the Friday Institute separate and distinct from the Evaluation Team

[11] http://wikicentral.ncdpi.wikispaces.net/NCDPI+WikiCentral+Page

further differentiate professional development activities to meet the specific needs of teachers of different content areas, grades, and levels of expertise.

3. Where possible, leverage existing online professional development workshops and resources available through the national e-Learning for Educators Consortium, other RttT states, local providers like LEARN NC, and others.

4. Focus on building statewide capacity for effective implementation and facilitation of OPD in order to ensure sustainability beyond the period of RttT funding. To do so, build upon multi-LEA and regional coalitions that will share expertise and resources to develop OPD programs throughout the State.

5. Leverage the additional tools available via the NC Education Moodle Learning Management System to support both state and local professional development initiatives with asynchronous and synchronous discussions, content repositories, and wikis.

6. Continue to focus on organizing all online resources into a centralized, searchable content repository, to make them more easily accessible.

Appendix G. Executive Summary: *Turning around North Carolina's Lowest Achieving Schools (2006-2010)* (September 2011)

From 2010 through 2014, a portion of North Carolina's $400 million Race to the Top grant will enable the NC Department of Public Instruction to intervene in an effort to improve performance in the lowest-achieving five percent of North Carolina's schools – some 118 elementary, middle, and high schools. With modifications to accommodate federal guidelines, the interventions supported by Race to the Top funds will build upon experience gained from the NCDPI Turnaround Schools program's work in similar schools between 2006 and 2010. The study reported here was designed to help distill that experience into knowledge which the District and School Transformation Division can use to strengthen its work during the Race to the Top era.

During the 2006-2010 period, the NCDPI and its partner organizations worked with 66 low achieving high schools, 37 middle schools, and 25 elementary schools. These schools were targeted for intervention primarily because their Performance Composites fell below 60% for two or more years. A school's performance composite is a percentage reflecting the number of End-of-Grade or End-of-Course examinations its students passed, out of the total number of examinations taken. Across the elementary, middle, and high school levels, local educators pointed to similar factors contributing to low performance:

- Challenging economic and demographic conditions, whether newly developed or chronic

- Serious and widespread discipline problems

- Low academic demands and expectations among teachers and low aspirations among students

- High principal and teacher turnover

- A negative school identity in the minds of teachers, students, and the surrounding community

- Ineffective school leadership, ranging from harsh top-down leadership to leaders that are too eager to please and fail to enforce discipline or follow through on decisions

- Alienated teachers marking time in survival mode, isolated within their own classrooms

When intervention by NCDPI, the New Schools Project, and other partners was matched by energetic school leadership and district support, teachers took responsibility for student learning, overcame the challenges, and raised student performance, sometimes to striking degrees. The Turnaround Schools program of intervention included (1) a requirement that the schools submit plans consistent with a Framework for Action designed to focus the schools on changing practices thought to affect student achievement, (2) a series of professional development sessions designed to build the schools' capacity to carry out the plans, and (3) follow-up coaching and school-specific professional development, which continued for as long as the school's performance composite remained below 60%. A subset of 13 high schools were also divided into separate, smaller academies in order to strengthen teacher-student relationships and facilitate other reforms.

In the "stuck schools" we studied—those that had made little or no progress despite strong pressure from Judge Manning and assistance from the NCDPI, the New Schools Project, and other organizations enlisted by the NCDPI and local districts—attempts at reform were undermined by stop-and-start reform initiatives with no sustained follow-through, continued principal and teacher turnover, principals who were unable to mobilize teachers behind efforts to enforce discipline and step up demands for academic achievement, and breakdowns in basic policies and procedures at both the district and school levels. Without sustained, competent, and authoritative leadership at both the district and school levels, these schools were simply unable to break out of the doldrums of despair.

This report is the first in a series related to the evaluation of North Carolina's Race to the Top initiative. As indicated earlier, the interventions to be implemented as a major component of the Race to the Top initiative will build upon experience gained by the Turnaround Schools program between 2006 and 2010. The study reported here was designed to draw lessons from that experience in order to inform the NCDPI's Race to the Top-funded work. In this executive summary, we outline the key findings from the study.

Impact of the Turnaround Schools Program

To assess the impact of the Turnaround Schools program at the high school level, we conducted an analysis of student achievement data and graduation rates comparing change in the turnaround high schools with change in a set of high schools that performed only slightly better in the years before the Turnaround Schools intervention began. The student test score analysis used value-added models that controlled for differences in student characteristics such as prior achievement, family economic background, and ethnicity as well as characteristics of the schools themselves, including average daily membership. This enabled us to isolate the effects of the Turnaround Schools program from many other variables that affect student test scores. The results revealed that the Turnaround Schools intervention made a significant contribution to improved student test scores in the high schools it served. The contribution was modest but grew progressively larger over the period of treatment. We also compared high school graduation rates in Turnaround schools and similar schools from 2006-07 through 2009-10. Graduation rates in the Turnaround high schools appeared to increase by two percentage points. but the difference between the Turnaround high schools and comparison schools was not statistically significant. At the middle school level, where intervention began a year after intervention began in the first set of 35 high schools, the impact on test scores was not large enough to be statistically significant. Because of an interruption in the flow of resources to support intervention in the elementary schools, the program at that level was not sustained enough in a single set of schools to warrant impact assessment. An important implication of our findings at

> **Impact**
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> The Turnaround Schools intervention made a significant contribution to improved performance in the high schools it served. The contribution was modest – about ¾ point on average on End-of-Course tests – but grew progressively larger over the period of treatment…. An important implication of our findings at the high school and middle school levels is that improvement in the state's lowest-achieving schools is seldom immediate, but requires sustained support over three or more years.

the high school and middle school levels is that improvement in test scores in the state's lowest-achieving schools did not occur immediately, but in the high schools required three to four years before significant improvement registered.

In addition to the analyses comparing the improvement in student learning in Turnaround high schools with improvement in student learning in the comparison schools, we also compared improvement in the performance composites of the two sets of schools. Performance composites represent the percentage of students in a school who have achieved proficiency in tested subjects. The graphs on the next pages show that improvement in performance composites varied widely across the high schools served by the Turnaround Schools program, but on average, the Turnaround schools' performance composites improved more than those of the comparison schools. In the first cohort of high schools, where intervention began in 2006-07, by the end of 2009-10 performance composites in the Turnaround Schools had improved by an average of about 12 percentage points, compared with an improvement of about three percentage points in the comparison schools. In the second cohort of high schools, where intervention began in 2007-08, by 2009-10 average performance composites had improved by about 10 points, compared with the 3-point improvement in comparison schools. Note also that the degree of improvement varied widely across Turnaround schools in both cohorts. It was to understand this variation in improvement that we undertook the closer study of selected schools summarized in the next section.

Figure 1: Percentage Point Change in Turnaround Schools' Performance Composites Compared with Change in Comparison Schools' Performance Composites, 2005-06 through 2009-2010
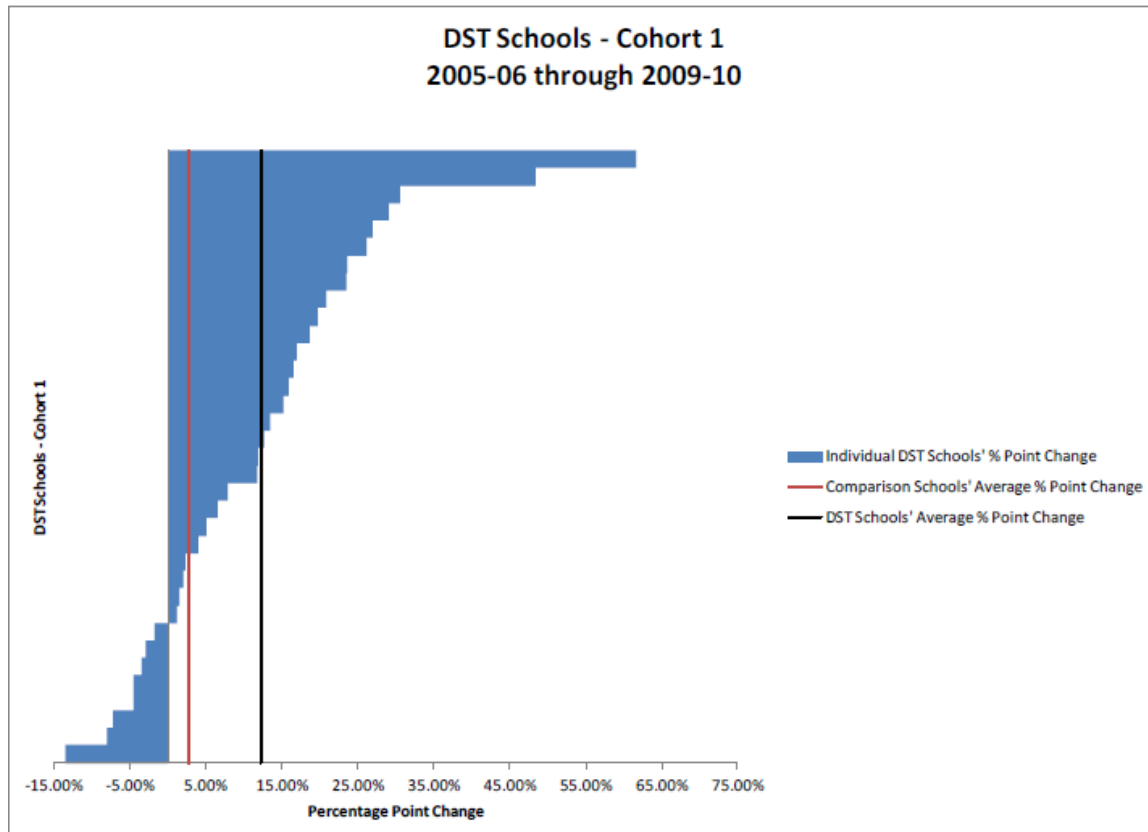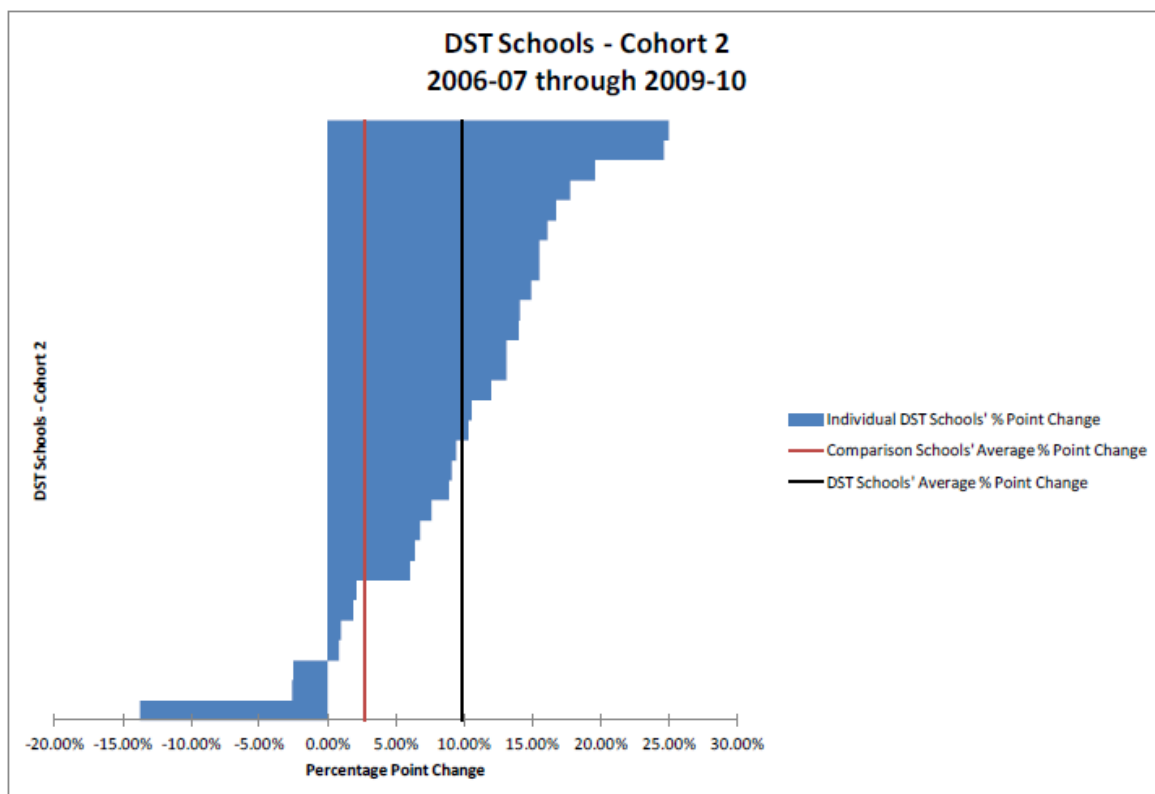
Figure 2: Percentage Point Change in Turnaround Schools' Performance Composites Compared with Change in Comparison Schools' Performance Composites, 2006-07 through 2009-2010 *vi*

How Turnaround Worked: Scaffolded Craftsmanship

To learn how change took place in the schools that did improve and what frustrated change in those that continued to perform poorly, we selected 12 high schools, 9 middle schools, and 9 elementary schools to study via onsite interviews and examination of plans, reports, and other documents generated during the turnaround process. At each level of schooling, we chose one third whose Performance Composites had improved sharply (by 20 percentage points or more), one third that had improved moderately (about 12–15 points), and one third that had made little or no progress. By contrasting the developments in the most improved, moderately improved, and "stuck" schools, we were able to reveal both the dynamics of improvement and the main obstacles to change.

We found that in the improved schools, the turnaround process began in virtually every case with the appointment of a new principal who replaced a substantial number of teachers and sparked a series of changes focused on key areas of school operation, including (1) the commitment, climate, and culture affecting student learning; (2) the knowledge and skills that school leaders, teachers, and other staff bring to their jobs; (3) the structures and processes that support instruction within the school; and (4) the strength of linkages between the school and both the district central office and the community served by the school. We coined the term *scaffolded craftsmanship* to characterize this change process.

The scaffolding consisted of the Framework for Action, professional development, and coaching provided by the NCDPI and its partner organizations. With these supports, school leaders and staff gradually learned how to improve performance by crafting improvements in the four key areas just mentioned. At the high school level, some schools incorporated selected components of comprehensive school reform models, but the heart of the improvement process was guided reconstruction of key functions rather than implementation of externally designed models.

Commitment, Climate, and Culture

In the area of commitment, climate, and culture, successful school leaders simultaneously asserted strong accountability pressures as they also cultivated relationships of trust and engaged the teaching staff more actively in planning, making policy, and solving problems within the school. In improved schools, it appears to have been this paradoxical combination of strengthened accountability pressures and strengthened professional ties that mobilized teachers and other staff behind the leadership's new goals, standards, and policies. This new commitment led teachers to challenge students with more demanding lessons and assignments. When, – often to teachers' surprise, – students responded with substantially better performance, teachers concluded, also with surprise, "We can do this!" And the initial successes led to still higher expectations for student learning.

Piecing together the evidence from our interviews across schools into a pattern, we concluded that this is how a culture of

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Relationships and Assertive Accountability

The principal of a small rural high school whose performance composite had soared 28 points in only two years began a sentence with a deadpan poker face, "I don't want to brag, but …"—and here he could not resist breaking suddenly into a brilliant smile—"… my teachers love me." Our interviews with teachers bore him out. His teachers did love him. Teachers could not contain their own smiles when they talked about the principal: how hard he worked, how well he knew the students, how often he was in their classrooms, how well he listened and responded to their problems and needs, how he had handled a certain problem with a parent, and on and on.

Yet on the white board behind the principal, we could see teachers' End- of-Course examination passing rates and average scores displayed, together with the goals for the number of students in each class who would pass the exam this year. He explained that early in a semester, he sat down with each teacher of an EOC course to review her students' prior scores and the Education Value-Added Assessment System (EVAAS) prediction for the student's likely score in the course. They would then discuss what the teacher would have to do to help the student make a passing score and set a goal for the number of students the teacher should be able to get over the bar. Periodically, they would meet to review benchmark and formative assessment results in order to adjust the program of extra support required to meet the goals. Because the goals are displayed on this public whiteboard, each teacher could compare her students' performance relative to the goals with those of other teachers in the same and other EOC courses. This spurred competition among teachers, but it also prompted teachers to seek help from colleagues with better success rates.

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high expectations was made. Accountability pressures within the context of strong relationships and engagement of teachers in planning and problem solving generated commitment to new goals and standards for student behavior and learning. Similarly, strong and consistently

More Orderly Environment

The clearest illustration of how a more orderly and caring environment was created comes from a small rural high school that was plagued for more than 20 years by conflict between students from two communities consolidated into this county-wide facility. There were small-scale scuffles almost daily, and periodically, large group fights and near riots would erupt. The atmosphere of conflict and disorder permeated halls and classrooms and contributed to rapid turnover of principals as well as teachers.

Leadership came from an unexpected quarter. A man who had grown up in the county, left to pursue a military career, and returned to join the local police force took note of the problems in the high school. Believing that his military and police experience gave him a special perspective on the issue, he approached the chairman of the school board with his ideas for addressing it. The school board chair asked him to lay out a more specific plan and hired him to implement it.

The plan had two sides. First, the new chief of security added two more officers to the two already in place, deployed all four to walk the halls, and instituted a zero tolerance policy against fights. Offenders would not simply be disciplined by the school, but arrested, jailed, and prosecuted. At the same time, however, the security officers were instructed to chat with students, get to know them personally, eat lunch with them, attend sports events they played in, and ask the students to come to security officers, teachers, or the principal with information about developing conflicts or planned fights. Teachers were also asked to show a greater presence in the halls and to listen for signs of trouble in their classrooms. The combination of a get-tough policy and relationship building worked. After an arrest or two, students began to approach the staff to talk through the conflicts that would previously have sparked fights.

enforced discipline policies together with energetic efforts to cultivate caring relationships with students combined to help schools create safer and more orderly environments. But while the initial mobilization of commitment seems to have been crucial, it does not seem to have been sufficient to consummate the culture-building process. By *culture*, we mean beliefs, expectations, and norms that have a force of their own in shaping teachers' and students' ongoing behavior. When teachers told themselves, "Wow, this is possible! So we can go higher!"—a development that was recognized and reported across the improved schools—a new culture had started to take shape. By then, teachers had newly recruited colleagues, had learned new skills, and had begun to take action in the new ways we outline in this report. In the improved schools we studied, culture-building and improved performance were part of a spiraling process. Assertive accountability, strengthened relationships, shared decision-making, and an infusion of new colleagues begot commitment to new goals and standards. Commitment begot a more orderly environment and initial steps toward improved teaching and learning. Together, these begot some improvement in student learning and performance, and improved performance inspired the "Wow!" that energized still higher expectations.

In the successful turnaround schools, a parallel combination of tough assertion and strengthened relationships between the leaders and staff on the one hand and students on the other appears to have produced an environment that was substantially more orderly and conducive to learning.

Improved Knowledge and Skills

School leaders' and teachers' knowledge and skills—the "human capital" available to the school—were improved through three main approaches: selectively replacing administrators and teachers, focusing professional development on the school's most pressing problems, and providing sustained follow-through with coaching at both the leadership and instructional levels. The installation of a new principal was generally followed by replacement of a substantial number of teachers—the entire teaching staff in one case, half of the teachers in another, and seldom fewer than a third of the staff. New teachers brought new energy and commitment as well as new talents to the school, but in the short term, personnel replacement sometimes exacerbated mistrust between administrators and staff as well as among teachers themselves. Successful principals devoted substantial time and care to mending these frayed bonds. Especially when teachers who were new to the school were also new to teaching, professional development to strengthen their classroom management skills and knowledge of the North Carolina Standard Course of Study was also necessary to transform the new potential into improved performance. Without this follow-through, personnel replacement is simply another form of turnover.

> **The Turnaround Principal**
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> The common image of a "turnaround principal" is of an energetic, expansive dynamo who shapes up a lagging school by force of personality. But in only one case did a principal conform closely to this image—the principal who swept into the school, tore up the existing Framework for Action, wrote his own, persuaded the School Improvement Team to endorse it, and set about getting it into practice. In general, the principals of improved high schools seemed quieter people, distinguished more by their ability to develop rapport with teachers and students, by their knowledge of instruction, and by an unshowy determination to improve academic performance rather than by an outgoing, expressive personality.

In most of the improved high schools, replacement of a substantial number of teachers came at the same time or soon after a new principal was installed. In a comprehensive urban high school that was divided into a series of smaller schools on the same campus, an entirely new faculty was hired for the most improved of these smaller schools. At one rural high school, half of the faculty was replaced by Teach for America teachers in a single year. In the remainder of the improved schools, the first wave of teacher replacements was not the result of a deliberate policy decision, but a side effect of serious discipline and morale problems, sometimes exacerbated by principals trying to get control of the school and raise scores through stern unilateral action alone.

Coaching from leadership and instructional facilitators complemented personnel replacement as a strategy for building human capital. Leadership facilitators—successful former principals, many with experience in turning around schools themselves—visited the schools weekly. A typical visit involved a brief orienting conversation with the principal, several classroom observations, and participation in a School Improvement Team meeting or a meeting with a small group of teachers and an assistant principal working on some identified problem, such as difficulties in the in-school suspension program or how to improve tutoring arrangements for struggling students. At the end of a day in a school, leadership facilitators usually met again with principals to discuss what they had learned during the day. Leadership facilitators sometimes served as neutral discussion leaders during leadership team and School Improvement Team meetings as well as planning retreats. In addition, they took the initiative to organize special meetings to address problems they had identified. Facilitators' written reports also show them

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Stick with the Plan

Another function served by leadership facilitators was to support follow-through on the schools' Framework for Action plans. As one NCDPI manager put it, "You need to see what is really going on and remind them of the plan. 'We agreed that we would do these three things, and you're getting away from the plan.' You need to remind them on a regular basis… to keep people on track in really low-capacity schools." From the written reports the leadership facilitators filed and the recollections of our interviewees, however, it appears that the facilitators virtually never tried to dictate actions to either principals or others.

"These Teachers Are Killing Your Scores"

In contrast, once they had discussed a problem several times with a principal, NCDPI managers sometimes urged certain actions in a very pointed way, an example being the portfolio manager who told a principal point-blank, "You need to get rid of these teachers. They are killing your scores."

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providing tools such as classroom observation protocols and common lesson planning formats to principals and teachers, modeling the use of the tools in joint instructional monitoring and feedback sessions, then following up by observing and coaching principals and teachers as they used the tools.

Instructional facilitators provided assistance to individual teachers and groups of teachers in their assigned subject areas. Paralleling the experience-based qualifications of leadership facilitators, instructional facilitators were selected for recent experience as successful teachers. Many were National Board Certified. Because resource constraints limited the number of instructional facilitators on staff, instructional facilitators were unable to visit schools as frequently as leadership facilitators—once or twice a month at most, rather than weekly. Reports filed by instructional facilitators also reflect more variation in the frequency of visits across facilitators, schools, and time.

Particularly when working with new teachers, instructional facilitators often focused on the NC Standard Course of Study, breaking it down goal by goal and objective by objective to clarify exactly what teachers should be focusing on. Instructional facilitators taught demonstration lessons, observed as teachers tried the new techniques or materials, and provided a combination of encouragement and corrective feedback. The demonstration lessons and the fact that the instructional facilitators were themselves practicing teachers recently out of the classroom gave them credibility and leverage. Most teachers' comments about instructional facilitators were positive, if general in nature. For example, "They were incredibly helpful on our Framework for Action plan." The main complaints we heard from teachers about instructional facilitators—more at the middle and elementary school levels than the high school level—were about seeing them too seldom. One NCDPI manager conceded that resources were too limited to provide the depth and frequency of instructional facilitation that she thought necessary in the lowest capacity schools.

Structures and Support for Instruction

As important as increased commitment, order, and demands for performance as well as new knowledge and skills were, carefully crafted structures and support for instruction were required to make effective use of the new commitment and skills. Instruction had not been strategically organized or managed in turnaround schools. The improved schools in our sample used a variety of strategies to shepherd individual students through curricular paths matched to their evolving skills and to ensure that students encountered solid teaching and re-teaching along the path to proficiency.

> **Not Forms but Functions**
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> The director of NCDPI's District and School Transformation division emphasized that what was essential to improved performance was not whether a specific model or organizational form is implemented, but that the functions featured in the Framework for Action be implemented. Thus, the Framework for Action called not for a Freshman Academy, but for a "Plan for Ninth Grade Transition." What we learned from our school interviews bore out the wisdom of emphasizing essential functions rather than specific organizational forms.

Improvements included more systematic attention to (1) coordinating curriculum and assigning students and teachers strategically, (2) supervising instruction, building professional community, and using multiple forms of assessment to guide revision of curriculum and teaching as well as to pinpoint the objectives that individual students are having trouble with, and (3) organizing extra assistance for struggling students. One key to improvement was to break down the curriculum into course-sized chunks leading up to as well as through the objectives in the NC Standard Course of Study, then route individual students through the right courses in the right order. The right courses in the right order were those that a given student could handle at each point along the way, provided that s/he gave a solid effort.

> **Supporting Instruction**
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> Having constructed curricular pathways designed for students of varying skill levels and having "hand-scheduled" individual students through them so that they would encounter the most effective teachers available to teach each course, the improved schools in our sample did not then leave teachers on their own to teach as best they could. They took a number of additional steps to ensure that the Standard Course of Study for each course was actually taught, was taught well, and was taught again when necessary. With the support of leadership and instructional facilitators, principals structured and supervised instruction closely, organized teachers into collaborative groups (professional learning communities), and promoted the use of benchmark and formative assessment to check students' learning regularly, to guide assistance for struggling students, and to shore up weak spots in teaching.

External Support

Finally, improved schools also featured stronger links with district central office administrators and with the broader communities served by the schools. For example, districts sometimes took the initiative to replace poor-performing teachers, responded to requests for new funds to staff the extra assistance for students who had been falling behind, and helped principals and teachers create more effective formative assessment programs and interpret data from a variety of sources. School leaders hosted meetings and offered building tours to school boards and county

commissioners, involved parents in major school clean-up efforts, organized mentorship programs in partnership with local businesses, spoke at churches and civic clubs, and used a variety of other devices to improve the school's relationships with the surrounding community.

Conclusion

Partly because our study was retrospective and partly because NCDPI's leadership and instructional facilitators approached their work in a facilitative rather than a directive manner, we found it impossible to determine just how much to credit the facilitators for the progress in improved schools and how much to credit the administrators and staff themselves. In their accounts of the change process, school people naturally featured the actions they themselves had taken— appropriately so, in the sense that it was their actions that directly affected student learning and test performance.

Summing Up

All in all, the NCDPI's Turnaround Schools program appears to have succeeded in providing high-quality assistance to most of the low-achieving schools targeted by the program. When this external assistance was matched by energetic and sustained local leadership, schools succeeded in breaking out of the doldrums of low performance and made significant, measurable progress over a three- or four-year period.

Yet principals and teachers did credit the NCDPI and its partner organizations with important contributions as well. Principals reported that the leadership facilitators helped them stay focused on implementing their Framework for Action plans and provided useful guidance on rebuilding many essential systems. Instructional facilitators' recent classroom experience, competent delivery of demonstration lessons, and concrete advice and feedback gave them credibility with most teachers. But because instructional facilitators visited less frequently than leadership facilitators (once every month or six weeks rather than weekly), they appear to have found it more difficult to develop trusting relationships with some teachers. A few teachers in low-progress schools complained that the instructional facilitators knew too little about them and their schools to advise them appropriately. In general, however, most administrators and teachers offered positive assessments of the leadership and instructional facilitators' assistance, and when they did offer critical feedback, it was mainly to call for more frequent visits from instructional facilitators. For a review of the contrasts between the schools that made substantial progress and those that made little or no progress, see Table 1 (following page).

Since the period covered by this report (2006-2010), the District and School Transformation Division has taken several steps to strengthen their interventions. With assistance from the Boston Consulting Group and Cambridge Education, LLC, an international firm with special expertise in the area, DST has moved to systematize the comprehensive needs assessment process. To ensure better use of the needs assessments, DST has also tightened the links between the needs assessment unit and the school and district facilitators. In addition, school facilitators are now employed directly by NCDPI rather than through a contract with the Leadership Group for the Carolinas. Further, the facilitators now provide professional development as well as coaching. The consolidation of professional development with coaching along with direct employment of the facilitators helps lower costs, but it also poses the challenge of training and

Table 1. Summary of contrasts between high-progress and low-progress or "stuck" schools

School attribute	Improved schools	"Stuck" schools
Focus and continuity	Sustained focus on improving key functions	Profusion of stop-and-start initiatives without continuity or follow-through
Principal replacement and district support	District installation of new instructionally oriented principal committed to reform, with continued district support for assertive accountability	Without strong district support for principal and assertive accountability, continued principal turnover
Teacher replacement	Replacement of ineffective teachers with energetic new teachers committed to turnaround agenda, with district support	Without improved discipline and accountability for student achievement, continued uncontrolled teacher turnover
Accountability and teacher-principal relationships	Principal actively holds teachers accountable for improving student achievement AND builds positive relationships with teachers.	Ineffective leadership, ranging from unilateral demands for improved achievement without relationship building, to nurturing relationships without accountability
Discipline and order	Tough, well-enforced discipline policy combined with strengthened adult-student relationships produce orderly environment for learning.	Without an assertive principal with strong district support, teachers lack incentives and confidence to enforce discipline.
Professional development (PD) and coaching	PD with sustained coaching follow-up at school and classroom levels strengthens principal and teacher skills and knowledge.	Continued turnover undermines the effects of PD and coaching; spottier classroom level coaching
Curriculum coordination and assignment	Strategic, individualized assignment of students to curriculum pathways matching their developing skills and of strongest teachers to End-of-Course curricula	Curricular pathways less carefully constructed, both student and teacher assignment less strategic
Instructional supervision	Frequent classroom observation and feedback from school leaders	Less regular classroom observation, less feedback
Professional community	Time, training, and support for teacher-led collaboration on pacing guides, lesson plans, mutual observation, and use of formative assessment	Less structure and support for a professional learning community (PLC), resulting in less robust implementation of PLCs
Assistance for struggling students	Well-developed tutoring focused with formative assessment results—during, before, and after school	Assistance less organized, not clearly focused with use of formative assessment

managing a number of people who are new to the job. DST has also increased its focus on the district level. District transformation coaches will assist the 16 districts where the majority of low-achieving schools are located. (Funding for 12 districts will be provided by Race to the Top funds. Assistance to the other 4 will come from state funds.) With these changes and some adjustments in the frequency of visits by instructional facilitators, DST seems poised to make a significant contribution to the ambitious improvements sought by the Race to the Top effort. We would caution against expectations for instant improvement, but DST has shown that with persistence and thoughtful adjustments throughout a four-year process, low-achieving schools can indeed turn around.

Appendix H. Executive Summary: *STEM Affinity Networks: Year 1 Report* **(December 2011)**

Introduction and Evaluation Goals

North Carolina's four-year Race to the Top (RttT) grant provides an unprecedented opportunity to further the state's vision for science, technology, engineering, and mathematics (STEM) education and to develop its understanding of what constitutes a successful STEM school. The RttT STEM schools initiative will support two major activities in North Carolina:

- Establishment of four STEM anchor schools (STEM-focused high schools that will serve as regional leaders in STEM education), each of which will be focused on a major area relevant to North Carolina economic development (health and life sciences, biotechnology and agriscience, energy and sustainability, and aerospace); and

- Support for and growth of a broad network of STEM schools across the state, with the anchor schools serving as centers for professional development for principals and teachers in these networked schools.

This report on the first year of the RttT STEM implementation activities provides a descriptive study and documentation of the implementation of the RttT STEM initiative in participating schools. Additionally, it provides formative feedback on the initiative's long-term goals of building articulated and cohesive models of a STEM school and of a network of STEM schools.

The evaluation is guided by the following research question:

To what extent have the following elements of the network of STEM anchor and affinity schools been implemented as intended?

- *A structure for the network of STEM anchor and affinity schools;*

- *Professional development for STEM school teachers and principals;*

- *Curriculum of the STEM schools; and*

- *Partnerships between STEM schools and IHEs, community, and businesses.*

In addition to documenting project activities to date, this report considers whether these activities as implemented are adequate to ensure the intended short-term outcomes.

Data and Methods

The evaluation is being conducted via a mixed methods approach, with an emphasis on qualitative data and analyses and survey data and analyses; secondary data and analyses play a larger role in the baseline report (submitted December 2011) and in the final phase of the evaluation (2014). Qualitative data for this report consist of various project documents collected by the North Carolina New Schools Project (NCNSP), as well as observational and interview data collected by the RttT STEM evaluation team.

Findings and Recommendations

Findings and recommendations are organized in the following sections:

> *Creating an Articulated and Cohesive Model of a Network of STEM Schools*

> *STEM School and Network Model Implementation*

> I.   *Structure of the Network*

> II. *Professional Development*

> III. *Development of Integrated Curriculum with Project Units*

> IV. *Partnerships*

Creating an Articulated and Cohesive Model of a Network of STEM Schools

NCNSP is developing new STEM school and school network models. Creating new models is a complex undertaking that necessarily includes trial and error and refinement of strategies to achieve desired outcomes. The process of refining these models will take a few years.

These new models build on NCNSP's previous success with implementing early college and redesigned school models using NCNSP's Design Principles, and it adds a STEM vision that includes (1) incorporating a STEM theme across all subjects in the school; (2) improving math and science teachers' content knowledge and teaching strategies via extensive professional development; (3) designing and implementing a new project-based STEM curriculum; and (4) becoming a member of a theme-based network of schools, business, and IHE partners. The Design Principles and STEM vision currently are not integrated with each other.

> *Recommendation:*
>
> To address the challenges that schools in the network face in terms of learning about and implementing multiple components of the model, the North Carolina New Schools Project should integrate the six Design Principles with the various components of the STEM vision.

STEM School and Network Model Implementation

Structures for networking, professional development, curriculum development, and partnerships are somewhat on track; however, as with any plan or proposal, implementation requires a substantial amount of real-time development. In particular, the North Carolina Department of Public Instruction (NCDPI) and NCNSP interpreted two elements of the proposal differently: (1) the criteria for identifying network schools, and (2) deliverables for the integrated curriculum with inquiry-based project unit(s). Delays in identifying participating schools and in reaching a shared understanding regarding deliverables for the curriculum development work subsequently have delayed overall implementation.

I. Structure of the Network

School enrollment.

- Three anchor schools had students enrolled in the 2010–11 school year, and the fourth will be opened in 2012–13 school year, as planned.

- There were significant delays in establishing the network of affinity schools due to discrepancies in understandings about school eligibility and criteria for selecting schools to participate. The list of network schools was not finalized until November 2011. These delays affected the effectiveness of the first-year activities and are likely to affect short-term outcomes.

- One of the four anchor schools opened for the 2011-2012 school year, and one will not open until 2012-2013. Therefore, these schools may not be ready to serve as model schools for the first few years of project implementation.

Face-to-face and online networking among schools.

- NCNSP provides many face-to-face networking opportunities for participating schools.

- The online community has four types of networks with varying numbers of participants and intensity of communication: (1) main STEM Affinity Network; (2) theme networks; (3) content networks; and (4) school networks.

- The online networks are used mainly for sharing resources and general information and for announcements. The level of interaction online has been relatively low so far, despite moderators' efforts.

- Participants appreciate networking opportunities and express willingness to collaborate across schools.

Recommendations:

- To reduce potential negative impacts, initiative leads should develop a plan for getting those schools that joined the network late rapidly up-to-speed with respect to implementation of all model components.

- To increase collaboration among schools, NCNSP should consider assigning groups of schools to complete common tasks or projects together.

- Two of the four anchor schools are brand-new schools; NCNSP may want to rethink the role of these anchor schools as role models for other network schools.

- To address the challenges of designing a new, complex model with a number of schools that are either brand-new or new to the network (including two of the four anchor schools), initiative leads may want to consider continued use of the four NC Learning Lab Schools as sites for study visits by teams from network schools until anchor schools demonstrate excellence in implementing the STEM vision.

II. Professional Development

- NCNSP offered 10 formal face-to-face professional development sessions, supplemented by on-site leadership and instructional coaching. The majority of the professional development activities focused on implementing the Design Principles, with an emphasis on using inquiry- and project-based learning to teach math and science content.

- External observers rated the majority of the sessions as accomplishing their goals and as effective or exemplary professional development. An area for improvement that observers identified was the need for additional time and opportunities for participants to reflect on what they had learned and to consider its application in the classroom.

- Participants identified the most significant barriers for implementation as those related to: (1) obtaining buy-in for the work from the different constituencies; and (2) having time for planning and implementation.

- The potential impact of the professional development was reduced by the changes in the list of schools participating in the RttT STEM network.

> *Recommendations:*
>
> - Provide opportunities for schools that joined the network late to catch up via provision of the professional development they will need for successful implementation of the STEM model.
>
> - Provide participants with additional time and opportunities during the professional development sessions to debrief on the activities and discuss how the activities can be implemented in the classroom. It would be particularly useful to help participants explicitly understand the nature of student learning occurring in the activities and how those activities might address (or potentially reinforce if not done well) students' misconceptions about the content.
>
> - Explicitly address concerns about lack of time by providing models of schedules that provide adequate time for collaboration and planning. Additionally, this year, the STEM initiative provided funding for additional planning days in the summer; it might be worthwhile to find additional resources to continue and expand this option.
>
> - To increase buy-in among staff, consider explicit training for leadership teams on creating a common STEM vision for their staff. Part of this involves creating and communicating a well-defined STEM framework with a compelling rationale for its adoption.
>
> - Add STEM themes and new project-based curriculum areas to the coaching report template to help the coaches explicitly focus their work on the STEM vision components.
>
> - To improve the NCNSP's data collection methods, both participant evaluations and event sign-up should be completed online, with all evaluations following a standardized form, designed in conjunction with the evaluation team.

III. Development of Integrated Curriculum with Project Units

- NCNSP conducted a number of activities to support the development of project units: a three-day Summer Project Development Workshop; two days of in-school project development; and a two-day Common Practices Symposium in October 2011.

- Most of the 13 schools that participated in the summer are actively engaged in project development; however, only four of those are on the final STEM school network list. The rest of the schools in the network started their project-related professional development in October.

- School staff working on project design encountered a number of challenges, such as: lack of time to do very time-consuming project design work in addition to teacher workload; effective integration of projects with the regular curricula and creation of meaningful experiences for students; and insufficient resources needed for successful project implementation.

Recommendations:

- Provide more background knowledge to teachers about the STEM themes and the engineering design process prior to their work on projects.

- Conduct theme-related webinars to make learning more accessible for everyone in the school.

- Encourage schools to work collaboratively on fewer projects, so that they can combine their human resources.

- Engage instructional coaches in supporting the project work.

- Reach shared understanding of expectations for the deliverables associated with integrated curricula with inquiry-based project units, to ensure that NCNSP and the network of schools developing these deliverables align resources to meet those expectations.

- Consider more active involvement on the part of IHE and business partners in designing a project-based curricula.

- Explore the possibility of contracting with a few highly skilled teachers to develop model projects for each of the four affinity networks.

- If the goal is to create a curriculum that is to be used by others, do not rely on school staff to do this unless significant resources are made available for this to occur over the summer.

IV. Partnerships

- NCNSP established four Industry Innovation Councils (IIC), one for each affinity network.

- Business and IHE partners started to participate in the network face-to-face events and to provide teachers and principals with their expertise about the network themes.

- Teachers found this sharing of information useful for their STEM-related work in the schools.

Next Steps

In preparation for the next report (December 2012), the Evaluation Team plans to:

- Analyze data collected through the end of the 2011–12 school;

- Continue to analyze project documents received from NCNSP related to all professional development and partners' activities;

- Continue to monitor online and face-to-face networking;

- Collect and analyze any products generated by the project development work of participating schools;

- Conduct site visits in the anchor schools (site visits to network schools will occur in Years 3 and 4);

- Analyze coaches' reports and interview selected instructional and leadership coaches about their work and about the effects on schools of participating in the STEM network;

- Conduct at least one focus group with teachers at one of the professional development or face-to-face networking events in the Spring;

- Conduct observations of Industry Innovation Council meetings and focus groups with business and IHE partners about supports they provide to the networks;

- Investigate RttT-funded NC STEM Collaborative activities; and

- Conduct a quantitative analysis comparing the background characteristics of schools in the network with those of other STEM and non-STEM schools in North Carolina.

Appendix I. Executive Summary: *STEM Affinity Networks: Year 2 Report* **(November 2012)**

Overview of the Evaluation and Progress Made since the Last Report

This second annual report of the RttT STEM implementation activities documents ongoing implementation of RttT STEM initiative in participating schools and assesses intermediate outcomes for students and staff in anchor schools after one year of implementation.

The evaluation is guided by the following two research questions:

1. To what extent have the four key elements of the network of STEM anchor and affinity schools (network structure, professional development, curriculum, and partnerships) been implemented as intended?

2. What are the intermediate outcomes for students and staff in anchor schools after one year of implementation?

In addition, this report notes recommendations from the Year 1 evaluation report that were addressed during the second year of implementation of the initiative. In particular, the implementation team:

- Integrated the six North Carolina New Schools Project (NCNSP) Design Principles with the various components of the STEM vision;

- Provided explicit training for leadership teams on creating a common STEM vision for staff;

- Continued using the four NC Learning Lab Schools as sites for study visits by teams from network schools while eventual anchor schools continued to develop;

- Provided opportunities for schools that joined the network late to catch up via provision of PD necessary for successful implementation of the STEM model;

- Provided more background knowledge to teachers about the STEM themes and the engineering design process prior to their work on projects;

- Engaged instructional coaches in supporting the project work;

- Actively involved IHE and business partners in designing a project-based curriculum;

- Contracted with highly-skilled teachers to develop model projects for each of the four affinity networks; and

- Designed and used a standardized participant evaluation form for evaluations of multiple PD offerings from NCNSP.

Findings and Recommendations

One of the initiative's objectives was to "Work with partners to support the development of a small set of anchor/model STEM high schools that will serve as laboratory schools and sites for professional development around project-based learning." There is definite progress toward this goal, with three of the anchor schools working hard to improve instruction and implement STEM features such as project-based learning, their STEM theme, and additional STEM courses, and also utilizing partnerships for improvement of student learning. The fourth school is welcoming their first students in the 2012–13 school year (with one-year delay). Based on analyses of RttT STEM initiative activities to date, the Evaluation Team concluded that structures for networking, professional development, curriculum development, and partnerships are in place to support both anchor and affinity schools as intended, though some of these activities have been delayed. A summary of findings and recommendations for each of the four areas of implementation strategies and for the intermediate outcomes observed in the three anchor schools are presented here.

I. Structure of the Network of Stem Anchor and Affinity Schools

Baseline characteristics of the RttT-funded STEM schools

- Prior to the initiative's launch, RttT STEM schools offered a lower proportion of advanced STEM courses than did the average high school in the state. In most cases, student achievement in RttT STEM schools was not notably different from all other high schools; however RttT STEM school physical science EOC scores did tend to be higher.

- Since its launch, the RttT STEM initiative has made progress toward its goal of serving minority and poor students, who are traditionally underrepresented in STEM fields. In 2010–11, North Carolina RttT STEM Affinity Network schools served a higher proportion of black and Hispanic students and a higher proportion of students of poverty than did the average high school in the state, hosted the same proportion of female students, and were more likely to be located in an urban area.

- Also, while faculty credentials and experience were similar across RttT STEM Affinity Network schools and all other high schools, per-pupil expenditures for STEM schools typically were slightly higher on average, and school sizes often were smaller.

Face-to-face and online networking

- NCNSP has encouraged and facilitated networking and collaboration by various means, including embedding it in face-to-face PD events, furnishing online collaboration tools, and providing coaching services. Currently, face-to-face meetings have been the most successful networking channels.

- Networking among schools in the STEM network is still in the early stages. Some schools have been networking with other schools outside of the RttT network.

- NCNSP provides multiple opportunities for online collaboration. Edmodo, the original online network for STEM schools, has not been actively used.

Infrastructure developed for schools and their partners to share resources

- As part of the RttT initiative, the NC STEM Learning Network was created and provided a number of services and products, though some of the main products and services have not been finished and require additional sustainable funds to continue in operation.

- There has been little collaboration between the NC STEM Learning Network and the NCNSP STEM network.

Recommendations:

- Leadership coaches should consider making increases in advanced math and science courses a possible emphasis for conversations with administrative teams in RttT STEM schools.

- Implementers should consider various strategies for increasing the appeal of and incentives for visiting a virtual networking hub, including moving some PD elements for content and instruction into the online space, and encouraging instructional and STEM coaches to create online groups for following up on face-to-face visits.

- In order to increase the effectiveness of sharing best STEM practices and resources, the NCNSP Affinity Network and the North Carolina STEM Learning Network should consider a better coordination of their activities. Additionally, creating a central hub (or portal), with access to content resources, professional development, and assessment and lesson planning tools that could serve both networks, might increase the utility and effectiveness of online collaboration for both networks.

II. Professional Development

- Schools are receiving the PD and coaching services outlined in the scope of work.

- Most of the coaching visits to comprehensive schools that joined the network in 2011 happened in 2012, and the number of visits per school was unevenly spread among schools.

- Overall, PD and coaching were seen as valuable and of high quality. Staff at the anchor schools hoped for continuing PD and coaching in the upcoming year.

- Professional development was most appreciated when participants understood its direct application to their classroom.

- The vast majority of coaching time was spent on changing instruction in the classrooms.

- The fact that coaches engaged with schools over an extended period of time gave coaches, teachers, and principals the opportunity to develop trusting relationships that likely increased the coaches' impact.

- Challenges and barriers related to PD included:

  o Sending teams to off-site PD during the school year for schools with small staffs;

  o Balancing the competing demands of different RttT initiatives; and

  o Getting buy-in from teachers around changing instruction.

Recommendations:

- Much of the professional development was perceived by recipients as relevant, but NCNSP may want to explore ways of increasing the relevance of the lowest-rated sessions.

- Because the impact of the coaches increased the longer they worked with teachers, implementers should consider having coaches in larger schools focus initial efforts on working intensively with a sub-set of teachers, instead of working with the entire faculty.

- To better leverage professional development and coaching resources and to create incentives for using online networking, the Implementation Team should consider blended professional development.

III. Development and Implementation of Project-Based Curricula

- A new contract was awarded to the North Carolina School of Science and Mathematics (NCSSM) by NCDPI to design STEM curricula with project units. Between July and August 2012, NCSSM delivered the outlines for all 16 year-long courses and the first units for the four freshman courses in each of the four themes (Aerospace, Security and Automation, Biotechnology and Agriscience, Energy and Sustainability, and Health and Life Sciences).

- NCNSP provided multiple opportunities for teachers to engage in professional development focused on the four themes and on project design and implementation.

- Themes are being incorporated in anchor and affinity schools in a number of different ways, including special sequences of courses on a theme, integrating a theme in all core subjects, and blending two or more courses.

- Three existing anchor schools started to incorporate both cross-curricular projects and projects within individual subjects.

- Scheduling and teacher knowledge on project-based learning (PBL) were identified as challenges for project implementation.

Recommendations:

- The initiative leads should consider identifying additional resources and supplementary funds to support piloting and revisions of and professional development for the 16 year-long STEM courses. NCNSP should consider identifying schools from each of the Affinity Networks that are willing to pilot the courses and provide feedback to the developers. In addition, NCSSM should share the units with Affinity Network schools at scheduled professional development events.

- Based on teacher feedback, incorporation of themes and project design and implementation should be emphasized both in professional development and in resource development efforts.

- Based on principal feedback, the Implementation Team should consider providing schools with tips and examples of schedules that allow for integration of themed and cross-curricular projects in the context of a regular school day.

IV. Partnerships

- Industry Innovation Councils (IICs) for each of the four themes met quarterly to plan and provide support for the networks.

- Industry and IHE partners provided expertise to school staff on themes and on relevance to local community economic development, and they also planned partnership activities with schools.

- NCNSP, with the help of business partners, is developing a sustainable and replicable prototype model partnership to be implemented in the four themed networks.

- Ongoing challenges for schools: building partnerships in rural areas; making partnerships more collaborative and hands-on; and developing teacher content knowledge in the theme and in teaching career-ready skills.

Recommendations:

- The model for partnership building is currently being developed in one of the urban schools; the Implementation Team should consider examining specific issues faced by rural schools.

- There are still a number of questions and issues related to partnerships that anchor schools need to resolve, such as the anchor school's role in providing partners to other schools in the network, or in communicating between schools. The Implementation Team should devote more time both face-to-face and online to the anchors or other groups of schools with common issues and work together to resolve these issues.

V. Intermediate Outcomes for Students and Staff in Anchor Schools

- In all three anchor schools, the initiative remains in the beginning stages of implementation.

- Given the large number of the early college/STEM design features that schools have to implement, the anchor schools each start with different priorities, which are affected by their context and by principals' preferences.

- There is not yet universal buy-in into the STEM initiative among staff in the anchor schools.

- All anchor schools added additional STEM courses, such as engineering, technology, science, and health sciences; some schools are adopting more innovative math and science textbooks.

- Technology is a high-priority area in all three schools, both as a subject of study and as an instructional tool for learning content across subjects.

- Many teachers report that they improved their instruction and implemented instructional strategies emphasized by NCNSP professional development, such as collaboration, classroom talk, inquiry and project-based learning, and higher order questioning.

- Interviews with staff and students indicated that students in anchor schools enjoy personalized attention and exhibit high motivation, engagement, and passion for learning.

- Staff identified a number of challenges to overcome during implementation, such as better defining and understanding the STEM model, improving teacher qualifications, increasing student preparedness, and addressing logistical issues.

Recommendations:

- In acknowledgement of the struggles faced by many participating schools to define what this initiative means for them and how to integrate multiple initiatives from the state, district, and NCNSP, the Implementation Team should consider providing more differentiated help to schools by staggering emphasis on different Design Principles and STEM features, depending on each school's context.

- To help schools faced with logistical issues related to their conversion or start-up, the Implementation Team should create resources and an online blog or discussion devoted specifically to those issues.

- Implementing the STEM initiative's more innovative components such as thematic and cross-curricular projects requires that teachers gain substantial new knowledge about both content and instructional strategies. The Implementation Team should consider differentiating ways of providing professional development devoted to these issues.

Next Steps

- Continue to track changes in the demographic, financial, and academic measures of RttT STEM schools through the administrative data, identify the degree to which any changes are related to efforts connected to RttT, and use this evidence to determine progress toward the stated goals of the North Carolina RttT STEM initiative.

- Continue qualitative data collection and analyses.

- Analyze responses to staff and student surveys that were collected in Spring and Fall of 2012 to provide baseline data.

- Provide a more detailed report about RttT-funded NCSSM curriculum development activities.

Appendix J. Executive Summary: *Local Education Agency Race to the Top Expenditures: An Initial Analysis* **(September 2012)**

In 2010, North Carolina was awarded $399,465,769 from the federal Race to the Top (RttT) competition to fund state and local educational reform. States receiving RttT funds were required to allocate half of the funds to participating local education agencies (LEAs). North Carolina pooled $34,639,376 of locally-allocated funds to provide a computing infrastructure to serve local needs statewide, referred to as the North Carolina Education Cloud. LEAs were required to contribute, on a prorated basis, funds from their local allocations to this project, after which the amount allocated directly to LEAs (including eligible charter schools) was $165,360,624. The purpose of the direct allocation of funds to North Carolina LEAs was to provide them with resources to support statewide RttT initiatives locally and to allow LEAs flexibility in crafting their own plans to achieve the objectives of RttT. LEAs pursued multiple strategies for spending their first year of RttT funds. In 2010-11, LEA RttT expenditures totaled $12,617,032 or approximately $11.92 per pupil.

This report provides an overview of historical levels of educational expenditures in North Carolina as a baseline for future analysis of potential connections between RttT expenditures and outcomes for North Carolina's LEAs and schools. In addition, this report documents the first year of RttT expenditures by LEAs (2010-11). Following regulations from the U.S. Department of Education, the North Carolina Department of Public Instruction (NCDPI) allocated RttT funds for each LEA based on LEA-level Title I allocations for the 2009-10 academic year. Thus, LEAs with higher rates of student poverty were eligible for greater proportional amounts of local RttT funding. LEAs were required to spend RttT funds to develop innovative programs or practices, or to expand or enhance existing innovations that aligned with the goals of RttT. Each LEA and participating charter school submitted plans to NCDPI to substantiate that their expenditures would conform to federal regulations.

This report presents RttT LEA expenditures for 2010-11 in fourteen broad-based expenditure categories that provide information about how the funds were used. The report finds that, even with the RttT supplement, total school-level expenditures per pupil remained reduced relative to previous expenditures due to economic conditions and state budgetary decisions. While 2010-11 school expenditures increased by 1% compared to expenditures in 2009-10, they remained 7% below 2008-09 expenditures.

The two largest categories of LEA RttT spending went directly to the classroom, where teaching and learning takes place: about 64% of all RttT LEA expenditures were for classroom instruction and about 29% were for support for classroom instruction. LEAs were not allowed to budget or expend RttT funds for basic operations (including classroom operations) or to substitute RttT funds for revenues that were reduced due to the economic downturn.

Key Findings

1. In the 2010-11 academic year, North Carolina LEAs spent the largest amount of their total funding on the category of classroom instruction, amounting to $4,514.40 per pupil (45% of the total). Classroom instruction, in this report, refers mainly to salaries and benefits for all classroom instructional staff, including teachers and assistants.

2. Between 2008-09 and 2010-11, total expenditures per pupil in constant dollars declined from $10,706.39 to $9,985.89—a 3.6% annualized decline. Over the same time period, expenditures for classroom instruction declined by $500.63 per pupil—a 5% annualized decline in real terms.

3. Total RttT funds allocated to North Carolina LEAs averages to $35.69 per pupil per year over the four years of the grant. LEAs and charters can spend more or less than this amount annually based on their actual allocations and on their strategic plans as approved by DPI.

4. According to an analysis of their plans, LEAs plan to use the largest proportion of their RttT *funds* (49%) for technology, followed by professional development (21%) and strategic staffing (15%). In terms of planned *activities*, LEAs plan to prioritize RttT funds for professional development (43%) followed by technology (24%) and strategic staffing (20%).

5. According to an analysis of actual expenditures, in 2010-11, regular LEAs spent approximately $12,580,518.67, or $11.92 per pupil in RttT funds. Three expenditure categories comprised the bulk of LEA RttT spending: classroom instruction (64%), support for classroom instruction (29%), and professional development (4%).[12]

6. In 2010-11, 16 charter schools spent approximately $23,536.31, or $83.24 per pupil in RttT funds. Four expenditure categories comprised the bulk of charter school RttT spending: administration (65%), professional development (17%), school leadership (4%), and supplementary classroom instruction (4%).

Recommendations

- Analyses of year-to-year shifts in shares across expenditure categories and funding amounts show a relative decrease in some categories (such as classroom instruction) and a relative increase in other categories (such as supplementary classroom instruction). RttT regulations do not prohibit supplanting of funds. However, the purpose of RttT funding is to provide funding for innovative reform efforts. This clear distinction can become blurred in an era of reduced state and local funding in a state that has designed and implemented numerous educational innovations that pre-exist RttT. This report recommends additional analyses to help determine the extent to which RttT funds either replace lost funding or are directed towards reform-focused innovations.

- In 2010-11 only 33 LEAs reported RttT spending to the school level. In the future, NCDPI should ensure that all RttT funds spent in schools be coded for the specific schools where the funds were spent and ensure that LEAs that report using RttT funds for initiatives based in LEA central offices are indeed doing so.

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[12] The categories in findings 4 and 5 are different because the planning documents and expenditure documents used different classification schemes.

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