PUBLIC SCHOOLS OF NORTH CAROLINA
State Board of Education | Department of Public Instruction

Report to the North Carolina General Assembly

Teacher Compensation Models and Advanced Teacher Roles Program Evaluation for 2021-2022

G.S. 115C-311(h)

NC DEPARTMENT OF PUBLIC INSTRUCTION

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Legislation

§ 115C-311(h). Teacher compensation models and advanced teaching roles.

(h) Program Evaluation. – The State Board of Education shall evaluate how the advanced teaching roles and new compensation plans have accomplished, at a minimum, the following:

(1) Improvement in the quality of classroom instruction and increases in school-wide growth or the growth of teachers who are mentored or impacted by a teacher in an advanced teaching role.
(2) An increase in the attractiveness of teaching.
(3) Recognition, impact, and retention of high-quality classroom teachers.
(4) Assistance to and retention of beginning classroom teachers.
(5) Improvement in and expansion of the use of technology and digital learning.
(6) Improvement in school culture based on school climate survey results.

The State Board shall contract with an independent research organization to perform this evaluation in the first two years of the program and provide reports on October 15, 2021, and October 15, 2022. Beginning October 15, 2023, and annually thereafter, the State Board shall perform the evaluation and provide the report. The State Board shall provide any report required in accordance with this subsection to the offices of the President Pro Tempore of the Senate and the Speaker of the House of Representatives, the Senate Appropriations/Base Budget Committee, the House Committee on Appropriations, the Senate Appropriations Committee on Education/Higher Education, the House Appropriations Committee on Education, the Fiscal Research Division, and the Joint Legislative Education Oversight Committee.

Proposed Evaluation Scope of Work

NCDPI is collaborating with North Carolina State University's Friday Institute to evaluate the Advanced Teaching Roles Program. At the time of this report, NCDPI and the evaluation team have completed the plan for evaluating the districts involved in the Advanced Teaching Roles program. NCDPI provides a copy of the proposed evaluation plan below. NCDPI anticipates findings will be available for the October 2023 report.

Teacher Compensation Models and Advanced Teaching Roles: Evaluation Scope of Work

INTRODUCTION

This document provides an overview of a scope of work developed by the Program Evaluation and Education Research (PEER) Group for an evaluation of the Teacher Compensation Models and Advanced Teaching Roles (ATR) program on behalf of the North Carolina Department of Public Instruction (NCDPI). This scope includes recommendations for evaluation questions, data sources, analyses and reporting that address the strategic objectives of the NCEC. Evaluation activities and deliverables are guided by the CIPP Evaluation Model focused on continuous improvement and program assessment (Stufflebeam et al., 2017). Data and analyses generated by this evaluation may also be used to support marketing, public relations, policy development, and lobbying efforts at the discretion of NCDPI leadership. The scope detailed below is for a total budget of $200,000 over twelve months.

EVALUATION CONTEXT

The purpose of the ATR program is to allow highly effective classroom teachers to impact an increased number of students by assuming accountability for additional students, either by becoming a lead classroom teacher accountable for the student performance of all 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. In addition, the program enables local school administrative units to create innovative compensation models that focus on classroom teacher professional growth that lead to measurable improvements in student outcomes.

North Carolina General Assembly Session Law 2020-78, Section 2.6(b), directs the North Carolina State Board of Education to contract with an independent research organization to evaluate how the advanced teaching roles and new compensation plans have accomplished, at a minimum, the following:

1. Improvement in the quality of classroom instruction and increases in school-wide growth or the growth of teachers who are mentored or impacted by a teacher in an advanced teaching role.
2. An increase in the attractiveness of teaching.
3. Recognition, impact, and retention of high-quality classroom teachers.
4. Assistance to and retention of beginning classroom teachers.
5. Improvement in and expansion of the use of technology and digital learning.
6. Improvement in school culture based on school climate survey results.

The Friday Institute Program Evaluation and Education Research (PEER) Group conducts evidence-based studies with a commitment to mixed research methods that employ the most up-to-date research and evaluation tools, techniques, and approaches. A key component of

the PEER Group's approach to research and evaluation is its maintenance of a strong network of relationships with local, state, and national education leaders, stakeholders, and policymakers, and its track record of building client partnerships that promote participation and confidence in study results.

Since 2009, the PEER Group has effectively carried out over $20,000,000 in research and evaluation grants and contracts, with past funders including local foundations (e.g., The Golden LEAF Foundation, The Walton Family Foundation, The Belk Foundation), the state government (e.g., North Carolina Department of Public Instruction), and national agencies (e.g., The National Science Foundation, The United States Department of Education, and The Institute of Education Sciences).

The PEER Group is uniquely qualified to conduct a rigorous, comprehensive, and cost-effective evaluation for the teacher compensation models and advanced teaching roles program due to:

- A long history of conducting research and evaluation on innovative programs and practices in North Carolina to improve outcomes for schools, teachers, and students;

- A responsive, uniquely skilled research team that deeply understands K-12 public education in North Carolina as a result of professional backgrounds that combine K-12 teaching and leadership experience, formal academic training, and years of research and evaluation work across the state;

- Experience completing large-scale evaluation projects in North Carolina that require managing multiple streams of work, including North Carolina's Race to the Top grant and North Carolina's Digital Learning Plan;

- A strong combination of expertise and experience with evaluation of teacher compensation models and the advanced teaching roles program, including an in-depth understanding of the school, district, and state administrative data systems.

EVALUATION DESIGN

Session Law 2016-94 requires evaluation of several components that fall into two broad categories: (1) impacts on teaching and learning and (2) impacts on the teaching profession. In addition, this evaluation includes a comparative analysis of Public School Unit (PSU) models and programs to better understand and improve implementation approaches, conditions necessary for success, and educational inequities that may exist. To provide a more complete understanding of implementation and impact, the PEER Group will use a mixed methods convergent design, in which different but complementary data are collected concurrently or sequentially (Creswell & Clark, 2017). This design is appropriate for evaluation contexts in which a single data set is not sufficient and evaluation questions require different types of data. By using this design, the evaluation can "increase the interpretability, meaningfulness and validity of the constructs and inquiry results by both capitalizing on inherent method strengths and counteracting inherent biases in methods or other sources" (David & Sutton, 2011, p. 296).

EVALUATION QUESTIONS

The evaluation questions developed for this proposal are explicitly aligned with the requirements outlined in Session Law 2020-78 described above. Table 1 (following page) provides a high-level crosswalk between the evaluation questions and the anticipated sources

of data and is followed by recommended analyses and reporting products. Evaluation Question 1 (EQ1) and related subquestions are intended to help the NCDPI and Public School Units (PSUs) better understand the impacts of these compensation models and ATR programs. Evaluation Question 2 (EQ2) and related subquestions are intended to help the NCDPI and Public School Units (PSUs) better understand how compensation models and advanced teaching roles are implemented and explain why some models and programs were successful while others may have struggled. In addition, implementation questions will also examine how the design of these models and programs can be improved to better address educational disparities among staff and students, such as student achievement gaps that have widened since the pandemic and the recruitment and retention of a diverse teacher workforce.

EQ1.   **Impact**: What have advanced teaching roles and new compensation models accomplished?

    a. **Learning**: To what extent does ATR increase student academic outcomes, such as achievement in math, reading, science and digital literacies?

    b. **Teaching**: How, and to what extent, does ATR improve the quality of classroom instruction, through factors such as increased teacher effectiveness and more effective use of technology?

    c. **Attractiveness**: How, and to what extent, does ATR support the recruitment, recognition, development, and retention of high-quality classroom teachers?

    d. **Culture**: How, and to what extent, does ATR improve school culture?

EQ2.   **Implementation:** What approaches and conditions are essential to implementing scalable and effective compensation models and programs for advanced teaching roles?

    a. **Approaches**: What are the similarities and differences in approaches to models and programs among PSUs, and what components differentiate those that have demonstrated significant impacts?

    b. **Conditions**: What school, district, and state-level conditions support or impede compensation models and ATR program efforts?

    c. **Equity**. How can the design of ATR models and programs be improved to better address educational disparities among staff and students?

Table 1: Anticipated Data Sources Matched with Evaluation Questions

Data Sources	Impact				Implementation		
	Learning	Teaching	Attraction	Culture	Approach	Conditions	Equity
Student Assessments	X						
DPI Administrative Data		X	X			X	
Administrator Interviews	X	X	X	X	X	X	X
Teacher Interviews	X	X	X	X	X	X	X
School Climate Surveys				X		X	
ATR Program Surveys	X	X	X		X	X	X
Classroom Observations		X			X	X	X
Program Documentation			X		X		X

DATA COLLECTION & ANALYSIS

The PEER Group will work closely with the NCDPI leadership team as part of a collaborative process to refine evaluation activities throughout the year. During August of 2022, the PEER Group will host a work session focused on finalizing evaluation questions, data sources and data collection timelines. In addition, the evaluation team will work with NCDPI leadership to develop data sharing agreements, revise existing data collection protocols from prior evaluation efforts (e.g., surveys, observation checklists, interview questions, etc.), and identify requirements for new data collection instruments and protocols as needed. Following fall data collection and analysis, the PEER Group will host an additional work session to reflect on evaluation findings to date and to revise and refine data collection for the spring in light of these findings.

Comparative Analysis of Implementation

Phase I of the comparative analysis of models and programs will begin in September and consist of gathering data through program documentation, surveys and group interviews in order to describe compensation models and ATR approaches developed by PSUs and gather perceptions of program impact and areas. Data collection and analysis pertaining to EQ 1 and will focus on PSUs who fully implemented programs during or prior to the 2021-22 school year and focus on the perceptions of stakeholders (e.g., district administrators, principals, and teachers) regarding the impact of the program on school culture, teacher retention, classroom instruction, and student learning. Data collection and analysis pertaining to EQ2 will focus on identifying similarities and differences in models and programs among PSUs, factors supporting or impeding school and district efforts, and how the design of models and program components could be improved to address educational inequities.

Phase II of the comparative analysis will include site visits to 10 participating PSUs in order to conduct classroom observations with an eye towards impact of these programs on classroom instruction, as well as how classroom conditions may support or impede the efficacy of these programs. A subset of PSU will also be selected for in-depth descriptive case studies that include interviews with teachers and administrators to gather a more holistic understanding of contextual factors that may dampen or amplify program impacts. The evaluation team recommends that 2-3 schools or districts be identified for in-depth case studies in the spring, with selection done in collaboration with ATR leadership and informed by qualitative and quantitative data collected and analyzed in the fall.

Case studies are particularly useful when one of the goals of an evaluation is to provide stakeholders with detailed information about a policy or program and describe the components critical to its success (Fitzpatrick, Sanders, & Worthen, 2004). A case study approach is well suited to this evaluation since North Carolina is well positioned to serve as a state and national model for teacher compensation models and advanced teaching roles. Sharing in-depth findings pertaining to best practices and challenges surrounding the implementation of these programs will serve not only NCDPI and PSU program improvement and assessment efforts, but also support non-participating PSUs interested in adopting or adapting the effective models and programs. Quantitative Estimations of Impact

Quantitative Estimations of Impact

Concurrent with comparative analyses of compensation models and ATR programs, the evaluation team will examine the measurable impacts of ATR on student achievement and growth, teacher recruitment and retention, teacher effectiveness and instructional practices, and school culture. Guided by previous ATR evaluation efforts, the quantitative analysis will use a comparative interrupted time series (CITS) design comparing PSUs implementing ATR with a matched set of comparison PSUs not involved in the ATR program. Similar to a difference-in-differences (DD) model, the CITS design has the added advantage of allowing us to estimate immediate effects of ATR on outcomes of interest and effects on trends over time. This model also allows us to include PSU fixed effects, which control for time invariant features of PSUs that could lead to biased effect estimates. These features of our proposed statistical model allow us to make credibly causal claims regarding the impact of ATR on student, teacher, and school outcomes. We will also estimate the CITS model within an event history framework, which will yield effect estimates in each separate year after PSUs begin implementing ATR. Estimating separate effects for each post-implementation year allows us to compare effects in early years of ATR implementation with later effects after PSUs and districts have gained experience implementing the program.

REPORTING & DISSEMINATION

INTERNAL REPORTING TO THE NCDPI LEADERSHIP

To provide NCDPI with timely data for guiding continuous improvement efforts, preliminary findings will be presented to ATR leadership as data are collected and analyzed throughout the year. Rapid reporting methods include, but are not limited to: memoranda summarizing interviews and site visits, qualitative research briefs, work session presentations, and quarterly memos on evaluation progress for program leadership.

The evaluation team will also prepare a final summative report for NCDPI, due June 30th 2023. This internal report will detail research findings from data collected throughout the academic year. This report will synthesize the findings from prior interim reports, describe results and findings based on comparative analyses of compensation models and advanced teaching

roles, and include recommendations for improving programs and fostering further evidence-based design. The report will also identify opportunities for further program improvement as suggested by evaluation findings, including areas of modification necessary for meeting program goals and objectives.

EXTERNAL REPORTING TO THE PROGRAM STAKEHOLDERS

The PEER Group will provide support and technical assistance to NCDPI leadership in preparing a summary evaluation report for external audiences. The summary report will include high-level information related to the specific goals of the program. NCDPI leadership may determine whether and to what extent information from internal reports is included in any external annual reports to the North Carolina General Assembly, State Board of Education, or other education stakeholders. NCDPI may request that the evaluator help prepare additional data products meant for external audiences such as fact sheets, presentations, infographics, data visualizations and report briefs.

Dr. Callie Edwards is the Associate Director of the Friday Institute PEER Group and will serve as Principal Investigator (PI) for this project. For a decade, she has studied, partnered with, and advocated for historically underrepresented and underserved populations in education She is also an expert qualitative methodologist, and teaches qualitative research courses in the College of Education at North Carolina State University. Dr. Edwards has extensive knowledge of advanced teaching roles pilot programs through her experience as a qualitative research associate and Project Manager (2018-19) and Principal Investigator (2020-21) of the Friday Institute's evaluation of six advanced teaching roles pilots: Chapel-Hill Carrboro, Charlotte Mecklenburg, Edgecombe, Pitt, Vance, and Washington. Dr. Edwards will be responsible for coordination and overall leadership of evaluation and reporting efforts, including communication with NCDPI, finalizing reports, and supporting dissemination of findings. Dr. Edwards will participate at an estimated 20% calendar year effort of work during the project.

Dr. Lam Pham is an Assistant Professor of Educational Evaluation and Policy Analysis in the College of Education at North Carolina State University and will serve as Co-PI for this project. Dr. Pham has worked on multiple grant funded projects examining educational policy interventions aimed at improving student outcomes. He has published in academic journals and written numerous policy reports on the topic of teacher compensation, recruitment, and retention. Dr. Pham will oversee the quantitative analysis, including data management, analysis, and integration with the qualitative findings. He will also assist in communication with NCDPI, finalizing reports, and supporting dissemination of findings. Dr. Pham will participate at an estimated 12.5% academic year effort of work during the project.

Dr. Shaun Kellogg is Sr. Director of the Friday Institute PEER Group and Teaching Assistant Professor of Learning Analytics in the College of Education. Dr. Shaun Kellogg has over 20 years of experience in education as both an elementary teacher and education researcher. Since 2011, Dr. Kellogg has led comprehensive research, evaluation, and capacity-building projects funded by local, state, and federal educational organizations. Dr. Kellogg will be responsible for contractual efforts and budget management, data sharing agreements and data transfer, and guidance and support of both qualitative and quantitative efforts on this project. Dr. Kellogg will participate at an estimated 5% calendar year effort of work during the project.

Malinda Faber, MPA, is a Research Scholar with the PEER Group at The Friday Institute. Ms. Faber has over 15 years of education experience working in classrooms, on policy, and in research and evaluation. Over the past decade, Ms. Faber has led a variety of the PEER Group's research, evaluation, and technical assistance work in STEM education, digital teaching and learning, and teacher leadership, including 3 years evaluating teacher leadership programs for digiLEARN and 7 years evaluating teacher leadership for the Kenan Fellows Program for Teacher Leadership. Ms. Faber will participate at an estimated 25% calendar year effort of work during the project, leading the qualitative aspects of the work including interviews, classroom observations, and program documentation.

Erin Huggins, MAT, is a Research Scholar with the PEER Group at the Friday Institute for Educational Innovation at North Carolina State University. Her current evaluation projects include work with PBS North Carolina, NC DPI's Broadband Infrastructure Office and DHHS, DPI's NC ACCESS program, the North Carolina New Teacher Support Program, and NC Independent Colleges and Universities. She has presented, at national and state conferences,

to state-level stakeholders, and to media outlets about the digital divide in North Carolina, and she is a member of several digital inclusion groups at the state and national levels. Ms. Huggins will participate at an estimated 25% calendar year effort of work during the project, leading the survey aspects of the work.

Dr. Rebekah Davis has been a Research Associate with the PEER group at the Friday institute since January of 2021. Dr. Davis has 25 years of experience in education in North Carolina, at the elementary, middle, and undergraduate levels. Her experience teaching in high-needs schools for many of those years provides a pragmatic, yet urgent view of the ways evaluation and research might benefit students and teachers across the state. Dr. Davis specializes in learning design and technology, studying and writing about technology acceptance and innovative use of technology for teaching and learning. She has most recently supported evaluation and research projects addressing the digital divide and teacher development. Dr. Davis will participate at an estimated 25% calendar year effort of work during the project, supporting both the qualitative and survey aspects of the work.

OTHER PERSONNEL

Graduate Assistant 1 (TBD) will staff the project at up to 10 hours per week. This hourly graduate research assistant will report directly to Dr. Pham and will support the quantitative aspects of the work, including but not limited to assisting with data collection, cleaning, and analysis.

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