Report to the North Carolina General Assembly

Advanced Teaching Roles Pilot Evaluation - Preliminary Report

SL 2016-94 (HB 1030)

Research Organization:

The William and Ida Friday Institute for Educational Innovation
North Carolina State University

Date Due: June 15, 2018
Report # 88
DPI Chronological Schedule, 2017-2018
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Teacher Compensation Models and Advanced Teaching Roles Pilot Programs

Year 1 (2017-18) Preliminary Report

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The William and Ida Friday Institute for Educational Innovation
North Carolina State University

May 2018
A Note on the Timing of this Report

The Friday Institute for Educational Innovation was contracted by the North Carolina Department of Public Instruction to conduct the evaluation of the Teacher Compensation Models and Advanced Teaching Roles Pilots on October 12, 2017. Since the Friday Institute was not able to conduct any work on this evaluation ahead of the awarding of that contract, the Scope of Work did not include completion of a Year 1 preliminary report for Fall 2017. The first four contracted deliverables and/or benchmarks were scheduled for submission between December 2017 and April 2018; the current report is a summary of work completed to meet requirements for those deliverables/benchmarks.
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Executive Summary

Overview

This preliminary report outlines progress made toward the development and execution of the evaluation of the Teacher Compensation Models and Advanced Teaching Roles Pilot Programs created in response to North Carolina General Assembly Session Law 2016-94, Section 8.7. Six Local Education Agency (LEA) proposals were selected by the North Carolina Department of Public Instruction (NCDPI) to participate in the pilot process: Chapel Hill-Carrboro City Schools, Charlotte-Mecklenburg Schools, Edgecombe County Schools, Pitt County Schools, Vance County Schools, and Washington County Schools.

To date, the evaluation team has completed a Year 1 assessment of the status of each pilot’s current implementation and has established a plan for conducting limited quantitative outcomes analyses, given time, data availability, and resource challenges.

Even though the pilots are only loosely similar as a result of the experimental nature of the pilots, the evaluation team worked with representatives at NCDPI to develop an overall logic model to represent NCDPI’s understanding of how the initiative as a whole ideally contributes to intended outcomes. The evaluation team also worked with each participating LEA to construct LEA-level logic models that reflect the planned actions and intents of each pilot.

Targets for Quantitative Evaluation

For initiatives like this one, there is high demand for a defensible, quantitative assessment of its direct impact on teacher and student outcomes. Potential quantitative indicators include cross-year comparisons of:

- Student proficiency (as measured at the subject level by EoG and EoC results and at the school level by overall School Performance Scores);
- Percentage of students performing at grade level in each subject (as measured by subject-level EoG and EoC scores);
- Teacher EVAAS values;
- Teacher retention/attrition figures; and
- Changes in overall school/LEA teacher quality (as measured by years of experience, EVAAS outcomes).

There are, however, at least four factors that significantly limit the scope of a meaningful quantitative analysis: 1) The small number of teachers impacted; 2) the differences across LEA proposals; 3) the lack of randomization in the identification of impacted teachers and students; and 4) the pilot timeline. The evaluation team hosted a quantitative analysis summit in April 2018 with independent experts to discuss reasonable quantitative options for this evaluation, given these limitations. Based on that consultation, the evaluation team developed a plan for the quantitative analysis component of the evaluation that includes the following elements:

The William and Ida Friday Institute for Educational Innovation
1. **A Combined-Data Approach.** Summit participants recommended *cross-LEA combined-data analyses* as the primary analyses. Each LEA’s initiative is different, so this type of quantitative evaluation places the focus on the impact of the *presence* of staffing and compensation flexibility—not on the impact of a specific implementation format.\(^1\)

2. **A School-Level Lens.** Summit participants also recommended focusing on *school-level rather than individual teacher- and student-level outcomes*, for two reasons: 1) the wide array of teacher roles makes analyses at the teacher level less reliable; and 2) the number of teachers impacted in several of the participating LEAs (and thus the number of students) is very low. By measuring the impact of an LEA’s plan on an entire school, rather than on an individual teacher’s or student’s performance, this approach focuses on overall change in school-level culture.

3. **A Focus on Teachers and Teaching as a Career.** Finally, summit participants recommended a focus on *teachers and the teaching career*, rather than on short-term student outcomes, which—as suggested by past research and by the relatively short length of the pilots—are not likely to change significantly as a result of the pilots.\(^2\)

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\(^1\) Based on similarities in their pilot designs, the evaluation team also will attempt to conduct analyses of combined data from a sub-set of LEAs (Edgecombe, Charlotte-Mecklenburg, Pitt, and Vance) in an attempt to provide additional insights about the impacts of one approach to implementation that is being applied across multiple locations. The team will attempt to analyze outcomes for each LEA separately, but only when numbers allow.

\(^2\) Any changes in student outcomes over the course of the pilot period will be noted but are not likely to be firmly attributable to the presence of the pilot programs.
Introduction and Background

Overview

This preliminary report outlines progress made toward the development and execution of the evaluation of the Teacher Compensation Models and Advanced Teaching Roles Pilot Programs created in response to North Carolina General Assembly Session Law 2016-94, Section 8.7.

To date, the evaluation team has completed a Year 1 assessment of the status of each pilot’s current implementation and has established a plan for conducting limited quantitative outcomes analyses, given time, data availability, and resource challenges.

Legislatively-Prescribed Goals for the Pilot Programs

Per Section 8.7(a) of the enacting legislation, the intent of the pilot programs is to:

1. Allow highly effective classroom teachers to teach an increased number of students by assuming accountability for additional students, by becoming a lead classroom teacher accountable for the student performance of all of the students taught by teachers on that lead classroom teacher’s team, or by leading a larger effort in the school to implement new instructional models to improve school-wide performance.
2. Enable local school administrative units to provide salary supplements to classroom teachers in advanced teaching roles. Selection of an advanced teaching role classroom teacher and award of related salary supplements shall be made on the basis of demonstrated effectiveness and additional responsibilities.
3. Enable local school administrative units to create innovative compensation models that focus on classroom teacher professional growth and student outcomes.
4. Utilize local plans to establish organizational changes related to compensation in order to sustain evidenced-based teaching practices that have the capacity to be replicated throughout the State.

Participation and Support

The legislation outlines a plan that includes implementation of three-year pilots, to begin with the 2017-18 school year and conclude with the 2019-20 school year. Six Local Education Agency (LEA) proposals were selected by the North Carolina Department of Public Instruction (NCDPI): Chapel Hill-Carrboro City Schools, Charlotte-Mecklenburg Schools, Edgecombe County Schools, Pitt County Schools, Vance County Schools, and Washington County Schools.

The initial allocation for the 2017-18 fiscal year was $7,180,000, with an additional $3 million ($1 million recurring for three years, 2017-18 through 2019-20) distributed among the three largest LEAs each year of the pilot. The total appropriations for the three-year pilot program are

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3 Twelve LEAs submitted proposals, all of which can be found here: http://www.ncpublicschools.org/district-humanresources/
$10,180,000. The disbursement of funds across the six accepted pilot programs is detailed in Table 1.

Table 1. Distribution of State-Provided Funding for Pilots

<table>
<thead>
<tr>
<th>LEA</th>
<th>Total Project Budget</th>
<th>Recommended Funding</th>
<th>Annual Recurring Funding</th>
<th>Total Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlotte-Meck.</td>
<td>$2,645,131</td>
<td>$1,947,995</td>
<td>$257,477</td>
<td>$2,645,131</td>
</tr>
<tr>
<td>Pitt</td>
<td>$4,810,169</td>
<td>$2,161,613</td>
<td>$492,596</td>
<td>$3,689,352</td>
</tr>
<tr>
<td>Chapel Hill-Carrboro</td>
<td>$2,258,952</td>
<td>$1,096,732</td>
<td>$249,927</td>
<td>$1,871,857</td>
</tr>
<tr>
<td>Vance</td>
<td>$898,000</td>
<td>$898,000</td>
<td>NA</td>
<td>$898,000</td>
</tr>
<tr>
<td>Edgecombe</td>
<td>$1,002,210</td>
<td>$943,480</td>
<td>NA</td>
<td>$943,480</td>
</tr>
<tr>
<td>Washington</td>
<td>$132,180</td>
<td>$132,180</td>
<td>NA</td>
<td>$132,180</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$11,746,642</strong></td>
<td><strong>$7,180,000</strong></td>
<td><strong>$1,000,000</strong></td>
<td><strong>$10,180,000</strong></td>
</tr>
</tbody>
</table>

4 Contingent upon $1 million recurring budget appropriations through the 2019-2020 fiscal year.
## Revised List of Evaluation Questions and Data Sources

The evaluation questions that guide the evaluation (Table 2) correspond to questions posed in the authorizing legislation, as well as questions of interest to the implementing agency (NCDPI). The list of evaluation questions has been revised and re-organized from the draft list presented in the evaluation team’s original proposal to better reflect information collected about each LEA’s pilot program as a result of the first stages of the evaluation work. The list also now includes the measurable outcomes and indicators associated with each evaluation question.

### Table 2. Evaluation Questions and Proposed Data Source(s)

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Measurable Outcome</th>
<th>Indicator</th>
<th>Data Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Q1. Do advanced teaching roles improve the quality of classroom instruction?</strong></td>
<td>Students exhibit increased interest and engagement in class.</td>
<td>Students report increased interest in class</td>
<td>Survey, Interview/Focus Group</td>
</tr>
<tr>
<td>[NCGA]</td>
<td>Students demonstrate greater academic growth relative to pre-initiative period.</td>
<td>Teachers report increased student engagement</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teachers exhibit more VA growth than a) teachers at other matched local (same-district) or nearby (comparable neighbor district) schools and b) statewide growth averages.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[NCGA]</td>
<td>Student proficiency</td>
<td>EVAAS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>School performance score</td>
<td>Rubric-based observation data (collected by LEAs); teacher and principal focus groups and/or surveys</td>
</tr>
<tr>
<td></td>
<td></td>
<td>School percentage of students performing at grade level in each subject</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Changes in teacher EVAAS</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Students exhibit increased interest and engagement in class.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Students report increased interest in class</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teachers report increased student engagement</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Q2. Do advanced teaching roles increase school-wide student growth?</strong></td>
<td>Students demonstrate greater academic growth relative to pre-initiative period.</td>
<td>Within-school, cross-year comparisons of:</td>
<td>North Carolina administrative Data</td>
</tr>
<tr>
<td>[NCGA]</td>
<td>Students exhibit more growth than a) students at other matched local (same-district) or nearby (comparable neighbor district) schools and b) statewide growth averages.</td>
<td>- Student growth</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- School growth score</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- School report card grade</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Student growth measured against students in matched schools in the LEA or region</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Student growth measured against all other schools statewide</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>

5 **Note:** The evaluation team also will attempt to measure lead teacher and non-lead teacher performance changes separately, to determine changes in either group (as opposed to just changes in the overall group), as time, data, and funding allow.
<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Measurable Outcome</th>
<th>Indicator</th>
<th>Data Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Q3. Do advanced teaching roles and/or related local-level salary supplements, either collectively or individually, increase attractiveness of the teaching profession? [NCGA]</strong></td>
<td>Teachers apply for and fill advanced roles</td>
<td>Teacher application and recruitment figures</td>
<td>Extant administrative data New teacher surveys and focus groups; teacher preparation program surveys</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teachers attribute attractiveness of the teaching profession (in part or in whole) to initiative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lead teachers remain in advanced roles</td>
<td>Lead Teacher retention /attrition figures</td>
<td>Extant administrative data Teacher and principal focus groups and/or surveys</td>
</tr>
<tr>
<td><strong>Q4. Do the pilot programs provide recognition to high-quality classroom teachers? [NCGA]</strong></td>
<td>Schools/LEAs provide role-based incentives for lead teachers</td>
<td>Program incentives • Financial • Job-related (e.g., mentoring, PD facilitator, etc.)</td>
<td>Pilot program theories of action/logic models/incentive schedules Teacher and principal focus groups and/or surveys</td>
</tr>
<tr>
<td></td>
<td>Schools/LEAs recruit and hire/reassign high-quality teachers for advanced roles</td>
<td>Initiative recruitment/ recognition plan • Lead teacher recruitment/candidate pool quality measures (e.g., GPA, years of experience, prior EVAAS scores, etc.) compared to other teachers in school/LEA</td>
<td>Logic models Extant administrative data Teacher and principal focus groups and/or surveys</td>
</tr>
<tr>
<td><strong>Q5. Do the pilot programs support retention of high-quality classroom teachers? [NCGA]</strong></td>
<td>Programs sustain advanced positions</td>
<td>Program funding allocation and sustainability plans • Number and type of advanced roles available to teachers each year</td>
<td>Pilot program theories of action/logic models Extant administrative data Teacher and principal focus groups and/or surveys</td>
</tr>
<tr>
<td></td>
<td>Overall increase in high-quality teachers at school/LEA level</td>
<td>Change in overall school/LEA teacher quality (as measured by years of experience, EVAAS outcomes) over time</td>
<td>Extant administrative data</td>
</tr>
</tbody>
</table>
## Evaluation Question

<table>
<thead>
<tr>
<th><strong>Q6. Do the pilot programs provide assistance to and support retention of beginning classroom teachers? [NCGA]</strong></th>
<th><strong>Measurable Outcome</strong></th>
<th><strong>Indicator</strong></th>
<th><strong>Data Sources</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead teachers support new/beginning teachers (e.g., mentor, planning, model strategies, etc.)</td>
<td>Lead teachers/administrators report provision of support to new teachers</td>
<td>Pilot program theories of action/logic models</td>
<td>Extant administrative data, Teacher and principal focus groups and/or surveys</td>
</tr>
<tr>
<td>New/beginning teachers remain in pilot school/LEA</td>
<td>New teachers report receiving adequate support from lead teachers</td>
<td>Extant administrative data, Teacher and principal focus groups and/or surveys</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lead teacher evaluations identify practices/actions that support beginning teachers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>New teachers indicate a desire to continue teaching (short and/or long term)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Q7. In what other ways do these pilot programs impact high-quality experienced classroom teachers? [NCGA]</strong></th>
<th><strong>Measurable Outcome</strong></th>
<th><strong>Indicator</strong></th>
<th><strong>Data Sources</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Other unanticipated/untracked program impacts (direct and indirect)</td>
<td>Teacher perceptions of impact related to the program</td>
<td>Teacher and principal focus groups and/or surveys</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Principal perceptions of impact related to the program</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Q8. What do the proposed pilot programs have in common? What are each pilot program’s unique components?</strong></th>
<th><strong>Measurable Outcome</strong></th>
<th><strong>Indicator</strong></th>
<th><strong>Data Sources</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Participating LEAs and evaluation team complete state-level and program-specific logic models</td>
<td>Descriptions of program models, intended impact, and fidelity of implementation; Unique program elements highlighted</td>
<td>Pilot program theories of action/logic models; descriptions of similar or related prior initiatives</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Q9. As measured by the quantitative and qualitative outcomes of interest described above, which pilot program or programs appear to be the most successful?</strong></th>
<th><strong>Measurable Outcome</strong></th>
<th><strong>Indicator</strong></th>
<th><strong>Data Sources</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurable outcomes for Q1 through Q7 -- individually or collectively -- indicate successful outcomes for a specific pilot model or models</td>
<td>Comparative assessment of qualitative and quantitative results for Q1 through Q7</td>
<td>All data gathered and results generated for evaluation questions described above</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Q10. Which pilot programs appear to be most scalable? What resources would the state need to commit in order to successfully scale them?</strong></th>
<th><strong>Measurable Outcome</strong></th>
<th><strong>Indicator</strong></th>
<th><strong>Data Sources</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Program sustainability measured by cost (and availability) of resources to maintain roles and salary supplements</td>
<td>LEA projections for fiscal sustainability after pilot period (cost)</td>
<td>Extant state and local fiscal data</td>
<td></td>
</tr>
</tbody>
</table>

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6 A rigorous benefits-costs analysis or cost-effectiveness analysis is not feasible on the current pilot timeline and evaluation budget
<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Measurable Outcome</th>
<th>Indicator</th>
<th>Data Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>more of the pilot programs?</td>
<td>Individual successful program components identified for Q9 show evidence of scalability to other LEAs</td>
<td>Pilot program components are not place-dependent (i.e., they do not require locale-specific inputs, can be adapted across LEA contexts) (flexibility)</td>
<td>All data gathered and results generated for Q1 through Q9 Extant state and local fiscal data</td>
</tr>
<tr>
<td></td>
<td>Overall successful pilot program(s) identified for Q9 show evidence of scalability to other LEAs</td>
<td>Via survey and focus groups, implementers indicate ease of implementation (minimum LEA capacity requirements)</td>
<td></td>
</tr>
<tr>
<td>Q11. What are the costs and benefits associated with establishing advanced teaching roles? To what extent does the return on investment in establishing new compensation models that correspond with these roles (as measured by the outcomes of interest described above) justify the investment?</td>
<td>Teachers and administrators express support for continuing the pilot</td>
<td>Trends in teacher survey responses over pilot period Trends in administrator survey responses over pilot period Trends in teacher focus group responses over pilot period Trends in administrator focus group responses over pilot period</td>
<td>All data gathered and results generated for evaluation questions described above</td>
</tr>
</tbody>
</table>
Evaluation Schedule

**Year 1 (November 2017-June 2018) – Planning and Baseline Data Collection**

- Work with NCDPI to establish an initiative-level logic model, as well as working definitions for key terms (e.g., “high-quality teacher” and “experienced teacher”)
- Work with each participating LEA to establish an LEA-specific logic model for each pilot program that identifies how the pilot program is designed to meet the legislative intentions outlined above, as well as how the LEA thinks the pilot program will address LEA goals and intentions
  - Develop objective descriptions of each pilot program
  - Identify commonalities across programs with the potential to allow for larger-scale (cross-LEA) quantitative analyses
- Identify examples of similar programs in other North Carolina LEAs (and possibly nationally as well), both current and historical
- If possible (depending on pilot program structures), identify potential comparison schools and LEAs
- Develop all instruments for the evaluation (focus group protocols, surveys)
  - Via survey and focus groups, conduct initial qualitative data collection rounds in each LEA and at each licensure program in the state (to determine perceptions of pilot program appeal among beginning teachers)
- Determine feasibility for any rigorous quantitative outcomes studies; feasibility will depend on: a) numbers of teachers, students impacted by the initiatives; b) similarities of initiatives across LEAs (to increase numbers available for analyses); and/or c) absence of similar initiatives in LEAs before introduction of current pilots

**Year 2 (July 2018-June 2019) – Review of Implementation and Early Results**

- Continue carry-over work from Year One (quantitative and qualitative data collection)
- Assess Program components (recruitment, selection, program content, program delivery, etc.)
- Begin recording beginning teacher and experienced teacher retention rates
- Begin comparing historical and current teacher vacancy application rates in participating LEAs and in nearest-neighbor LEAs
- Analyze short-term (one years out) qualitative outcomes for participating teachers, schools, and students
- Retrieve, prepare, and analyze administrative and accounting data for first year of implementation (anticipated initial data availability: November 2018) for use in quantitative analysis
Year 3 (July 2019-June 2020) – Mid-Pilot Results and Initial Recommendations

- Continue work from Year Two (quantitative and qualitative data collection; formative program assessment)
- Analyze and interpret mid-term (two years out) qualitative outcomes for participating teachers, schools, and students
- To the extent possible, analyze and interpret final year (three years out) qualitative data
- Estimate costs for and feasibility of scaling the pilots that appear to be experiencing the most success
- Retrieve, prepare, and analyze data for second year of implementation (anticipated initial data availability: November 2019)
- Conduct quantitative data analyses for SY 2017-18 and 2018-19 for inclusion alongside qualitative data analyses

Projected Deliverables

Table 3 outlines the projected deliverables for this evaluation, as well as the evaluation question(s) each will answer and the estimated delivery date.

Table 3. Evaluation Deliverables

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Anticipated Evaluation Question(s) Addressed</th>
<th>Estimated Delivery Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updated evaluation plan – including presentation to State Board of Education</td>
<td>N/A</td>
<td>December 2017 (summarized in this report)</td>
</tr>
<tr>
<td>Initial overall state logic model</td>
<td>Will inform EQ 4, 6, and 8</td>
<td>February 2018 (summarized in this report)</td>
</tr>
<tr>
<td>Initial individual local logic models</td>
<td>Will inform EQ 4, 6, and 8</td>
<td></td>
</tr>
<tr>
<td>Data collection instruments (surveys, focus group protocols)</td>
<td>Will inform EQ 1, and 3 through 11</td>
<td></td>
</tr>
<tr>
<td>Brief: Formal preliminary assessment of quantitative evaluation possibilities</td>
<td>EQ 2, 5, and 6</td>
<td>April-May 2018 (summarized in this report)</td>
</tr>
<tr>
<td>Initial formative evaluation report for State Board</td>
<td>EQ 1, and 3 through 9</td>
<td>October 2018</td>
</tr>
<tr>
<td>Initial quantitative outcomes report for State Board</td>
<td>EQ 2, 5, and 6</td>
<td>March 2019</td>
</tr>
</tbody>
</table>

7 Note: Because funding for the evaluation ends in June 2020, the evaluation team will be able to analyze only some of the Year 3 qualitative data (data collected by or before February 2020).
8 Note: Funding for the evaluation ends before data for quantitative analyses of Year 3 will be available (November 2020).
<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Anticipated Evaluation Question(s) Addressed</th>
<th>Estimated Delivery Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second formative evaluation report for State Board</td>
<td>EQ 1, and 3 through 9</td>
<td>October 2019</td>
</tr>
<tr>
<td>Two-year qualitative and quantitative findings report for State Board (includes identification of most promising pilots, plus estimates of costs to scale those pilots)</td>
<td>All EQs</td>
<td>May-June 2020</td>
</tr>
</tbody>
</table>
Evaluation Update: Prospects for Quantitative Estimations of Pilot Program Impacts

Because most of the pilot programs are in their first year of operation, the evaluation team anticipates that there will be changes in implementation between this year and next that will impact the final form of each pilot. Therefore, the evaluation team will delay presentation of in-depth descriptions of each pilot program until the initial formative evaluation report (October 2018). In the meantime, we present here information about the emerging similarities and differences across pilots and how they inform the quantitative components of the evaluation plan.

Similarities and Differences across Pilot Programs

Even though the pilots are only loosely similar as a result of the experimental nature of the pilots, the evaluation team worked with representatives at NCDPI to develop an overall logic model to represent NCDPI’s understanding of how the initiative as a whole ideally contributes to intended outcomes. The evaluation team also worked with each participating LEA to construct LEA-level logic models that reflect the planned actions and intents of each pilot.

All logic models are included in Appendix A. They aided in the development of data collection tools for the evaluation—including development of the quantitative models used to estimate numerically measurable impacts of the pilots. In addition, they also informed the development of a matrix that summarizes the major points of comparison across programs (Table 4).

Table 4. Common Pilot Program Features

<table>
<thead>
<tr>
<th>Components</th>
<th>CHCCS</th>
<th>CMS</th>
<th>Edgecombe</th>
<th>Pitt</th>
<th>Vance</th>
<th>Washington</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional devel.</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Variable class sizes</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Teacher teams</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

**Teacher-Leader Roles**

9 Roles are not the same as position titles; the roles in this table are those identified by the evaluation team as being covered by one or more positions across LEAs plans—regardless of an LEA’s title for the person who takes on a given role. Corresponding positions in each LEA are identified in footnotes.

10 CHCCS=PD Facilitator; Pitt=Facilitating, Multi-Classroom Teacher; WCS=Master Teacher

11 CMS=Multi-Classroom Teacher; ECPS=Expanded Impact Teacher, Multi-Classroom Teacher; Pitt=Facilitating, Multi-Classroom Teacher; VCS=Multi-Classroom Teacher; WCS=Master Teacher;

12 ECPS=Expanded Impact Teacher, Multi-Classroom Teacher, Reach Associate; CMS=Multi-Classroom Teacher, Reach Teachers; Pitt=Facilitating, Multi-Classroom Teacher; VCS=Expanded Impact Teacher, Multi-Classroom Teacher, Reach Associate

13 CHCCS=Mentor Teacher

14 CMS, ECPS, Pitt, VCS=Multi-Classroom Teachers
As indicated by the table and the logic models, there are differences in each LEA’s implementation (as would be expected with independently-conceptualized and -run pilots); however, several of the pilots share at least a few components and roles in common (though sometimes only in nominal ways; differences exist in each LEA’s implementation of each component and role)—in part because three LEAs are working with or have worked with a common third-party support provider. These commonalities are important to keep in mind when reviewing the planned quantitative component of the evaluation.

**Quantitative Analysis Projections**

**Targets for Quantitative Evaluation**

For initiatives like this one, there is high demand for a defensible, quantitative assessment of the direct impact of the initiative on teacher and student outcomes. As indicated in Table 2 (above), there are several evaluation questions that would benefit from quantitative analyses alongside the qualitative components of the evaluation; those questions and their relevant quantitative indicators are revisited in Table 5.

**Table 5. Non-Financial Evaluation Questions with Potential Quantitative Analysis Components**

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Quantitatively Measurable Outcome</th>
<th>Quantitative Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Q1. Do advanced teaching roles improve the quality of classroom instruction?</strong></td>
<td>Teachers demonstrate quality classroom instruction. Teachers exhibit more VA growth than a) teachers at other matched local (same-district) or nearby (comparable neighbor district) schools and b) statewide growth averages.</td>
<td>Student proficiency (EoG, EoC) School performance score (80% achievement; 20% growth) School percentage of students performing at grade level in each subject (EoG, EoC) Teacher EVAAS</td>
</tr>
</tbody>
</table>
| **Q2. Do advanced teaching roles increase school-wide student growth?** | Students demonstrate greater academic growth relative to pre-initiative period. Students exhibit more growth than a) students at other matched local (same-district) or nearby (comparable neighbor district) schools and b) statewide growth averages. | Within-school, cross-year comparisons of:  
  - Student growth  
  - School growth score  
  - School report card grade  
 Student growth measured against students in matched schools in the LEA or region  
 Student growth measured against all other schools statewide                                                                                                                     |
### Evaluation Question

<table>
<thead>
<tr>
<th>Evaluation Question</th>
<th>Quantitatively Measurable Outcome</th>
<th>Quantitative Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Q3. Do advanced teaching roles and/or related local-level salary supplements, either collectively or individually, increase attractiveness of the teaching profession?</em></td>
<td>Lead teachers remain in advanced roles</td>
<td>Lead Teacher retention/attrition figures</td>
</tr>
<tr>
<td><em>Q5. Do the pilot programs support retention of high-quality classroom teachers?</em></td>
<td>Overall increase in high-quality teachers at school/LEA level</td>
<td>Change in overall school/LEA teacher quality (as measured by years of experience, EVAAS outcomes) over time</td>
</tr>
</tbody>
</table>

### Limitations to Quantitative Analysis Options

A key purpose of the overall evaluation is to attempt to analyze as many of these quantitatively-measurable outcomes as is feasible. There are however, at least four factors that significantly limit the development of a meaningful quantitative analysis strategy: 1) The small number of teachers impacted; 2) the differences across LEA proposals; 3) the lack of randomization in the identification of impacted teachers and students; and 4) the pilot timeline.

1. **Size of Impacted Teacher Population**

   The evaluation can report raw changes in teacher behavior (e.g., attrition rates) and teacher quality (e.g., via formal teacher evaluations), but, without sufficient numbers of impacted teachers, these measures may not be suitable for rigorous statistical analysis. This problem is confounded by the second issue.

2. **Differences across LEA Proposals**

   As indicated by each pilot program’s logic model (Appendix A) and the table of common program features across LEAs (Table 4), each pilot program is different from the others in certain ways, and many are very different—enough so that combining data from multiple pilots (allowing for stronger analyses of impacts on larger groups of participants and impacted students) in order to overcome the first limitation must be done with caution and with a full explanation of the caveats that apply to all results.

3. **Randomization**

   Very often, programs like these pilots depend upon either teacher participant volunteers or teacher assignment to program participation based on one or more preconditions, or both. In most cases, students are not randomly assigned to the teachers who participate. None of these factors prevents evaluators from determining statistically significant correlations between program initiative components and certain outcomes, but all of them do prevent evaluators from determining causation.
4. **Lifespan of the Pilots**

Finally, at its heart, a differentiated pay/advanced roles plan, no matter how it is implemented, is about changing school culture for the long term. The evaluation team knows from studies of the impact of changing even just one school culture variable (for example, changing principal leadership) that schools often experience a regression in outcomes for at least a year before even highly successful program begin to show positive results. The evaluation of the state’s statewide and local Race to the Top experiments with strategic staffing (2010-2014) also suggested that fully-realized impacts of an advanced teacher roles plan often will not materialize for several school years, after preliminary impacts on school culture and teacher turnover have paved the way for later impacts on student performance (a top-level Theory of Change produced as part of this work is included in Appendix B). With only a three-year window of implementation, it will be challenging to detect the potential full effects of any of these pilots, and it is not inconceivable that the initial short-term results will be negative, even if the longer-term prospects are potentially positive.

**Plans for Quantitative Analyses**

Given the limitations described above, as well as the limits imposed by the evaluation budget, and with acknowledgement of the Theory of Change suggested by the evaluation team’s work on similar programs during the state’s Race to the Top period, the team hosted a quantitative analysis summit in April 2018 with independent experts to discuss reasonable quantitative options for this evaluation. Based on that consultation, we developed the following plan for the quantitative analysis component of the evaluation.

**A Combined-Data Approach.** With acknowledgement of the caveats above, summit participants recommended **cross-LEA combined-data analyses** as the primary analyses. As noted above in the list of limitations, each LEA’s initiative is different, so this type of quantitative evaluation places the focus on the impact of the presence of staffing and compensation flexibility—not on the impact of a specific implementation format.

To partially compensate for that, based on the similarities of their programs as indicated by Table 4, we also will attempt to conduct analyses of combined data from Edgecombe, Charlotte-Mecklenburg, Pitt, and Vance only. Doing so may provide additional insights about the impacts of one approach to implementation that is being applied in similar ways across multiple locations.16

Finally, we will attempt to analyze outcomes for each LEA separately, but only when numbers allow. Because of the low numbers of teachers and students impacted in some LEAs, these analyses may be possible only for some outcomes in Chapel Hill-Carrboro, Charlotte-Mecklenburg, and Pitt. In all cases in which we conduct LEA-level analyses, we will include qualitative data and findings for context.

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16 Because of the major differences between Chapel Hill-Carrboro’s program and the programs in the five other LEAs (e.g., the Chapel Hill-Carrboro program is the only pilot program that does not include school-based leadership roles; to be explored in greater detail in the October 2018 report), the evaluation team also may run separate analyses that exclude only Chapel Hill-Carrboro data.
A School-Level Lens. Summit participants also recommended focusing on school-level rather than individual teacher- and student-level outcomes, for two reasons: 1) the wide array of teacher roles makes analyses at the teacher level less reliable; and 2) the number of teachers impacted in several of the participating LEAs (and thus the number of students) is very low. In keeping with the idea of whole-school cultural change, this approach focuses on the impact of an LEA’s plan on an entire school, rather than on its impact on an individual teacher’s or student’s performance. Indicators to be measured at the school level are outlined in the Quantitative Indicator column in Table 5 (above).

In the case of one participating LEA (Pitt County), the evaluation team may be able to conduct school-level quantitative analysis of the same indicators that compare impacted versus non-impacted schools within an LEA. In all other cases, the team will analyze quantitative differences between matched schools in similar participating and non-participating districts. Some factors that may aid in the matching process include historical and current Teacher Working Conditions survey results, student proficiency and growth results, school size, school location, and school demographics.

A Focus on Teachers and Teaching as a Career. Finally, summit participants recommended a focus on teachers and the teaching career, rather than on short-term student outcomes, which—as suggested by the Theory of Change model and by the relatively short length of the pilots—are not likely to change significantly as a result of the pilots (any changes in student outcomes over the course of the pilot period will be noted but are not likely to be firmly attributable to the presence of the pilot programs). When available, we will rely on EVAAS value-added scores to control for some of the challenges posed by each LEA’s different approaches to teacher selection.

In addition, to gauge the overall appeal of career ladder programs to young professionals, the evaluation team will investigate the possibility of asking teacher licensure candidates in colleges of education to review short descriptions of each program (with a focus on role/position descriptions and salary/bonus schedules) and assess their relative appeal.

17 Charlotte-Mecklenburg’s long history with differentiated pay and strategic staffing models may make it difficult to find appropriate comparison schools within the LEA that have not been impacted by similar models in the recent past.
Appendix A. State-Level and LEA-Level Logic Models

**State-Level**

**Mission & Vision:**
*A high-quality teacher for every child*

North Carolina will provide opportunities for teachers to both stay in teaching and advance professionally.

North Carolina will retain its best teachers in classroom settings by expanding opportunities for good teachers to provide leadership in the classroom for all other teachers.

In so doing, North Carolina will increase teaching quality across the board for all students by diffusing the best teaching practices to all teachers.

**The results:**
1. Every child in NC has access to a great teacher.
2. The teaching profession is elevated by giving teachers ways to pursue career growth through leadership opportunities within the context of teaching.
3. Teacher leaders are recognized for their leadership and for their demonstrated talent.

**Inputs**
- LEA plan
- Third-party support (e.g., Public Impact, NLNS, BEST NC, etc.)
- State support (DPI teacher leadership consultant)

**Outputs**
- Critical mass of participants in each LEA, and in every participating school
- (State) Teacher-leaders identified ("recognition" of high-quality teachers)
- Teacher-leaders fill all identified advanced teaching roles
- (State) Teacher-leaders assume accountability for student performance and teacher teams
- (State) Teacher-leaders lead target number of teachers
- (State) Teacher-leaders reach target number of students

**Outcomes**
- Shorter-Term Outcomes
  - LEA-identified sustainability models for their plans
  - Match between identified teachers and available roles
  - Discrete growth among teacher-leaders along state’s 5 research-based trajectories identified with teacher leadership
  - (State - short-term) Impact of high-quality teachers

- Longer-Term Outcomes
  - Scalability and sustainability of "winning" plans
  - Provision of leadership by teacher-leaders for other teachers (holistic growth across 5 domains)
  - (State) Increase in the attractiveness of teaching
  - Student awareness of positive changes in instruction and school culture
  - (State - long-term) Impact of high-quality teachers

**Goals/Impact**
- School culture is redesigned, reflected in changes in leadership roles such that schools become more efficient, nimble, and, ultimately, effective
- Growth in public perceptions of teaching as a meaningful profession
- Teacher evaluation is organic, authentic, meaningful, and learning-focused
- Equitable access to high-quality teaching for all publicly-educated kids
- Stronger leadership for lowest-performing schools
- State fiscal support for local plans
- School stability

The William and Ida Friday Institute for Educational Innovation
Chapel Hill-Carrboro

Resources
- Executive Director of Professional Learning (in LEA) and Project ADVANCE (filled 2018)
- District Coordinator of Professional Learning
- Project ADVANCE implementation team

Activities
- Establish ADVANCE model w/ 4 levels of advancement
  1. Learn
  2. Grow
  3. Impact
  4. Inspire
- Identify Professional Learning Course developers and facilitators
- Design and implement PD & professional learning coursework around 4 core competency areas
  - Data Literacy
  - Instruction
  - Content Knowledge
  - Engaging with Diverse Populations
- Develop plan for financial sustainability
- Board approval for blending new and old pay structures
- Develop communication & community outreach plan
- Design & Implement evaluation plan

Outputs
- All teachers participate in professional learning courses
- All teachers complete PD to advance levels
- PD tracked via digital badge or micro-credentialing

Outcomes
- Short Term
  - Teachers build core professional competence: 95% of eligible staff will be engaging during Year 1.
- Long Term
  - Teachers advance through the levels for career advancement
  - Teachers demonstrate mastery of new skills; 75% of eligible staff will complete all three Project ADVANCE courses; at least one of which will be an Instructional Planning course by end of Year 2.

Goals/Impact
- Model for career and financial advancement based on instructional excellence and professional growth
- Increased achievement for all students: decrease in achievement gaps (proficiency, growth, discipline) Reduce non-proficiency in all sub-groups by 5% in five years
- Greater impact on students academic growth with specific goals driven by new district strategic plan
- Create new systems and practices that will sustain effective PD and proven research based practices
**Charlotte-Mecklenburg**

### Resources
- Success by Design strategic program (phase I)
- Compensation model
- Advanced teaching roles (MC, E, MCT, MRT, SB, RTF)
- Risk Foundation (financial support)
- Educational Resource Strategies (ERS) support
- Public Impact support for Opportunity Culture components
- Project L.I.F.T.
- Public Impact support for Opportunity Culture components

### Activities
- Establish teacher recruitment talent pool screening process
- Develop/Implement communication strategy
- F3 Design Sessions
- Develop evaluation process for re-qualifying teacher leaders (comm. every 2 yrs, headed toward every 3 yrs).
- NC teacher leadership (specialist status - for MCLs)
- NC teacher evaluation (specialist status - for RTF, SB, MRT)
- Establish differentiated PD model/activities
- NC teacher leadership specialist status (for MCLs)
- NC teacher evaluation specialist (for RTF, SB, MRT)
- Implement program evaluation process

### Outputs
- Lead teachers identified
- Multi-Classroom Teacher 1 - coaches 2-3 teachers & 2 coaches up to 7
- Master Teacher Team: Senior Teacher Team: Teacher-at-Large: Teacher
- NC teacher leadership specialist status (for MCLs)
- Implement program evaluation process
- # schools participating Y1: 35 Y2: 31 Y3: TBD
- # teachers participating Y1: 107 Y2: TBD Y3: TBD
- Establish program evaluation process
- Process & Outcome monitoring
- End-of-Year test
- Post-data analysis

### Outcomes
- **Short Term**
  - 1. Improvement in school culture
  - 2. Teacher growth (as measured by EVAS and evaluations)
  - 3. Student growth (largely EVTAS, but could become student survey data, too)
- **Long Term**
  - 1. Teacher retention
  - 2. Teacher growth (as measured by EVAS and evaluations)
  - Growth of MCLs
  - Growth of SB, RTF, MRT
  - Growth of "led" (teacher-supported) teachers

### Goals/Impact
- Overall improvement of CMS’s recruitment and retention (and all the option) - specifically, the career path option and the retention of the best teachers
- Improvement of student achievement (will test score-based at the moment, but have found discussions about student surveys)
- There is also a bit of appreciation for how things like SoO help with overall school culture, individual feelings about being involved in education, etc.
Edgecombe

**Resources**
- Public Impact: support for Opportunity Culture design process
- Hill Center: support for reading intervention
- Other partners: Emerging Leaders, REI Buck Institute
- Title I: salary differential support
- District innovation lead: coordinates initiative
- Historical (pre-intervention) support from Hill Center (HiRAP reading intervention training for teachers)

**ECPs Activities** (with partners noted)
- Implement OC Design Process (wiPublic Impact)
- Establish curriculum/reach plan
- Establish lead teacher selection criteria (wiPublic Impact)
- Teacher quality indicators: student growth, demonstrated mastery, degree, or greater or higher on teacher eval
- Conduct Performance Event Interview (REI)
- Evidence of 'critical competencies' for each role
- Establish district design team (wiHill Center representation)
- Establish school design team (wiHill Center representation)

**Outputs**
- District design team supports implementation of OC
- School design team supports design & implementation of OC
- Lead teachers identified and assume new roles (7 in Y1; about 35 by Y5)
- OC 1 & 2: Exceed impact Teacher (ETT) & RCL, larger class size & manages RAs
- OC 3: Multi-Classroom Leader (MCL) & RCL, teacher capacity, direct instruction, team management
- 3rd role = sub-role. Reach Associates serve as TA
- Hill trains 100% of all Literacy MCLs annually

**Outcomes**
- Short Term/Ongoing
  - 3 times as many applicants as positions (excluding RA positions)
  - New teacher leader hires are qualitatively stronger (based on selection criteria in proposal) than average ECPs teacher

- Long Term
  - % of students reached by excellent (ETT, MCL) teachers (increase of 60%, 80%, Y2, Y3)
  - Improvement in literacy growth (use ESSA targets as basis plus addition for MCL schools)
  - All OC schools meet or exceed expected growth by the end of second year of implementation

**OC1:** % of students reached by excellent (ETT, MCL) teachers (increase of 33% each year)

**OC2:** Typical % attrition reduced (all teachers) to 15% by Y3

**OC3:** Years 2 & 3 vision and strategy plan developed

**Goals/Impact**
- Improve instruction within schools
- Improve student academic growth in core subjects
- Opportunity Culture elements that should emerge as result of plan implementation (activities, outputs, or outcomes)
  - OC1: Teachers reach more students
  - OC2: Teachers get paid more
  - OC3: Funding for pay comes within regular budget
  - OC4: More time for planning, collaboration, and development
  - OC5: Authority and accountability is matched to individual responsibility
Advanced Teaching Roles Pilot Evaluation: Preliminary Report

May 2018

The William and Ida Friday Institute for Educational Innovation

Washington
Appendix B. Strategic Staffing Theory of Change

Evaluations of state- and local-level strategic staffing initiatives funded by North Carolina’s Race to the Top grant (2010-2014)\(^{18}\) all suggested that several intermediate changes needed to occur in a school (e.g., better teacher recruitment and retention, lower teacher turnover rate, etc.) before the existence of a staffing plan would have a measurable impact on student outcomes:

\[^{18}\]http://cerenc.org/rttt-evaluation/equitable-supply-and-distribution-of-teachers-and-leaders/
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dtstalli@ncsu.edu